ARCHITECTS 'R' US

A personal inquiry into the use of the concepts of architecture in the secondary artroom, leading to the creation of a 'Primer' for interested teachers based on the '3 Rs': Receive, Respond, and Responsibility.

by

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Abstract

The processes involved in making places are not the exclusive province of experts, but a set of natural actions that belong to all people. Creating places for ourselves is a natural, organic, and integral part of our work as a society. The term 'place' connotes particularised, human settings, located at a specific site and reflecting the geographic and cultural context.

Many people view the architect as a practitioner of an esoteric profession that is understood only by the formally trained. Architecture, which I define as the planning, designing and crafting of our built environment, is a subject for us all. No one needs to believe that they know nothing about architecture. We each have at least a latent awareness of our surroundings, which can be sharpened and made conscious. Given some skill and confidence, people can move from reticence regarding the shaping of our places to a more active role.

The goal of this work is to invite, encourage, and provide some tools for teachers to promote awareness of our settings, and active, responsive and responsible participation in the shaping of our places. In no way do I mean to subvert the practice of architecture, or to encourage ill-advised, headstrong attempts to build or rebuild our environment. I hope to encourage thoughtful discourse about how our world might be, and more exchange between the experts and the others. Fitting out our settings can be an action not only FOR people, but BY the people as well.

The research question, based upon these goals and premises, is: <u>What is the nature and scope of an architectural 'Primer', designed to assist educators to encourage a citizenry that is aware of our settings, willing to be involved and capable of responsible participation in the shaping of our collective and private places?</u>

To carry the 'Primer' idea a bit further, this approach to place making is organised into learning experiences founded on what I have come to view as the basics of built environmental education: 'the 3R's' of architecture. The program encourages teachers and their students to:

1.RECEIVE - the messages of our environment, to thoughtfully look, see, and consider what is

2.RESPOND - envision and shape what could be - with growing confidence and capability

3.take RESPONSIBILITY - at the personal and collective scale to affect needed and appropriate change.

These 3R's are as important to an educated person as are the traditional 3R's. We need to be able to operate capably with all the R's to maximise ourselves and our settings, rather than abstaining from this decision making. This document provides some supporting material and ideas for teachers who want to encourage responsive awareness and involvement in the shaping of our environment, particularly in the secondary art classroom.

If architecture involves the human activities associated with the making our places, and if we are accepting the responsibility thus implied, then Architects 'R' Us!

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ACKNOWLEDGEMENT

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PREFACE/DEDICATION

This work is dedicated to the memory of my father, Richard Thorne Nesbitt, who lived in our family home on River Road, Sunbury, for more than fifty years.

My father was an architect in what I have come to understand is a true sense of the word. Not formally trained in architecture, though the recipient of a high school 'training' in art and industrial or manual arts typical of the 19th century ideal, he thoughtfully designed and then built with care and great self-taught skill, a house for his family-to-be. It is a small, modest house - quite unique in its simple elegance and stout construction, and it turned out to be very well tailored to the needs of his family. Other families thought it would be well-suited to their needs as well. I can remember all through the years I lived in that house, people came to the door to ask if it was for sale, or might possibly be available in the future. I rent it out now that my parents are both passed on, and the minute the 'For Rent' sign goes up on the tree, I am flooded with calls. The 'For Sale' sign will likely not go on the tree in my lifetime.

My father had been born in an architect-designed house six miles away from his home on River Road. He once described his first home to me in minute detail, while I drew it in plan from his words. (Perhaps I had inherited some of my father's innate capacity to visualise - this is an ability that can be developed with practise and awareness even

without the inheritance.) I had seen the house once, from the front porch, just before it was demolished to make way for Douglas College, but I went inside only in my imagination. It was a lovely house, also beautifully fitted to the needs of the family; it seemed that the architect listened well, and my grandparents seem to have been confident and articulate clients, who understood their needs and their context with some surety.

But somehow I am very grateful that my father took matters into his own hands. (It occurs to me only as I write this, the house was built in the last two years of the 'great' depression - my parents moved in only days after war was declared in 1939. That perhaps explains why an architect was not consulted, but certainly does not diminish the simple beauty of the house or the accomplishment in any way.) For whatever reasons, my father was clearly not willing to be paralysed by a lack of certified professional expertise; he made his plans and got on with the job of construction. Perhaps his example is one of the reasons why I value the idea so highly that we are all capable of participating, at least to some degree, in the design of our places and settings. This idea formed a critical foundation for my own practice as a registered architect. I considered my clients, to the degree that they were willing, to be key participants in the architectural process. As a student, a professional, an interested citizen, and as part of a client group in two large and dear-to-my-heart projects, I have unfortunately seen that clients are not always viewed as allies in the architectural process.

I believe from my gut and heart and head, fuelled by real experiences both positive and negative, that the making of our places, is not the province of registered professionals alone. I am always optimistic about the potential of the expert to enrich, and where appropriate, guide the process. But I posit that, however much experts have to contribute, in the best of all possible worlds the non-experts, the people who will inhabit the places, such as my courageous and determined father, and all people who receive the messages of our environment and are moved to respond in a responsible way, will enrich the process a great deal as well. In that sense, ARCHITECTS 'R' US!

CHAPTER 1 Statement of the Search

1.1 Introduction - the 'searcher'

I grew up beside the Fraser River, near the mouth of it, so the tide came in and the tide went out the way tides do on seas but not usually on rivers. This was important to me as a child because when the tide was out, I had a lovely beach, almost flat, all to myself, where I could draw creations that would last until the tide came back in. My favourite project was to draw house plans, full size, and then dwell in the house until some event - lunchtime, or the incoming tide, caused me to move on. These fifty years later, I still recall some of the homes I drew. And most particularly, I recall the joy I felt in creating these elaborate and highly articulated fantasies.

I felt fortunate, as a child, to have a father who knew how to make a tipi out of poles tied together with stout rope, and covered with the 'indian blanket' from our car - typical of the forties - a generous sturdy thick flannel rug stamped with zigzags and other repetitive patterns and done up in earthy 'primitive' colours. The tipi was the envy of my friends, and a lively addition to the architecture in our community when it appeared on our front yard in the summertime.

I was not overly thrilled to learn that my father had designed and built the home I grew up in. My assumption was that the fathers did that sort of thing. The mothers

seemed to get to continue the business of homemaking thereafter - refining, adding grace notes, and maintaining the house so it was indeed a home. Although I see these actions as natural but very enterprising architectural action now, as a youngster, I was able to take this activity completely for granted. My father formed the intention and then completed the action of building a house. Yes, of course. My mother made the house beautiful, and the lawn and gardens all around it lovely as well. But naturally.

Nobody was hired to make a place for my family; Richard and Sally, typical of all moms and dads, I assumed, made our home, and then we lived in it. And I was invited to participate in the process of place making, in the fullness of time. When my father set to finishing the upstairs room to make a bedroom for me, I was able to participate in the critical decision making processes. The question I remember with most pleasure: what shape would the valence over my new closet door take?

I designed a tricky line indeed. Fortunately my dad had gone through the art training of the twenties and was as a result, very capable in geometric drawing. My godfather, a boatbuilder, helped by cutting the five foot valence out on his bandsaw.

I got to choose what colour everything would be painted and agreed with my dad's idea that two shades of rose (with darker rose where shadows would naturally fall in the nooks

around the chimney that ran through my room) would be lovely. He asked me if I would agree to that! Moreover, my father let me choose the tiles for the floor of my tiny bathroom - and I chose a quirky combination of maybe five different patterns of tile that delights me, and some others, to this day. That pattern is still on the floor these fifty years later. After a spirited debate with my mother, who wasn't quite as liberated about children's rights as my father was perhaps, I got to choose the curtain material as well - a strange evocative geometric creation that gave me hours of meditative pleasure over the years.

Although the limited scope of the design process involved in fitting up a young girl's bedroom may not generally recognised as 'architecture', I would argue that it is architecture in the simplest sense.

I trust the good Gage Canadian Dictionary, and believe that in our use of language, culturally agreed upon definitions must underpin our communications. Gage tells me that architecture is: 1. the science or art of building; (I would say science and art), the planning and designing of buildings, (all the work that takes place before construction begins) 2. a style or special manner of building - eg. Greek architecture, 3. construction, (the crafting of a building) and 4. a building or structure (the result of the process). In my personal lexicon and for this document, the word architecture is interchangeable with place making, or, as product of the process, as the

place that results from the act of place making. I see this in the same spirit as Gage's definition. The word 'place' connotes a particularised setting for human activity, conceived and realised as a response to environmental and cultural requirements and context. I recognise that different shades and depths of meaning may be assigned to these words by others - for example, an architect whose life has been devoted to the more esoteric pursuits of his or her field, or someone who is frightened off by the esoteric connotations of the word 'architecture'. (The same could be said for the standard definition of 'teaching' as opposed to a practising teacher's richly emotive response to the word.)

Although a young girl's private space/bedroom/sanctuary is not serious Architecture by any stretch of the imagination, it serves as an example of place and place making from which important principles can be derived. And I can vouch that for me, and for my family and associated others, it was both an important process of planning and design and crafting, as well as a place of delight. If the making and dwelling in such a simple but meaningful setting is not to be construed as important enough to be termed architecture, then I would question the word, not the process or the product in this instance.

As a person fortunate enough to have been invited to participate in the making of my own place in my family home, I was amazed to discover that some people feel unequipped or unentitled to make even the simplest efforts

towards individualisation of their space. Such concepts as 'paint it beige for resale value' and the 'speculative housing market' and even 'colour codes in the subdivision' and the 'turnkey development' caused me to feel sorry and sad when I discovered their existence. Sure not everyone has the time or the inclination to build a house, or even a cake for that matter, from scratch, but I find the notion that bland = beautiful, purely for the sake of conformity or to maximise resale value, to be a frightening indictment of our society.

Other searchers

Hurray for Gertie, who painted her kitchen ceiling Chinese Red in 1951 - even though my mother declared that she stole the daring colour scheme from her. My mom had been considering the idea, had mentioned it, and discarded the scheme with some relief when she saw Gertie's place. Hats off to Lewis and Anders, who built themselves tiny shacks at the edge of the Fraser - totally tailored to their needs: small, easy to care for and located precisely where they wanted to be. And kudos to the developers of the first subdivisions that sprang up in our rural area. There were six or seven house patterns used; some plans were flipped to increase variety all the more, and the purchasers had input into the finishings, producing a quite natural looking, varied neighbourhood.

Moving towards Architecture

I didn't consider architecture as a career when I finished high school. It occurs to me now that I was only dimly

aware that trained architects were operating in the world. Wasn't designing what the dads did? Once at university I met a tableful of architecture students. All male. The whole school, except for one teacher, was male at that time. Pretty wild bunch too. It never even crossed my mind to study architecture. Because of my gender I wasn't even allowed to take Drafting in high school. Even with my encouraging background at home, it never occurred to me to go to architecture school. I became a teacher, specialising in art and language arts, and started my practice as a teacher when I was still a teenager.

Time to compress the tale: After six years of teaching, and several more of studying education, I realised a need to investigate what else one might undertake in September besides entering some institution of learning. I went to the north, and by happenstance, acquired a small lot. I dreamed numerous house plans for nights and days after the land purchase, and on about the tenth night dreamed a plan that might be simple enough for me to build. (I had decided to try to build myself a home, reasoning that because I was skilled at sewing, the same general principles should apply in the manipulation of wood and metal as in cloth fabric.) So I did start building, and so a tiny, essentially well-tailored home eventually emerged, and so grew in me the desire to study architecture, and carry on with this very satisfying process. Perhaps because of my early background, I considered architecture to be a natural operation: the planning and designing of places for people. In study and practice, I learned that

'architecture' has a rich meaning indeed, but the simple definition still works for me.

Architecture is intriguing to me, especially in its broad social and artistic implications; the technical and economic aspects of contemporary architectural practice fascinate me somewhat less. After more than ten years of quietly successful but not earth-shaking practice, I began to notice that I was feeling jealous of the teachers in the schools I had spent so many years as an architect working to replan and reprogram, renovate, design or add onto. I realised that the final years of my working life could very happily be spent in the public school system as a teacher, and I took the necessary steps to return to the classroom, with my expertise as an architect very much a part of my educator's toolkit.

I recount these personal stories as an example of how I came, over time, to recognise in myself the capability of impacting my surroundings. Buoyed by little triumphs, and a growing awareness of the environment in which I moved, I was increasingly able to give myself the permission to declare my interest in and willingness to make a mark on my surroundings. There are many ways to come to recognise oneself as an aware and responsive and responsible dweller in our own context. One might also recognise that travel and study of other places helps to sharpen our ability to see and understand our own as well as other settings. Involvement in projects at the micro or macro scale gives a sense of what might be possible and how those possibilities

might be realised. Viewed from this perspective, reflection upon personal experiences may well yield the recognition that we do have something to contribute, and indeed, have likely contributed in some real ways already in the shaping of our places.

Towards (and back to) education

In order to become familiar with current thinking and practices, I enrolled in a program designed to Help Educators Access a Return to Teaching, the H.E.A.R.T. program at Simon Fraser University. This excellent course of studies enabled me to return confidently to the classroom, and enabled me to consider the nature of my contribution. I owe a great deal to the art teacher with whom I worked in the lengthy practicum at Killarney Secondary School in Vancouver. Neil Prinsen is a treasure house of ideas and expertise, and he shared generously with me as he has with a generation of student teachers in his classroom. He inadvertently caused a 'click' in my head that has helped focus my intentions for this study. One day, during one of our many stimulating and rich conversations, this sophisticated and highly skilled art educator made a statement that resonates with me yet. Neil said: "I don't know anything about architecture." He wasn't trying to be cute. (Donna Sheh, another art educator who served as an outstanding Faculty Advisor for a recent student teacher in my artroom, said exactly the same sentence to me in March, 2003.)

So what did these educators mean by this statement? I know that they both know much more than they claim about architecture. Perhaps the term 'architecture' has a mystique that makes even the most sophisticated among us shy away from recognising our own understanding and efficacy. Perhaps the concept 'architecture' needs to be de-mystified, if indeed we tend to think of architecture as an esoteric profession, reserved for the experts alone. The non-experts (and maybe some of the experts as well) need to gain access to what it is we all know, our tacit understanding of our environment and our requirements, so that we can operate together effectively in the process of place making and inhabiting our places. We can move towards a sharpened awareness of our surroundings, learn to respond to what we see and what we need and what we might change, and we can find and grow in ourselves the confidence and skills to actively and responsibly participate in the shaping of our designed environment.

Architects do have a place in the order of things

I recognise that the insights gathered and developed in the course of my architectural education, internship, and practice as a registered architect put me in a somewhat privileged position to operate as a place designer and place maker. I would never minimise the effect of a wonderful set of growing and learning experiences, particularly in the M.A.S.A. graduate level (Master of Advanced Studies in Architecture) of my formal education at the university. And the internship program and daily practice as a professional enabled me to experience a wide range of challenges, which increased my expertise well

beyond the scope of an average layperson's architectural experience. I had the opportunity as well to investigate ways to involve clients (building users) in the design process. Particularly in projects involving schools, I was able to work closely with school communities in the conceptual and design stages of their project. It was especially gratifying to see how students, as well as teachers and administrators, were able to contribute thoughtful and reasoned commentary regarding the existing situation, and imaginative speculation regarding what might be possible. They seemed to enjoy being asked for this input, and perhaps discovered, in the articulation of their ideas, that they knew a great deal about architecture. Unfortunately, budgetary considerations did not allow for much post-occupancy evaluation, but I hope that where input was actually manifested in the building, the school community recognised their input.

I acknowledge that clients and their projects can often benefit greatly from the inclusion of professionals who have a rigorous background and a wide range of experience. But I also know that architectural decision making can be shared amongst the trained architects and the other natural repositories of architectural understanding - the ordinary people who spend most of their lives in and around the designed environment. I think in some instances, architects find the sharing of decision making to be a messy approach, complicating an already very complex process. It seems that architects are perhaps not always trained to draw out the tacit understandings and the visionary potential that resides in us all to some degree.

I think that often people conclude they 'know nothing about architecture' and therefore shy away from participating in the processes of place making. And I recognise that people who do not choose architecture as their profession can still contribute a great deal to the process of place making, if they are given some basic guidance.

The goal of this document is to suggest to teachers, themselves likely to be untrained in the architectural lore of our culture, how they can help themselves and their students to become more aware inhabitants of the designed environment, and more confident and responsible participants in the process of place making.

The Primer consists of teaching/learning experiences that are based upon what I have come to think of as the three basics of architectural necessity. We need to receive and be aware of what exists in our surroundings. We need to feel entitled and inclined to respond to that increasing awareness, and to act with prudence and care and responsibility - in the understanding that our actions can have a profound effect, for good or ill, on our environment.

The program outlined in the Primer encourages teachers and students to be clear about these components, focused upon singly or all at once. I have come to call these elements the 3 Rs of architecture:

1. **RECEIVE: to look thoughtfully and to consider our surroundings with attentiveness and wonder. This is**

in marked contrast to taking our settings for granted which, I think, is a common stance.

2. RESPOND: to envision and shape what might be - with confidence and capability, based on the clear awareness of what exists.

3. take RESPONSIBILITY at the micro and the macro scale to affect needed and appropriate change. This change will be based upon values that evolve in the course of our lives, and which can be developed and clarified as a result of a thoughtful educational process.

These three Rs are as important to an educated citizenry as are the traditional three Rs. We all need to be able to operate capably with all the Rs to maximise ourselves and our individual and shared potential. And when ordinary inhabitants and experts can work together to create settings that reflect our needs and optimise our lives, then we can say with some confidence that architecture is not the esoteric constituency of the trained few, but that Architects 'R' Us.

An architecture process/product story

A couple with whom I was only very informally acquainted invited me some years ago to their home on Haida Gwaii to discuss the prospect of designing a home for them. They were preparing to retire, and wanted a home to grow old in. When I stated my operating mode in the initial stages of our work, I felt some strong resistance from the woman of the house. (It was she who had initially suggested to her

partner that I be consulted.) As an architect, I believe my job is to participate in the design process with those who asked for my help, but not to provide the design singlehandedly. We had a number of lengthy conversations about the dream home that was forming itself in our minds, spending hours discussing what might take place in their new home, and what special requirements would need to be provided for. Only after many hours of easy discussion, during which I would make visual notes to share with them what form their ideas might actually take, did the woman of the household explain her resistance to the notion of participating fully in the design process.

It seems that many years before, in a similar manner to many of us in Haida Gwaii who had tried to build a home, the woman and her then-partner had built an immensely disappointing structure. She felt the effort had been a dismal failure, with respect to both space planning and structural integrity, and a waste of their precious resources. She had decided, this time, to engage an architect and to thereby insulate herself from another potential disaster.

Of course, when I realised the reasons for her earlier reticence, I was able to reassure her that together we could find a well-tailored and sturdy setting for herself and her current life partner. And I recognised that my training and experience both in academia and in the rural setting and in architectural practice had fitted me well for this task. I had lived in Haida Gwaii for many years,

eyes wide open much of the time, and I love those islands. I claim some understanding of the genius loci, as Christian Norburg-Schulz calls the spirit of the place.

The result of our collective effort was a lovely house in Tlell, Haida Gwaii, reminiscent of the simple and primitive forms built by cannery owners along the coast, lovingly built, and now lovingly maintained. Several years after the house was completed, the owner wrote to me to say how happy she and her husband have been in the house. She added that the money they spent to involve me in the design process - but, as it turned out, not to hand over the process to me - was the best money she reckoned she had ever spent. Obviously, there is a place for thoughtful architectural expertise in place making. But just as obviously, there is a place for us all in the process. We all need to make our imprint on our settings and the insights we all bring to the design process can add to the value of our made places. I don't think that the joys of place making should be reserved for the 'experts'. Perhaps an essential skill of the experts is to find ways to enable all relevant participants in the place making process to contribute to the vision and its manifestation - to bring alive and active the latent knowledge we all must collect in the course of dwelling in place.

Christopher Alexander, architect and builder, professor and researcher, and author, with his colleagues, of The Timeless Way of Building and A Pattern Language, sees architecture as a natural part of human action as well. He

states the belief that bringing a building or even a part of a town to life

> is a fundamental human instinct… the desire to make a part of nature, to complete a world which is already made of mountains, streams, snowdrops, and stones, with something made by us, as much a part of nature, and a part of our immediate surroundings.
>
> Timeless Way of Building, 9.

Although Christopher Alexander and his colleagues acknowledge that trained architects have 'the desire to make places at the very center of their lives' (ibid) they think that everyone shares that desire to at least some degree. They hold the belief, furthermore, that people should design for themselves their own houses, streets, communities - based upon the observation that most of the wonderful places of the world were not made by architects, but by the people.

A Pattern Language describes this attitude toward architecture or place making, and provides, unsurprisingly, patterns - often of an archetypal nature - to guide this action. The patterns are predicated on an understanding of successful places and infer the transference of that understanding to guide place making. While I would agree that these insights are profound and valuable, and would also add that I referred to the patterns a great deal in the course of my architectural education and practice, it must also be said that many architects view these patterns as overly prescriptive and even somewhat overwhelming. I would suggest that if the people learn to be brightly aware of their surroundings, the realisation of what exists and

what is successful logically informs the response or act of place making in a natural but perhaps more individualised way. Further, I suggest that people can be taught this awareness and confidence in the act of place making, so that they are freed to participate in this natural and very satisfying action.

My professional stance

My background as an architect has relevance to my goals as an educator. It is not easy to summarise the goals of a person who has been moving about with some energy for as many years as I have. But reflecting on my eclectic and privileged life as a teacher and architect, I might articulate my personal stance some help from Walt Whitman. Somewhere (source long lost) I found this statement and copied it carefully as it resonated very deeply with me. He said: "All architecture is what you do to it when you look upon it." This touches squarely on the 3R's I have named and has helped to guide my practice as both an architect and a teacher. I want to continue learning how to look upon the world, and keep considering what to do about our places in the broadest sense. And I want to enable others to look upon our designed environment with interest, energy, and delight, receptivity and active creativity, and a confident sense of personal responsibility. This includes the planet too, come to think about it. But this educational stance points me in the direction I envision. We should not just sit by and wait for enlightened others to shape our settings. Architects 'R' Us!

1.2 Methods of investigation and exploration: the analytical framework/generating process

The method of investigation and documentation that I have used in this exploration of architectural concepts in the secondary artroom is 'action research'. Narrative accounts of this type of educational research comprise a growing body of pedagogical literature. This document is my attempt to share insights gleaned in the course of my practice, using the action research methodologies.

I include, as explanatory background to my experiences in the artroom, a narrative report of my first work with this research process to illustrate and explain the methodology. The following Teacher-on-Call narrative report sheds light on the action research process, and shows how theoretical understanding can be derived from the cycles of action research. In this example, as a Teacher-on-Call I constructed and tested a working theory regarding the elements of meaning, engagement and connection in the range of educational settings I encountered. I have been able, from that experience, to generalise some working principles to all teaching situations.

A story illustrating the methods of action research

The following story serves to demonstrate the action research investigation method. The story is built from excerpts from a working journal I kept in 1998 as a Teacher-on-Call, which was filled with reflections, in various forms, on my practice. The inclusion of the narrative is based on the belief, fundamental to my understanding of the process of action research, that the personal is universal; that from

our shared stories, we take what we can use and grow toward the light together.

The story, which is specifically about a rather unusual and somewhat unanticipated design class, also serves to reinforce my notion that design - and specifically the process of designing, (which we do all the time in the course of our lives in one way or another), is interesting, meaningful and engaging to students.

The 'Primer' - chapter 5 of this document, is intended to share, in reduced narrative form, the insights I have derived from a series of iterative attempts to bring the themes and concepts of architecture into the secondary school artroom. The Primer was built from the same type of research activity as is this report of my first attempts at action research, as teacher-on-call.

Narrative - "First day back"

After a very prolonged absence from a classroom of 'my own', I returned to the public school system as a T.O.C. - Teacher-on-Call - in January, 1999. I had carefully planned my return to teaching - had completed the re-entry program for teachers at SFU and begun graduate work in education at UBC the previous year, and felt ready and willing to take on any classroom situation.

The first assignment offered to me was to replace the Woodwork teacher at a secondary school. I recognised it would be inauspicious to refuse my first position, so at 6am I agreed to do this - and managed to sound, I thought, reasonably self-assured about the prospect, even though I don't think I had ever even been inside a high school

Woodwork shop. When I was in high school, I asked the Industrial Arts teacher if I could take drafting. "No" was all he said. It would have been ridiculous in that context to have attempted to enroll in Woodworking, as much as I wanted to. Now I was going to substitute for a Woodwork teacher. This was quite a lot to process before 6:30am, the first morning after a lengthy hiatus from the schoolhouse.

After sign-in and key pick-up at the school office, I headed off to the technical wing. After a few wrong turns, where I tried to look 'interested' rather than 'lost or 'confused' in the maze of this large school, I found the correct general area. I chanced upon a man, still in his overcoat, struggling with the lock on a classroom door. He wanted to know who I was, so I introduced myself and said I was substituting for the Woodwork teacher for the day. His face fell. In the jumble of his words, I caught: "you can't turn on the power - we'll have to have a study period - we don't do announcements until B block, so the class for first period A block won't come prepared for study!" (Oh dear. I hadn't thought about power tools - I think there was somewhat more emphasis on hand tools last time I looked into the woodworking shop. Furthermore, I had read in the T.O.C. manual that if you are in a specialty area like gym - don't try to supervise tumbling without proper training, ditto for the shops etc.)

When he did pause briefly, I explained that although I am not a qualified Tech. Ed. teacher, I do have an extensive technical background as an architect, which was what prompted the callboard to think of me this morning.

"This is <u>Woodwork! - With POWER tools!</u> - it's going to be a total mess - like last time the teacher didn't show up!"

He suggested I send behaviour problems straight to the office and they would deal with the mess there. I asked who he was, and he replied, "The Principal" and stalked off.

I found the Woodwork room and met two other Tech Ed.teachers who seemed dubious about my chances for having a nice day. They warned me especially about the grade 11/12 boys of block A. They thought, if I were lucky, that most of the class would skip out when they saw a 'sub' was there.

The bell rang. The grade 11/12 boys arrived. Perhaps powered by New Year's resolutions, they were quite polite about the situation. I hadn't been waiting this long to get back to the classroom to let this opportunity fizzle, so I decided to see what sort of interaction we could generate. I introduced myself, explained why I was there (technical expertise, but not the necessary paper to turn on the power) and told them a bit about myself. I acknowledged that the situation was far from perfect.

We talked about architectural design and their projects a little. I told them they could go to get study materials if they wished. Inasmuch as it was their first day back after the holiday, there wasn't all that much to study, so they declined to take a trip to their lockers. I had been expecting that they would be glad for the excuse to take a walk, but they all elected to stay in the classroom. I said ok - let's do a design project - I probably won't be here tomorrow so let's try a quick design exercise or 'charrette'. Some of the boys had found something else to do in the shop, but more than half of the class looked quite interested.

We started talking about chairs. We discussed designing a chair for a specific character. We speculated about Homer Simpson as a character and about how a design response could

best be tailored to Homer's needs and wants. They got the idea and came up with suggestions both hilarious and, I thought, quite appropriate for Homer. The Clinton/Lewinsky affair was freshly unfolding, and some of their ideas for other clients seemed to take a somewhat sexual cast. I drew the line at allowing the 'rape chair' idea to be developed, but recognised that the 'affair' was indeed an issue of interest and concern. They seemed to feel almost obliged to consider this hot news item. When they saw that I wasn't going to shy away from discussion of the presidential behaviour, they moved past sex to other considerations quickly. I acknowledged their interest (like the rest of the informed world's interest) in the sexual/political news and discussed it with them as matter-of-factly as possible.

Each student selected a 'client', wrote a short brief including a list of characteristics of the client and imagined requirements, and made preliminary sketches. Throughout the class, the students maintained spirited conversations regarding their collaborative and individual efforts. The seventy-five minutes passed reasonably quickly. 'Art' was not made that day, but some good ideas were generated, the students were meaningfully engaged, and nobody needed to be sent away for disciplining.

Analysis, Observations, Reflections, Musings...Theory

The day went better than the principal and the other teachers had anticipated, actually quite different from the gloomy scenario that they had predicted. This was attributed by one of the teachers to my 'calmness'. I think there is more to it than that.

I think that the process of design has a universal appeal and comes quite naturally to many people. I realise that the design project could have been more successful if I had been more resolute at the outset. I saw that the students were interested, but I could have motivated the chair design project even more strongly. I was actually a bit surprised to find them so receptive. (And I was trying to process quite a lot of new circumstance here, all at once.) I think that young people really want to be meaningfully engaged at school, and they immediately understood that designing a simple piece of furniture could be meaningful.

I needed to be ready for situations like this - no plans or guidance from the regular teacher, and very constrained circumstances - use of power tools forbidden. But there are always many options. I have subsequently explored the use of hand tools, introduced other design problems, motivated research problems with library references, assigned technical exercises in the texts. This school was undergoing a renovation and was rich with architectural possibility: studying drawings, critiquing the ideas, post-occupancy evaluation of the sections already in use. I do not think that 'bring materials for study' is ever necessary, and neither is busywork.

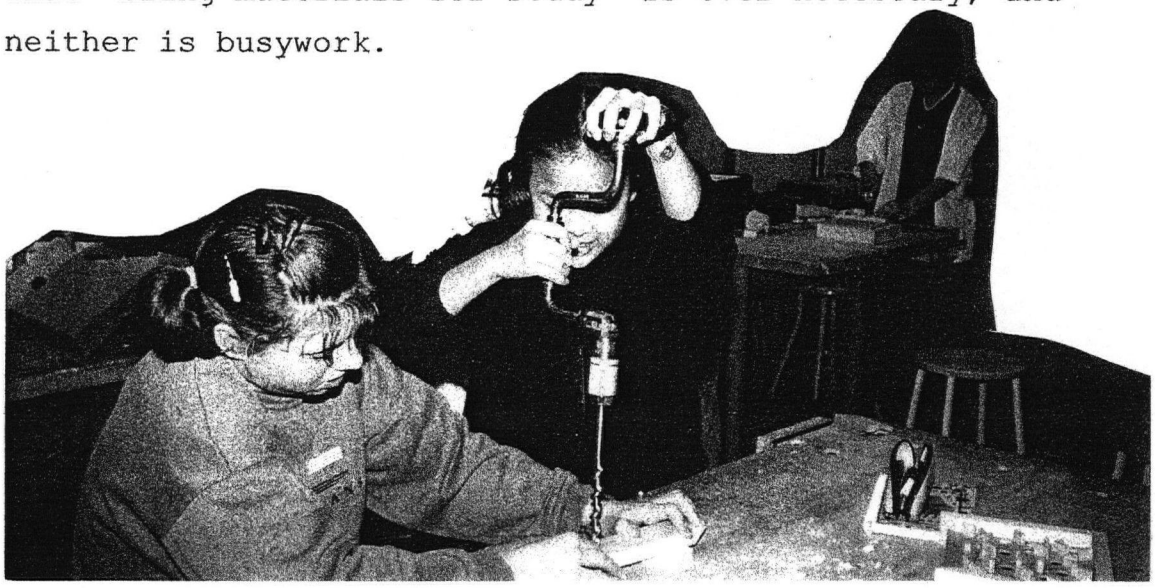


Figure 1. Hand tools in the shop.

Action Research: how does this approach impact practice?

Very fortunately, I began a graduate course based on the concept of Action Research the same week that I started work as a Teacher-on-Call. I immediately began a journal, in which I recorded notes from readings, narrative bits, insights derived from experience, new processes, issues, musings, ideas, reflections, promptings, metaphors. This journal keeping became an ingrained habit almost immediately. I cannot now imagine how I could operate intelligently without the journal habit - my system of keeping track of and deriving and making meaning from my teaching experiences. Reflecting upon the months where studying and teaching-on-call overlapped, I realise that without the journal, my experience would have been an indistinct blur, and the lessons embedded in those experiences would largely have been lost to me. I was able to convert raw experience into stories which helped me to glean some new insights from the fast-paced, varied, and densely packed set of circumstances I was experiencing.

Just what is Action Research?

Eileen Adams, British art educator, succinctly defines action research as: "essentially a practical, problem-solving approach which encourages practitioners to reflect on their practice and to seek ways of improving it. (Adams 2001, 38)

Adams further notes that the focus of enquiry of action research is on practical issues, as distinct from theoretical issues, and she calls the principal thrust the study of change. Moreover, Adams summarises that the study of cases of practice is preferred in this research concept to the study of experimental samples. The researcher as the main

focus of the research; and others are involved as co-researchers, 'educated' witnesses from the context served by the research. (Adams 2001)

I consider other teachers (and my students) to be my research partners in this research I have undertaken. Teaching can be a somewhat isolating occupation, which is ironic, considering that a secondary school teacher can easily have over 200 students in the course of a year, not including all extra-curricular contacts. But when is there time for a satisfactory conversation, especially with another harried teacher, when we teachers are so absorbed with the goings-on with students in and out of the classroom?

I am fortunate to be part of a teaching staff that makes time for teacher discourse. Each teacher needs to find a few 'critical friends' or, as Eileen Adams says, 'educated witnesses', to consider issues with and to share concerns. I call these people my 'research friends'. As well, I routinely ask for feedback from students, informally and formally, regarding specific projects, aspects of projects, and the general progress of the courses I teach. Each piece of feedback is a gift, and both my colleagues and students know this. The proffered opinions are very useful in guiding <u>change</u> in my practice.

From Dr. Rita Irwin at UBC, I came to see action research most clearly in terms of the following simple diagram:

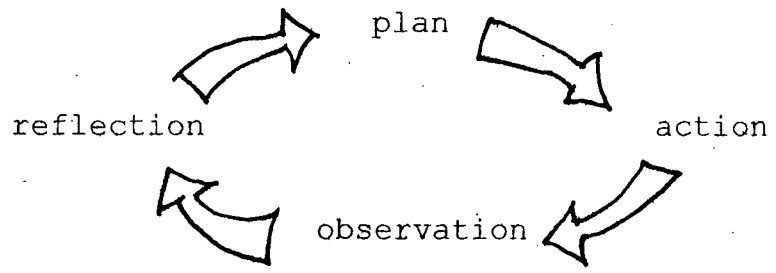


Figure 2. The cycles of action research.

This form of re-searching can be seen as iterative loops of action, wherein careful attention in the course of action leads to thoughtful inquiry and the possibility of refinement in the subsequent iteration(s).

The investigation can be entered at any point in the cycle. As an example, when I began my career as a Teacher-on-Call that first memorable day, I would say, notwithstanding all my plans and preparations, I entered squarely in the action phase of a cycle. The narrative demonstrates how observation, reflection, and right-back-to-the-drawing-board planning led to practical insights and refined action that could be applied in the next situation. The cycle also led to my initially tentative, but later, more confident articulation of personal theory that served as a guide in my career as a T.O.C, and continues to guide my planning and action as a regular classroom teacher.

The simple but clear structure for my thinking-in-action gave me the opportunity to convert my response to a quite challenging set of circumstances into better pedagogical action. The change and improvement in my teaching stance was based on a formalised and therefore strong grasp of the 'baseline situation', which was the direct result of careful and deliberate observation and reflection.

It became clear to me, particularly in the changeable life I lived as a T.O.C., that even if the same situation, topic, lesson is never encountered again, the opportunity to grow is presented. I could find ways to improve generalisable understanding, or to make some progress with respect to simple maturity and depth of thought, with the attentive observation and creative theorising typical of the action research process. And if the opportunity to meet a similar circumstance is there, as in presenting the same topic to

another class the same day or even in a subsequent year, this action research process leads to change and fine-tuning which improves the quality of the educational experience. This has been my experience in the years I have been teaching art and conducting ongoing action research in the public school system and in a variety of extra-curricular settings.

As well, I learned in Rita Irwin's action research class that once new insights or improved pedagogy has been obtained and achieved, sharing the results in some way that the pedagogy of others might be similarly enriched is an implied option.

Relation to the existing literature

Another simple diagram serves to locate the process of action research in terms of what I consider to be the principal components of growth. The existing body of pedagogical thought is extensive and rich, and is not to be overlooked in the personal problem solving process of action research.

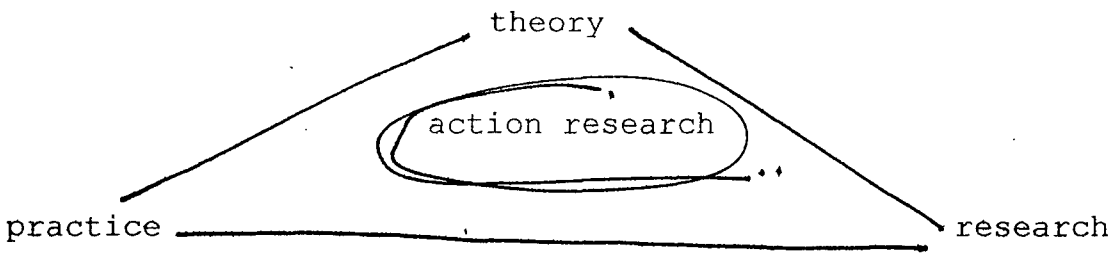


Figure 3. The components of action research.

A very rich diet of readings suggested by Rita Irwin gave me the opportunity to clarify the concepts of the action research approach. In the process, I was able to connect my experience, from which I was beginning to draw out some insights and principles, with broader educational thought.

I had to make an initial leap of faith when writer Jean McNiff and her collaborators, and my professor, Rita Irwin,

declared that action research can improve the quality of life, even though I was unable to clearly envision the implications at the outset. I mulled over the relationships between theory and practice, and wondered how "praxis can become more aware of itself by means of theory." (Van Manen 1990, 154).

I learned from McNiff et al, that praxis is "informed, committed action that gives rise to knowledge, rather than just successful action." (McNiff 1996,8) I discovered that action research includes description, explanation, interpretation of ordinary events in the daily unfolding of life. I was very attracted by the notion that this research is "driven by your own values about what is good." (McNiff 1996, 13)

I tried to articulate the values which I would want to guide my professional action. Equality surfaced first. Inclusivity and respect, cousins of equality, followed. (Especially in a district where so many of the students are recent immigrants, I need to be aware of the needs of students whose English skills are tentative. I also recognised the need to go beyond the somewhat eurocentric focus I had traditionally maintained.) Cooperation is important to me. (I feel that years of practice as an architect have enabled me to understand and practise collaboration - I believe it is a basic attitude/skill for the learning setting.) Encouraging a solid belief in oneself and nurturing personal initiative and independence are key values, related intimately to the others. Students all have special abilities and needs which may not be apparent to T.O.C.s (read 'passers-through') but that awareness at least increases sensitivity to what might be. Depth of response, founded on a capacity for critical thought, reflection and creative adaptation, which I initially listed as goals for

the learning setting, became very basic personal goals as well. Measured against what I saw as a baseline of very low and pessimistic expectations, I could see that a change would be required if I were going to be able to realise my professional values to any meaningful extent as a T.O.C.

McNiff suggests that we motivate our action from the tension resulting from the inability to live out our values in practice. The trick is to imagine a better way, based on what we value, then work towards that vision. Keeping close track of tensions as well as observations and reflections regarding the quotidian, and even converting those notes into a form that can be shared, enables a clarity and depth of insight that enriches practice. From the above experiences, and many others which filled my life in the intensity of that first round of action research, I was able to derive certain hypotheses. Although my experiences as a T.O.C. are certainly relevant to my teaching practice in general, many of these new insights thus derived fall somewhat outside the scope of this document. Suffice to say, the action research process was an important path for me to follow in developing a personal theory of practice from hypotheses that I was able to articulate from this important phase of my career. A brief summary of how observation became hypothesis became research question serves to elucidate the process.

Towards a personal theory of practice

At first I hypothesised that content was the key to successful substitute teaching - possibly because my first three weeks as a Teacher-on-Call were spent in situations where no daybook was supplied and where ordinary activity could not take place - Woodwork shops - the power stays off. I approached the situation by devising content - a series of

lessons based on stories about people in non-traditional, technical roles - Kate Braid, carpenter/poet, and her hero Emily Carr, adventurer/painter/writer. I introduced relevant design projects based upon collaboration and critical analysis. I brought the wonderful ideas of Gu Xiong, and particularly his notion of honouring ordinary simple objects, into the learning situation wherever possible.

I was attempting to make the time spent in the absence of the regular teacher meaningful to students - but I realised that the first cycle of my action research was simply refinement of content - not hugely different from the ordinary activity of a conscientious teacher. However, some of this lesson content, devised for survival in the intense situation of substitute teaching, has evolved into lessons that appear in the Primer.

It should be noted as well that after the first three weeks as a T.O.C., the circumstances changed quite dramatically. A daybook and clear instructions were provided, more often than not. This was new to me, to have actual lessons already planned. My job was then to ensure that students were engaged in the work - in effect, to contribute my classroom management skills to the situation. This clearly has relevance in any classroom, and to the learning situations described in the Primer.

I noticed, as a T.O.C., that if I made a real effort to connect with students, our time together seemed to unfold more smoothly. I refined simple tactics such as carefully calling the roll - making eye contact with each student as they answered. I told stories as I introduced myself and encouraged students to share their stories as well in order to build trust and goodwill in the class. I noticed that kids are interested, generally, in what is going on at

school. They were often willing to share information about themselves and their school, and willing to adapt to the realities of a new but temporary learning situation. This clearly can be applied in any learning situation, and is an important dynamic in all the experiences described in the Primer as well.

I became increasingly committed to the notion that something of value should take place in every class even if the regular teacher could not be there. I articulated a personal statement: students are entitled to move forward with their education every day at school - whether or not their regular teacher is available. My initial research question as an action researcher began to take shape: How can I provide for a quality learning experience as a substitute teacher - (and simply as a teacher)? I tried to identify at least three components of a good "subbing" situation and I speculated that personal connection, educational meaning (content), and engagement (process/management), are the primary elements. Each situation requires attention to these fundamental elements; each situation must be read to determine in what proportion these elements are required.

The narrative of my career as a teacher-on-call, beginning with a memorable first day, serves as a vehicle for sharing with others the insights I was able to articulate. This is a natural part of the action research investigative process. The insights and principles thus derived have formed an important part of my teaching stance in the time I have been conducting the action research that has led to the Primer.

The action research process, articulating a commitment to improvement and understanding of practice (and the practitioner), driven by personal values, and manifested in factual and subjective research accounts - narratives of

daily unfolding action - has also become for me a fundamental approach to ongoing practice. I grow clearer now about the foundations of my professional knowledge. Some tacit truths have been made more explicit. The values I have articulated and have moved closer to are best shown as narratives put together from notes in my journal. This narrative, and subsequent others, are supported by excerpts from the writings of theoreticians and new heroes of mine that have become part of my operating insights. I have been re-searching in the sense expressed by Burnaford et al:

> "Research ...(is) the search for practical possibilities - teachers and students searching themselves, their classrooms, and their worlds for <u>educative meaning</u>. Such meanings are contextual and often socially constructed." (Burnaford et al 1996, xii)

In the journal notes and narratives, I have made some progress in being able to ground the action of teaching in who I am - and to relate the professional to the personal. I have, over time, come to agree with Burnaford et al that "faithful description helps one to see more", and I have learned that reflection is a "standing back, a pausing to reread, to mull things over and search for connections, associations, significances and possible meanings not noticed before". (Burnaford et al 1996, 13)

I am guided by Eudora Welty's insight, which is underscored in one of our action research seminar readings:

> "The events in our lives happen in a sequence of time, but in their significance to ourselves they find their own order ... it is a continuous thread of revelation." (Sumara and Luce-Kapler, 394)

Writing narratives of, and reflections upon practice, the process of which culminates in the story of my return to

teaching, is a key part of my effort to make and share meaning as a teacher. This process has enabled my growth as a reflective practitioner.

A new research context - towards a new research question

Most of the ideas in the Primer have evolved over the years through the process of action research, which I carried into practice as a regular teacher. After only a few months of Teaching-on-Call, I was offered a continuing contract with the Richmond School District, teaching Art, as well as other subjects.

My art assignment has usually involved teaching Art 9, 10, 11, and 12 in a class together, occasionally with the odd grade 8 student thrown in to the mix to keep matters even more exciting. Initially, I taught Visual Arts 3-D to this broad range of students, with drawing and other 2-D techniques included as supporting skills. In order to simplify the timetabling in our department, I was asked a year ago to teach Visual Arts 9-12, both 2-D and 3-D together. Over the last several years, I have occasionally, (maybe twice) been given an art class comprised of one grade, or perhaps two grades only. It turns out that the mix of grade levels and experience and ages mostly works to our advantage in the artroom. Students seldom have the advantage in the graded school system to mix with others of different grade levels, and the general atmosphere of the classroom is collaborative rather than competitive. It is from this lively context that the Primer has emerged.

So what am I curious about? - formulation of the new research question

I have noted before that I was delighted, though somewhat bemused, when the two teachers for whom I have the highest regard both said exactly the same sentence to me: "I don't know anything about architecture". These statements were made more than four years apart, perhaps when I personally needed to hear them the most. The first time a teacher said this to me was during the course of my preparations to return to teaching. The second time was short weeks before I began writing the actual text of this document.

I have been keeping notes in preparation for this writing for a long time, and my journals and files are stuffed with words, diagrams, photographs, samples and quotations. Each course outline has been covered with notes about refinements to project ideas and new ideas that spring from ones already presented. My daybooks are spotted with immediate, scribbled reflections which are collected into a journal, when the intensity of teaching changes to the quiet of after school hours. I keep track of feedback from colleagues and students. The years fly by and insights accrue. How fitting that my notes have this propitious statement, spoken by highly regarded colleagues: "I don't know anything about architecture" - at both the beginning of my return to the classroom and again, so recently.

1.3 Rationale for the research question: why is this important?

"I don't know anything about architecture". That's what I am curious about. If we use 'place making' as a starting point, then how might sophisticated, well-educated people like my two statement-makers think they know nothing about

this? They know a great deal and they spend their lives sharing with fortunate others. And they have both lived in and around architecture in the broadest sense all their lives. So I am curious as to why they would say this. Have practitioners of architecture and/or our culture in general somehow caused 'architecture' to seem too arcane for formally uninitiated people to feel part of this process, to claim knowledge of it, to feel 'qualified' to participate? If this is the case, then the concepts of architecture clearly need to be examined.

In our culture, it is estimated that roughly ten per cent of building projects involve a professional architect. Clearly, there is scope for the actions of non-architects in our place making activity. Place making and being-in-places is a natural activity of humans - the people should be able to approach this natural activity with confidence rather than the often articulated insecurity.

Clearly there is some mystery associated with 'architecture'. It is viewed by many as a respected profession, a guild composed of the selected few who pass through the rigorous rites of passage to emerge as experts in the art and science of place making. And yes, a formal education fitting one to deal with the countless issues involved, especially in the making of a complex place, is an important foundation for the place making process in many instances.

I do not denigrate or deny the need for experts. My critical point is that the input of formally trained and practiced experts is but a part of the requirement for sensitive and thoughtful place making. An aware and confident populace, willing and able to participate in this critical process, is a key part of the process as well. I would venture to guess that someone who declares "I don't know anything about

architecture" does not feel this confidence and is unlikely to agree to participate in the act of place making.

The people should not simply accept our places from formally trained others, imagining perhaps that this is some prescribed way decreed by the arbiters of art, science, economics and safety, and then adapt our places over time to suit ourselves rather than the expert decision maker. Rather, all people who dwell in places might feel welcome to participate in the creation and ongoing revision of our settings: both the built environment and the sites upon which we build.

Although it is an intriguing question, I think it is beyond the scope of this work to investigate why people feel they don't know about architecture. I am much more curious about investigating what to do about this. I want to explore the teachability of architecture, with the goal of finding ways to ensure that students and their teachers will never feel moved to say "I don't know anything about architecture".

In our society we are learning to take part in a reasoned and informed way with respect to the medical care of our own bodies: researching options, experimenting with alternative medicines and methodologies, questioning the total authority we have traditionally given to doctors. I envision, in the same manner that we have begun to participate more fully in the processes regarding the care and maintenance of our own bodies, that we should be able to similarly participate in matters regarding our settings. We can act with reasoned awareness and assurance, knowledge, and with respect for the varying complexity of our projects.

So my research question falls naturally out of this goal:

What is the nature and scope of an architectural primer designed to assist educators to encourage a citizenry that is aware, responsive, willing to become involved and capable of responsible participation in the shaping of our collective and private places?

This approach to place making and being in the world could be organised into three integrated areas, the three Rs of architecture. The program would guide and encourage students to:

- **realise** - thoughtfully look, see, consider what is
- **respond** - envision and consider what could be
- and accept **responsibility** at the micro and macro scale to affect needed and appropriate change.

I see each 'R' as part of an integrated concept that begins by encouraging alertness to the environment and one's own powers, and leads to the development or discovery of a sense of personal efficacy of each inhabitant of a place.

I think that these three environmental 'R's' are as important to an educated person as are the traditional '3 R's'. We need to be able to operate capably with all the R's to maximise ourselves and our individual and shared settings.

So how will I move towards answering this question?

My methodology is meant to be qualitative in nature. This is an action research project which is based upon iterative explorations of possible approaches to the question. I will present ideas for lessons or learning sequences that were developed to build upon the following goals:

- to strengthen awareness of the environment,

- to encourage rich and thoughtful responses to situations and circumstances in our settings,
- and to nurture a sense of personal responsibility and efficacy in the matters of personal and collective place making.

As a part of the study, I will take a look at some existing programs which have presented architectural ideas in the schools, especially the work of the Architectural Institute of British Columbia Committee called Architects in Schools, and such educators as Ginny Graves of the USA, and Eileen Adams of Britain.

Buoyed by models and guided by personal beliefs, I will recount stories of a series of educational experiences which I have presented and refined as a teacher and as an Architect-in-Schools over the last two decades. I have had the opportunity to work with these ideas in my classes in the public school system, at the Shadbolt Centre in Burnaby, at classes for highly motivated students in several school districts, and as a Teacher-on-Call at several schools. These reports will be presented in a narrative style, again reflecting my belief (and agreement with Carl Rogers) that the personal is most universal - teachers can adapt my stories of practice to meet their own unique requirements.

My role in this work has been participant-as-observer and observer-as-participant in the learning settings. I have practised reflection-in-action and reflection-on-action. My journals have been critical to this process. As David Hobson writes: (Burnaford et al 1996, 10)

> The journal is a place where much of that very important research process can be described, drawn, reflected on, analyzed, and put back to use in the classroom. Each teacher's journal can become the textbook of emergent practice, ongoing research, and as such may be the most important book a teacher can fully write and read.

But the process of action research does not end with the journal. A text introducing the methods of action research states it clearly:

> The final stage of action research is when the process and outcomes are made public. (Altrichter et al 1993,176)

These authors consider it important to make teachers' knowledge public, and back this assertion with several strong reasons. They urge against what they term 'teacher privatism' and believe that this traditional reticence to share is "detrimental to the development of insights on professional practice."(ibid). Moreover, they believe that reporting

> saves knowledge and insights from being forgotten in two senses of the word: by reporting and communicating your own experience you root it more deeply within your own memory, as well as making it available to other teachers and the professional community as a whole. (ibid, 177)

I was able to generate and maintain the iterative loops of learning in the various artrooms and with the wide range of students I was fortunate enough to have access to. I was able to collect a rich supply of student samples to use as visual data in my research. I have snapshots, wordshots, my own observations and the comments of interested others. I have questions, theories, answers sometimes too. The results of my efforts have been edited and sifted to glean the useful material that can be passed on to other teachers in the form of a document which I have chosen to call the 'Primer'. This Primer, Chapter 5 of this document, is composed of a series of narratives, informally and writerly styled reports of the lessons tried in this research. I agree that

> The realm of meaning is structured according to linguistic forms, and one of the most important forms for creating meaning in human existence is the narrative. (Polkinghorne 1988, 183)

I am spurred on by the words of Susan Jungck who writes:

> The personal construction of narrative or story, is the process through which individuals integrate a multidimensional way of knowing. The dynamic nature of narrative is particularly important in research; if we interpret our experiences through narrative, then we can and often do reinterpret those experiences as well… stories of experience and understanding reflect stories of change as well. This represents not only the power of narrative as a way to grow, but the potential of this form of research as well to promote growth and change…the methods of personal accounts research…with their essential reliance on the first person "I" are intended to reflect the legitimate and necessary presence of a researcher. Narrative accounts of experience and research reflect the processes through which current understandings are derived as well as their temporality; they are not definitive or static findings. (Burnaford et al 1996, 177-178)

And I am inspired by the work of Sylvia Ashton Warner, whose wonderful narrative, Teacher, first published in 1963, became a beacon of light leading me towards richer and more humane practice when I first read it in the summer of 1967, before I returned to my third year of teaching. Subsequent readings have served to reaffirm my belief in the power of narrative to bring stories of practice alive in such a way that others can benefit from the tale. Although she was describing her days as a teacher in the infant room of a provincial New Zealand school, far from my experience in a secondary school artroom, no pedagogical textbooks have enriched my development as a reflective practitioner to the degree that Sylvia Ashton-Warner's simple but evocative book has done.

I envision the Primer as being of use to teachers who perhaps worry that they don't know anything about architecture. I title it 'Primer' to suggest that it contains simple accessible ideas, not mysterious arcane suggestions that require years of special training to become expert in Matters Architectural. My guiding metaphor for the work is that the

lessons described might be used by teachers not just as seeds, but more as bedding plants, to move forward to the goal of integrating the concepts of architecture into the rich garden of curriculum that exists today in our schools.

Concluding Real Questions

"Is teacher research real research? Where? With whom?

When teachers as researchers are affirmed; when teacher knowledge is respected; when teacher language is legitimate; when theory, practice and reflection are united; when teacher-researchers are experts, change agents, producers, and consumers of meaningful knowledge; when teachers pioneer new methods of knowing; who *really* benefits?"
(Susan Jungck, in Burnaford et al 1996, 178)

I understand that I have been mostly affirmed, respected, encouraged, supported, understood in the course of my preparation and practice as both architect and teacher. I recognise that I have had access to guidance by educators and practitioners of profound knowledge and generosity. I take for granted that the rich wealth of ideas of others has always been readily available to me, and I understand that I have something that may be of value to others to share. I see how I benefit from participation in the communities of learning where I have been welcomed. But the real reason that this is important is my students, the ones who *really* benefit if they have access to meaningful and engaging programs.

I don't ever want students or teachers to feel the need to draw back from architecture. My goal is to enable young people and their teachers to feel securely grounded in what I

have, for purposes of clarity, termed the three R's of architecture. I hope they can receive their surroundings and form an awareness of their what is and what might be, feel enabled and moved to participate in an active response to our settings, and operate with responsibility and sensitivity on this planet we all share.

CHAPTER 2 Educational scaffolding

2.1 Is there educative value in using the ideas of architecture in the classroom?

We know more about architecture than we might think we do - it is all around us, providing at least part of the setting for our lives. Architecture study can therefore be a very satisfying pursuit, because we can recognise and crystallise insights - we have plenty of prior knowledge that comes clear with some reflection.

Learning about places and place making is interesting and engaging, for myself and for students. I have noted that students tend, in general, to be interested in, and highly motivated to consider architectural concepts. Moreover, our relationship with our surroundings is important, and should be carefully attended to. This is one way in which the curriculum that unfolds in an artroom can become a relevant part of our way of moving through the world. Authors June McFee and Rogena Degge, in their encyclopedic handbook for art teachers titled Art, Culture and Environment, assert that we all influence the quality of the shared environment in one way or another. They state:

> The quality of the environment depends on people's ability to use their design sensitivity, their social responsibility, and their ecological concerns together to solve environmental problems. When this is done, art is not an appendage, but an integral part of decision-making. (McFee and Degge 1977, 10)

These same authors further observe that environmental psychologists (citing Ittelson et al, 1974) state that the built environment has a tremendous impact on our lives: the impact of the built environment on people's sense of who and what they are is critical to social and individual well being. (McFee and Degge 1977, 111) This supports the 3R's claim that a curriculum which promotes awareness of the designed environment - 'Receive', offers an invitation to participate and the promotion of some skills and confidence in designing the settings we inhabit - 'Respond', and guides some sense of responsible approaches to these efforts - 'Responsibility' is a necessary part of everyone's education.

A quotation from a handbook for students from the Beaumont Art Museum of Southeast Texas, printed in 1979 (no further source information available) gives a further rationale for teaching about places and place making in the schools:

> Although one of its goals is to prepare future citizens to make environmental decisions, built environmental education is not an end in itself. It is not a new subject area to be added to the school curriculum, but rather an approach to and a framework for learning in all areas. It is rare that one can become involved in something that makes sense, in some way, to almost everyone it touches - young and old alike. Built environment education has that quality. The skills and attitudes acquired through observation and participation in built environment activities can be applied to the learning of all subject matter.

This statement embodies a broad view of the possibilities of built environment education, which provides the context for a rich array of learning goals - for connected,

relevant, and engaging interdisciplinary learning. Through such a study we can begin to knit a meaningful worldview together with and for our students/co-learners.

2.2 Interdisciplinary connections

Architectural concepts are useful in teaching in a range of disciplines. Early on in my studies I saw ways to translate what I was learning as an architecture student into learning opportunities. In my daughter's daycare and elementary school classrooms, for example, we tried some measuring/mapping projects. Later, in more structured extra-curricular programs for highly motivated students, and as a teacher-on-call and a regular classroom teacher in the public school system, I began to adapt and use ideas from my studies in artrooms and technical skills classrooms, social studies and even English classes.

As a founding member of the Architects in Schools program of the Architectural Institute of B.C., I have had the opportunity to see the enthusiasm and practical and creative expertise of both teachers and architects in the classroom grow over time. We all became more aware of the potential of architecture as a rich topic on its own, and as a way to facilitate the integration of existing subjects in the curriculum. Interesting and fruitful connections can be explored between architecture and all the social studies, language arts, fine arts, sciences, mathematics, home economics, technical studies, career and personal planning.

The lesson suggestions presented in the Primer reinforce the content of other subjects and disciplines as well as developing skills that can be used in many ways other than the explicit art projects they are embedded in. Some examples:

> The mapping exercise, in its various forms, encourages learners to look, with some increased awareness and analysis, at the journeys they make in the course of their daily lives. What is important in the journey, and how does the expression of the journey reflect the personal attributes and values of each person? These are interesting questions for teens, and it is particularly illuminating for students to see their choice of focus, for the mapping of the expedition from bed to schoolhouse door, in the context of the other students' selections.

> The perceptual skills required in attempting to draw one's home from the imagination and the increased awareness from actually looking at the home and drawing it again can be transferred to any operation requiring the ability to actually <u>see</u> rather than just <u>use</u> a portion of our environment. Students often express their amazement at how little they knew about such an important place as their own home before they really took a close look at it in order to draw it with some accuracy. McFee and Degge suggest that students who look at things "only to know what they *are*, need more time and help to see the pattern of design". (144) Once students recognise that they are not really aware of even such an important place as

their own homes, they are receptive to learning to see more adequately, to look for and acknowledge the patterns - the order and variety and the visual language of houses and other built forms.

In the course of designing simple or complex places, whether singly or in small groups, students are required to develop, and refine, many attributes. These attributes include: flexibility, analytical problem solving skills, cooperative skills, the increased ability to visualise, the application of mathematical and scientific abilities, the application of insights gleaned from social studies, and increased awareness of personal as well as group choices.

Students are given the opportunity to consider how their own particular energies can be harnessed to improve the quality of surroundings shared by the larger group. Such experiences as the actual planning and embellishing of their school, or the theoretical refitting of a shared community space in the 'unpaving' project exercise this ability to contribute socially. Moreover, in the consideration of events outside the daily life of students such as the '911' redesign of a large urban area, or the initiatives to collaborate in action with people of another culture, students begin to see ways in which their socio-cultural values can help to make a difference.

Opportunities are there for a wide range of learning possibilities -including the acquisition of interesting and useful information and skills. A favourite project with students is the 'travel to make art' project, motivated by a close look at Emily Carr and her travels about the province in her caravan. This combines a close biographical look at an important historical hero of our heritage, an opportunity to practise the process of design in a simple manner, and a chance to closely investigate a self-selected geographic area.

To summarise:

I see the principal educational meaning in the approach presented in this document to reside in the basic goals of the program. The 3R's represent in shorthand what I have come to consider the educative foundation that built environment education can promote: the deepening of appreciation and awareness of our surroundings (which I call 'Receive' - the first of the 3Rs), the enjoyment and sharpening of creative problem solving attitudes and techniques (which I call Respond - the second R), and the development of social values and collaborative abilities (Responsibility - the third R.)

This is the theoretical basis of the lesson sequences in the Primer. Each of the learning experiences focuses upon at least one of the 'Rs', but most projects involve the three Rs: Receive, Respond and Responsibility.

Latent awareness, teachable expertise, and civic concern based on some consideration of values and influences, all incubated in the designed environment that most of us inhabit much of the time, can be nurtured to produce an aware citizenry, willing and able to respond and participate in the shaping of the environment. This tall order can be filled by the active integration of all disciplines in the study of the built environment by all students, not just those who wish to specialise in the built environment as a career. While I would never deny the need for architects as expert contributors in matters to do with the built environment, I believe that education must involve a fitting out of a general populace which is prepared to participate in aware, responsive, and responsible dwelling in our places.

2.3 Approaches to learning - what do the psychologists have to say to art teachers?

Individuals perceive and process information in very different ways. Instead of teachers and students themselves asking if a student is smart, the germane question is 'how is this person smart?' Theories of learning styles are based on research demonstrating that heredity, environment and current demands enable individuals to deal with information in different ways. These ways are generally classified as to modes of perception and modes of processing.

Concrete perceivers are generally thought to be those who absorb information through direct experience, by doing, acting, sensing and feeling. Abstract perceivers take in information through analysis, observation, and thinking.

Active processors make sense of an experience by using the new information quickly. Reflective processors make sense of an experience by reflecting upon it and thinking about it until readiness to act occurs.

As educators, we need to reflect upon the modes we favour. Are the concrete perceivers and active processors adequately provided for in a system that seems to expect abstract perceiving and reflective processing? The important matter is to ensure that experiences must be appropriate as well to students' readiness to learn, and to enable the development of the range of learning modes in

each learner. McFee and Degge, whose handbook for art teachers includes a section on what art teachers can derive from psychology, is unequivocal about this point. They state:

> As teachers, we have to help children use the learning aptitudes they have already developed, but we can also help conceptual children become more perceptual and perceptual children become more conceptual. (McFee and Degge 1977, 336)

Learning experiences in the Primer include opportunities for the development of perceptualising in the range of drawing and awareness exercises suggested; conceptualising as a prelude to any design process - verbalising (written and where necessary, spoken) and image making comprise preliminary work to be done. Some students need to be encouraged to try to perceive and process in the mode which they may not have developed - I see it as the task of teaching to determine who requires what kind of encouragement and guidance. MccFee and Degge comment that a student whose success in art has always been through impulsive expression may not have learned to be very reflective in his/her approach. Teacher intervention to help such a child to reflect could indeed help him or her to develop the habit of reflection. Some students engaged in simple design projects in my classroom are surprised at my insistence that they write actual design briefs and provide several alternate possibilities to consider before selecting a design idea to develop. It has not occurred to some that verbal processing can be a part of activites in the artroom. (The converse happens in my English and Philosophy classes when I ask students to draw what they are thinking, to retell an essay they have just written

using visuals only, or to translate a descriptive passage they are reading or writing into visuals. It doesn't usually take long for them to find a way to do this.)

McFee and Degge point out that 'impulsive expression in art education has sometimes been stressed at the expense of analytic expression'. They note that:

> Since the time of the strong reaction to classic realism and disciplined drawing and the emergence of the child-centred curriculum, teachers have focused on self-expression at the expense of much reflective problem-solving.' (ibid 341)

The exercises in the Primer, and perhaps in any built environment curriculum generally, provide a wide range of complexity which can engage reflective behaviour and visual analysis as well as the opportunity for more intuitive and impulsive or freer response.

2.4 And what about Creativity?

McFee and Degge refer to psychological research which helps us to understand which traits lead to creativity in perception, in content of ideas in art outputs, and in problem solving. They write:

> The capacities to be independent, flexible, fluent, playful, to be open to new experience all provide children and adults with the attributes needed to be creative, but do not necessarily ensure it unless avenues to explore, invent, manipulate, and solve problems are available. (ibid 353)

A clear case can be made that the learning sequences of the Primer provide for such experiences. Students who have

attempted the design projects of the primer (toys, vehicles, chairs, and some simple building projects) and speculated about the creative possibilities of design for a specific client rather than the speculative market, understand this design as an intimate, at least theoretically doable, ecological activity which affects their life very differently from a shopping expedition. McFee and Degge ask: "Are you including activities that encourage constructive, aesthetically honest reuse of materials?" (ibid 354) While I see that the Primer activities do engage creative use of ideas and materials, I concede that this work done thus far is a beginning, a step along the way towards a higher order of well-integrated problem solving which would involve a more sophisticated understanding of recycling and the properties of materials, and a deeper grasp of aesthetic possibilities. McFee and Degge also suggest that inasmuch as creative traits are partly learned, we can encourage the development of creative behaviour by asking students to find "many workable answers to problems rather than single, most right ones". The design process suggested in the Primer, where students are required to find and consider several alternate solutions before developing one in detail, confounds some students initially, but most have little trouble integrating the idea. I have, however, found that it does make sense to the few 'holdouts', and it does yield satisfying results if I model the process for them and demonstrate a commitment to this aspect of the process.

In general, the possibilities for creative activity using the concepts and processes of built environment education

seem to me to be limited only by our confidence or imagination. If we own that we do know rather a lot about architecture rather than shying away from this knowledge, we can integrate this topic into the activities of the artroom to provide a rich source of creative learning experiences.

2.5 Howard Gardner's Multiple Intelligences - how the processes of architecture can connect with all the identified intelligences

In his work Frames of Mind: The Theory of Multiple Intelligences, Howard Gardner suggests that there are at least seven ways for people to perceive and understand the world. He has identified the list of intelligences to include:

Verbal-linguistic - using words and language - 'word' smart

Logical-mathematical - inductive and deductive thinking as well as the use of numbers and the recognition of abstract patterns

Visual-spatial - the ability to visualise objects and spatial dimensions and create internal images and pictures strong graphic sense - 'picture' smart

Body-kinesthetic - using the tacit understanding of the body, physical motion - 'body' smart

Musical-rhythmic - using the ability to recognise tonal patterns and sounds as well as sensitivity to rhythm

Interpersonal - person-to-person communications and relationships - 'people' smart

Intrapersonal - inner states of being, reflection and awareness.

Natural - alert to the laws of the natural world - 'nature' smart

In an interview with Ronnie Durie, co director of Project Zero at Harvard, Gardner cautioned that this system of attending to the differences among students should not be

used to label them. He claims that the intelligences are categories that help us to discover difference in forms of mental representation; they are not good characterisations of what people are (or are not) like. We should therefore use this reflective system to seek and discover what is special about our students, and to personalise instruction, where possible. In short, Gardner asserts that everything can be taught in several ways. If we reflect on the various intelligences we are trying to reach, we will be able to find ways to match instruction to particular types of receptivity.

I have discovered that most students love to consider their own ways of being intelligent, and I begin each course, each year, with a short discussion of Gardner's theory, which I ask them to apply to themselves. I ask them to make an eight petalled flower (or a hubcap, or a tree - whatever symbol personally suits), and to discuss their relative strengths and yet-to-be-developed strengths in each area of intelligence identified by Gardner.

Without belabouring the point, I posit that the possibilities inherent in designed environment education appeal to each of the range of intelligences here listed and provide ways to engage and to strengthen each way of being smart. Some areas may be more obvious than others, so perhaps a bit of discussion is helpful.

<u>Linguistic</u> - Students who are 'stuck' while trying to develop an idea visually for a design often discover that

trying to describe what is needed in words helps to get the ideas rolling. Even the making of a simple list of possibilities often serves to mitigate the intimidating whiteness of a fresh page in the sketch book. In design projects, I ask students to annotate their drawings - some students become quite chatty - and often the level of verbal detail helps to encourage a similar level of visual detail in the drawings.

Logical - Mathematically minded students like to use the architectural tools that I make available. Graph paper, rulers, scales, protractors and compasses, even templates of geometric shapes seem to comfort and encourage the mathematically inclined in their design quest. I have observed that this does not seem to hamstring creativity. The results might be quite innovative and sometimes startling, but the process might lean more to the scientific and mechanical with students who have developed confidence in their mathematical ability.

Visual/Spatial - I believe, and share this belief with students, that the ability to visualise and create internal images is quite easy to develop, though of course it develops differently in each person. As a beginning architecture student, I(along with many of my peers) was troubled enough when required to draw an existing building. We were very surprised to discover how difficult it was, at first, to draw a building that didn't yet exist. Being a bookish, verbal-linguistic type, I raced to the library to do some research on the subject of visualisation. I no

longer have the sources available to quote, but I made some discoveries that helped me a great deal. It was in the library that I discovered the theory that visualisation is a skill that can be developed with practice. Certain simple visualisation exercises, such as envisioning and manipulating simple geometric shapes, were prescribed and earnestly attempted. Confidence and ability grew. Learning to see with interest and awareness, and using drawing to help sharpen the ability to see, fed my ability to see more imaginatively, to visualise what couldn't yet be seen. I share these suggestions and simple exercises with my secondary school students whenever I hear the same lament, so often heard in the introductory studio at the School of Architecture: 'how can I draw it if it doesn't yet exist?' Young students respond in much the same way as architecture students to the simple exercises, though sometimes it seems with less crystallised fears and barriers to overcome. Of course the act of closely observing and drawing actual objects in the world, and of applying design strategies and creative interpretation to what is focused upon also helps to sharpen the visual and spatial facility.

Kinesthetic - A good way to integrate the body-kinesthetic intelligence into the study of places and placemaking is something I found in the AIBC Architecture for Kids program.(9) This exercise could be used to foster an awareness of the structure of a building and the structural forces and reactions involved. When students are considering a building, and trying to determine the principal structural elements, it helps to try to

understand by 'acting out' the elements and forces involved. The diagram, borrowed from the AIBC program, shows how students singly and in groups might be able to demonstrate how a post and beam system operates, how a dome or a barrel vault works, and what a cantilever or a truss or a buttress is, including a sense of how the forces involved might operate.

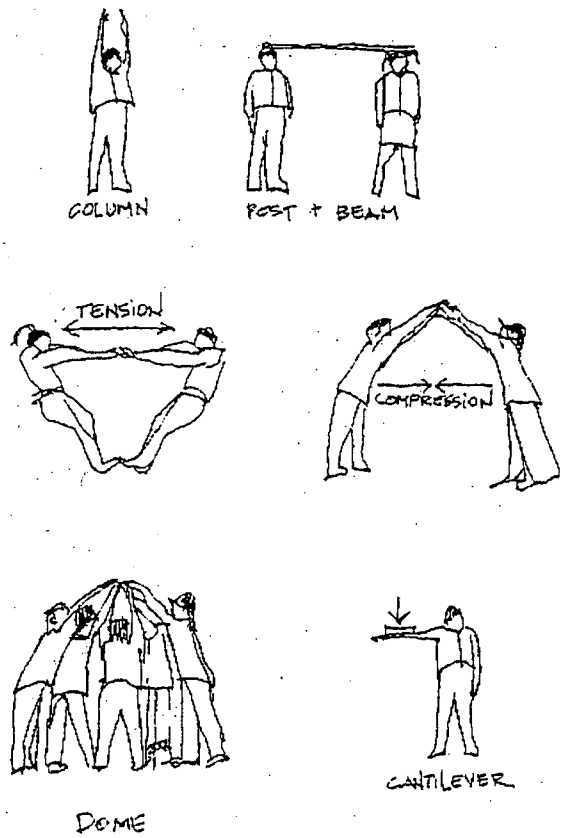


Figure 4. How we can understand structure with our bodies.

The body-kinesthetic intelligence is engaged as well when students are asked to consider how a structure that they design might respond to the physical requirements of the user, and how questions of comfort and convenience might be addressed. Students are required to reflect upon and document how a space might be used, which activities might be supported in that setting, how an actual person living in an actual body might experience the place that they have designed. Moreover, students can chalk full-sized plans onto expanses of, say, pavement, and imaginatively inhabit those plans, adjusting them at full scale as better arrangements and configurations are imagined.

Musical - Again referring to AIBC materials, I have seen a wonderful learning sequence which relates built form to the musical-rhythmic intelligence. I was once present when Clyde Mitchell, the assistant conductor of the Vancouver Symphony Orchestra, met with a group of young students at a workshop at the Simon Fraser downtown campus to consider the musical or rhythmic aspect of buildings. The expressed purpose of the exercise was to 'read' a façade's rhythms, and set them to music. Which instrument can best express the rhythm of a row of beautiful windows, or a delicate wrought iron fence, or an ornate dome? With a little guidance, students were able to set the building façades to music, to play their song. Students with a sophisticated musical sense seem to have little trouble making the connection between the cadence of a building and musical rhythm. Those with special strength in the mathematical/logical intelligence seem to really enjoy this sort of activity as well.

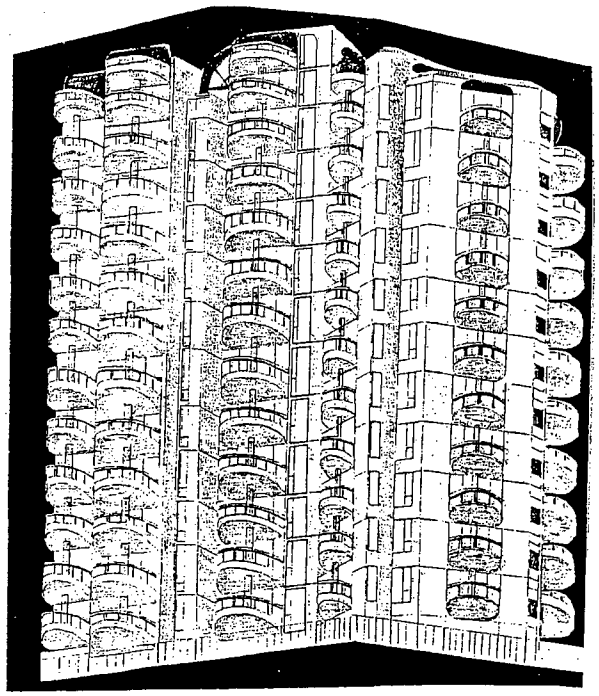


Figure 5. A complex, rhythmic building - student drawing.

Interpersonal and intrapersonal - Many opportunities exist, even in the course of one project, for students to experience interpersonal interaction as well as intrapersonal, more inward looking action. We need to dare to dream, individually and collectively. Placemaking activities offer a lovely chance to collaborate, to see how a small group can grow ideas perhaps well beyond the capacity of any one person to develop and resolve. This collaboration also provides an arena for practising the delicate arts of group dynamics, which are not always simple to achieve. The growth of responsibility, both individual and collective, can be nurtured in projects

which benefit ourselves and others. What better way to acquire a taste for anticipating and meeting society's needs than to explore ways to make delightful places for us all to share.

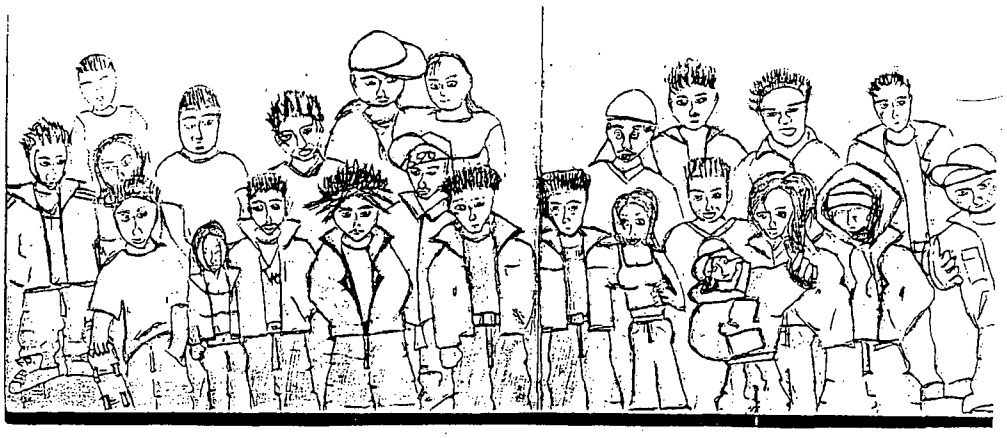


Figure 6. Drawing by a young man whose chief interest is interpersonal. This is his impression of his high school.

Naturalist - Many students prefer the stimulation of their indoor pursuits to the joys of getting out in the natural world. Often this is because they have not really been encouraged to encounter nature in a personal way - or because paradise has been paved with some finality in their immediate surrounds. Certainly if students are going to be encouraged to make places, they need as well to be encouraged to understand the setting in which those human made places will be created. To the degree that it is possible and appropriate to the program, students need to learn how their (and all our) interventions on the natural landscape affect the natural ecology.

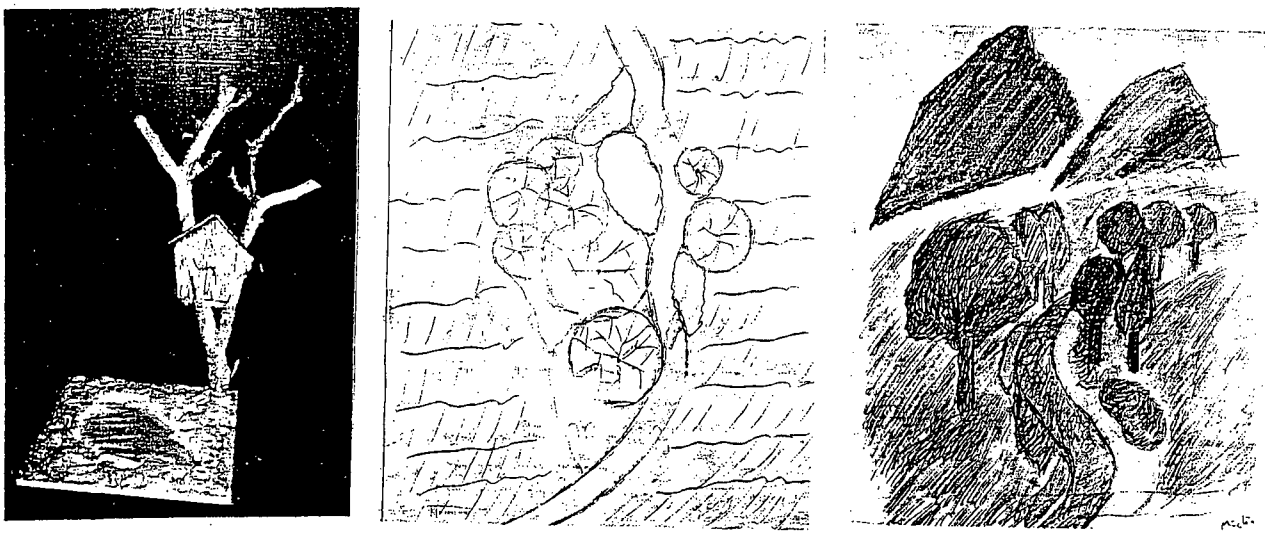


Figure 7. Drawings and explorations by students whose appreciation of nature is highly developed.

Howard Gardner does not see the consideration of Multiple Intelligences as an educational end in itself, but as a powerful too for educating. Having an awareness of the strengths our students possess, enables teachers to plan programs that will enable learners to maximise their achievement. The possibilities of a rich subject such as architecture seem almost endless with respect to appeal to the various intelligences that Gardner has identified, and that we have probably always instinctively understood as ways of learning.

2.6 Right brain, Left brain

The theories regarding the structure and functions off the mind suggest that the two sides of the brain control two different 'modes' of thinking. It is further suggested that each individual prefers, or at least has a stronger affinity for, one side or mode over the other.

Experimentation has shown that the two sides, or hemispheres of the brain are responsible for different ways of thinking. The left side of the brain has been found to be the seat of logical, rational, sequential, analytical, and objective and detailed thinking. The right brain has been found to be the side used for random, intuitive, holistic and subjective styles of thought.

Schools are generally thought to favour left-brain modes of thinking, although the appreciation of aesthetics, affect and creativity is more valued, perhaps, in education now than previously.

Clearly, learners would benefit from a curriculum that would nurture and expand the powers of the whole brain. Thus if we value and attend to matters involving the imagination and acts of synthesis, we are engaging the whole brain rather than simply the left, logical side.

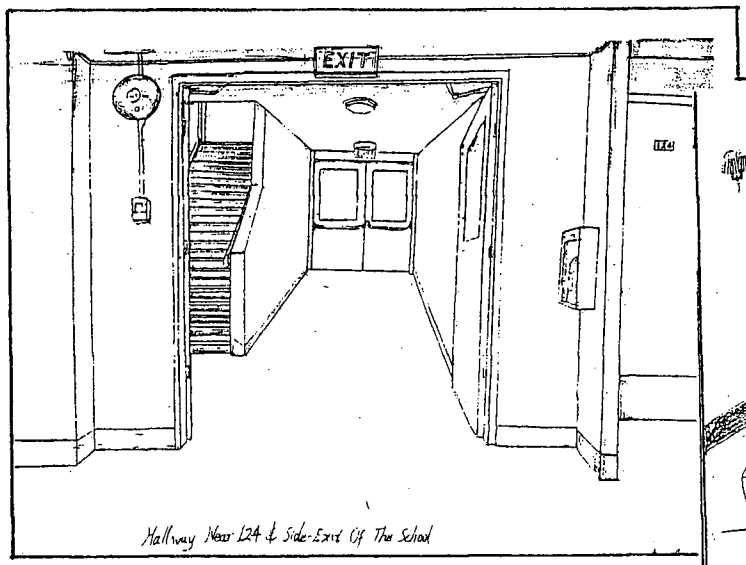
Betty Edwards, author of Drawing on the Right Side of the Brain, shares some simple techniques to help art students engage the right side of the brain to help us see in a

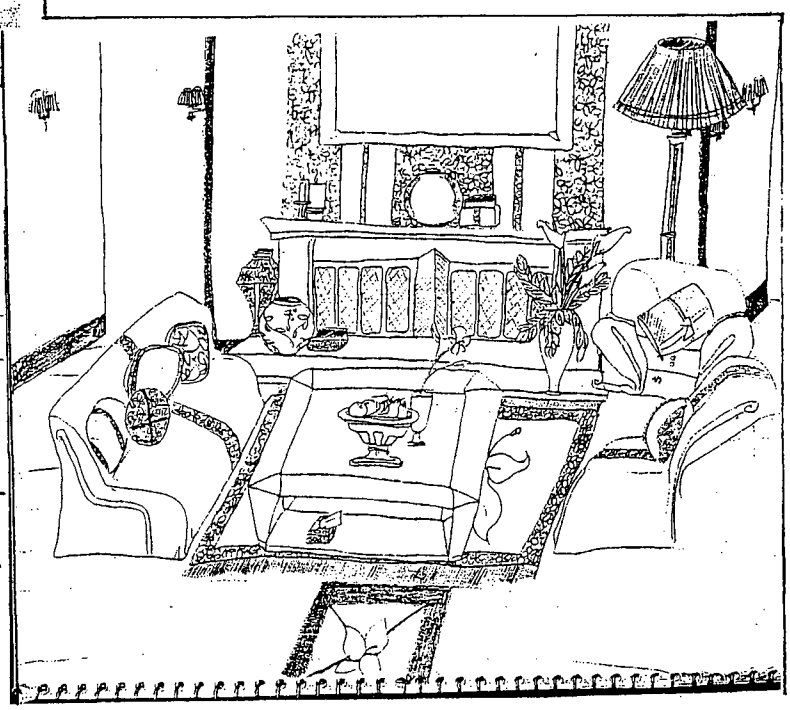
fresh and alert manner. Some of her exercises include drawing a complicated object of figure upside down, rather than right side up - in the way we are accustomed to seeing it, to force us to look with fresh eyes. This helps the seer/drawer to really look, rather than use stored information that is known about the object or figure instead of looking to see what is. This, as Edwards describes it, "forces the cognitive shift from the dominant left-hemisphere mode to the subdominant right-hemisphere mode". (Edwards 1979, 53)

I have often used this technique as a sketchbook exercise to introduce students to the concept of a fresh look. Students are often very surprised at the accuracy they are able to achieve in a drawing if they look at the object model in a way that is not typical. They are also amazed at how they can copy a quite complex drawing that they would not normally feel confident to tackle, if they draw it upside down. (I ask them to enlarge the image slightly, to avoid the temptation to trace.)

Edwards discusses the technique of contour drawing, introduced by Kimon Nicolaides and well known to many teachers. She suggests that this method, of following with the eye and drawing edges to simultaneously engage sight and touch, is disliked by the left brain "which rejects the slow, meticulous complex perceptions of spatial, relational information, thus allowing access to R-mode (right brain) processing". (ibid 82-83) This technique can be used for drawing any subject, but it becomes especially interesting in this context when applied to drawings of built form.

Combined with the simple technique of 'sighting' or what I term 'eyeballing' in drawing built form, this has real value in enabling break-throughs in confidence, especially when confronted by challenging complexity. She suggests that instead of using complicated systems of perspective drawing, sighting is "visual perspective, with the optical information perceived directly by the eye and drawn by the artist without revision." - using the right brain to observe angles and line directions. (Edwards 1979, 119) The edges of the paper represent the true vertical and horizontal. The pencil, held parallel or perpendicular, allows the artist to gauge the angles being observed with respect to the pencil and then the angles or line directions are drawn on the paper in relation to the horizontal and vertical edges. This simple device, engaging the right-brain, enables the drawing of complicated angles and tricky corners with accuracy and frees students to draw what they see simply and effectively.





Figures Pages from student sketchbooks.

2.7 Transmit Transact Transform

Curriculum building would not be complete without at least a brief discussion of the three major orientations to curriculum articulated by Miller and Seller in their book Curriculum - Perspectives and Practice.

The authors describe the three major positions or metaorientations in curricular programs: the transmission, transaction and transformation positions. Following is a brief statement of each of the three positions as outlined.

In the transmission position, the function of education is to transmit facts, skills, and values to students.(Miller and Seller 1990, 5) This position involves a 'one-way movement' - from curriculum, through the teacher to the student - to convey the content involved. Miller and Seller align this orientation with an "atomistic view of nature in which reality is seen in terms of separate, isolated building blocks." (ibid 6)

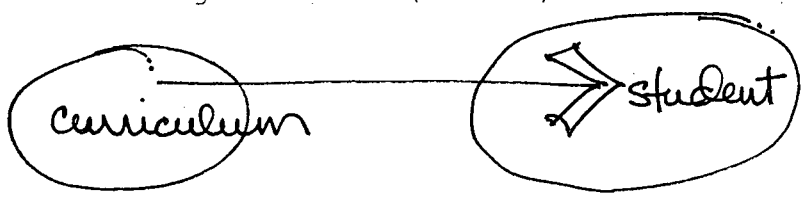


Figure 9. The transmission position.

In the transaction position, the individual learner is viewed as 'rational and capable of intelligent problem solving. (ibid 6) The connection between student and teacher is seen as dialogue between the student and the curriculum, and the emphasis is upon curriculum strategies

that involve problem solving and the application of problem solving skills in social contexts and development of cognitive skills in academic pursuit. Miller and Seller consider the paradigm for this position to be the scientific method, and the general belief underpinning this position is that "rational intelligence can be used to improve the social environment". (ibid 8)

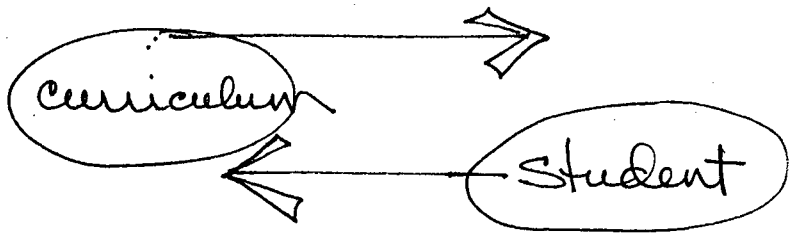


Figure 10. The transaction position.

The transformation metaorientation, according to Miller and Seller, focuses on personal and social change. They write of three specific orientations of this position:

(1) teaching students skills that promote personal and social transformation (humanistic and social change orientations)

(2) a vision of social change as movement toward harmony with the environment rather than as an effort to exert control over it, and

(3) the attribution of a spiritual dimension to the environment in which the ecological system is viewed with respect and reverence. (ibid 8)

In the transformation position, the curriculum and the student are seen to interpenetrate each other in a holistic manner.

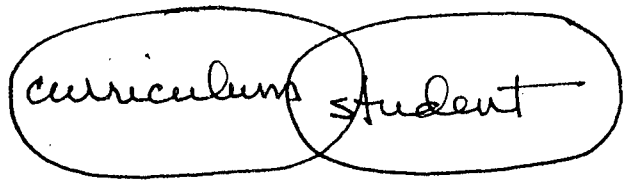


Figure 11. The transformation position.

The learning sequences in the primer consist of a mix of all the abovementioned curricular positions. There are simple skills to transmit in the program - as in mastery learning, as appropriate to the needs and interests of the students. For example, each student who sees a green pepper cut to demonstrate plan, section and elevation drawings is able, to some degree, to recognise and to draw using these architectural conventions. Architectural as well as standard artroom tools are handled and used correctly, again to the degree that the student is capable. Some textbook information is transmitted in the course of the Primer, usually based upon a judgement regarding the depth to which the student wants to pursue any aspect of the program. Often that is a surprising depth. But the course is not strictly built around the textbook, as it might be in the transmission model. The 'texts' (a wide range of relevant resources) are available, not considered core material but enrichment.

Miller and Seller create a "transaction scenario" for the future (ibid 341) wherein teachers focus on problem solving skills and on making students aware of their own thinking processes. The work regarding the analysis of a design problem, the design processes practiced in the Primer, could be considered in this light. Miller and Seller note as well that the "transaction scenario is characterized by some degree of emphasis on applying problem-solving skills to social dilemmas." (ibid 341) While this occurs in the Primer sequences particularly connected with sustainability, such as 'Unpave", and with respect to issues of social responsibility such as the poverty unit,

it differs from their description of the transaction model in that the affective domain is emphasised and integral to the work.

According to Miller and Seller, in the transformational scenario, there is a move toward decentralisation and human-scale rather than larger corporate decision making, and "people will tend to be more sensitive to global concerns and more likely to participate in local politics… and participative decision making". (ibid 341) Such individual participation underpins the Primer. Through involvement in individual and collective projects to shape the built environment, it is hoped that students will recognise and build their capability for cooperative social action. The authors predict that projects in the transformational scenario "will involve various efforts to improve the quality of life in the community". (ibid 342) That is a key thrust of the lesson sequences suggested in the Primer.

Inasmuch as the thrust of this document is action research, wherein I have completed my curricular explorations following the plan - action - observe - reflect pattern, I have not used the implementation monitoring models described by Miller and Seller. I have, however, been informed by the descriptions of the three curricular positions, and have recognised that the three models of curricular reality are all at work in the development of the Primer exercises.

Concluding observations

As a mature student in the School of Architecture - I was well into my thirties when I began - I often revelled in the knowledge that pretty much everything I had ever learned in my life was useful in this discipline. Young students can feel that joy too, as their general knowledge and acquired skills and insights are drawn out, reflected upon, and put to new and contributory use in their lives. Simple practical design problems, and theoretical efforts of grander scale, engage learners and focus their knowledge, insight and abilities in a satisfying, life affirming way. Creativity is sharpened, and both sides of the brain and all the resident intelligences are marshalled. Possibilities in our built environment can be shaped into lessons that satisfy a wide range of curricular requirements. The educative potential of architecture in the artroom and other classrooms is rich and plentiful.

Figure 12. Architecture in the classroom.

CHAPTER 3 Connection to broader themes of art and architecture and society

The discussion in this chapter gives background rationale for some of the learning sequences in the Primer. It enables some basic connections to be made with some of the broader themes of architecture. The Primer, chapter 5 of this document, which can easily be used as a discrete unit - contains narratives of practice which are grounded in these themes.

Of the many themes of architecture and art, I have selected five major ones to focus upon here. They represent my personal choices regarding some important considerations for students, teachers, and an active citizenry to explore. These themes are by no means an all-inclusive list of what could be presented in built environmental education, but taken together they support a cohesive approach for a series of learning experiences that are focused upon the built environment.

The first theme I explore here is Drawing, because some form of visual communication, drawing being the most obvious, is clearly fundamental to any kind of planning, or design. 'Drawing' can here be expanded to include diagramming, mapping, various forms and combinations of visual/verbal communication, but some facility in this area

certainly frees one to move forward with design. The expressive art program can well be supplemented and enhanced by the strengthening of drawing ability and confidence. The drawing skills that are developed through consideration of and interaction with the built environment integrate the logical processes of the left brain and the intuitive and holistic styles of thought of the right brain.

The design process is explored in order to direct enthusiastic energy insofar as this direction is needed. If the design process is powered by the notion that solutions to any problem do indeed exist, then an exploration of the processes by which one analyses a problem, explores options or alternatives, evaluates findings, and moves forward in an iterative way towards a goal is applicable in many areas, not just in the artroom.

I see something very natural about the design process. We 'design' in our daily lives in many creative ways, often unaware that we are indeed 'designing'. I think it helps to consider this process in an explicit way. Although I leave myself open to the charge that a problem solving approach is more of an engineering point of view than an architectural stance, I have chosen to focus upon the imaginative approach to creating something new, rather than the consideration of established precedents. Clearly, seeing existing styles and typologies is part of environmental awareness, and context is always an important aspect of our design deliberations. I have plenty of stimulating and informative material about existing architecture available, but I do not explicitly teach the

architectural styles or structures in this program, except when it is specifically requested by a student.

Phenomenology is introduced as a theme for consideration as it is a key approach in the making of humane and particularised architecture. This thoughtful, reflective position suggests for us new ways of seeing and thinking about our world. We learn to look with attentiveness and wonder at what exists in order to imagine and manifest what could be. The phenomenological approach helps us to search out and understand the unique character of a locale, to respect and act in concert with the spirit of the place.

Sustainability is another ethical stance I have recognised as critical in the putting together of this program. Although I do not explicitly teach the principles of sustainable development in my artroom, I believe that there are many ways that considerations regarding sustainability can be woven in to all education programs. I have gathered some reference materials, which some students have used in the course of their project efforts, and some of the learning experiences have explicit considerations of sustainability.

Tied very closely to the previous two themes is the theme of social responsibility, which underpins any environmental education in my mind. Architecture and the built environment are never just about form, but complex interactions between people and their settings. I think too, that many of the small interventions which we make to

affirm and improve our surroundings are sometimes not recognised as socially responsible contributions. Part of my goal is to acknowledge the actions we already perform, as a way of encouraging further generosity of this sort. Moreover, some of the learning experiences overtly address the questions that challenge us today: what can we do about poverty, threats of violence, environmental degradation? How can the next generation be fitted with some of the awareness and tools they will need in the future?

My objective in writing this document is to share some experiences, both theoretical and practical, much of which is embodied in these five themes, in the hope that it will inspire and help others to confidently tackle some of the substantial and fascinating issues of place making in actual classrooms. It is, by definition, a work in progress - action research is always iterative - and I welcome dialogue on any aspects of this work.

Themes

3.1 Drawing to art, drawing to architecture, drawing to action

It is interesting to consider how much and what types and quality of architecture would have been produced in the world without the range of drawing tools we have discovered for the purpose of communicating ideas. The tool might vary - for example, stick drawing on the sand, or scratches upon a sheet of ice may have provided a sketchplan; all

manner of interesting methodologies have without a doubt been employed in planning for building, since building first began. Moreover, each mode of drawing shifts the perceptions of what we are experiencing. But without some way of crystallising the initial vision, and a way of sharing that image with others, the making of architecture would have been severely hamstrung. Drawing is a key part of the process.

Based on this recognition of the importance of drawing to any sort of design or architectural project, I propose that a sequence of drawing exercises might be usefully followed before any attempts are made to create designs of any scale.

'I can't draw!'

It is safe to say that many students, especially at the secondary level, approach the artroom with some trepidation. Some are quick to confide that they are in the art class as a result of some force or mishap well beyond their personal control. I generally read this sort of statement as a subtle request for help. When they trust me a little more, the same student might convey the message "I can't draw" in some form or another. I generally read this as an incomplete statement: "I can't draw… but I want to - is this class going to change that?"

'Yes, you can…'

I define the job of an art teacher as the ability to reply "yes" to such questions/requests. Students need to be put at their ease - it is pretty difficult to produce anything when seized by fear of failure, public shaming, miserable moments passed waiting only for the bell to ring. I will try to set the fears aside, but all the words in the world aren't going to really solve this problem. Action is required. Results will be needed; drawing is, after all, an ally of words, but a quite different action.

Eileen Adams quotes Sue Grason Ford, the director of the annual Campaign for Drawing in the U.K., who offers the following encouraging remarks:

> We believe that, given the right encouragement, everyone - not just artists - can draw. And not all drawings have to be works of art. They can be used to explain our ideas or to understand how something works, to record impressions or to jog memories, to express what we feel or to entertain others. We can draw with anything from a pencil to a vapour trail, and on anything… (Adams 2001, 34)

I often tell students, and I note that they want to believe me, that if they can write - and some of them cannot, so I need to be very careful here - then they can draw. Moreover, I think that if they spent the same amount of time drawing as most of them do handwriting or printing, their drawings would show character as their handwriting or printing does. Sometimes, however, a student's drawing is much more developed than their writing ability. So blanket statements are inappropriate here. For students who have

well-formed handwriting, this serves as a confidence booster. Whatever the skill situation of the student arriving in class at the beginning of the course, I see the growth of some drawing skill as important. Visual literacy, including the development of confidence to make purposeful meaningful marks is, to my mind, as important as verbal literacy. And particularly with respect to the communication of design ideas, the two literacies can be made to work together to express ideas. Architects commonly use words and images to develop and express and clarify ideas, and in the critical process of communication with others.

Daina Augaitis, curator of the 'hipsters' part of the wonderful 'Drawing the World - Masters to Hipsters' exhibit at the Vancouver Art Gallery, 2003 wrote:

> Drawing seems as basic and intrinsic to human communication as writing - we scribble an image to cut to the core of a complicated idea, we doodle idly in a flow of consciousness, or we jot a diagram to explain connections. Its immediacy is as vital in the everyday world as it is in the art world. (11)

And Bob Steele, beloved proselytiser for drawing adds:

> The child has three languages for common use in the curriculum: words alone, drawings alone, and words and drawings in a single expression. (Steele 1999, 4)

So how can we teach drawing?

Where might we begin - to put students at ease and to offer them some insights on skilling, so that this vital

ability comes to life? I do not believe in simply teaching Drawing Skills as in 'How To'. I worry that this could fetter students' adventurous spirit - which in some ways, at the high school level, is already compromised enough by the wish to conform. I therefore propose a series of exercises to loosen up, get results, build confidence - and I admit to a bias towards non-conforming, fresh, free and flexible process and product. I do recognise however, that some students want to act like a camera. While I am quick to praise the fresh and unfettered, I also respect each student's right to follow his or her own vision regarding what constitutes a good drawing.

The first day

I start each course by giving each student a sheet of coloured paper, less intimidating than the regular 8-1/2 x 11 white. I ask students some questions which are open-ended and designed to allow them to tell me what they want me to know about themselves: their family and heritage, their likes and dislikes regarding art, their art background, their accumulated skills, confidence levels, and fears. From this I can derive an idea of their suppositions regarding their likelihood of survival in the artroom. The results I receive are often amazingly honest, and I then have a way of understanding the (hugely varied) backgrounds, levels of interest, previous exposure, skills and insights brought to the class. We might deal with families, origins, all in <u>any style of verbal or visual response - even stick figures welcomed</u>. (A surprising

number of students in secondary school do not draw beyond the stick figure stage, or use very simple schema or personal symbols, clearly learned in early childhood.) Students are asked to reflect on their favourite pieces of art that they have ever created, and to describe, preferably with an annotated diagram, one of their best creations. I have asked hundreds of students to do this on the first day of class, and have seldom received a null reply, except for those students who have never had the opportunity to make art before. There is almost always some little creative jewel crafted in their background, wanting to be shared again. (I have had students in the secondary school who have never made art before, never had an art class. Then I might get to watch them move swiftly through the stages of drawing development, often generating many pieces of which they can be proud.)

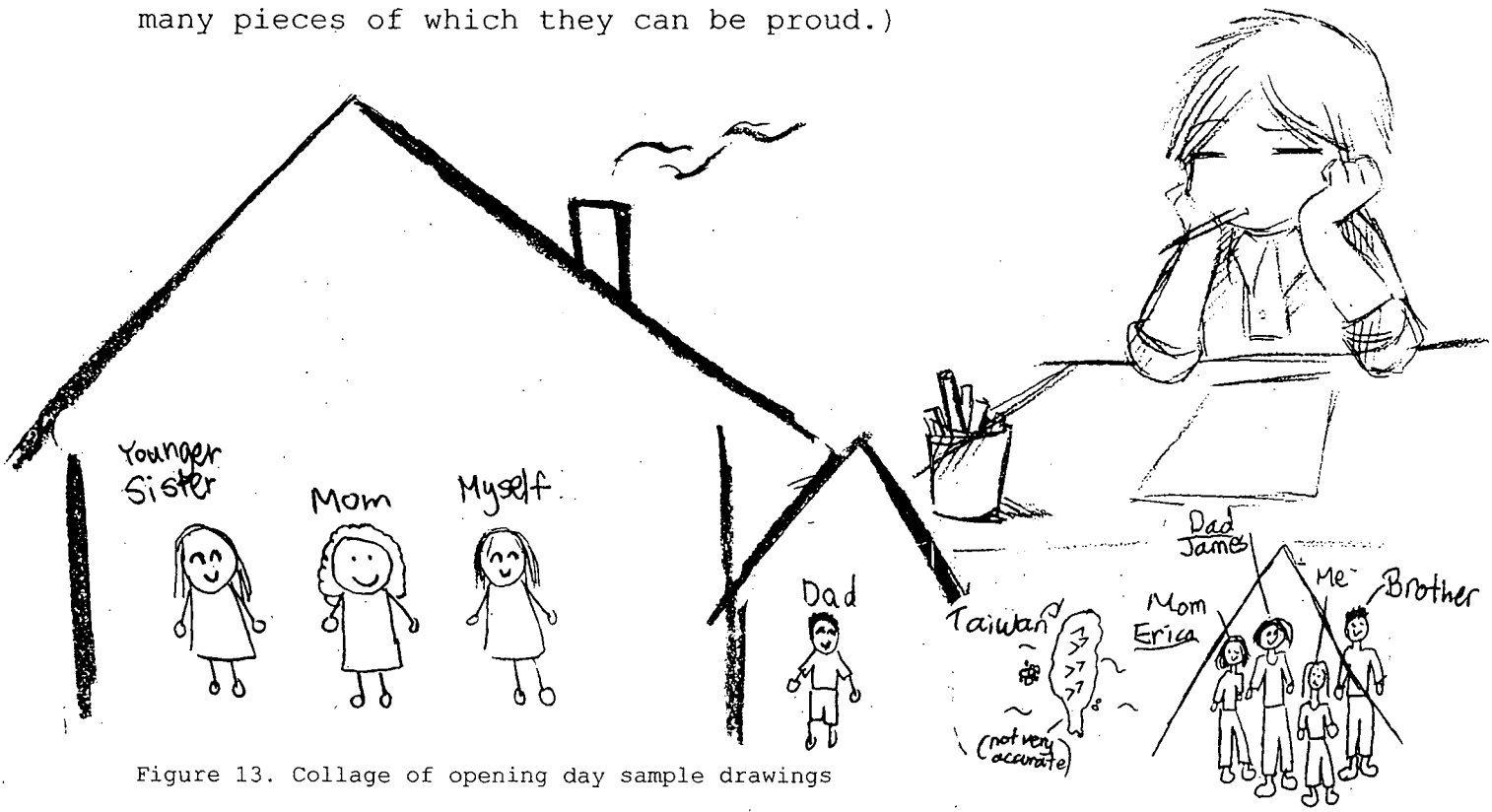


Figure 13. Collage of opening day sample drawings

I think, and I clearly state to students, that there are no wrong answers/responses to art projects <u>if</u> the exploration is approached with integrity i.e. care and thought and effort and honesty and whatever else students might determine is important in their own hearts. I would explain this to new students in as few words as possible, but with sufficient emphasis that they understand an important concept regarding approach is being delivered, well before the first 'exploration' a.k.a. assignment-for-marks is assigned.

Loosening up

Bob Steele, Betty Edwards, and many other drawing resources have a number of drawing games/loosening up suggestions that are invaluable in setting the tone in an artroom, and keeping drawing tools moving throughout the course.

One might start with 'quickdraws': quick gesture drawings of people in various poses and of interesting objects for 30 seconds, 60 seconds, and up to several minutes with a variety of tools; this sort of warm up is not new to many art teachers. Drawing with the left hand, blind contours, freeze contours - stop the drawing whenever you look at the page - these all serve to convince the student whose confidence is yet to be found that he too, she too can make marks, some of which might be at least fun to look at and share. And for a surprising number of students in the secondary classroom, this is not yet a discovered fact. Many students have never drawn freely, have never felt successful when trying to engage in this simple form of

visual communication, of what Bob Steele calls "drawing-as-language". (ibid 8) He suggests strategies to reduce the "I can't draw" syndrome which

> might include visualization, guided imagery, presenting drawing as a game, relying on repeated practice, creating a class ambience favourable to drawing... (ibid 9)

Students seem to like to be told "you are not a camera!" They also enjoy the discussion of reality in art and why being a person with a drawing tool in hand is so much more adventurous and fun than being a camera in pursuit of faithful, realistic representations of reality. If all students are given the opportunity to loosen up, try some 'low-stakes', 'can't-fail' drawing exercises, to get pencils and other tools moving, the confidence thus built can be the start of some exciting and satisfying journeys.

Each student needs his/her own sketchbook/journal

Regular use of sketchbook/journals in the secondary art class provides a place for 'safe' experimentation. Teachers seem to need to prime the pump - to get the use of the student's own book an ingrained habit, but students often take over responsibility for continued independent work. I have noticed that if students are invited to use the sketchbook as a sketch/journal/scrapbook, the activity becomes more vibrant. Zany, fun assignments, at least initially, are needed to let students know that the sketchbook/journal is not a place for precious, publishable work, (maybe that too), but mainly a place to try out ideas

and to experiment and above all to get on with the process of making art.

There are some sketchbook/journal ideas that went over well with students over the last few years. Everyone seemed to like copying a lovely line drawing I found somewhere of a Japanese geisha - upside down and slightly enlarged to prevent tracing. (This is one of Betty Edwards' ideas, slightly altered. Students seem like to make autobiographical memory drawings, especially when they are invited to be as symbolic as they choose. Stick figures soon turn into fleshier folk. Drawing simple objects of personal significance, (see the work of Gu Xiong), and inventing new objects in schematic form are often non-threatening assignments.

The simple technique of 'sighting' outlined by Betty Edwards - using a horizontally held pencil to determine angles in the corner of a room frees many students who aren't sure where to begin to draw interiors.

I show simple perspective examples and shading to students, and they sort themselves into 'I'm ready to explore this' or 'maybe later'. But I have found that encouraging students to look at built form and draw simple architectural details and facades often brings a pleasant surprise - it's easy to make a good likeness of a building. Furthermore, it is fun to experiment with alternate forms of building 'likenesses' one of which is demonstrated by Alex Morrison in his 31 part drawing series titled "Every

House I've Ever Lived in Drawn from Memory", (2002) and another in a sketch of a student's current home.

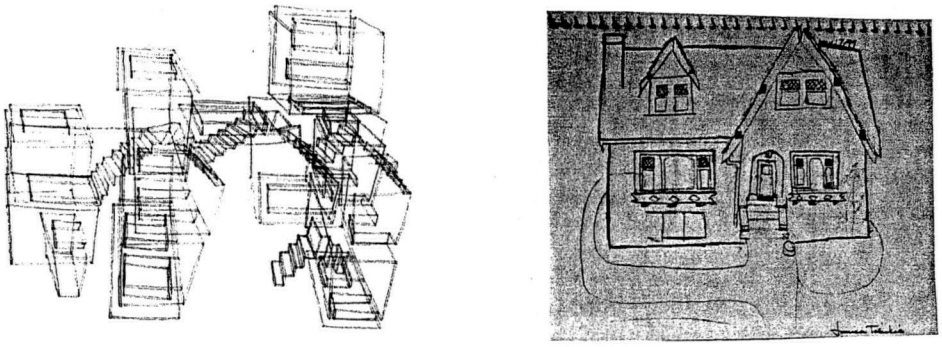


Figure 14. Building sketches.

Moreover, axonometric drawings and x-ray type drawings of the guts of cars or machines are easy to do too - maybe just start with a simple line drawing to copy to get the hang of it, and not too much concern with accuracy, especially at first.

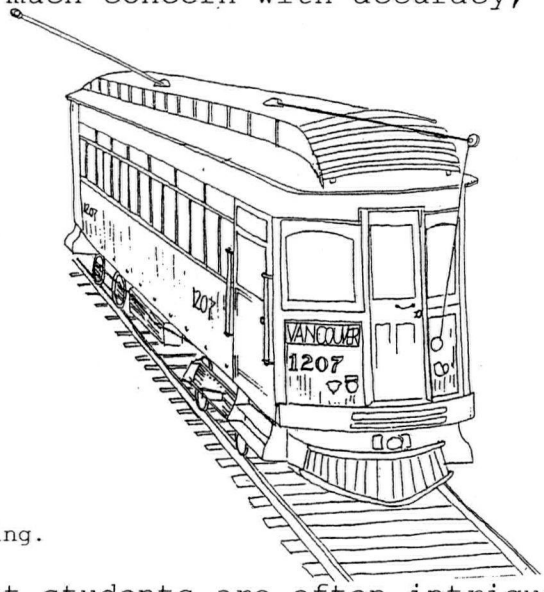


Figure 15. Trolley - line drawing.

I have noted as well that students are often intrigued with architectural plans, sections, elevations - they want to know how to read them, and when they have been given a few simple conventions (door swings, walls, windows) they are able to understand and ready to use this vocabulary to design some remarkable concoctions. The use of verbals and

visuals together in drawings, or in any attempt to communicate graphically, gives some options where drawing skills might be a bit shaky. In practice, architects often adapt the drawing conventions to meet the needs of clients who might not readily understand plan/section/elevation. Students, too, can experiment with these techniques - it is not necessary to be hamstrung by conventions. Simple sketches, diagrams and clear coding devices can be used to communicate many levels of ideas.

Students are generally fascinated with architectural construction drawings and renderings. These can quite easily be obtained from architectural firms, and are helpful for students trying to understand the connection between drawings on paper and actual, three-dimensional buildings. As well, architects can often be persuaded to donate copies of the process drawings - conceptual diagrams, relationship diagrams and other design development drawings for a project, which are lovely for demonstrating how the art and science of architecture work together in the evolution of a building design. Moreover, it naturally follows that when a student is able to read the drawings and envision what is, or is going to be, he or she is much more likely to be able to eventually participate in a meaningful way in architectural processes.

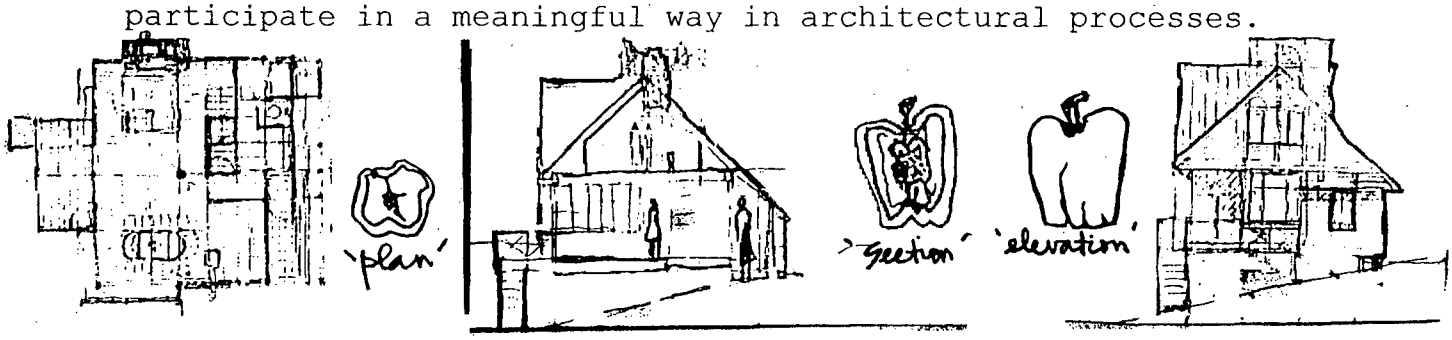
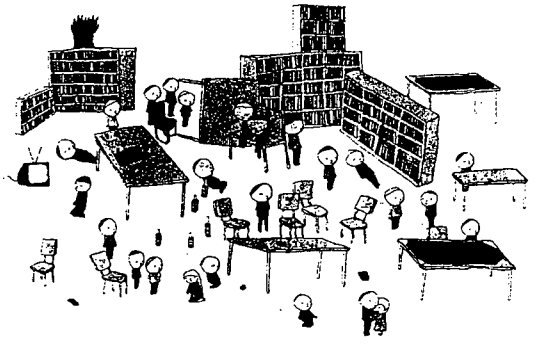


Figure 16. Plan/section/elevation views

How do others draw?

It is helpful for students whose view of drawing is very conventional and narrow, to view drawings from other cultures and to see that the standard, camera like representational drawing is by no means the only possible goal. I wish all art students in the world could have attended the drawing exhibition at the Vancouver Art Gallery, 2003, titled 'Drawing the World: masters to hipsters'. The huge range of styles included in that show, and the honouring of simple, honest drawings by children and teenagers of the Inkameep Day School, and some very young members of the Royal Art Lodge as well, make this an exhibition that offers some serious inspiration for all receptive viewers.



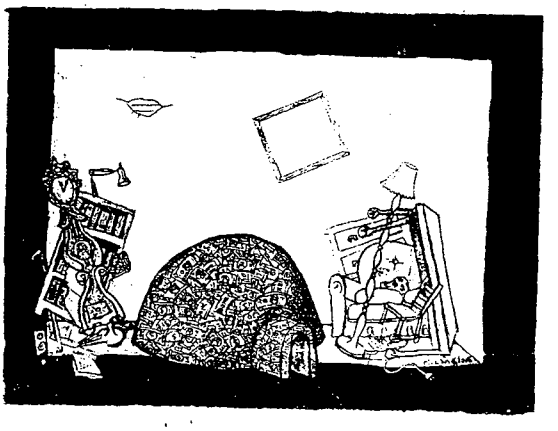


Figure 17. Drawings of the Royal Art Lodge left: Neil Farber, right: Miles Langlois.

I think that copying the work of others as a way to acquire both skills and confidence is a delightful way to progress as an artist. The 80 or so teachers who had the opportunity to copy works from the masters to hipsters exhibition certainly seemed happy, and I heard many expressions of delight and surprise when a copying effort was attempted successfully. Perhaps we have overreacted to the copybook days by avoiding this activity as a way of enjoying mark making, not to mention sharpened perception of the copied work, and perhaps a lovely communion at some level with the original artist.

Can't I just turn on the computer?

With respect to the possibility that drawing may be becoming an outmoded form of visual communication with the advent of the computer image, I offer a statement by one of the artists of the Drawing the World exhibition - Jason McLean, who wrote:

> I find that drawing, and a more hand-made approach in general, has become a major element in graphic design. Many young artist-designers have been combining their commercial practice with their art practice, with little or no discernment between the two. There has also been a radical shift in the art world in reassessing the importance of drawing within contemporary practices. I think these two shifts represent an interest in a more personalised approach to visual communication. (quoted in Augaitis 2003,15)

So do it.

I like what another of the 'hipsters', Ben Reeves, has to say about drawing. This comment begins to point at the richness of possibility in the simple act of drawing = making marks with meaning. He said:

> Drawing is both a verb and a noun. It is at once an act of research and a report of its findings. It is a trail and an exploration. (quote in Augaitis 2003, 14)

If students and their teachers look at drawing in this way, rather than as a precious, product-oriented operation, sketchbooks will soon fill up with lively and exciting possibilities, and skills and confidence will very likely rapidly increase.

Drawings of the built environment, and the processes involved in design and development of ideas which originate in each student's head, can form a yeasty and promising part of the drawing curriculum. Certainly, those drawing skills will enable students to take some wonderful imaginative journeys in the exploration of architecture in the artroom.

Once students have discovered that they indeed can express themselves through drawing, including the conventions and evocative possibilities of built environment and contextual drawings is neither farfetched nor frightening. And I have seldom encountered a student who was indifferent or unmotivated to explore the architectural aspects of the secondary school art curriculum when given the opportunity.

3.2 The design process

A story of how I erred and strayed

I was once painfully, but fortunately only briefly, ostracised by a beloved professor at architecture school because I tried to get him to talk about the process of design. I accused him of dropping 'metaphysical cigar ashes' all over peoples' drawings, and said that I wanted some tangible, practical advice about how to go about the action of design. He actually liked my ash imagery quite a bit, but he really didn't want to talk about how to design and so our hard heads collided.

I will always have a huge respect for that professor, and when he forgave me for being so tiresome, and when I forgave him for his unwillingness to discuss what I considered to be a valid and fundamental question, I learned some very beautiful lessons from him. His insights enriched my work and he showed me a grace and receptivity that I would probably never have received from anyone else. But I had to learn how to talk about and think about design from others.

Despite this moving evidence to the contrary, I held the belief that one could analyse the process of design, and perhaps even discuss it intelligently with other designers. Some other professors took a rather more practical, and perhaps it needs to be said, articulate approach to design, and I was able to piece together some sort of working approach that helped me figure out what I needed to do at

my studio desk.

Articulating The Design Process

It happens that one of my professors at architecture school, in that harrowing first year when I was desperate to talk process, has lately written a doctoral dissertation in which she discusses the design process.

In her thesis, Dr.Freda Pagani explores the design processes necessary to achieve adaptive buildings that will fit their economic, social and ecological environment. She "describes and critiques the contemporary building project design process and its resultant product in Western culture." (Pagani 1991,1) Here the focus is upon the steps of the design process that can be communicated, at least for discussion and consideration, to students at the secondary school level and even students who are preparing to become architects at a professional school.

Dr.Pagani asserts that the design process is a skill that can be learned. (ibid 136) This in itself is a very reasuring bit of news for anyone who is initially mystified about how to begin. While her work is concerned with complex adaptive systems, which are well beyond the scope of our interest here, the thesis includes some insights useable in the secondary artroom. It is assumed that the designer(s) will draw on previous experience, what I have called latent knowledge, and more conscious understanding of the world, to make a design. The most basic and universally agreed upon description of design - that in

"involves analysis/synthesis/evaluation as basic processes" (ibid 139) is acknowledged.

Dr. Pagani notes that design involves the 'willing suspension of disbelief' and "the ability to tolerate the uncertainty of the process". Further, "the processes of design are simple and the results are complex products."(ibid 139) And lastly, her description of the design process notes that "ideas come mostly unbidden and fully formed" (ibid 140) before being submitted to the analysis/synthesis/evaluation process.

Knowing that an approach has been articulated and that it is possible to talk about this - in terms which young designers might be able to grasp - might be very reassuring to teachers unused to the process of design. Dr. Pagani recommended a book called A Practical Guide for Policy Analysis - the Eightfold Path to more Effective Problem Solving, which she believes clearly parallels the steps in the design process. The author, Eugene Bardach, defines the problem-solving process as a process of trial and error and calls it 'iterative', "so that you usually must repeat each of these steps, sometimes more than once". (Bardach 2000, xiv) He suggests that in any of the steps, especially in the earliest phases of the project, one's approach might be very tentative. This might be the most difficult part of the process to communicate to students, who perhaps need to be taught to explore a little - to try, reflect, try again, and again. I have noticed that few young people are willing to trust that a better idea might be hidden at

first, that the first flash of insight might not prove to be the finest possible. Joel Shack asserts a similar theory, suggesting to me in an e-mail (25 February, 2004) that the design process… follows a linear orderly sequence which is an effective model for teaching to avoid 'a leap to form', without adequately clarifying intentions and reviewing alternatives.

Bardach's 'eightfold path' - an articulation of the design process

To summarise, the steps in Bardach's eightfold path are as follows:

1. Define the problem. (p.1)

For example, I might ask students to consider a person they know, to write a detailed profile of that person, and then to design something for that person specifically tailored to their needs. I consider the definition of the problem - the design goal, to be as creative an aspect of the process as any other.

2. Assemble some evidence. (p.7)

Bardach calls the activities in this step "thinking", and "hustling data". (p.7) He asserts that "thinking", which I take to mean fresh, creative speculation about what is possible, is "by far the most important". Research (data) connected to ideas can be an interesting and engaging task for students at the secondary level if it is presented as a way of enriching ones own deliberations. Some students might warm to the task of delving in to the history of

chairs, for example, or other pieces of furniture in their quest for the a new design. This is the point in the process where latent knowledge of what is can be assembled to help create what might be. It is important, though, not to overdo the "data" to the point of overwhelming the designer, especially at the secondary school level.

3. Construct the Alternatives (p.12)

Bardach suggests that one might "err on the side of comprehensiveness" at the beginning of the process and that one should end up much more focused - with a reduced and simplified number or possibilities - at the end of the analysis. He suggests that constructing a list of all alternatives is useful. I often suggest the same thing to students: a list of ideas in words and/or a series of small thumbnail sketches, maybe very symbolic, to just get the ideas/possibilities into a concrete form, however sketchy they might be. Bardach stresses inventiveness here, and I do too. He notes further that "…design is a complex process, requiring many iterations, in which you both explore different ways to accomplish a certain set of objectives and alter the set of objectives in light of what you learn about what is actually practicable." (p.17) Young designers can be encouraged to take this time, can be led to understand that this ambiguity is a delightful challenge, but in my experience, they might not instinctively understand the joy that comes from this kind of an explore. I counsel 'calm' and 'steady' a lot at this stage, as I have noted that many students like to leap at their first good idea in a bolder and less contemplative manner than what Bardach seems to be suggesting.

4. Select the Criteria (p.19)

Bardach suggests there are two interconnected but separable approaches - the analytical (factual and objective) and the evaluative (value judgements) used in judging the "goodness" of an idea. Students need to understand 'analysis' and 'evaluation' in many of the knowledge areas they are studying. Thus applying the objectivity of analysis to their designs, and evaluating the alternatives as well, is an interdisciplinary skill both enabling the artistic process and enabled by the process.

5. Project the Outcomes (p.27)

Bardach believes this is the hardest step in the process and gives "the most important advice about this step:… Do it". The principal challenge in this step seems to be to put the energy out to realistically envision what the outcome of each alternative might be. Bardach suggests models, which in design might take the form of mock-ups or at least informed speculation of form, materials, techniques; all the component parts of the idea. Students are likely to need some counselling regarding patience here. I don't think many people naturally understand that a good idea might be superseded by another, better idea. A mature patience is required to assemble rich enough alternatives to make a real choice.

6. Confront the Trade-offs (p. 37)

Bardach allows that sometimes one alternative is dominant, but that usually choosing between options is more complicated. He suggests that thinking in terms of 'trade-

offs' is useful when considering policy options. I would suggest that a similar selection needs to be made in design, and that the choosing mechanisms required for a product become apparent with some consideration at this stage in the process.

7. Decide! (p.40)

Bardach suggests that if it is difficult to make the decision regarding which alternative to develop, perhaps the choices or trade-offs need to be clarified. This is where eager young designers again may need some calming guidance.

8. Tell Your Story (p.41)

In the artroom, the parallel is 'Make It'. The outcome of the careful and possibly sometimes chaotic design process is likely to be much richer for the process.

I have found that students who do agree to explore possibilities, rather than simply going with their first idea in a design project, will start to integrate an approach to problem solving that is useful in many areas of art as well as other disciplines. Although some students resist this process oriented approach, it is an enriching experience even in an adapted or truncated form.

If the design process is collaborative rather than individual, the problems obviously are more complex, but not beyond the realm of possibility. In many of their

courses, students are encouraged to work in groups on projects. Many cooperative skills can be discovered and practiced in the group design process. Cooperative design in the art studio both enables and employs those cooperative attributes which are called upon increasingly in the educational system as well as the work world beyond. The receptivity and communication skills required are sophisticated and learnable. Creating learning situations in which students singly or in groups are challenged to iteratively create new connections and alternatives, to consider and reflect, to analyse, to question assumptions and create new assumptions for consideration, to evaluate, to choose and to develop ideas. This allows students to practice learnable problem solving skills which are relevant in a wide range of applications.

This way of approaching design - a process of learning to design - of practising the design process - is parallel to the process of policy design suggested by Eugene Bardach. It is also, perhaps, parallel to the process of maturing: to confidently approaching the problems one encounters, and to produce good workable ideas for dwelling harmoniously in the world. These problem-solving approaches and skills, practised in the safety of an art studio, can be powerful tools for students in whatever field of endeavour they may find.

3.3 Phenomenology

Definitions and a clarifying example

When I went dictionary shopping in 1983 or '84, I used the word 'phenomenology' as one of my criteria for choosing amongst the vast array of dictionaries available. It was a new word I was struggling with at that time, though it was not new to several of my professors in the School of Architecture or to philosophers. I was trying hard to construct a working definition of this word as an architecture student, half-realising at the time that this concept was fundamental to my whole approach to architecture, which was also under construction at that time.

My Gage Canadian Dictionary, copyright 1983, defines phenomenology in this way:

> n. *Philosophy*. The purely descriptive study of consciousness and the objects of consciousness (phenomena), without any attempt to explain causes, origins, etc.

This is the only definition given at this time. It is a good start, I realise now, but by no means a full working definition of this word. No mention is made of how this word has anything whatsoever to do with architecture. In my quest for clarity, it helped to check the definition of phenomenon which reads in part:

> 1. a fact, event, or circumstance that can be observed...3. *Philosophy*. a.) something known through the senses rather than through thought. b.) something as it is observed through the senses and understood, as distinct from the thing itself.

This becomes more interesting when I consider an assertion made by Prof. Joel Shack of the School of Architecture, UBC, that there are many more than five senses - how else can we learn about the world than through the standard five senses: sight, smell, taste, hearing and feeling? What indeed are these other senses and how can they be engaged in receiving/perceiving the world? Some other senses suggested by Prof. Shack are the senses that have to do with time - our bodyclock sensors and memory sensors in which past perceptions combine with current experience. Also, there are what he calls 'mapping perceptions', in which we put perceived parts into whole patterns. There is as well the kinaesthetic perceptions such as the senses of balance and orientation. He summarises: "Phenomenology argues for inclusiveness and multiplicity and simultaneity because it makes its observations and design proposals in the living world." (e-mail, 3 March, 2004)

Prof. Shack suggests, in another correspondence to me, "perhaps the only definition needed (for the word phenomenology) is 'seeing, thinking, building, with attentiveness and wonder.'" (e-mail, 26 June, 2002) This clear beacon of definition leads us to another source: the work of Charles Moore and Kent Bloomer, whose words predated the common use of the term 'phenomenology' of architecture, but whose work is itself a splendid example of the phenomenological approach.

When Kent C. Bloomer and Charles W. Moore wrote the landmark book Body, Memory and Architecture in 1977, the term 'phenomenology' was not readily bandied about, but, as

Prof. Shack wrote, regarding the ideas of Charles Moore and Kent Bloomer:

> this simple direct way of connecting architecture to human embodiment and introducing the 'haptic' sense I have found to be an effective way for young students to connect their own lived-in-the-world experience to phenomenology. (ibid)

'Haptic' is not included in my aforementioned dictionary - Gage Canadian 1983, but www.hyperdictionary.com says haptic means:

> of or relating to or proceeding from the sense of touch; 'haptic data'.

The search engine Google led me to the website of the University of Hertfordshire Sensory Disabilties Research Unit which contributes that 'haptic perception' involves both tactile perception through the skin and kinesthetic perception of the position and movement of the joints and muscles. For example, if we hold a cube, we perceive it through the skin of our fingers and the position of our fingers. Indeed, there are more beyond the basic five we seem to have agreed upon.

The art educator, Viktor Lowenfeld, in discussing the individual differences in drawing aptitudes in children, uses the term 'haptic' to describe children who get their information more from their 'inner' experience, as distinct from children who observe phenomena outside themselves, which he terms 'visual'. (quoted in McFee 1977)

Bloomer and Moore have written what they call an 'optimistic' book together and have based their thesis upon the following hopeful assertions:

> first, that the landmarks and order of our bodies create a basis, comprehensible by everyone, for the extension of human identity into our environment; and second, that the world of architecture abounds in successful and even inspiring examples of that extension. (Bloomer and Moore 1977,131)

An inspiring example cited by Bloomer and Moore is the Hotel del Coronado in Southern California, built in 1888. If the term 'phenomenological' had been in common usage at the time of writing or of building this example, the authors might have commented that this building is based on clear and inspired phenomenological understanding of its requirements. Instead, the authors wrote:

> The lifestyle of the inhabitants was well understood by all: it included the pleasures of the beach, the elegance of spacious bedrooms cooled by sea breezes, and the more formal splendours of the great ballroom and dining hall as well as the opportunity for rendezvous in smaller but still sumptuous parlours. The guest rooms were arranged on several floors around a great outdoor square, whose subtropical planting must have astonished travelers from the East and Mid-west just arriving on the new transcontinental railroad. Beside the open courtyard, enclosing one side of it, the soaring vertical spaces of the public rooms gave the visitor the chance to feel that he had arrived and was, in his body and all his senses, for the time being in a splendid and personal house. (ibid 132-3)

From an examination of just one façade of this hotel, one can see the built-in delight of the place.

Figure 18. Facade of the Hotel del Coronado.

Another inspirational example cited of buildings that were made for people especially "concerned with being in a *special* Place" is the Royal Crescent at Bath which Moore and Bloomer believe:

> express(es) the intense personal concern of the people who built them and (those who) continue to care for them. The right to inhabit our landscape and to establish our identity is fundamental and not limited to any group; but with that right goes the responsibility to care. The caring and the energy for it depend on the sensitivity of the inhabitants, reinforced by professionals devoted to committing all their capacities to the task of understanding the potential of a place and the possibility of dwelling in it, of experiencing it with all the senses, of feeling it and remembering it and making it the centre of a whole world.(ibid 138)

Figure 19. The Royal Crescent at Bath, 1996

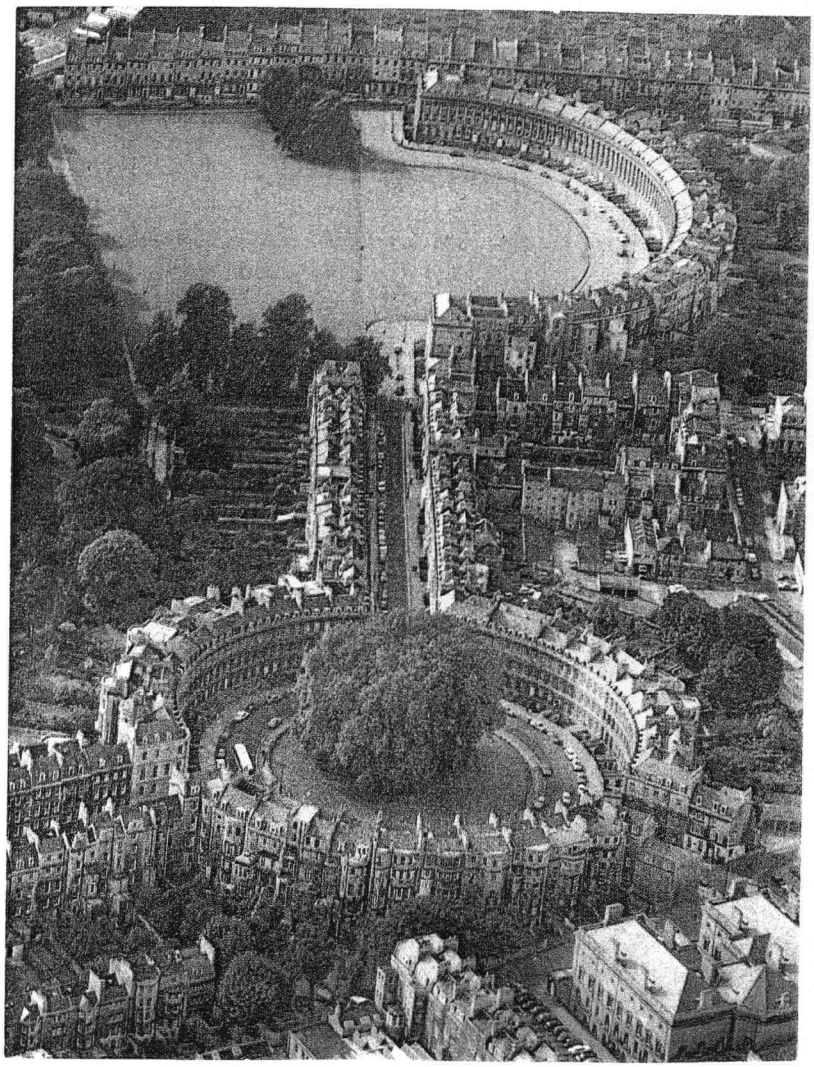


Figure 20. Aerial view of Bath

These thoughtful observers have concluded that large design offices which serve huge corporate clients and turn out undifferentiated urban cells for social masses, viewing "problems of human inhabitation as problems of organisation" (ibid 131) do not make inhabitable dwellings "just by getting element of the visual codes right"

An example of a project in this category would be the prize winning Pruitt Igoe housing project in St. Louis. The inhabitants of these high rise apartment buildings were often moved in from traditional communities that were dispersed by urban rehabilitation schemes. The accommodation was minimal, mechanical services were undependable, there was no place provided for children to play, and there was little impetus for residents to mingle or to take responsibility for the upkeep of amenities. Vandalism and violence were some of the outcomes. The project proved to be so unsuited to the problems of human habitation that it was dynamited in 1972.

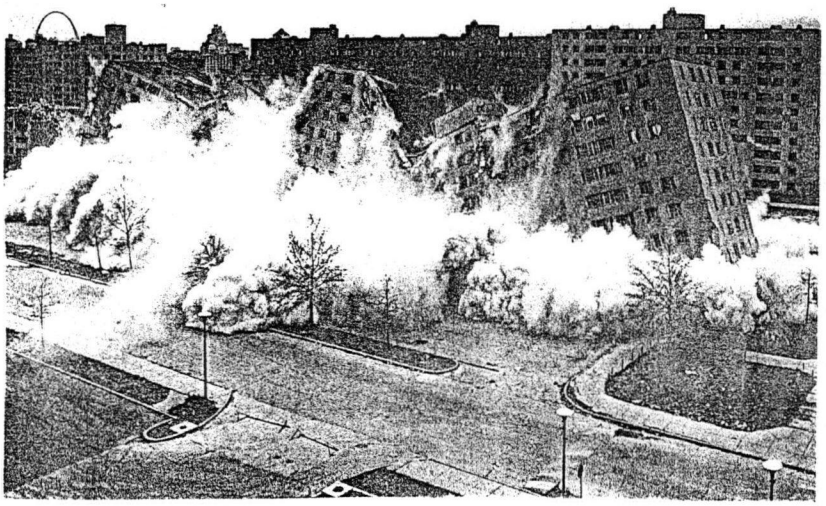


Figure 21. The dynamiting of an unworkable urban housing project.

Moore and Bloomer state:

> To help people inhabit the world, we feel the basic act is not organizing, but *caring;* the architect's client is not undifferentiated society but caring individuals. (ibid 132)

Moreover, they assert:

> The architects'proper role… is an accepting and absorbing one, to encourage others to make the effort and to develop the physical surrounds that make dwelling possible and attractive… it is like a teacher reaching and moving a student, not like a magnet moving (however lightly) a cloud of iron filings across a surface.(ibid 132)

When thoughtful investigation of the phenomena impacting dwelling in(a)place is taken into account, thoughtful and inspiring architectural design can be the result. This approach is not just for the experts, but for all of us to take. We can do this by making the effort to learn about offering both our settings and the process of place making, the alert and caring attention that all of us, as inhabitants, can give.

Adults can do this. Students can do this. Architects **'R'** Us, and it does help to have sensitive guidance from those who have made the design and delivery of our places their life work: the professional architects. But we want architects to operate with what Prof. Shack calls 'this careful way of being in the world and creating with love (that is) the 'ground' that underlies phenomenology.'

So how might someone put this into practice?

One of the first assignments I completed in graduate school in architecture was a cleverly designed project given so that we students might understand the attentive observation of phenomenology by practising it, if I might be excused for saying so, *immersing* ourselves in it. We were asked to take a 25 minute visit to the UBC swimming pool, and to make a 50 item list of our minor actions, sensations, feelings and impressions, and our responses to both design impediments and good design while personally and actively involved in the sequence of experiences at the pool.

The professor, Dr. Richard Seaton, noted that he was most interested in our responses as an organism: our introspective, intuitive observations; and that we were meant to reach within ourselves to find our responses and express our feelings in words. (I wonder now if words <u>and</u> pictures might have given a fuller response.) He wanted to know about our frustrations, and our gratifications, the attributes of the phenomenon that emerged from the experience. The focus of our observation was meant to be recorded, not necessarily the degree of our arousal.

Following are a few excerpts from my response to this assignment, which I think sheds some light on the concept of phenomenology. For me, the body memory of this exercise kept me clear when I grappled with the notions of phenomenology over the years at graduate school. I was reminded of the process wherein I paid a more-than-usual amount of attention to my setting, and as well, put more

energy into generating a more-than-usually observant critical response to the experience I was having.

(These notes were originally written on 50 separate note cards, as assigned. I must have been quite a sight, swimming along with these cards and my pen in a plastic bag clipped on my head!)

3:25pm Sunday, November 8, 1987

Crossing to the building from the parking lot, I enjoy the sound of tennis balls being thwacked in the court nearby. I appreciate having something to look at besides all these dormant cars.

I like the rows of trees that march off in four different directions at the edges of this lot. What's really beautiful about them is that each row is a different species and the colours are as a result all different at this time of year. But they all blend.

Made a 'bandit' run across the woodchip landscaped garden. (Very unpleasant. Yuk). I am glad I have boots on. I pass a tired, sad little garden near the exhaust vent - not flourishing on the chlorine fumes.

Up the stairs, through the entry that seems to read 'back door', and into the spectator bridge. I like this bridge very much, can look down both sides, trees on one side, strongly chlorinated water (vs. epidemics?) on the other side. Lots of activity, loud music blaring away in the background, shouts.

I've never noticed before how otherworldly people look when they swim past a spotlight in the side of the pool.

Now I'm a paying guest.

People waiting in the lobby look hunched over uncomfortable. The design of the seats makes no sense. Why would anyone design them like with so little attempt at providing comfort? And why would they be purchased for the pool complex? Manipulation?

Locker room - 'warning thieves...' sign a little disconcerting. Also it would be very easy to find one's way into the wrong (gender) dressing room. I'd like to see the rooms much better marked.

Damn. To get to the locker I had to cross a wet spot. Maybe I should have left my boots on. Or taken my

socks off. I'd like to see a little wooden slat platform at this edge.

Even with bare feet this floor is too slippery. I hope that little child doesn't fall. There has to be a better way to make a cleanable floor.

The shower is body temperature today. Just right. But now that I'm wet I really have to mince along on these slippery tiles. I wonder how many times they have been sued here. And I wonder why privacy is so neglected in the shower room. It doesn't seem necessary.

Hot tub. I am experiencing a new tendency to really look at the other patrons before I get in. Getting epidemic conscious, I guess. It's very overcrowded today and the water looks overused. I think I will just put my feet in.

People look so bovine when they have been sitting here for a few minutes. The swimming pool looks much cleaner, but this warmth is hard to leave.

They should never play a radio station over the loud speaker in here. The talking is very eerie sounding in this expansive space. Music is great though.

The water in the pool is uncomfortably cold after the hot tub.

Four laps. I'm almost out of time (25 mins.) and breath. (I may never smoke another cigarette.)

The water temperature seems perfect now. I wonder if a dolphin would like it in here. I like the oversized wall graphics, can enjoy them even without my glasses.

Mincing back to the locker room makes me hate this tile floor even more. Smart lady just walked by wearing rubber shoes.

I wish I had had my towel with me when I got out of the shower. How to do that without paying an extra quarter to lock it up again? The air in here seems very cool on wet skin. The breeze from the dryers makes it worse.

Into my clothes. Everything is wrinkled but dry. I think these tiny lockers are ridiculously small; next time I will pay the extra quarter.

Down the back stairs into the fresh air - a treat after the chlorine laden air inside. I like the

> action of swimming in the water, but I am reminded today what an inefficient, picky-picky operation it can be.

Since this exercise, I have always looked more carefully at swimming pools, and I have never taken a dip as completely for granted as I did before completing this interesting challenge. Moreover, if I were to be part of a design team to help create an aquatic centre, notes of this nature would be useful, even critical to the process. This type of exploration contributes to the experiencing of a place, the phenomenological processes of design, and the creation of sensitive and thoughtful places. It is clearly not beyond the scope of anyone's ability, this process of paying close attention, and making a mental or actually written record of what is observed.

This sharpening of the experience calls to my mind the same phenomenon that I have experienced while journal keeping for action research. The clarity of impression and potential for conversion of experience into useable knowledge and insight is immensely increased with this kind of conscious attention and recording.

The phenomenological approach to research

Rose Montgomery-Whicher, art historian and art educator, speaks of the phenomenological approach to research in this way in an article titled "Drawing Analogies: Art and Research as Living Practices",

> As a practice of inquiry - a way of questioning our experience of the world - a phenomenological approach to research shares three important characteristics with drawing from observation: one, it begins in the everyday world in which we live: two, it is directed towards a renewed contact with the world; and three, learning to do this kind of research, like learning to draw, is largely a matter of relearning to see.(
>
> (Montgomery-Whicher, 217)

Montgomery-Whicher believes that attentiveness and wonder are the tools with which one must view the world, and the ability to see "the everyday as worthy of attention, to see through surface appearances and worn-out cliches, to attend to what we ordinarily overlook, in short to re-search." Similar to the manner that Ben Reeves sees that drawing "is at once an act of research and a report of its findings", Montgomery-Whicher sees "the very act of describing and interpreting has the capacity to inform the way we see." (ibid 219) Moreover, she is concerned with the quality of contact made between researcher and those with whom the re-search is shared (as is the concern of the writer of this document), and she offers this criteria for success: "A successful phenomenological description elicits a…response…we think 'ah yes…I know what that's like'…we 'recognise' it as a possible interpretation of human experience. This, Montgomery-Whicher says, has been called the 'phenomenological nod'." (ibid 221)

Careful observation and notation, coupled with the reflective analysis that needs to follow in order to make meaning from such attentive observation, demonstrates the process of re-searching that we have come to call Action

Research. The phenomenological approach to architectural design, and the phenomenological approach of Action Research, here applied to education, are clearly allied disciplines. Prof. Shack noted that he would add to Montgomery Whicher's words:

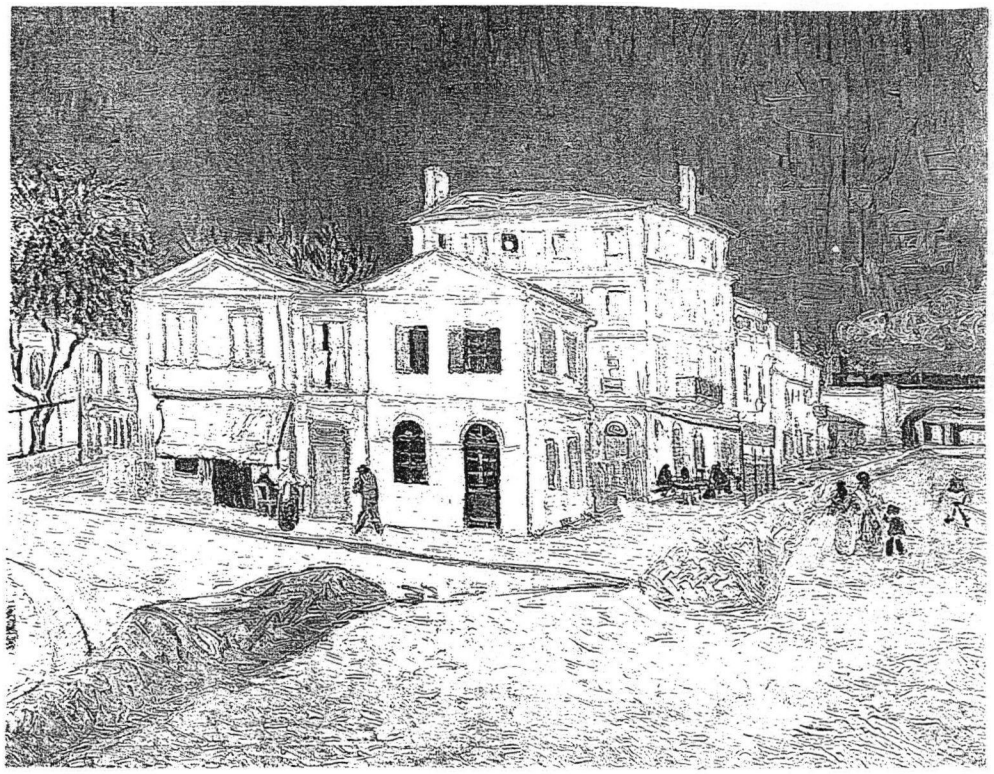
> the combined 3 'ings' (of architecture) - seeing, thinking and building - a phenomenological philosophical understanding that integrates perception, analysis and synthesis like language does. (e-mail 8 September, 2003)

This convergence of the capabilities of visual and verbal attentiveness and open-minded wonder lead us closer to the place where we can reveal the essential requirements, what Prof. Shack calls " 'the essences of architecture and built places'- with words, images and built places that evoke …the inherent poetry of everyday life." (ibid)

This indeed can occur in the process of research as well. In action research we seek to locate for the essential requirements and the everyday poetry, the principles and the detail that feed our iterative search for refined action.

We can look to inspired others for a taste of that everyday poetry. See what Vincent Van Gogh was able to do with a simple building that touched him somehow.

The Yellow House
Arles, September 1888
Reed pen, 13 × 20,5 cm
N. Dreher collection, Brienz



The Yellow House
Arles, September 1888
Oil on canvas, 76 × 94 cm
Rijksmuseum Vincent van Gogh, Amsterdam

"My house here is painted butter yellow on the outside and has solid green window shutters; it is located directly in a square with a green park full of plane-trees, oleanders and acacias. And inside all the walls are painted white and the floor is tiled in red. Yet the most striking thing is the glaring blue sky. Inside the house I can really live and breathe and think and paint." VINCENT VAN GOGH

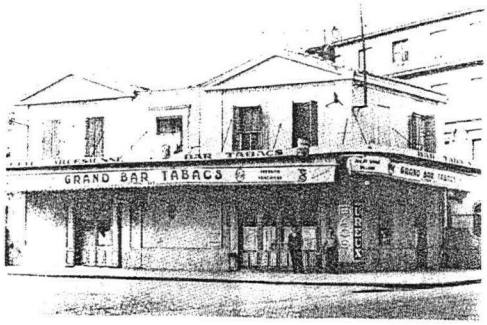


Figure 22. The yellow House at Arles: the actual building renovated, and images produced by Vincent Van Gogh c. 1888.

The basis of phenomenology

In an e-mail letter to me (26 June, 2002), Prof. Shack refers to Rainer Maria Rilke (in Letters on Cezanne (13 October, 1907) who spoke of really looking, and then making things as an act of love - love for the physicality of objects, for buildings and places. In the same letter, Prof. Shack wrote in part,

> …of course, it's not just the physical - the intangible is made tangible to evoke the intangible, not explain it, nor sentimentalize it, nor dramatize it. So, it's a way of loving that honours the essence - of site for example, and what one makes there. For me, this careful way of being in and creating with love is the 'ground' that underlies phenomenology.

Shall we imagine a world in which everything: building, object, work of art, simplest tool, was made with care and love? Sometimes when I slow down and just watch the students in the artroom, working with such care and love to bring their visions to life, I understand that we could indeed make a world full of beautiful and humane, supportive places, were we to nurture and support that tendency into adulthood. I wonder if we encourage young people, not to mention design professionals whom we hire, to form the pattern of applying such loving care to our settings. We worry about the economics of care. We fret about wasting time and resources, about affecting resale value if we individualise. Perhaps if we show our young the possibilities, we can nurture a higher societal value for our places and our efforts at placemaking than the rather expedient approach that seems to me to prevail at this time.

The phenomenology papers

In a series of lectures delivered to the School of Architecture, UBC in 1987 and 1988, Prof. Shack presented "A phenomenological approach to the design process" in terms that students and the interested layperson could receive and use. (If we are all going to participate in this process, some thoughtful effort to understand the dynamics of design will be required).

In Paper 1, titled "Making an Authentic 'Place-Story'", Prof. Shack offered the suggestion that a designer might imaginatively create what might happen in a place, in order to create form that might appropriately enable that 'place-story'. His definition of 'place-story is

> more than a 'scenario' for daily activities on site; place-story also includes embodiment of cultural place rituals, accumulative experience of a building as one moves through it and lives in it over time, [think cinematographer here] memories and association with traditional and archetypal ways of being in and making places. It is based on a phenomenological position of actual experience, though at <u>all</u> levels of experience (combining subjective, sensory, cognitive, spiritual or poetic experience). From a phenomenological point of view, it evaluates theoretical intellectual ideas against possible experience - thus the emphasis on 'authentic' place-story. (Shack Paper 1 1987)

In my practice, I have observed that many students love to do this story making. In various assignments, particularly the design of a personal sanctuary, students at the secondary level are often able to discuss with full belief what might take place in their proposed design. When

invited and encouraged, they can say and show, often in minutest detail, what their vision holds. They can imagine, for example, the daily rituals of life - such as arriving, waking, eating, work and play; and dream of special times such as parties, informal gatherings, that might take place there. They might be very capable of speculating how their designed places might, as Prof. Shack puts it in the same paper, "gather meaning through use, experience and association" over time. We need only to invite this kind of creative speculation - young students seem to be able to quickly pick up on what is required and possible in the envisioning of a story.

Figure 23. Some visual place stories - drawing in bed, a home in Haida Gwaii surrounded by rhododendron bushes.

It occurs to me as well, as I write, that if I attempted to more powerfully connect their vision of what might be (the design) to what is (the site), this could be a much enriched assignment. For example, in the design of a personal sanctuary, I asked the students to imagine where the sanctuary might be located, to perhaps draw the context. Much more would likely come of that critical connection between site and built form if I were to emphasise site, not leave it as a 'perhaps' drawing. I could start at the beginning of the year to ask students to 'adopt' a site with which they feel a special kinship. They could draw and study this site using careful observation over the course of several seasons, recording their findings as occasional assigned sketch journal projects. When the time came to design a sanctuary for their adopted site, this gathered knowledge and insight about the site would likely enrich the place-story of their personal sanctuary, tying it to an actual site, well known to them after careful study.

To further enrich the visioning, Prof. Shack notes:

> Within one built-place can exist several layers of experience: memories of other buildings in other places, the dreaming mind of its creator, the here and now hand of its maker, the urgency of current needs, the visions of a better life, the eternal orders of the site of the earth and of the sky, the eternal images of archetypal places in our minds and in our bodies. (Shack Paper 1)

Some of this richness can be absorbed and articulated by us all. We can learn to envision - perhaps <u>must</u> learn to

envision, if we are to make our places humane, supportive and beautiful.

Paper 2 in the series "A Phenomenological Approach to the Design Process", explores how to use drawing and model making to 'see' and 'think' during the process of design.

Prof. Shack suggests that we think in terms of 'open seeing', which is more than visual, but includes emotions, memory, kinetics - beyond simple visual perception. He allows that a struggle is involved here, "to give presence to difficult-to-draw phenomena" and that results might be "crude but often evocative" drawings and models.

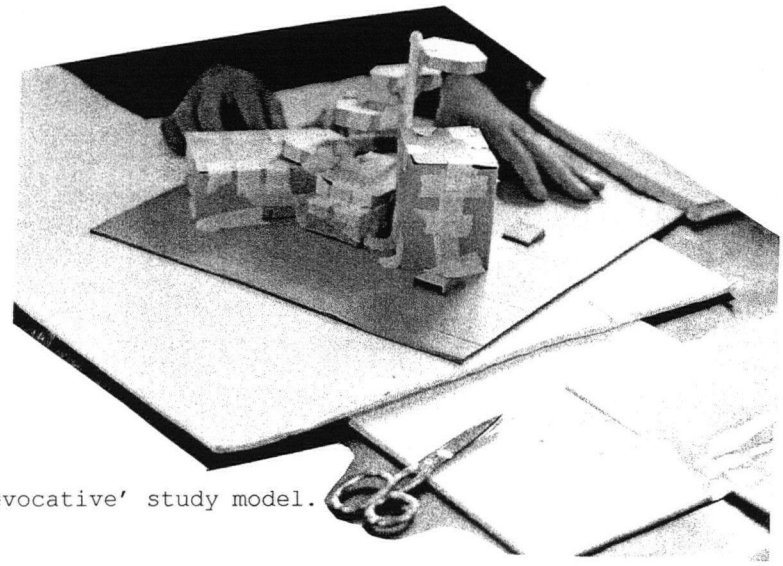


Figure 24. A 'crude but evocative' study model.

It is his belief that perspective drawings, which he calls "one-eye-still-snapshots" do more to distort and convert architecture into "pictorial constructs that avoid(ed) the essence of the place". Some of the perspective drawing methods commonly taught to students may be included in this category.

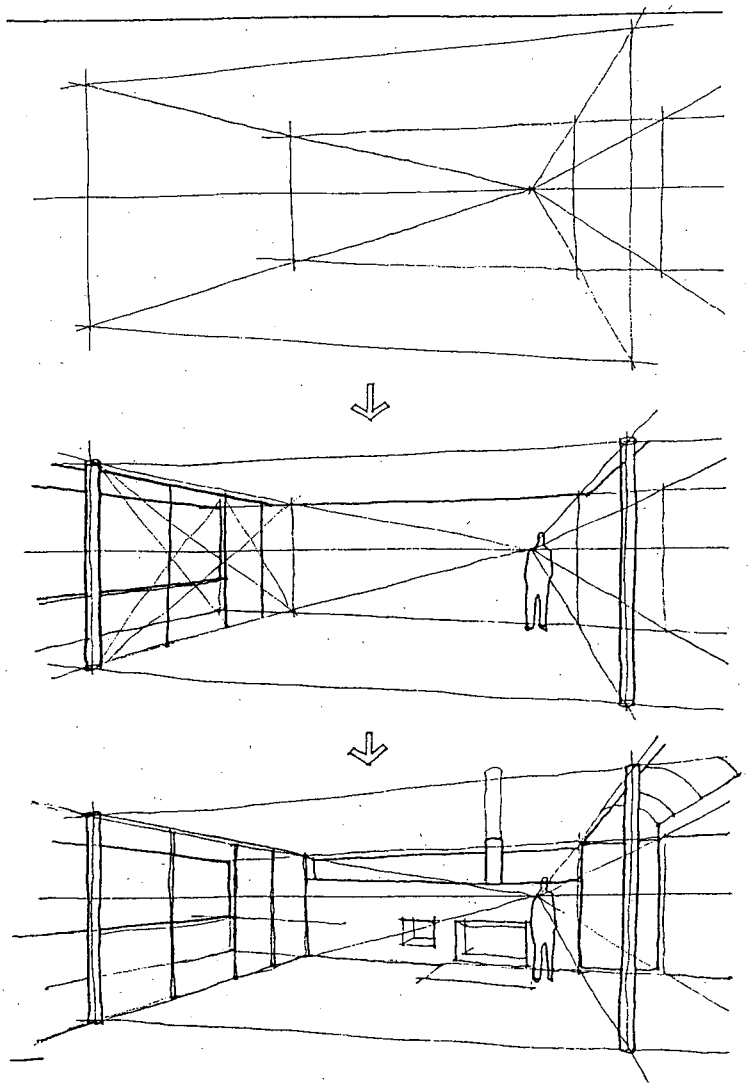


Figure 25. Perspective 'how to' drawings. (Ching)

Prof. Shack suggests instead that evocations of ideas might give presence to critical phenomena associated with the design, and some of the examples he gives that we can consider are:

> groundedness - standing upon and set down into the ground: ourselves and our buildings connect with the earth
>
> (how a building rests) under the sky: reaching to the light and covered by the sky dome
>
> insidedness/outsidedness : how the within and without of a building merge into one another

twin phenomena of place… (such as) light and shadow, one and many, intimate and public spaces

journey: ritual routes, places and thresholds: the procession into and out of a building

rhythm and resonance of form and space: as we see easily in complex repetitive buildings

nesting of part and whole.

embodiment of place: transposing body concepts into architecture

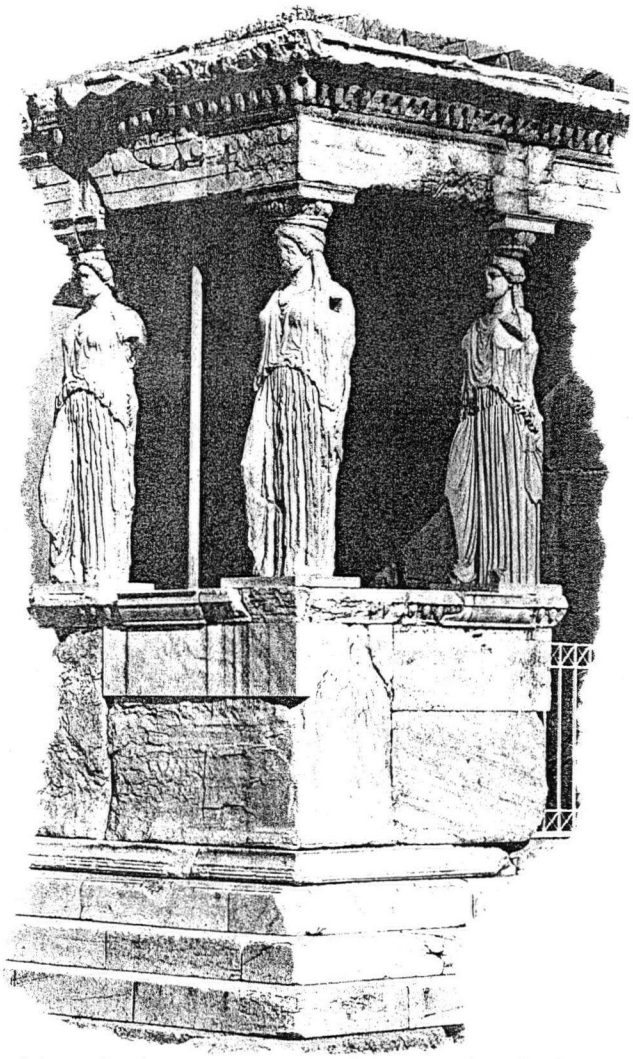
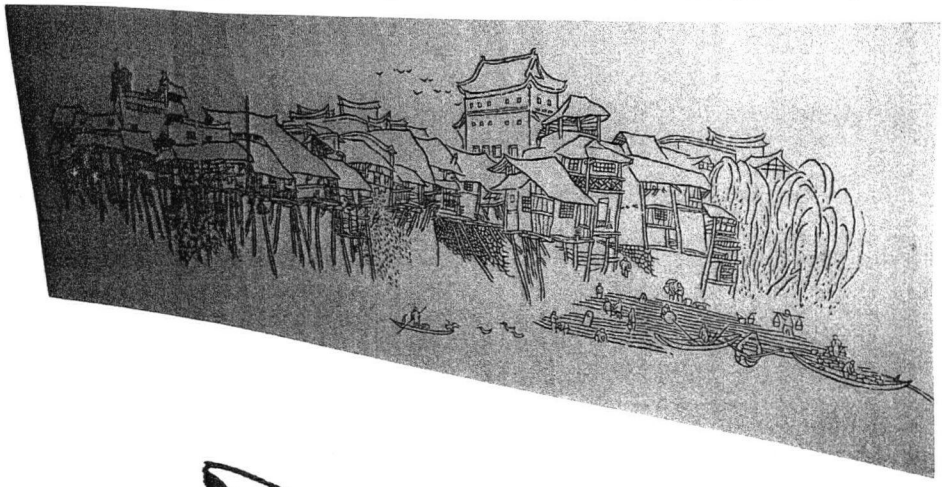


Figure 26. Caryatids - body as support, transposing body concepts.

Some of these concepts might be a bit hard to draw. Yes, but we are looking for the "inner essence" here, rather than the surface pictorial.

Prof. Shack uses drawing in the design process to make progress, not slick presentation perspectives. He bypasses the 'touristic self-consciousness' of renderings, and gives freedom to realise the poetry.

Figure 27. Student model - twin phenomena: intimate and public space.



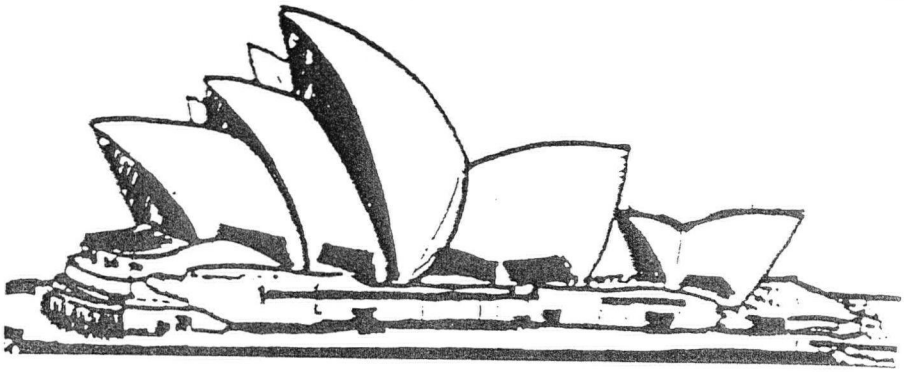


Figure 28. Examples of the poetry: rhythm and resonance
above: Gu Xiong beneath: Sydney Opera House.

In the design studio, Prof. Shack experimented with large conceptual 3-D models that explored a vague 'image' of a place and large 1" - 1' models to generate the order of a place, but with the assumption that the order of the place would not be clear till the end of the design process.

This is quite different from the approach I have used in my artroom. I have encouraged students to conceive of the design using techniques of listmaking, thumbmnail and other sketchy drawings, simple plan section and elevation sketch diagrams, and then to turn to modelling, to show us all what the idea is - model as culmination. In most instances, except for encouraging some very rough exploratory modelling - perhaps because of a perceived shortage of materials - I have tried to reserve model making card for the final part of the project. Time to start cutting up more cardboard boxes!

Prof. Shack also suggests that the designer might find a poetic image - not a literal representation but perhaps a "painting or a photograph as a poetic image or imagining one intuitively yourself, …(which) transform(s) and gain(s) clarity through a repeated cycle of intuition and reflection." An imagined ordering might be abstracted into a sketch plan in the manner of some architects particularly respected by Prof. Shack:

> Kahn with thick charcoal strikes shifting volumes in plan; Corbusier with ink lines subtracting and adding interlocking spaces; Aalto with soft pencil, overdrawing, carving naturalized built landscapes on paper… (Shack 1988,5)

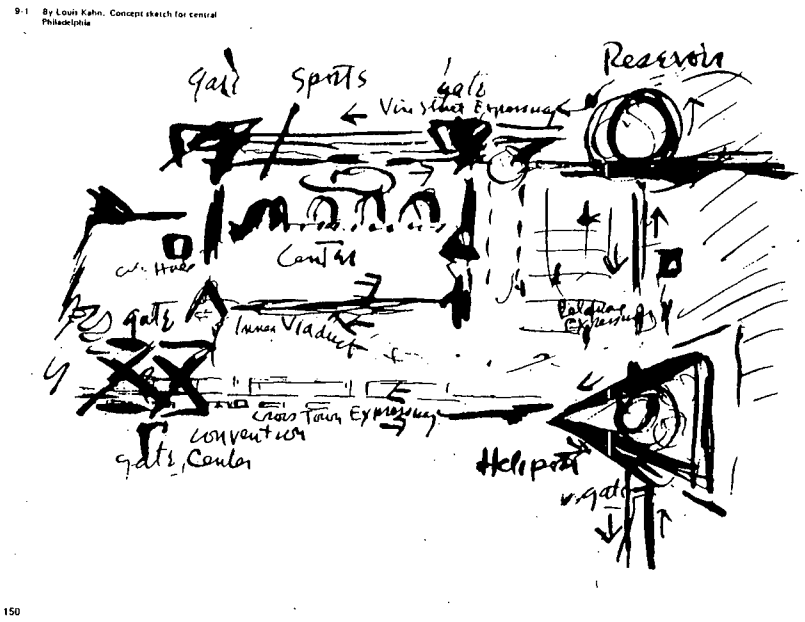


Figure 29. Concept sketch for Central Philadelphia - Kahn (from Leseau).

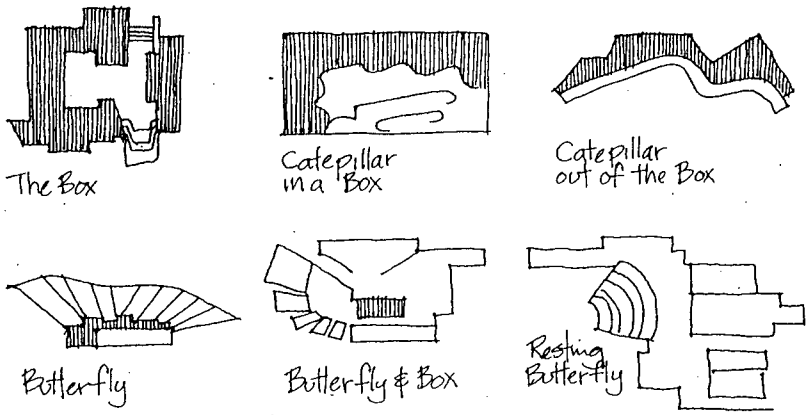


Figure 30. Prototype concepts developed by Alvar Aalto (redrawn by Leseau).

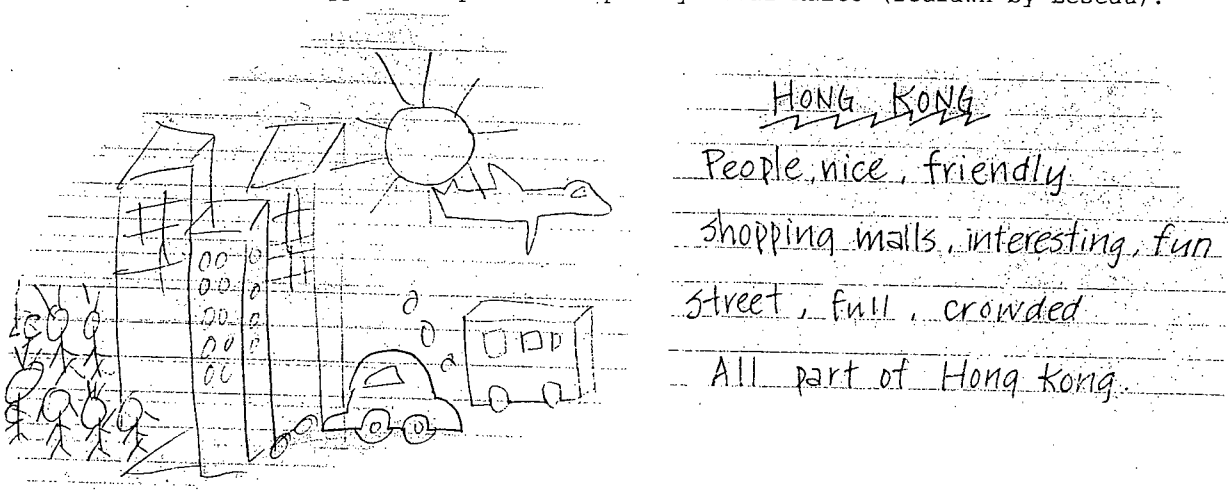
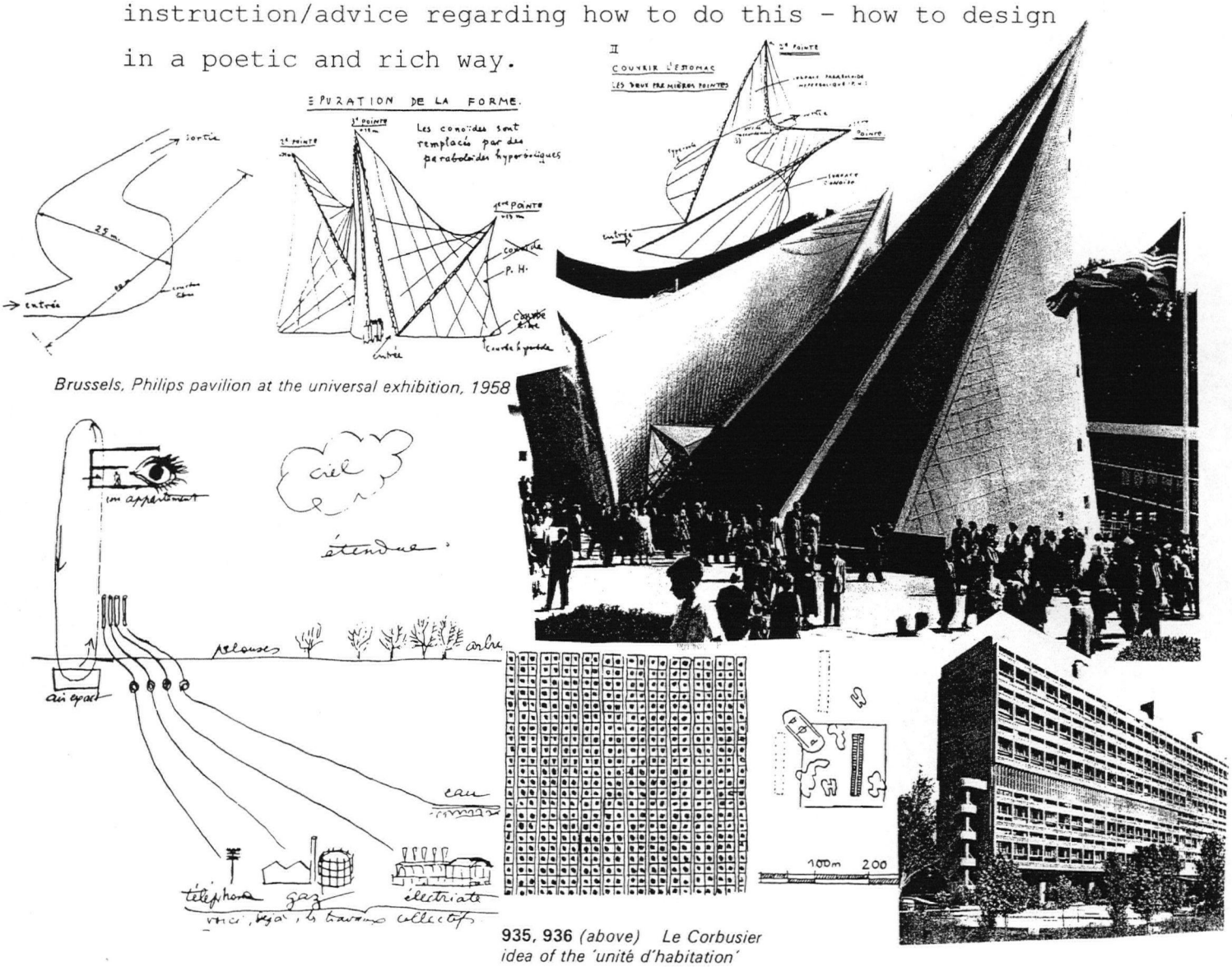


Figure 31. Conceptual sketch of Hong Kong - student sketchbook.

This is exciting. I haven't thought of it this way for a long time, but these ideas can be translated into a secondary school artroom. I could show students the work of these masters. They could see these designs unfolding from published drawings retained for the archival record. It is rare to have such clear but deeply evocative instruction/advice regarding how to do this - how to design in a poetic and rich way.



935, 936 *(above) Le Corbusier idea of the 'unité d'habitation'*

Figure 32. From image to reality - collage of conceptual sketches and buildings by Le Corbusier (Benevolo 2)

After moving in this (albeit sketchily recorded) manner from initial poetic image to inner order of the building, Prof. Shack suggests the designer next moves to actualisation, "giving material and spatial presence to the project… in the lived world - made to be experienced fully". (ibid 6) The designer can mark the actual ground, using the evocative image and the diagram of inner order.

I have tried something like this with students: we thought about what could be done with an underutilised parking lot and actually drew life sized plans on the paved area near to the school. This helped students to visualise and to understand their ideas more clearly.

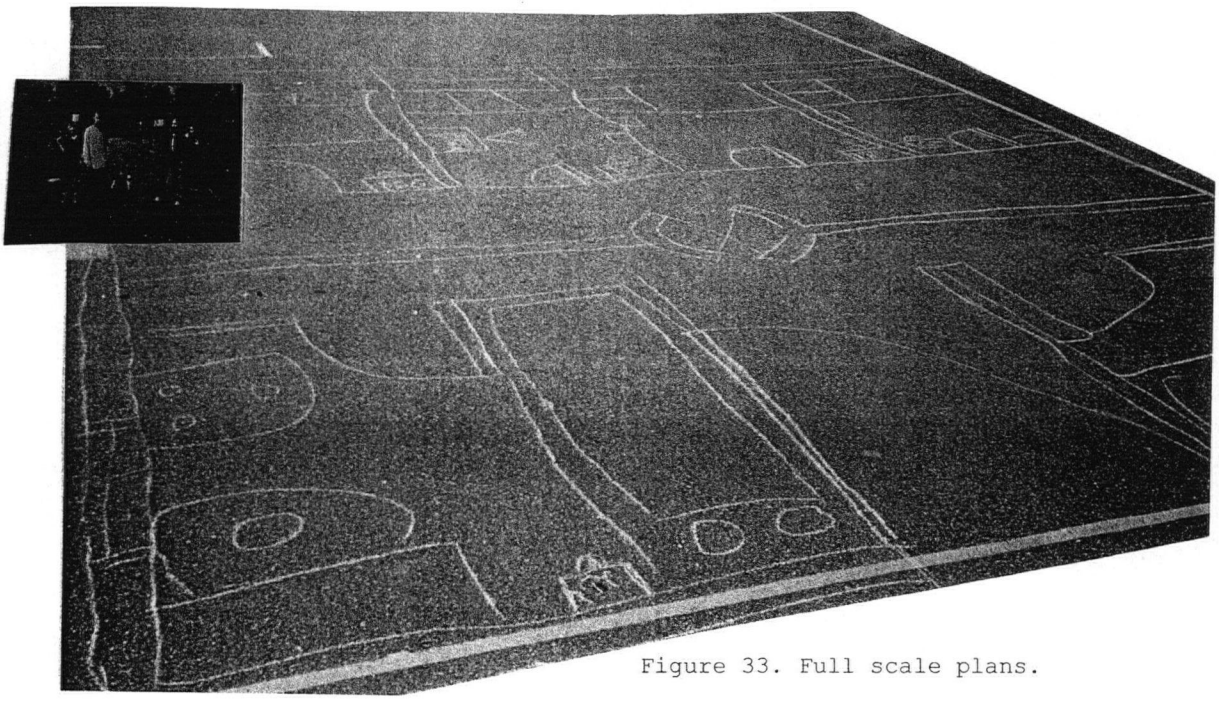


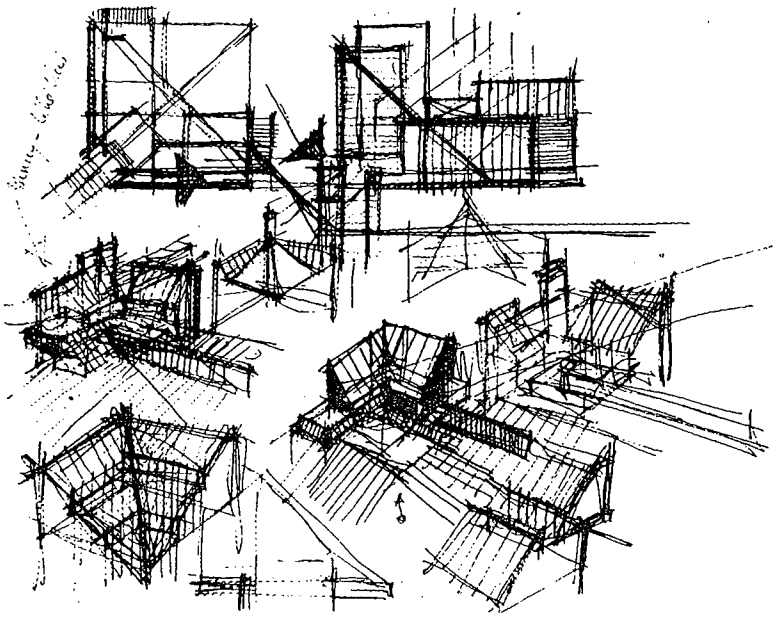
Figure 33. Full scale plans.

This became the first iteration of a learning sequence found in the Primer - Chapter 5 - 'Unpave'. (Perhaps the first iteration was the planning I did upon the beach in front of my family home as a child!)

Prof. Shack suggests that after laying out in full size on the actual ground, a new layout can be made - a sort of collage based on one's vision of the horizontal, geometrical layout as perceived at this stage - 'close-ups' of what one might experience in moving through the imagined space. The resulting collage of close-ups

> can provide a balance between the order of the whole and the uniqueness of the parts as long as the parts are continually re-examined in increasing detail and as long as they come into a 'discontinuous - continuity' of memory in the imagined walks through the building and site. (Shack Paper 2, 7)

So the building design comes alive - in plan, section, elevation, axonometric (simple 3-D sketch at an angle built up from plan), mini 3-D sketch and model - loose and sketchy at first, and hardening up as the process unfolds.



A standard story that many architects delight in telling describes how the most basic concept for a multimillion-dollar project was first scribbled on the back of a restaurant napkin. I have wondered why both, the teller and the listener, always seem to derive amusement from such a story. Perhaps the story restores confidence in the strength of the individual designer, or maybe it is the incongruity that decisions on such important matters are being made in such a relaxed, casual manner. Viewing this story in the context of graphic thinking, it is not at all surprising that inspired, inventive thinking should take place at a restaurant table. Not only are the eyes, minds, and hands of at least two persons interacting with the images on the napkin, but they are further stimulated by conversation. Besides, these persons are separated from their day to day work problems; they are relaxing in a pleasant atmosphere and with the consumption of, one hopes, good food, their level of anxiety is significantly reduced. They are open, ready, prepared for discovery; indeed, it would only be surprising if the most furtive ideas were *not* born in this setting.

Figure 34 Axonometric and plan sketches on the proverbial placemat. (Steglitz, from Leseau)

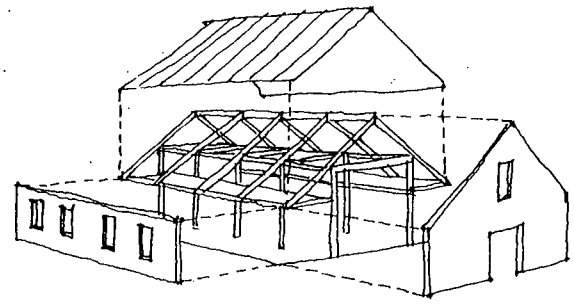


Figure 35. Axonometric 'exploded' - a tool for understanding and communication.

Prof. Shack suggests that on a project which is actually to be built, full size models should be made or even experimental construction of elements of the building to "get deeper into the architectural poetry and actualization of the poetic image and order - to bring the 'hand' back to architecture." (ibid 7)

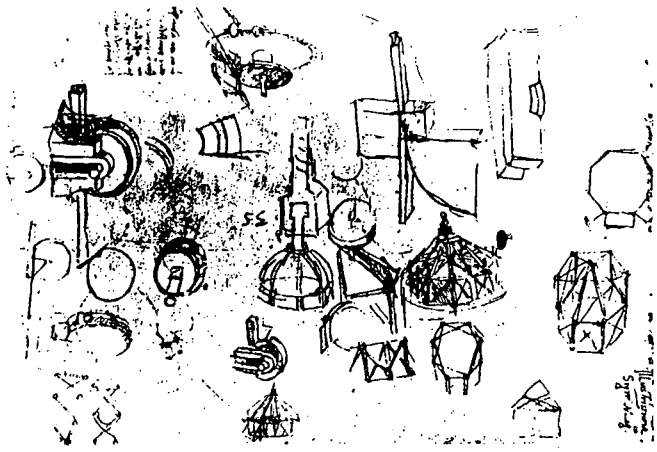


Figure 36. Poetic images of Leonardo da Vinci: Studies of temporary structures for a festival (Leseau).

These evocative steps towards design are so relevant to lessons I have tried in my secondary artroom. I did attempt, with the parking lot exercises, "to bring the foot

and pace back to architecture" (Shack Paper 3 p.1) Joel Shack suggests. How much richer would our efforts to 'Unpave' have been - to design and then work in plan at full scale with chalks to lay out a new vision on a paved parking lot - if I had reminded myself of the contents of the Working Papers that I first saw in 1988. Having gone through this paper again, which so clearly sets out poetic possibilities for the design process, I see rich implications for another set of iterations in my artroom.

These notions, set out by Prof. Shack in 1987 and 1988, and which perhaps seem a bit esoteric to anyone unaccustomed to thinking in terms of the design process, can, with some effort, be squeezed by teachers into useable form. We design things all the time: programs, lessons, our personal costume for the day, lunch, a new classroom layout of furnishings. We do this with varying degrees of care and attention - sometimes without much thought, sometimes intently observant of the phenomena of our lives. We might not call this action 'design', but that is what creative arrangement in its myriad forms in our lived world is called. The step from designing the ordinary items needed in our daily lives to designing architectural form - making our places - does not need to be considered so formidable that it need be reserved for only the 'trained'. To some degree, we can all participate in the design process to make our settings. If we are fortunate, we will find an architect of generous sensibility who will to share this journey. Certainly the architecture students at UBC were fortunate to have this opportunity under the tutelage of this inspiring teacher.

All our creative acts, especially those acts entered into with care and awareness, can serve to train us to move into more complex design and planning undertakings if we choose. We can rely upon our direct experience in the world to guide us, avoiding set theory and fixed ideas about who is entitled, and who is not, how things 'should' be or 'should not' be. If we look with fresh sense,(as I began to consciously do in that trip to the swimming pool at the start of my quest to understand phenomenology), we can move past preconceptions to new and authentic understanding of what is and what needs to be. Perhaps we can reach the point where we are able, as Prof. Shack says, to 'reveal the inherent poetry of everyday life'.(e-mail 8 September, 2003) Perhaps we can move beyond being reluctant or reticent participants; we might even blossom into poetics, if we cultivate a taste and capability for engaging in the natural human activity of place making.

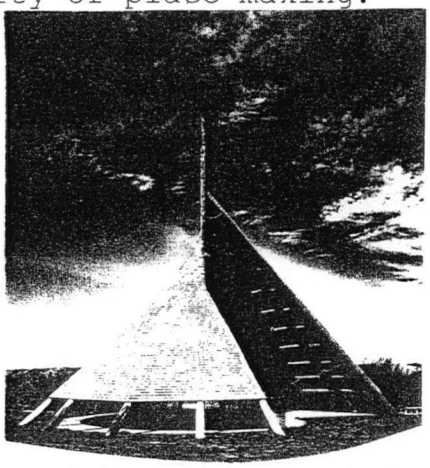


Figure 37. An evocative camp shelter which responds to context - the prairies, and elegant cultural precedents. (Clifford Wiens, in Bernstein and Cawker)

3.4 Sustainability

If we were not so single-minded
about keeping our lives moving,
and for once could do nothing,
perhaps a huge silence
might interrupt this sadness
of never understanding ourselves
and of threatening ourselves with death.

Pablo Neruda

Is this an issue for the schools? - in the artroom?

The electronic publication "Canadian Responses to Agenda 21: An Assessment", first compiled and released in 1994, provides the framework and context for sustainable development action in Canada.

At the Earth Summit in Rio de Janerio, June 1992, governments around the world agreed to Agenda 21 - a plan which names what needs to be done by all of us to achieve sustainable development in the 21st century. Many young people were inspired at that Summit by the words of Severn Cullis-Suzuki, then 13 years old, who spoke so eloquently about the problems we have created for her generation to inherit and the pressing need to take care of this planet of ours.

Carla Doucet, Policy Advisor for Education at the Canadian National Round Table on the Environment and the Economy, describes the nature of the challenge of sustainable development very succinctly.

She states:

> "Society must find new ways of developing and must reorient itself from an unsustainable society to a sustainable one. In order for society to reinvent itself it will require education, public awareness and training related to sustainable development…(which) requires a multi-disciplinary approach. While sustainable development offers hope as a concept, people are often unclear as to what practical action they can take… Linking sustainable development issues and public education will help centre the ethical dimension of the issue."
>
> Canadian Response to Agenda 21

For me, the study and practice of architecture is a multi-disciplinary, very fundamental pursuit, which calls upon almost all the scraps of knowledge I have been able to obtain, organise and put to work over the course of my conscious life. Not very much of our practical knowledge is irrelevant when we consider the magnitude of the challenge of reversing the unsustainable course of development in many areas of the planet. The thoughtful observation and creative alternative envisioning inherent in the processes of design, the dynamics of cooperative community action, the constructive thrust of building or changing something for the better: these are the elements of architecture that have relevance and value for the classroom. If these elements or tools are shared and sustainable practices are encouraged through meaningful and engaging projects in an artroom, young people can be fitted with the necessary capabilities and confidence to meet the very formidable challenges that are ours at this time.

So do we really have a problem?

> "There is an exceptional degree of agreement within the scientific community that natural systems can no longer absorb the burden of current human practices. The depth and breadth of authoritative support for the Warning should give great pause to those who question the validity of threats to our environment."
>
> World Scientists' Warning to Humanity"
> 18 November, 1992

For residents of the province of British Columbia, the events of the summer of 2003 - the fires and then the flooding - became a local Warning, something that we in these blessed parts had not experienced to a greatly noticeable degree. Many of the students at the school where I teach have emigrated to Canada from crowded and polluted parts of Asia. They often comment on the quality of the air and revel in the fact that they can drink the unpolluted water directly from the tap in the Lower Mainland. Until the dramatic events of the 2003, these new Canadians, like many longtime residents, have felt that we are relatively untouched by the problem of global warming.

This is, of course, not to say that we have been untouched by environmental degradation. We are beginning to purchase bottled water, or at least keep special filters in our refrigerators. From time to time, we might see someone wearing a medical mask while out in the smog. Moreover, students are well aware of the term 'extinct' and 'non-biodegradable'. I have taken students to the Vancouver garbage dump, and watched them react with disgust and new resolutions. One class even got busy with a strongly worded petition taken throughout the vicinity of the

school, to encourage the 'other 3 R's' - reduce, reuse and recycle. Students, like adults, want to be part of the solution rather than part of the problem. I am always heartened by evidence whenever I initiate even the simplest of ecological routines. Many students flatly refuse to put paper into the garbage can anymore. That same motivation makes then receptive to projects of a sophisticated sustainable nature as well. They know about saving the trees and why that is important. They are ready to learn how to use resources efficiently to satisfy our daily requirements.

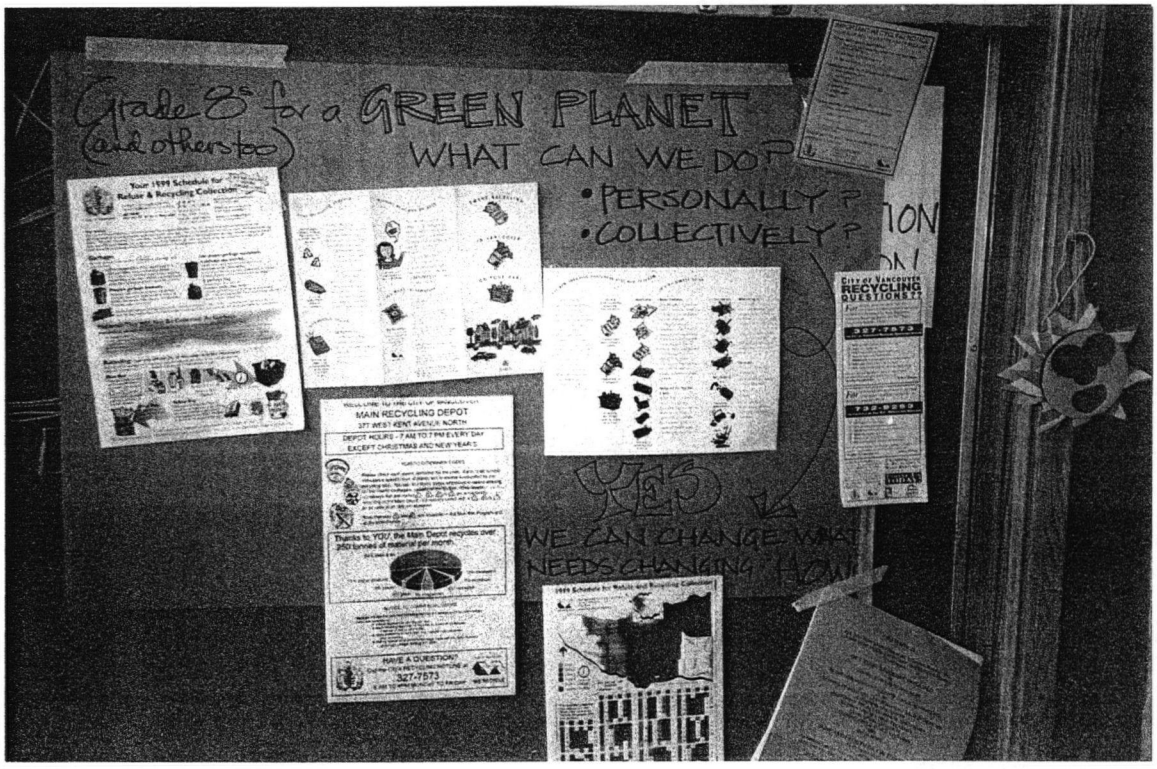


Figure 38. Collective noticeboard.

Science and interdisciplinary teachers have been busy. Students have been alerted. And whereas students of an earlier generation would never have considered using 'soft drugs', for example, but might have smoked tobacco and littered the streets with packaging, some of today's youth might be more open to exploration of mind altering drugs, but heed the anti-litter and anti-tobacco slogans scrupulously. Times have changed. It can perhaps be said that we are making some progress, at least as far as education of our young is concerned.

David Suzuki is optimistic about our efforts to teach our children. He notes that:

> Our giant brain allows us to see patterns by discerning repetition, similarity and difference. From this we gain history and we gain foresight - we can plan. Because we can learn from experience, we can teach our children more than we knew when we were their age. We can change more rapidly than evolution would allow us to, responding to threats by drawing from our experience and deciding to alter the way we live."
>
> David Suzuki, The Sacred Balance

Students generally are beginning to show interest in, understand, and discuss the concepts of sustainability.

The Brundtland Commission made what has become a widely accepted call to "...meet the needs of the present without compromising the ability of future generations to meet their own needs." (Wackernagel and Rees 1996,33) This is the core definition of sustainable development. My students understand, notwithstanding the relatively clean B.C. air and water, that we have soiled the planet, and

that much is to be done to halt the damage and turn it around. Indeed, sophisticated students at the high school level speak of the concept of sustainable development with some measure of understanding and confidence. They have been paying attention, although this term is, regrettably, not much discussed in formal learning situations at the secondary school level.

I know that in all subject areas we need to engage learners in discussion about the health of our planetary home. We need to discuss sustainable development as a route to the future health of the planet. A good place to start the conversation is provided by Wackernagel and Rees who assert that sustainability requires that our emphasis shift from "'managing resources' to managing *ourselves*, that we learn to live as part of nature." (ibid 4)

What does this mean? What can we do, personally and collectively, to live in a sustainable way? Do we not live as part of nature already?

What are the implications of Wackernagel and Rees' assertion that "...human enterprise is inseparable from the natural world. Humankind is often the dominant species in virtually every significant ecosystem on the planet. Human beings are embedded in nature."? (ibid 4) Certainly, if we are going to engage students in the act of designing places, we need to acknowledge that 'the environment' in which we are locating our visions is a critical part of the exercise. Do we know that? Do we act on it?

Some would say that in general, we do not. At least not with sufficient resolve to undo the very considerable environmental damage that has already been done.

Do we generally recognise that our expectations are rising and very different from the standards of the previous generation in Canada? I have noted a statistic which I cannot properly footnote but which begs to be included here which states that while family sizes have dropped precipitously in North America, the average house size has almost doubled from 1,100 in 1949 to 2,060 square feet in 1993. This is not a healthy development.

We need to show our next generation the pattern that is emerging in our living habits. How else will they understand the implications of our daily choices? We need to teach them that

> …as living standards rise, more and more people live on ecological carrying capacity 'imported' from somewhere else. The obvious follow up question is: how long will it be before we run out of 'somewhere else'? (Answer: we already have.) If the so-called 'advanced' countries continue to promote a lifestyle whose satisfaction will require the equivalent of several more planets, they are, in effect, blindly planning their own demise. The greatest contribution the developed world can make to sustainability is to reduce its resource consumption by all means at its disposal…there may well be greater ecological, community and personal merit in learning to live more simply so others can live at all." (ibid 155-6)

Maurice Strong, in an undocumented but unforgettable statement quoted in the Guardian, points out that "a

citizen of an advanced industrialised nation consumes in six months the energy that has to last the citizen of a developing country his entire life." It is not fair of us not to pass this understanding on to the next generation. They need to know this and we need to do something about it together.

Dr. Freda Pagani taught a course titled "Sustainability" at Royal Roads University in the summer of 2003. A statement in her course outline reads:

> "Sustainability is both an idea and a way of doing things, a journey rather than a destination."

Our collective responsibility is to give young learners the benefit of these insights. Although it is an issue that overarches all disciplines and affects us all, many teachers are reluctant to tackle the question of sustainability. We might shrink from this responsibility because of a lack of knowledge, understanding, optimism, energy, or opportunity. But we are all on the planetary journey together and our destination will be bleak if we do not explore this idea, and find new ways of doing things in our journey together.

So how can students understand this and what can we do to learn and practise this approach?

Perhaps I will go into production as a poster maker. I can see my artroom spotted with words as well as the ever-changing supply of student work and examples of the fine works of globally aware master artists. I think students are each somewhere on the continuum from somewhat to deeply

disturbed by the psychological depth charge of present and future environmental degradation. On behalf of future generations, I am too. (I have long assumed that my generation might make it relatively unscathed, especially in this very privileged part of the globe. After watching fire and flood so close to home, I am, like many others, now strongly questioning that airy assumption.)

So what can we do in the artroom? I can't really start teaching ecology per se - I think students would rebel if the class began to take on the shape and tenor of a science class. But based upon the belief, strongly held, that it all hitches up somewhere, that arts and sciences and humanities all interlock at the key places, there are some things I can initiate into the artroom. I can inject ecological thinking into our projects. I can encourage students to seek and discuss relevant information so that in every classroom, not just the non-existent 'eco' classroom, we can build a knowledge base, work out and work on strategies for resolving our planetary problems, and build a confident, optimistic stance for the future.

I sometimes tell students that, in the fullness of time, I will be joining the group that needs to be cared for. And, only half-jokingly, I add that I see my job in the classroom as somewhat self-serving: my students are the generation that I will be depending upon to take care of things. So I had better get it right! But I recognise at the same time, that dropping the responsibility on them without some tools is heavy and unfair.

I do not have a very broad scientific background, although some scientific rigour was included in the architectural training I am richly privileged to have received. And I confess to an indecently recent sharpened interest in the good health of our planet. When I was a student of architecture in the 1980's, 'green' was, for many students and many of our teachers as well, just another colour. I was told by a professor in my first year design studio that my efforts to fit out an apartment building with solar devices was 'boring' and that what I was meant to learn in this studio was good, strong and exciting design. Furthermore, the successful, efficient, experimental solar home, built by forward looking architecture students near to my campus housing at UBC was summarily demolished one day, as it was not deemed to be important enough to save, despite the efforts of some students who were canvassing to have it preserved. But times, perhaps, are changing. There are some simple measures I was beginning to learn about as a student architect to conserve resources, choose healthy materials, manifest planetary consciousness. I grabbed a book, vintage 1976, that was being discarded from the Architectural Reading Room at UBC called Low-Cost, Energy Efficient Shelter for the owner and builder, edited by Eugene Eccli, and I have referred to that book from time to time in designing buildings for friends. I have a kit produced by CMHC called "Your Tools to a Healthy Home". I have long admired and been attentive to the work of David Rousseau, a friend and former work partner who wrote the very popular and useful book titled Your Home, Your Health, and Well-Being, which I have also used as a reference and which sits on my bookshelf at school. Some of my students

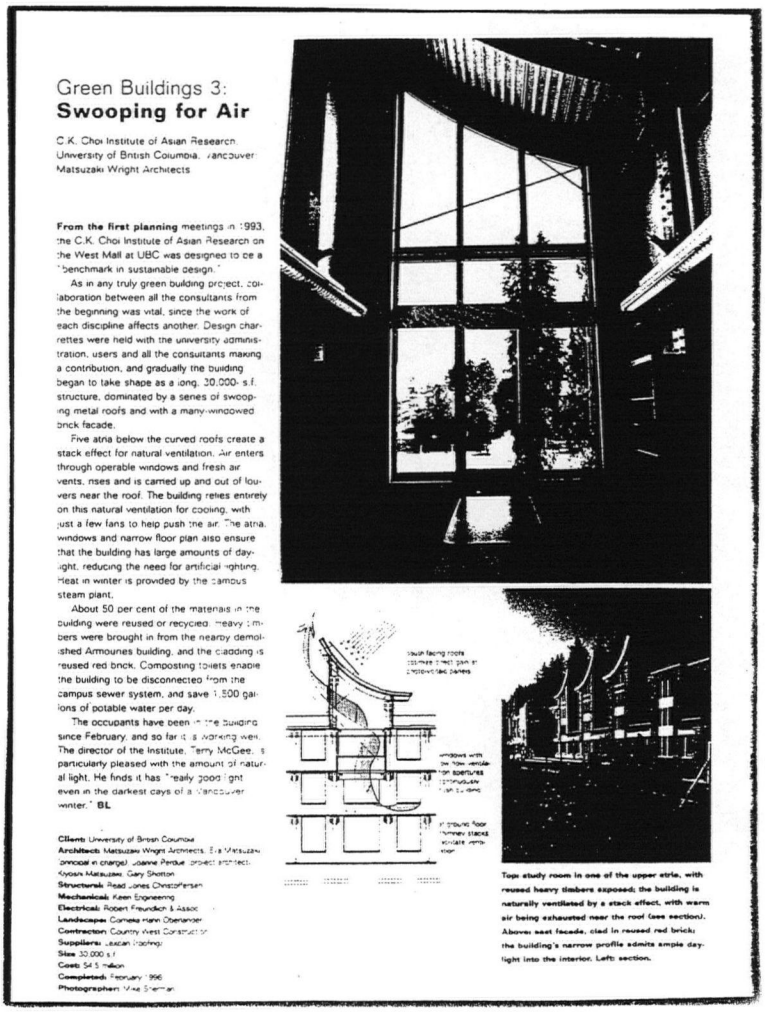
read some of these materials in the course of making their art projects.

Figure 39. David Rousseau's practical guide.

In the albeit few projects I have given students to consider in the artroom that have an explicit ecological component, I have noticed a degree of interest that cheered me. Based upon the knowledge that the exhaust emissions of vehicles contributes a great deal to the pollution of our air, and to the global warming phenomenon, students have set their energies to work to investigate and design alternative fuelled vehicles which, in some instances show evidence of interest in the scientific aspects of the problem. (Some students responded with lovingly drafted carriages to be pulled by the family horse; one replied with an exquisite drawing of a man on a flying carpet - it is an artroom after all.) And some students are interested in investigating simple solutions for making buildings ecologically sound. I can't push it to the point where students are turned off and unwilling to investigate these options, but, where there is interest, I am ready with simple materials, to encourage some scientific rigour. And some students, with whom I have discussed a project in which ecologically sound housing is researched and designed, responded very favourably to what they termed the 'challenge'. These projects are elaborated upon in the Primer.

There are some fine examples of handsome and sustainble buildings which can serve as models to inspire and direct eco-motivated energies of students. Following are some views of the C.K.Choi Building at UBC, which opened in 1996 and features reused and recycled materials, natural rather than energy wasting ventilation systems, highly efficient lighting, and the novel composting toilets and grey water

recycling system. I would think a field trip to this inspiring building or the newer Liu Centre for the Study of Global Issues, also at UBC, would be of great interest to students, for a wide range of reasons, including the opportunity to see first hand the leading edge of sound sustainable building principles.



Green Buildings 3:
Swooping for Air

C.K. Choi Institute of Asian Research, University of British Columbia, Vancouver
Matsuzaki Wright Architects

From the first planning meetings in 1993, the C.K. Choi Institute of Asian Research on the West Mall at UBC was designed to be a "benchmark in sustainable design."

As in any truly green building project, collaboration between all the consultants from the beginning was vital, since the work of each discipline affects another. Design charrettes were held with the university administration, users and all the consultants making a contribution, and gradually the building began to take shape as a long, 30,000- s.f. structure, dominated by a series of swooping metal roofs and with a many-windowed brick facade.

Five atria below the curved roofs create a stack effect for natural ventilation. Air enters through operable windows and fresh air vents, rises and is carried up and out of louvers near the roof. The building relies entirely on this natural ventilation for cooling, with just a few fans to help push the air. The atria, windows and narrow floor plan also ensure that the building has large amounts of daylight, reducing the need for artificial lighting. Heat in winter is provided by the campus steam plant.

About 50 per cent of the materials in the building were reused or recycled. Heavy timbers were brought in from the nearby demolished Armouries building, and the cladding is reused red brick. Composting toilets enable the building to be disconnected from the campus sewer system, and save 1,500 gallons of potable water per day.

The occupants have been in the building since February, and so far it is working well. The director of the Institute, Terry McGee, is particularly pleased with the amount of natural light. He finds it has "really good light even in the darkest days of a Vancouver winter." **BL**

Clients: University of British Columbia
Architects: Matsuzaki Wright Architects, Eric Matsuzaki (principal in charge), Joanne Perdue (project architect), Kyoshi Matsuzaki, Gary Shorton
Structural: Read Jones Christoffersen
Mechanical: Keen Engineering
Electrical: Robert Freundlich & Assoc.
Landscape: Cornelia Hahn Oberlander
Contractor: Country West Construction
Suppliers: (excavation/roofing)
Size: 30,000 s.f.
Costs: $4.5 million
Completed: February 1996
Photographer: Mike Sherman

Top: study room in one of the upper atria, with reused heavy timbers exposed; the building is naturally ventilated by a stack effect, with warm air being exhausted near the roof (see section). Above: east facade, clad in reused red brick; the building's narrow profile admits ample daylight into the interior. Left: section.

Figure 40. C.K.Choi Building for the Institute of Asian Research.

There is not a shortage of information about how to live in a sustainable way, and teachers can easily locate the necessary materials required to supplement our projects, once chosen. It is well beyond the scope of this work, and my present expertise, to provide a list of sources. But I do have another story and some advice, passed on from David Suzuki's wonderful book, The Sacred Balance which can be used as inspiration for students and teachers alike.

First, the story.

An architect who David Suzuki clearly admires, William McDonough, dean of Architecture at the University of Virginia in Charlottesville, "likes to cite a story related by the ecophilosopher Gregory Bateson:

> At new College in Oxford, England, the huge oak beams of the university's main hall are some 12 metres long and 0.5 metre thick. In 1985, dry rot had finally weakened them so much that they needed to be replaced. If oak trees of such size could have been found in England, they would have cost about US $250,000 per log for a total replacement cost of about US $50 million. Then the university forester informed the administrators that when the main hall had been built 350 years earlier, the architects had instructed that a grove of oak trees be planted and maintained so that when dry rot set in, about three and a half centuries later, the beams could be replaced. (Suzuki adds) Now that is long-term planning, and McDonough believes this has to become standard in architectural thinking." (Suzuki 1997, 224-5)

We can all learn to think this way.

And finally, the advice.

In a section titled "What can we do?" in Chapter 9 - A New Millenium, David Suzuki, gives a series of simple

suggestions for actions we can all take. I will note here only a few of the practical approaches David Suzuki suggests for changing the way we think and live, particularly those that may connect most readily with design work in an artroom:

- **Think critically about the information that floods over us. Consider its sources carefully…**
- **Trust your common sense, your ability to assess information…**

I am willing and able to assemble simple and useable materials for use by students in the artroom. I do not think students will tolerate my turning the artroom into a science lab, but they seem agreeable enough about the prospect of doing some simple research on issues connected to design projects. Ones who resist will not be pushed. Following are some resources I keep handy:

Figure 41. CMHC pamphlets - readily available from CMHC offices.

Suzuki continues:

- **Project your mind far ahead into the future and consider the problems that we are leaving as a legacy for our children and grandchildren…**

This projection and the recording of deliberations might be easier for art students because of the accumulation of graphic skills and confidence, and the habit of creative envisioning. I can see how this can be integrated into a project for students to consider the future and the works of artists who have portrayed future possibilities as well.

- **Reflect on how we can meet our fundamental needs while also making a living…**

I have observed that students like to engage in conversations regarding our needs as opposed to our wants. This obviously has an effect upon subjects chosen for design projects and upon outcomes. Data such as the earlier mentioned information about the increase in house size over time is interesting and relevant for young people who are forming their attitudes and life patterns. They want to live well on the earth, they certainly want the planet to be well, and they are willing to put considerable thought into the designs for living that they develop in art classes as well as elsewhere. Over the years, I have noted that students love to design places for themselves and their families: a personal sanctuary, a home for themselves and/or their family - these topics engage their deep attention over an extended period in some instances. I have not emphasised as much as I might have, the challenge of designing for the eco-benign quality that Suzuki suggests, but I will in the future. I can see very fertile

possibilities here for gently shifting the emphasis towards an eco-planetary commitment with respect to place making.

- **Work to get your home as ecologically benign as possible. Of the three Rs - reduce, reuse, recycle - reducing is by far the most important precept...**

Reduction of size and overall material use is a rational, supportable approach to design, not difficult to understand, support and integrate into planning.

- Lest anyone despair, it is worth remembering Margaret Mead's words: "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."

(Suzuki 1997, 209-218)

This well known maxim provides a very suitable connector to the next section of this document regarding the connections of my curricular proposals to broader themes of architecture. Thinking of ourselves as part of a community, and engaging in collective actions together, is the logical extension of our deliberations in bringing the ideas of sustainable design into the artroom.

3.5 Social responsibility, Community action

Some people don't have a place. This is obscene.

My personal focus for my professional and voluntary energy, in much of my adult life, has leaned towards involvement in community action against the effects of poverty. I have long believed that human dwelling considerations are something I could most meaningfully address. This crystallised into a life pattern for me over coffee one morning many years ago, with a social worker, then working at the emergency services office on Drake Street, Vancouver. She had just told me how hard it was for her to deal with women who came to her in the night to ask for help in finding a place to stay. After all the shelter places were filled, this social worker routinely gave the women two dollars - so that they could buy coffee in a café and wait for the shelters to empty out in the morning. (Existing services are, if anything, under even more pressure currently.) I was horrified at the thought - but even more horrified by what this kindly and good woman said next: "Housing is not my issue." At that moment, something came clear for me. I realised we must choose our issues and move them ahead as best we can. I could never reconcile how a woman in charge of settling homeless women could think that "housing" was not her issue, but I do recognise that we all need to choose where our energies are going to be spent, and to focus our work so that goals can be achieved.

Personally, I don't lean nearly so enthusiastically towards promoting the harder scientific aspects of sustainable development. I do, however, understand that without wise attention to ecological matters, other human considerations may not be relevant for much longer. The Canada and Agenda 21 commentary document, already referred to in an earlier section, devotes a chapter to combatting poverty. Two sentences jump off the page for me: "Sustainability cannot be achieved without eradicating poverty." (p.1,Chapter 3) And, furthermore, "The relationship between poverty and degradation of the environment is evident."(p.3,Chapter 3)

The commentary continues with the observation that the causes of poverty, which are rooted both globally and nationally, result in diminished access to economic, social, and political options for the poor. The thrust of the effort to eradicate poverty is thus to regain access by the poor of options, and to transform oppressive systems using a multi-sectoral and multi-disciplinary approach. The commentary asserts that "poverty eradication and sustainability will be achieved through community based development strategies… transformation of … policies that impede successful development efforts, and mechanisms for communities and governments to share in policy formation." (ibid)

So what does this have to do with the artroom?

How can the students in an art course get involved in this sharing of social responsibility?

I believe that the artroom can be an important learning ground for acquiring the skills and understanding essential to the movement against poverty.

Obviously, students must be made aware of the poverty that exists: in our own neighbourhoods, in our cities, and further afield. Envisioning solutions, not simply for the alleviation of homelessness, but to the underlying causes of poverty and homelessness, can be part of imaginative deliberations in the artroom.

Another of David Suzuki's proposals for action, found in The Sacred Balance:

> **Get involved... action invariably precedes a profound shift in values, so actually doing something is important. In the process, one learns and becomes committed...**

I sponsor a student club at school called Colts that Care and Colts Humanitarian Aid. I am always delighted on Mondays at lunchtime when my classroom fills up with over seventy students who have come to sign up for volunteer hours in the community and for fundraising for global projects. I believe that much of the motivation springs from a simple desire to make the world a better place. We joke sometimes about how good volunteer work looks on a resume, but I think there is much more to it than that. These students have raised many thousands of dollars for good global causes and have given similarly thousands of hours of their time for causes in the community. It is many

of these students who have spent hours making posters and informative artwork which enlightens the general population of our school with respect to issues surrounding the reality of poverty and the alleviation of poverty. The interest and energies are there; it is up to educators to guide that impulse and to provide some scope for action. We can offer design projects that promote thoughtful, ecological responses as part of the art curriculum - the opportunity to combine the wish to live well with practical investigations of how to accomplish this. We can offer students opportunities to do and to learn and to learn commitment.

The Ministry of Education has drafted (February 2000) a document called Social Responsibility which reinforces the ideal of encouraging such a component in the curriculum. A 'rating scale' for social responsibility is included in the Performance Standards document, which might seem a bit fatuous to some, but which provides some food for thought regarding behaviour goals we might embrace. The several aspects of behaviour to be rated are:

1. Contributing to the classroom and school community
2. Solving problems in peaceful ways
3. Valuing diversity and defending human rights and
4. Exercising democratic rights and responsibilities.

A way of meeting and/or exceeding the first goal is articulated in this way: "works actively to improve the school or community: often volunteers for extra responsibilities and shows leadership skills".

While I am not sure whether the provincial Ministry would interpret these goals in the same manner that I might do, I can see that some of the activities one might provide in the artroom might well serve to help students meet these liberal goals.

So what can we DO?

Art students can play a major role in the simple act of beautification of their surroundings, and in providing thoughtful works of art to provoke thought or even to promote ecological values. I consider these acts of environmental enhancement to be an important aspect of the art curriculum and am well aware of the power of such acts for students.

Because our school was scheduled to be demolished in 2004, I was granted permission from the School District to embark on a vigorous program of school beautification for the last two years of our building's life. This involves the painting of wall murals in spots throughout the school and the painting of students' lockers, which proved to be a very popular activity. This lifted our spirits and possibly helped to reduce the vandalism that might have arisen in our old, soon to be abandoned school building.

At another point in our recent history, in answer to a school-wide question "What can we DO to help people less fortunate than ourselves?", students in my art classes researched and recreated at very large scale the logos of

many of the major helping organisations available to people experiencing the impulse to get involved. In every corridor of the school, logos were displayed, which tied in with the theme of an assembly involving the entire school community. Many students, especially the 'Colts that Care' have spent countless hours creating well-researched public education posters for the school which focus on themes of poverty, particularly related to the work of "Doctors Without Borders'. Much of this work was done outside of class time - students often spend hours after school in the artroom, engaged in such tasks.

With respect to goal 4, 'exercising democratic rights and responsibilities', the school in general, and the artroom in particular can play a rewarding role in fostering this kind of development. From the rating scale, we see that a way of meeting and/or exceeding the expectations of the fourth goal is: "shows a strong sense of community-mindedness and accountability; can describe and work toward an ideal future for the world". This calls to mind the words of an African theologian, Emmanuel Tehindrazanarivelo, who tells us:

> ...the African tradition sees education as a process of bringing a sense of awareness to people; that is, an awareness of worth, belonging, and responsibility; a sense of tradition, roots, and projection - a sense of being human within a community. The knowledge produced through education provides people with a vision that makes them able to interpret and to be creative so they can produce action as an expression of their own life and the life of the community."
>
> (Arnold et al, 1991, 150)

Global initiatives

Every year for the last ten, the students and teachers of a locally developed course at our school called Global Perspectives have visited an area that is experiencing hardship, and work together with the local people of that area to complete a project. Some of the countries these students and teachers have visited include rural and isolated parts of Ecuador, Guatemala, the Philippines, China, Thailand, Guatemala and Santa Domingo and Cuba. At times, art students have provided support to this program, perhaps by making a scale architectural model of a building to be constructed in the rural area, perhaps by sending art work along as gifts to students in the area, or by helping to publicise fundraising events for the program.

Although such projects clearly involve much beyond the discipline of art, the meaningful actions of this program strike me as a definite example of community action at its finest. Such programs, of which art can be an important component, are to me exemplary models of social responsibility education. There are lots of things we can do that don't involve leaving our own country, or even our own neighbourhood in some instances.

Understand our local reality

In a recent study titled homelessness - THE MAKING AND UNMAKING OF A CRISIS, Jack Layton, formerly a Vice-President of the Federation of Canadian Municipalities and Toronto City Councillor tells us that "On Toronto streets, one homeless citizen dies every six days". (Layton 2000,

xix) He believes that homelessness is "a social construction, a result of our collective actions as a society, an artifact." (ibid xxi) To me it seems that if this is true, the unmaking of homelessness could be a result of our collective actions as well.

Theories and research abounds with respect to the causes of and reasons for homelessness. The media and the literature cite the main factors: economic downturn, unemployment and underemployment, changes in social and medical (particularly mental health) policy, gentrification - the list goes on. But it is a relatively recent problem. Layton notes that "computer searches of Canadian newspapers of the '60s, '70s or early '80s yields no mention of the word *homelessness*.(ibid 3) 1987, The International Year of the Homeless, brought attention to this phenomenon to the public eye. It is important for students, as the generation to inherit this societal, and perhaps personal problem, to understand homelessness and its ramifications.

I think students need to understand the facts about homelessness and as well, need to be given the opportunity to address the problem and seek solutions to both the alleviation of and the eradication of this form of advanced poverty. The Toronto group CERA, Centre for Equality Rights in Accommodation, is one of many articulate and vocal groups whose mission it is to see that we are informed about this problem as a society. They assert that in 1976, our country ratified the International Covenant on Economic, Social and Cultural Rights which ensures that everyone enjoys an adequate standard of living. Recently

the United Nations Committee on Economic, Social and Cultural Rights has expressed grave concern that Canada is allowing violations (documented by CERA) of the right to adequate housing to occur, and has recommended that the problem of homelessness in Canada be addressed as a national emergency. CERA's charting of how the "epidemic" and "national disaster" of homelessness has spread in Canada since that covenant was signed is illuminating and succinctly expressed at their website - (www.equalityrighs.org/cera/docs/tcupdate.rtf.) Such action groups perform a valuable service to interested students and other citizens by making this information readily available. CERA's Test Case Litigations are bringing people whose rights have been denied to the courts all across Canada in an effort to publicise this problem and to claim fundamental rights for the disadvantaged.

Most students I broach this subject with, in the inner city (Richmond) school of very mixed economic levels where I teach, are not aware of the reasons why the few panhandlers they see in the streets are there, asking for money or work. Few of my students are aware that, only a few miles from their relatively comfortable neighbourhood, sits the postal code zone which is documented to have the lowest per-capita income in all of Canada - the Downtown Eastside community of Vancouver. Students arrive with their own personal biases to the discussion regarding why the problem exists and what we should do about it. I have found that students are interested and willing to do the research and spend their creative energies involved in this issue.

This kind of creative problem finding and solving is well suited to the artroom as well as other classrooms. In their collaborative effort, Educating for a Change, the authors assert that "social change education encourages people to identify, value and contribute what they know so they can solve problems together. The social change educator must design different processes that actively invite such joint learning and problem solving".

(Arnold et al 1991, 127)

Such educative action ties together the creative problem solving common to the artroom, the multi-disciplinary thrust of the educational system, and the social responsibility goals articulated in the B.C. Ministry Performance Standards. Such action also brings to life the African theologian's abovequoted goal to create in students "a sense of being alive within a community". Such action in the classroom also meets the definition of the authors of Educating for a Change that education is:

> A way to help people critically evaluate and understand themselves and the world around them, to see themselves as active participants in that world. Our hopes for social transformation are ignited as people come to see themselves as creators of culture, history and an alternate social vision…(ibid 151)

In this way, my efforts at educational research, should they be meeting some of these goals, push past the original goals of educational action research to become participatory societal action, to the degree that we see ourselves - myself and the students - as active participants and co-learners with respect to the societal

change that we address. In the continued support that we give one another as researchers, designers, learner/students and participants in our society, as we probe for causes and solutions together to a painful aspect of our Canadian reality, we might reach the transformation goals of education described earlier by Miller and Seller.

Poverty - a definite culture in our multicultural, pluralist society

A young Philippino boy, recently arrived in Canada and separated from his Philippino-Canadian friends in the course of an altercation, was lately beaten to death by a group of young Indo-Canadians near a schoolyard. The ensuing debate focused upon whether or not this was a 'racist' incident. In our part of the world, we have achieved a quite sophisticated level of multi-cultural acceptance, as the extent of our collectively expressed grief over this death will perhaps attest. And perhaps we read too much into this incident. It may well be that it is not the tip of a 'racist' iceberg, but a horribly unfortunate accident that happened between two groups of boys of different ethnic backgrounds.

I am heartened when I read accounts of students-come-lately to Canada who tell their stories of initial culture shock and frustration and eventual integration and feelings of acceptance in the culture we are all working to evolve here. It is an exciting aspect of our contemporary life in this region and I perceive a generally optimistic appraisal

of our growing successes, particularly in my school community. Art has a place in this settling. A curriculum that embraces and celebrates the pluralistic nature of our region supports and encourages this settling and the common understanding that must grow if we are to truly become a society, all together.

Dr. F.Graeme Chalmers, presently David Lam Chair in Multicultural Education and Professor of Art Education at UBC, asserts that 'multicultural' means acknowledging more than just ethnic differences, that we need to recognise "all aspects of cultural diversity" (Chalmers, 1996,4) which includes such differences as economic situation, class, age and ability, gender and sexual orientation, as well as the much focused upon ethnicity.

I have noted my perception that the multivarious ethnicities have been well-served in our region. The arts, not to mention social action in general, have proceeded well beyond the tokenism that precedes a fuller understanding of meaningful multicultural orientation. We are, I think, generally moving past the limiting Eurocentrism that characterised much of our art studies previously. To focus this issue to the area of architecture, I see a cheering array of styles emerging in the built form of the region which reflects our acceptance of our diversity. Except for the sometimes painful discussions surrounding the so-called 'monster' houses, the architecture of this region is perhaps generally accepted as richer for this diversity.

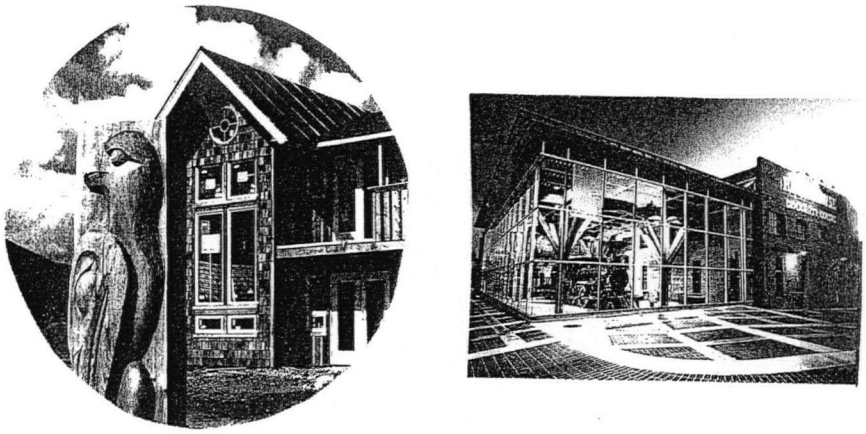


Figure 42. Seabird Sustainable Community project, the Roundhouse.

But Graeme Chalmers includes a quote in his discussion of pluralism which brings me to a long pause: "nothing human need be foreign in a multicultural society". (ibid 7, ref. Kattner) In my school community, the culture of poverty is, if present, hidden, not well acknowledged and certainly not well-understood by those who do not experience it directly.

Graeme Chalmers urges us to ask "Why do we make Art? How do we use Art? And what is Art for? He suggests that we should encourage students to act as anthropologists, to study art to identify what matters in a culture. He posits that Art is "what a culture says it is", in the sense that art is a "repository of cultural meaning". (ibid 30) Perhaps we could the same about architecture. By reading the existing built culture, we can derive a great understanding of how dwellers see themselves and what is important to them. By making art (and architecture) we

identify ourselves and our aspirations, and provide for social and cultural change. Art (and architecture) can become a "powerful pervasive force that helps to shape our attitudes, beliefs, values and behaviours." (ibid 31)

Dr. Chalmers asserts that we need to insist upon inclusion of art that has perhaps been overlooked or marginalised in the past in the Eurocentric orientation that we have favoured. He cites murals, street art, public art, as areas of art history that we should not overlook. Certainly if we focus on the built environment, as is the intention here, the merging of the built form with art is a very compelling study. Consider a Cuban street mural, or a highly embellished Irish neighbourhood, or a high school corridor with public art which has served to enhance and identify the culture and make manifest aspirations ranging from simple aesthetic, to political, to deeply spiritual issues.

Figure 43. Cuban public art.

The poor are an aspect of our culture less well known than perhaps any ethnicity that is a part of our society

There exists a subculture of poverty in our culture, as different from the mainstream as if the people were from a distant unpronounceable land, little heard of and seldom visited by ourselves. The Gap exists, between the mainstream and the poor, and statistics notify us that it is widening. Representatives of all ethnicities are found in this culture of poverty, but some groups are overrepresented to be sure.

I think it is one of our jobs in the schools to shed light upon this culture as well as all the other cultures we examine and celebrate. If we are to have a properly integrated culture, we will need not only to understand this aspect of our culture, but we will need to act upon this understanding - act appropriately upon this understanding. This means no tokenism, no shallow responses, but well grounded, informed and authentic responses to genuine issues.

Inasmuch as the fortunate ones understand this subculture hardly at all, we need to act with care and sensitivity in order not to make painful mistakes. Perhaps it is this fear of error that keeps us from responding when a ragged panhandler approaches us. Perhaps it is this fear that lets us turn a blind eye to the troubles of the disadvantaged people in our midst, who are corralled into such areas as the Downtown Eastside of Vancouver. We need to know about the people who have no place to live, who are

tucked into crevasses at the margins of our existing built culture. We need to understand what it is like for so many of the people of our regions who live in substandard or even totally inhumane conditions. I think if we know about these conditions, if we let our students know about these conditions, the urge to do something about this situation naturally follows.

I read stories to my students, and otherwise make available information about the poor in our culture and in other cultures as well. I tell them about the recent photographic initiative of the 2004 Downtown Eastside Portrait Calendar in which 110 black and white disposable cameras were handed out to residents of the area in order to facilitate image making of their neighbourhood. I show them the photographs of the resulting calendar, along with all the other artistic and informative images I can find that will help them to understand poverty.

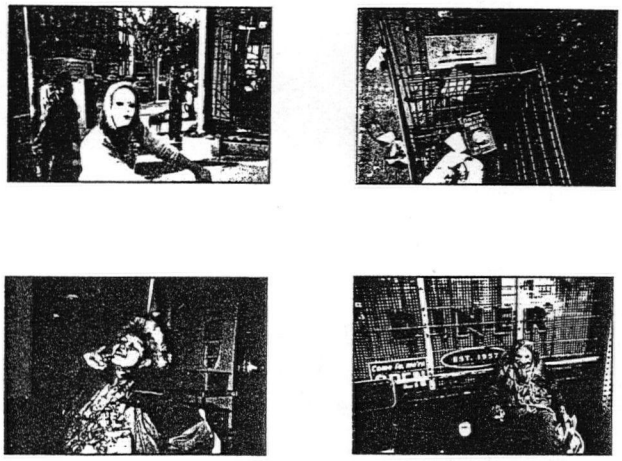


Figure 44. Photographs from the Downtown Eastside Photographers' 2004 calendar.

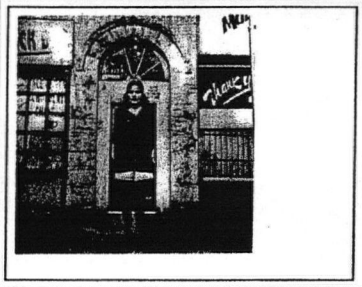
taxi vancouver SUMMER, 2001

"There is a whole connection with Vancouver and our environment and what our environment has to blame for the serious heroin and cocaine abuse. I think one of the reasons why this is happening is because they tear down buildings, for example, across from Eaton's. If that building was there, people would be in there, doing things, living, working... and it's gone. It's this big huge empty lot that's like this tooth that's been pulled out of the smile of Vancouver. The way we treat architecture and space in this city is really connected, I think, to heroin abuse. If there were more gardens and less asphalt this wouldn't be so much of a problem and I really believe that.

"This has been my neighbourhood for twenty years. So when these gals ask me, where are you from, I say 'I'm from right here - where are you from?' I think that these women can be saved, and should be saved. A lot of people think that this is Vancouver's problem, but these women come from all over Canada. They're not all from the Downtown East Side. They're from everywhere in Canada. These kids, these women have parents and relatives all over Canada, from coast to coast. It's a national problem.

"I'd really like to see these gals look at themselves a little bit differently and have a little bit of respect for themselves and try to get their dreams happening because they all have dreams, all have great expectations and they all have plans and fantasies. It would be really great if this could be a turning point for them. It's a personal thing to have a record of yourself, and these gals have a record of themselves in the heroin ghetto. So I'd like it if they could look back and be inspired by these photographs and I'd like them to just sh... buy a one-way ticket somewhere else and get the monkey off their back.

"There are a lot of sixteen-year-olds, seventeen-year-olds down here, that I really hope are not here ten years from now. And I encourage them to change their minds about being there. You know, I say to them, 'isn't there somewhere that you'd like to go?' ...I get them to talk about their dreams so they don't forget them. A lot of times I ask them what they



Enter Poverty : Enter Downtown

Shift-alt dimension

Vancouver's Darkest Cloud

by A. Peter Jubb

If you can judge a chain by its weakest link, can you judge a city by its poorest neighborhood? That sure would make tourism easy wouldn't it? You could bypass Manhattan for the Bronx, Beverly Hills and Santa Monica for Compton, or in our case Robson Street and Stanley Park for the sketchy alleys and taverns of the Downtown East Side. So what would a tour of the Downtown East Side be like? What makes the neighborhood really stand out from the rest of Vancouver?

Well, to get the best (or worst) view of this part of town it is best to start at night in the area commonly known as Zombie Town, or what I like to call the Belushi Belt which is famous for its quantity of heroin and coke users. The streets and alleys between Pender and Cordova and from Cambie to Main typify this area's financially challenged population. Despite the destitution the area enjoys a dynamic economy and its residents are highly mobile. Although there are no tours of this boisterous district, any number of residents will offer you a unique glimpse of up or down on these streets.

Down near Gassy Jack your first tour guide might be Neil from London Ontario who was kicked out of his house when he was 13 for trying weed. Since then, Neil's family has mostly been Charity and Ivy. Neil is also unemployed as a runner. From E to a Z, Neil will find it all for you (gratuities expected, of course). On his arm of the journey Neil will probably tell you that there is in fact a lot of good on the streets. It's like a family, he'll say. Everyone watching and searching, wanting and needing - buying and selling somehow brings them together. Everyone has a buddy, but few have friends.

Neil might introduce you to his friends Mr. Brownstone, Harry Jones and his brother Blanco in the alley behind 30 Hastings. Here you can collect free hype sticks and water bottles! Then Neil might make tracks in Chinatown where he'll chase the dragon across the street from Sun Yat Sen Gardens. Don't worry, cops don't believe in dragons, he'll tell you.

Up the street in Memorial Park, your next guide might be Dave from Abbotsford, who won't tell you anything about himself but he'll offer you a cigarette. Dave's one of this city's newest rock stars, king of his own sensations, part of the coke generation. And although he spends most of his time on the streets he is quite bitter.

The streets are tough, he'll tell you. The only bands that play here are rubber; the perfume is always opium, the fashion is always retro grunge. A rat's worth of saloons rumbling with sticky barstools, gym bags, and missing teeth.

A minefield for the soul.

Figure 45. Excerpt from Taxi, a local newspaper.

I explain to my students the extent of the social dysfunction that has emerged in the neighbourhood, and I explain how cruel it is to turn the area into a gawk-show, by cruising through to take a look. I believe, however, there is much we can do, as 'mainstreamers', to understand, to alleviate and to work towards eradication of poverty in our culture and in the global culture as well.

Students love to discuss issues of relevance. I might draw a line down the centre of the artroom and write 'yes' at

one end and 'no' at the other. I might ask the students if they think they should give money to someone in the street who asks for it. Take your place on the line, and explain why you are there. (I might ask them to write their name and the date on the line, as we might revisit the line later, after some discussion.) I want students to take a position, to formulate and to share their views. I want to introduce data for them to study, stories for them to hear, art for them to look at, questions for them to ponder, dilemmas for them to investigate. And eventually, I want to give them opportunity to take some action, albeit limited at this stage.

I might ask them to consider life in a shelter for homeless people. There are lots of ways we can learn about this reality without turning the people we are concerned about into monkeys in a zoo. Many sources of information exist, and I would guide students to those resources. Perhaps this would lead to some design initiatives. I could show them the results of some design initiatives of others.

MIX

Architecture's rising stars

Stephanie Forsythe and Todd MacAllen have won almost every design competition they have entered

TREVOR BODDY

ARCHITECTURE

Last summer, partners-in-design Stephanie Forsythe and Todd MacAllen had a lot of choices for how they could apply their archi-

unless I'm wrong, is unequalled in the history of Canadian architecture. It's all the more remarkable for the fact that the pair are only three years out of their architectural studies at Dalhousie University. It is exhausting just reading the long list of Forsythe and MacAllen's recent design competition wins, never mind the long days and nights they slaved all summer to prepare their entries.

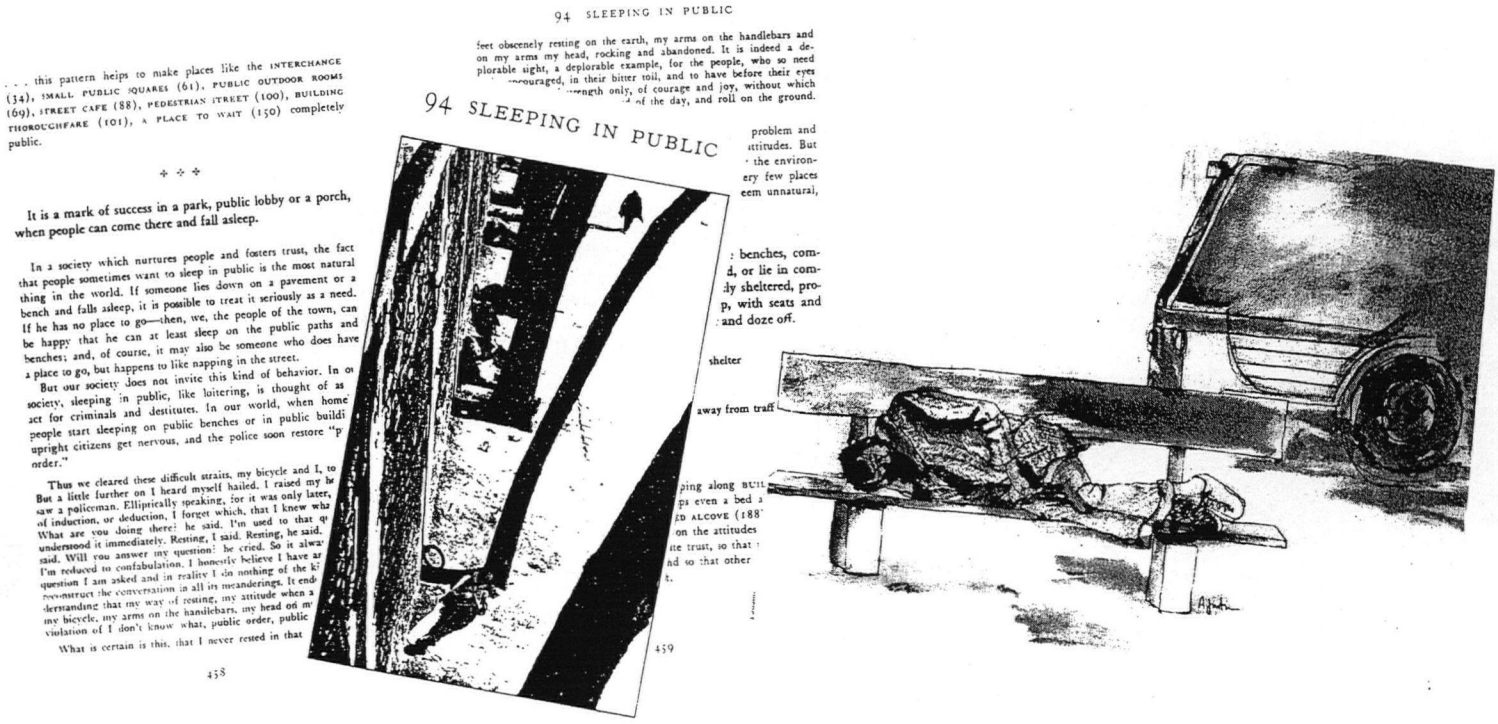
While the international community lavishes awards and attention on this couple, who live and work in a modest 730-square-foot Yaletown loft with their large pet boxer, Charlie, MacAllen and Forsythe currently have no substantive commissions in British Columbia.

They are not entirely unrecognized in Canada, however. MacAllen and Forsythe are 2003 recipients of the Canada Council's Ron Thom Prize, awarded to young designers who demonstrate

Stephanie Forsythe unfolds a paper 'tissue blanket' to form a wall for a temporary room, the core idea of Soft Housing.

Figure 46. Feature re: designers for the homeless, Trevor Boddy, 6 Dec. 2003

We could look at Christopher Alexander's Pattern Language, and perhaps expand upon his ideas for making places that enable sleeping outside. Perhaps the proliferation of people who are sleeping rough because of homelessness has changed the tone of this pattern over the years.



. . . this pattern helps to make places like the INTERCHANGE (34), SMALL PUBLIC SQUARES (61), PUBLIC OUTDOOR ROOMS (69), STREET CAFE (88), PEDESTRIAN STREET (100), BUILDING THOROUGHFARE (101), A PLACE TO WAIT (150) completely public.

+ + +

It is a mark of success in a park, public lobby or a porch, when people can come there and fall asleep.

In a society which nurtures people and fosters trust, the fact that people sometimes want to sleep in public is the most natural thing in the world. If someone lies down on a pavement or a bench and falls asleep, it is possible to treat it seriously as a need. If he has no place to go—then, we, the people of the town, can be happy that he can at least sleep on the public paths and benches; and, of course, it may also be someone who does have a place to go, but happens to like napping in the street.

But our society does not invite this kind of behavior. In ot society, sleeping in public, like loitering, is thought of as act for criminals and destitutes. In our world, when home people start sleeping on public benches or in public buildi upright citizens get nervous, and the police soon restore "p order."

Thus we cleared these difficult straits, my bicycle and I, to But a little further on I heard myself hailed. I raised my he saw a policeman. Elliptically speaking, for it was only later, of induction, or deduction, I forget which, that I knew wha What are you doing there? he said. I'm used to that qu understood it immediately. Resting, I said. Resting, he said. said. Will you answer my question? he cried. So it alwa I'm reduced to confabulation. I honestly believe I have ar question I am asked and in reality I do nothing of the ki reconstruct the conversation in all its meanderings. It end derstanding that my way of resting, my attitude when a my bicycle, my arms on the handlebars, my head on m violation of I don't know what, public order, public

What is certain is this, that I never rested in that

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94 SLEEPING IN PUBLIC

feet obscenely resting on the earth, my arms on the handlebars and on my arms my head, rocking and abandoned. It is indeed a deplorable sight, a deplorable example, for the people, who so need encouraged, in their bitter toil, and to have before their eyes strength only, of courage and joy, without which of the day, and roll on the ground.

94 SLEEPING IN PUBLIC

problem and attitudes. But the environ- ery few places eem unnatural,

benches, com- d, or lie in com- ly sheltered, pro- p, with seats and and doze off.

shelter

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ping along BUIL ps even a bed a ED ALCOVE (188 on the attitudes ite trust, so that nd so that other t.

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Figure 47. Collage of Pattern Language excerpt, homeless person sleeping (AIA)

We could develop the idea of designing a piece of furniture that could take the place of the simple cots lined up only inches apart in some of the existing homeless shelters.

We might consider the existing minimum legal requirements for habitable rooms in community housing projects, and we could see what might be possible. We could look at some of the supportive housing project that have been devised by housing advocacy organisations, and see what we could come

up with as well. And we could speculate about the social ramifications of our ideas, and see where they fit into the existing context.

If we could together, students and teachers, learn to understand and envision/create an appropriate response to the problems of the most marginalised of our culture, then pluralism, in its fullest sense, could be given the chance to flourish. Without addressing this critical piece of our cultural puzzle, we leave a troubling and painful gap that will only grow with our inattention. But we can make it worse with clumsy but well-meaning attempts.

In his discussion of pluralism, Graeme Chalmers includes a 'soft' quote given by Lilla Watson, an Australian aboriginal woman who said something like "if you have come to help me, don't bother, but if you have come because your liberation is tied up with mine, then let us work together." (ibid 303) It is this very approach and attitude that will lead to a genuine response to the injustice of our present situation.

We cannot walk past a panhandler and not see her, though we may not feel moved to give her money. We at least need to recognise that she is there, and consider why. Why is it that a young man is selling street newspapers or his meagre collection of second hand goods on the sidewalk? Why do I often find someone sleeping in the recycling cupboard of my co-op? How can this be happening in a country as fat as our beloved Canada? We all need to understand what is

happening in the lives of those we might glimpse, to consider appropriate responses to these people and the situation they demonstrate so vividly. We can develop a sense of responsible efficacy in dealing with the marginalised of our culture, based upon this understanding. A curriculum that includes these considerations can help to evolve and realise a genuinely pluralistic culture, where not only 'everyone's art matters' but everyone matters.

Endnotes for the themes of architecture

In this document, I include exercises to encourage and stimulate young people to look, with interest and care, at the world around them. My theory is that people in general take our environment for granted much of the time. Anything I can do to stimulate an interest in pausing to take a really good look at what is around us feels to me like a right and helpful thing to do. If we bring the viewing and sensing of our environment to a fully conscious level, we start to take a much greater interest in relating to our settings, and perhaps move to the level of interest where we might actively participate in the arranging, and if necessary, mending of the places we inhabit. We can learn to consciously design an environment for ourselves that is supportive and well-considered. We can hone the skills of cooperation required to make communal efforts. And we can look to one another to find the courage and wherewithal to prevent and to repair the places that we find that do not maximise our potential.

I am amazed, in my own life, by how I failed to notice my surroundings, until I began to make a conscious effort to observe. Drawing helped sharpen my eye, and building a small home definitely helped me to grow in appreciation of where shelter comes from. As a child, I knew from my own experience that it was generally the fathers who provided us with homes. But I had little realistic understanding of

what was involved in the provision of shelter - beyond, of course, the outfitting of my own immediate surroundings, my bedroom in our family home. Building a simple home for myself in Haida Gwaii changed the course of my life, and definitely opened my consciousness of buildings. As well, building a small home planted the seeds for a very enthusiastic appreciation of what is possible in the environment, and how one might go about realising possibility.

I want to help improve our chances of tailoring our environment to meet our human needs. I want all people who are so inclined to feel welcome in this natural and life-affirming process.

I do not question the need for architects in that process, but architectural decision making can be shared. Oftentimes it is not shared as well as it might be in the conceptual and design stages - too many ideas make the process messy (read expensive) and so the users of the building are sometimes excluded after a certain tokenist involvement has taken place. And often clients and building users are not confident (can I get away with saying it again? - they say "I know nothing about architecture") so they back off, and their valuable contribution is therefore not included. And although I very much respect the complexity of the fears, and the intensity of the doubts a person might have that prohibit comfortable involvement in place making, I believe there is much we can do, particularly in the artroom, to mitigate this reticence. In the 90% of our buildings in

which architects are not involved, careful thought, understanding of what is needed and how to obtain humane responses to the peoples' needs can be contributed by people who are not professional architects but whose expertise runs the whole spectrum of possibility. There are unlimited scenarios and roles to play: the little child who wants to help create her/his bedroom space, the adult who wants to provide a house for his/her family, the wife or husband whose job it is to make that house a home, the young couple who want to renovate an ill-equipped but affordable home, the teachers and students who want to meaningfully participate in the design of a school that really works for their particular learning community, the homeless women or men who dream of living in a safe building - who know exactly what is needed to provide that security, the people who have the means to build their dream home on a wonderful piece of property they have worked all their lives to afford, the group composed of many people wishing to build a co-housing project together, the developer who wants to build a group of very beautiful and responsive homes, citizens who need a public building for a specific purpose, a religious group that needs a place of worship, - endless possibilities. And while many of these abovementioned scenarios would not strictly speaking be called architecture, each is an important incidence of place making. Through the less earth-shaking activity of decorating a young person's bedroom, for example, the idea is born that one has something to contribute, that one has the ability to choose, perhaps that one has the right to be involved in place making. That sense of personal efficacy, likely to be applied in subsequent situations as well, is probably much more

important and powerful than any pink-bedroom-with-clever-design-features might be. But maybe, on the other hand, we need to be careful not to underestimate the importance to someone of self-made settings - even if they involve heavy emphasis upon pink.

Professor Shack wrote to me: "Maybe you should honour the doubts about architecture that were expressed by fellow teachers." He continued, "Exploring architecture opens up unknown worlds or unarticulated worlds that any novice would have limited experience with. It can be scary, unsettling, or at least challenging to enter a new 'world." I agree with this sensitive statement, but find it scary that the world of 'architecture' in the sense of 'place making', should be unknown to any of us. We all live in the world, but only a small fraction of our people choose to be architects, or even place makers. Where have we erred that we don't all feel eager and ready to be at least somewhat involved? And, more importantly, at least to this document, what can we do to change this situation?

I want people to feel that they belong in these processes and I don't see that as a widespread phenomenon now. I hear people making excuses for why they cannot get involved, and admitting to a lack of confidence. I recognise that people often put the economic aspect ahead of others and perhaps concur with architects or designers that it is too messy (expensive) to get non-professionals involved in the process of design. I find it even worse that people often live in their homes without personalising

their space out of fear that the resale value might be affected if any tinkering with their environment takes place.

People are the experts about their own selves and their own wishes and dreams. My dream is that it will become general and common practice for people who are not professional architects to be actively involved in the process of placemaking - to recognise that they indeed have a great deal of knowledge and understanding of what is in their environment, and what could be. Moreover, I want people to recognise, and to acquire, the simple skills which are indeed teachable: drawing to communicate ideas; a rudimentary understanding of design process; a lively, attentive, phenomenonlogical way of seeing, thinking and being in the world; a strong sense of what we need to do to sustain the resources we have been given to use; and a simple sense of what it means to be socially responsible - to respond to the needs of the whole community, not just those who are the advantaged. It doesn't take a great deal of shifting of attitudes, resources, skilling, or expertise to accomplish this. And the holding of the theory that these skills, albeit simple and rudimentary when compared with the rich skillsets held by trained architects, can be used to produce genuine contributions to place making, particularly in concert with the professionals when that is possible and/or necessary. I believe this growth can at least begin in the schools and this is the fundamental rationale underlying the curriculum approach presented here. Moreover, I believe that if non-architects choose to investigate these areas, rather than demurring:(I don't

know….), and leaving the important or even the minor choices up to the experts, this action will add to, not subtract from, the likelihood that our settings will reflect ourselves, our needs, aspirations, values and our aesthetic preferences.

In the same manner that people in our culture seem to be moving towards increased participation and ownership of the care of our bodies, involving a range of alternatives and much more power held by the actual owner of the body in the making of choices, I envision people taking a more mature role in the action of place making. Certainly the fact that ordinary people have participated in concert with the experts will enable, at very least, a sense of shared ownership and active caring and involvement that is often missing in our built environment.

CHAPTER 4 Architecture in the Secondary School Artroom

What is available?

A rich array of existing programs is available for teachers wishing to bring the concepts of architecture and studies of the built environment into the classroom. In this section, I will look at three such programs, which only represent the wide range of materials prepared for the interested classroom teacher, and which I think are particularly relevant for teachers here and now in B.C. schools.

Hinda Avery's comprehensive survey of built environment programs, which she assembled in order to gauge each program's inclusion of issues relevant specifically to women, provides a rich source of other possibilities. Included in this very extensive survey are CUBE and the work of Eileen Adams, both of whom are discussed in some detail in this section.

A 'Google' search, done recently to check for other resources, reveals 'about 1,850,000' responses for the key words 'built environmental education'. (I am not exaggerating.) Although many of these entries are not specifically designed to assist educators at the secondary school level, many are. There is no shortage of ideas.

The Architectural Institute of B.C. <u>architecture for kids</u> guide

In 1997, the AIBC published what is termed 'a Resource Guide for Teachers', which was written by Carole Arnston, MAIBC. This guide flowed out of a successful program initiated earlier by a group of architects at the AIBC who envisioned a partnering of architects and teachers working together to introduce built environment education into classrooms around the province. This program, called 'Architects in Schools,' has been in place since the early 1990s, and has achieved varying levels of success on a project by project basis. Some of the more successful and well-received ideas generated and refined by several teacher/architect partnerships in the course of this initiative have been documented by Rodney Cottrell, and are available by calling him at the Architectural Institute of B.C.

The resource guide, put together by Carole Arnston, supported by other architects and teachers, was an initial attempt to draw ideas together into useable form to enable wider distribution of some of the possibilities of architecture in the classroom.

The resource guide is specifically geared to children at the elementary level - Kindergarten to Grade 7, but it does include many suggestions for use at the secondary level. <u>architecture for kids</u> attempts to show connections with the <u>Visual Arts K-7 Integrated Resource Package</u> (review draft

1996) and thus gives ideas for classroom teachers to bring the intentions of the IRP to life in the classrooms. Moreover, the author has made an effort to explicitly articulate how each lesson idea connects with the curriculum in various other subject areas as well, demonstrating how the teaching of architecture can be relevant across disciplines.

Although the resource guide is richly packed with ideas, I think that is of limited value to any teacher who might be inclined to think 'I don't know anything about architecture'. Although the sixteen lesson ideas that are developed in the guide would probably interest and engage students, the guide does little to comfort and advise the classroom teacher who feels insecure about teaching architecture. Some of the ideas in this collection are not developed to the degree that they would be useful to a teacher who has not had some experience in an architecture studio. One example of a lesson plan called 'Perception + Representation: Plan', that might discourage a teacher, suggests that teachers provide a set of 'blueprints' for students to examine, show children how to make a reflected ceiling plan, and assign the task of recording the landscape surrounding the school in plan. (Lesson 3, page 19) No background information is provided for the teacher, who quite possibly has never seen a set of architectural plans, and who might have no idea where to begin to explain the codified drawing to eager students. Although the symbols for wall, door and window have been provided, and given that much can be done with those three basic symbols,

I still suspect that some teachers would require a bit more detail regarding how they might proceed with the lesson.

The ideas listed in the sample lesson noted above are fun:

1."visually explore the classroom every possible way",

2. "draw your chair from as many ways of looking as you can…include a plan view"

3. "draw a floor plan of your classroom…discuss scale and proportion"

4. "draw the most thrilling imaginary classroom you can, in PLAN" (page 20).

Many teachers might like to stimulate this kind of activity in the classroom, but the guide does not provide the needed information to proceed. A later lesson attempts to address proportion and scale, but again, needed background is missing. Although some of the ideas regarding human scale might be accessible to students and their teachers, the guide notes that at the grade 4 to 7 level, "Students should be encouraged to draw 'to scale' with the aid of a ruler or architectural scale. Ask them to choose an appropriate scale, such as metric 1:50." (ibid 28) Without a lot more guidance, this might not be the best way to encourage an uninitiated teacher to explore some of the more mysterious technical aspects of architecture with students.

Another criticism I might make of the guide is that it seems to have the intention of teaching students to learn

and practise the skills of the architect, rather than to understand how lay people, non-architects, might approach the very fundamental issues of place making.

The emphasis of the lesson plans seems to be on how to do what architects do: work in plan, section and elevation, draw to scale, manipulate geometric forms (from included templates) to create villages or forts, consider types of construction (which are not clearly elaborated in the guide) and make plans and models of various types of shelters.

Although some drawing techniques are introduced at the beginning of the guide that would encourage observation and learning to really look at the environment, the bulk of the ideas seem to be directed towards trying on the skills that architects are taught, with topics being treated in a somewhat superficial way, and without much development of any particular concept or theme. The idea of carefully considering the function of a building is largely ignored. This to my mind is the critical area where lay people can participate in the design process.

I think that with some more dialogue with teachers, the resource guide could become a more useful tool for the classroom. Wisely perhaps, the guide is available to teachers exclusively through the Architects in Schools workshop program. It is thus not a stand-alone document, but is given only to teachers in the workshop setting where demonstrations and more detail are provided.

Inasmuch as some of the ideas in this guide, and the vision of partnering arrangements between teachers and architects in the classroom are relatively novel in B.C. schools, I applaud the efforts to articulate the possibilities as the AIBC architects have tried to do. I would submit that there is much to be done to make the guide useful, especially to the teacher who has little confidence in his/her ability to teach architecture. Refinements to and perhaps more comprehensive development of the lesson ideas prepared for the elementary school classrooms could strengthen this resource.

Some AIBC members involved in the Architects in the Schools initiative have expressed concern about the lack of development of ideas for the secondary school level. Although some work has been done in this direction, the group has not yet succeeded in their efforts to develop and publish accessible and appropriate plans for teachers at the secondary level.

A draft document titled 'Design and the Built Environment', also authored by Carole Arnston, MAIBC, was circulated to four secondary schools to be tested by teachers. In this document there has been some attempt to connect lesson plan suggestions to the IRPs for Applied Skills 11 and Fine Arts 11.

A companion document, also in draft form and dated February 2000, called the 'Teachers' Guide for Skills Development', contains lesson plans, exercises and skills worksheets

intended to supplement the course manual and to make the presentation of this material easier for teachers. Teachers attempting to use this material reported that it was 'too convoluted and too involved' to be useful to them, according to Rodney Cottrell, MAIBC, Coordinator of the Architecture in Schools program in February 2004, which has lately been renamed 'Discovering Architecture in Schools'.

The initial guide, architecture for kids, is thus the only document as yet published by the AIBC for general circulation to educators. Rodney Cottrell is still going to schools and documenting some of the lessons he teaches, but the large committee is no longer active. Unless the Architecture Foundation, a charitable foundation which has as its mandate the promotion of architecture in B.C., chooses to fund the Discovering Architecture in Schools program, it may not be able to continue, at least in the form it has taken since its inception almost fifteen years ago.

There does exist, however, a rich body of material that has been assembled by architects over time, that could be shaped into some exciting educational materials. I think that if someone approached this material with an understanding of the hesitancy and perhaps lack of confidence that many teachers feel with respect to teaching architecture in their classroom, some engaging lessons could be shaped for use by teachers both at the elementary and secondary levels.

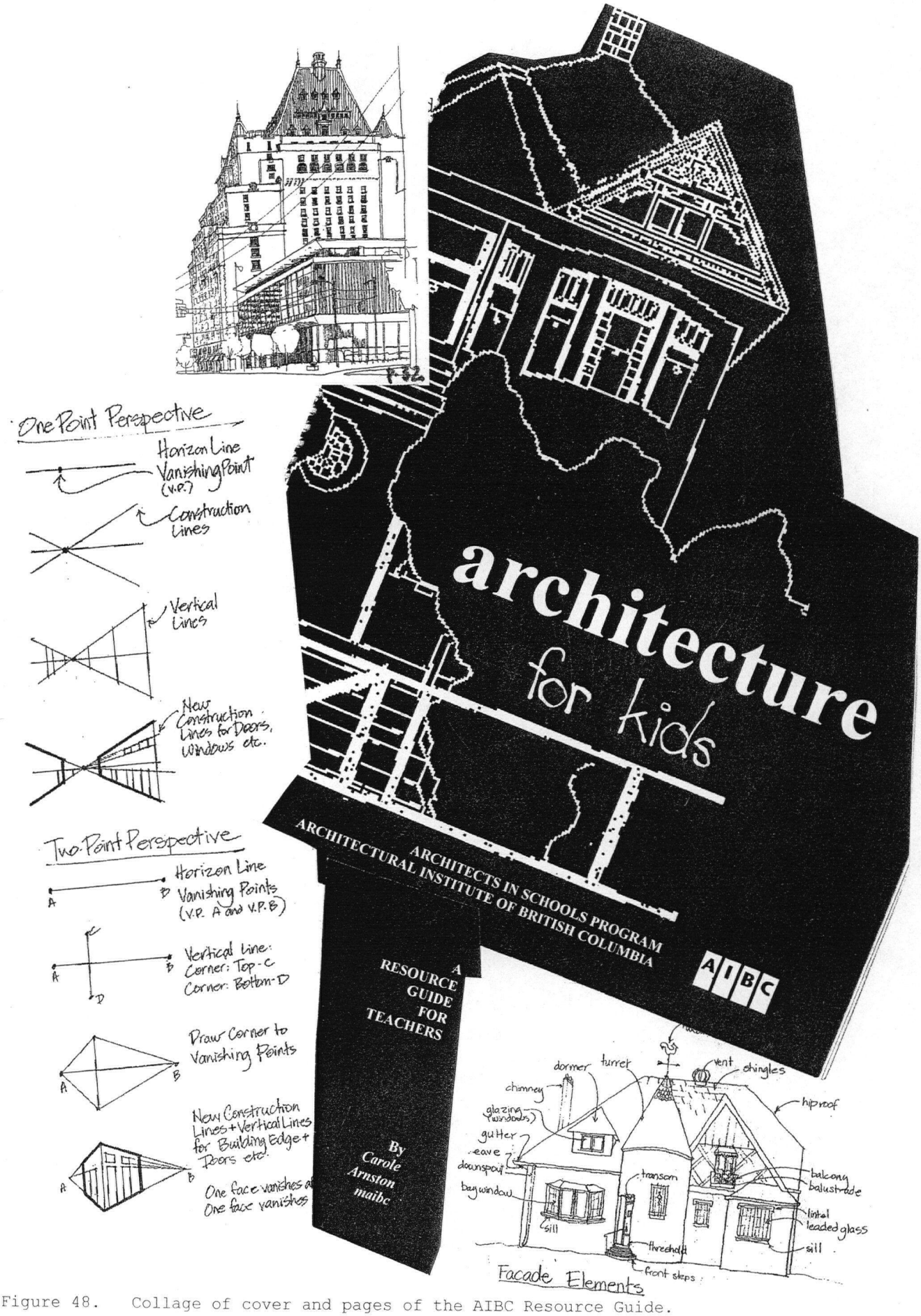


Figure 48. Collage of cover and pages of the AIBC Resource Guide.

The British art educator, Eileen Adams

In 1986 and 1987, Eileen Adams, renowned art and built environment educator from England, gave summer curriculum development courses at the Emily Carr College of Art and Design in Vancouver for teachers wanting to include built environment education in their programs. Although the idea of including built environment projects into the curriculum was not new to the west coast - Graeme Chalmers' books had been available to interested educators since the early 80s, and the Vancouver Environmental Education Project, prelude to the Pacific Educational Press at UBC, was underway. Additionally, a provincial Curriculum Resource Centre, holding some environmental education materials, was located in Richmond.

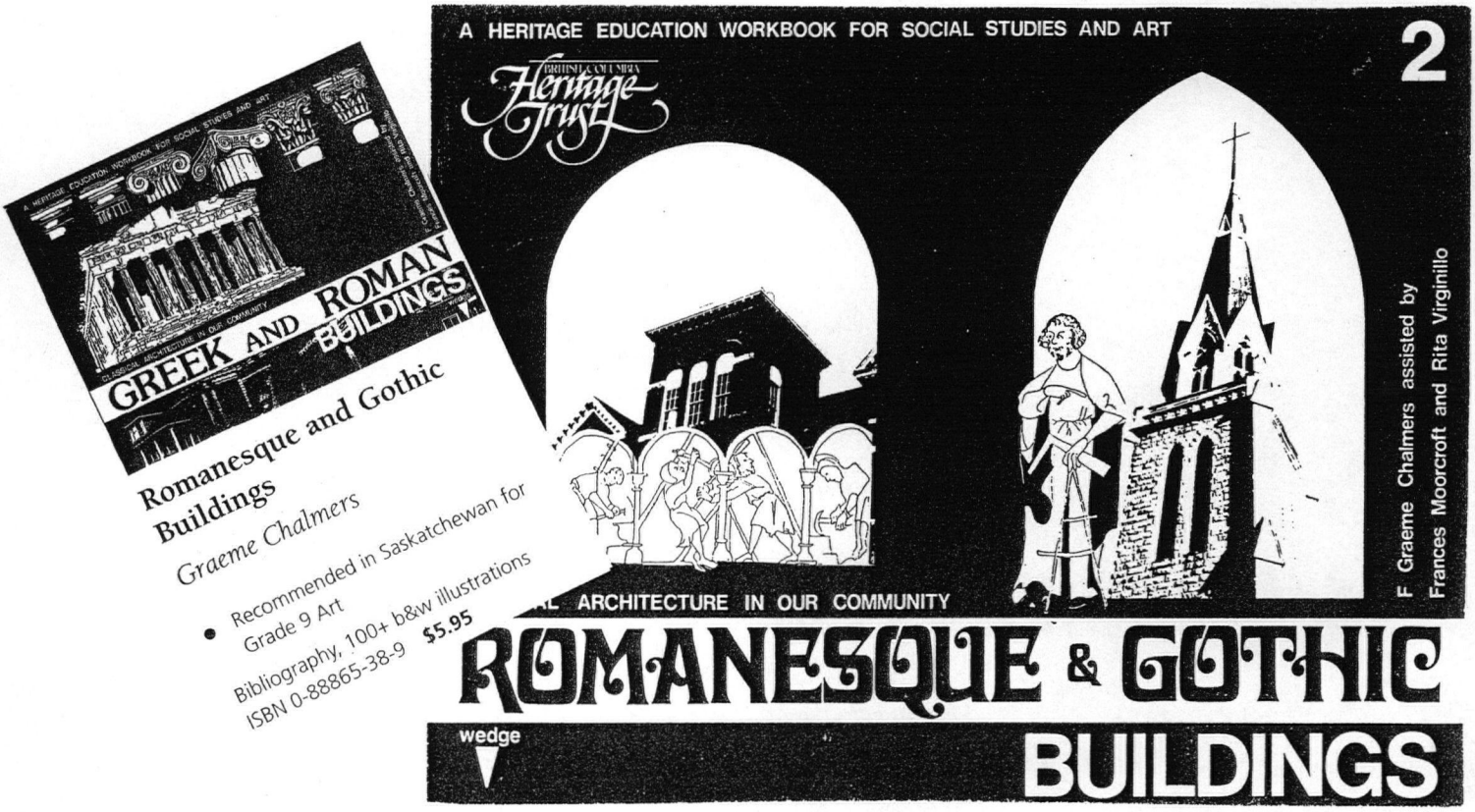


Figure 49. The built environment education books by Graeme Chalmers are available through Pacific Educational Press, 6365 Biological Sciences Road, UBC.

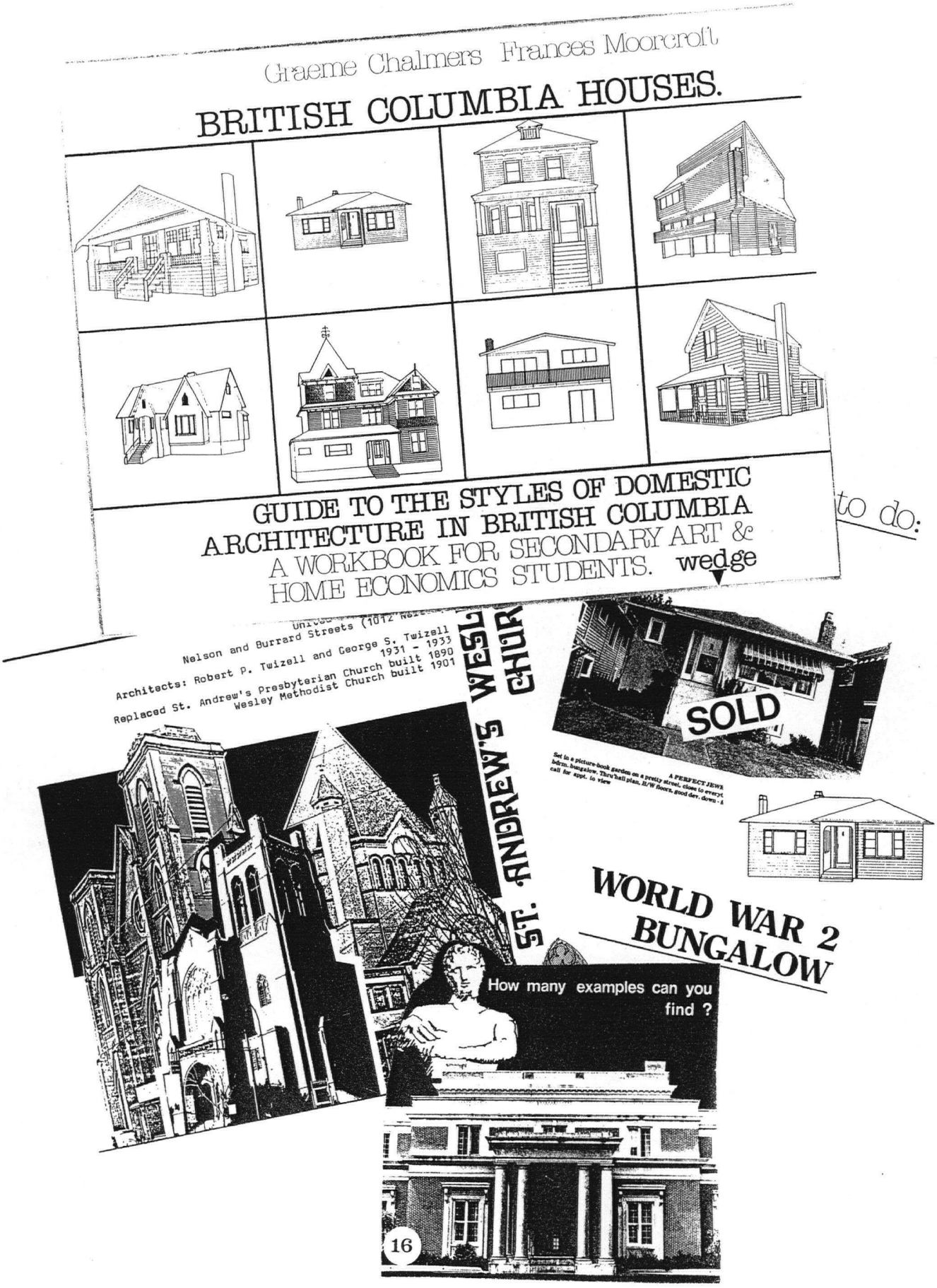


Figure 50. Collage of pages from the books of Graeme Chalmers.

This course at Emily Carr was billed as the first 'Art and the Built Environment' (ABE) course in Canada. It was based on Eileen Adams' and Colin Ward's work with teachers which is described in their 1982 book titled Art and the Built Environment: A Teacher's Approach.

Proceedings of the course are recorded in some detail in a 1987 joint publication of the Canadian Society for Education Through Art and the B.C. Art Teachers Association called Pouring the Foundations - a guide to built environment education, produced in 1987.

This course presents a very strong program, and an inspirational model for me for several reasons. I was immediately cheered when I read the words of Eileen Adams:

> The basis of ABE work (Art and the Built Environment) is direct, firsthand experience of the environment. But we need to remember that none of us comes cold to any environment. We bring to it a lifetime's experience and personal knowledge of other environments. Our expectations and perceptions are influenced by our previous experience and our memories. (Pouring Foundations p.4)

I have, at the foundation of my own approach, the belief that we know much more about the environment than we think we know - that much of our understanding is latent, but with attention can be brought to the conscious, useable level. Eileen Adams' methods for bringing some of that latent knowledge to the surface must be delightful to those who follow her course. She might ask students to recall and describe childhood environments, eliciting physical details and elements of personal response. The wonderfully

poetic statements that she gleaned from this activity could not have been gathered without some lovely interactions between her students and herself - without the establishment of trust and a willingness to take some chances. She records a few very detailed and powerful images offered by her students, some of which must have rested in memories a long while:

> there was a lot of swimming, basking and burning on the black sandy beach - boating, drifting in the canoe alone, devouring a forbidden book, fishing, berrypicking, often unwillingly… (ibid)

This emphasis upon "sensory experience and emotional response".(ibid) leads us to understand environmental study as an active, real pursuit, rather than a theoretical enquiry - from the heart and the gut, not just the head.

The ABE program explicitly encourages us to explore our relationships with the environment, to note the impact of people on our places and to enable people to 'cope positively and creatively with change'. (ibid 5) Eileen Adams believes that design activity has as a central concern the matter of dealing with change in a positive and creative way. Moreover she believes that we must encourage students to make value judgements about the quality of the existing state which, when considered, might lead to such change.

Some of the activities offered to encourage strong sensory awareness of a place include the 'sensory walk' in which the means used for recording is carefully related to the

sense involved - including visual, verbal notes and even tape recording of spoken commentary and actual sounds encountered. Adams has noted that most of her students' attention is taken up with objects rather than with the relationships between objects and people. She thus focuses on this relationship throughout her studies. She introduces the idea that a variety of spaces exist and suggests study methods to encounter and compare different spaces:

> SERIAL VISION - which requires the student to document the experience of moving through a sequence of spaces and to determine how the space changes as he moves through it
>
> STEEPLECHASING - which engages the student in an exploration of a number of different spaces to relation to a particular focal point such as a high building. (ibid 6)

Adams recognises the critical importance of drawing as a tool for both perception and expression and notes that her program uses drawing

> to encourage a more intense relationship with the environment, greater observation, recording information - note-taking, analysis, synthesis, establishing relationships between the various elements, expression - where ideas, sensations, feelings are make known and accessible, in the first instances perhaps, to the observer himself. (ibid 7)

She suggests that the 'private language' devised by the note-taker can later be translated into a more public form when the time comes for sharing of ideas.

With respect to the critical study of the environment, Adams encourages the use of annotated sketches, reasoning that 'words are needed to convey qualitative judgements and quantitative information... (such as "two hundred large trucks pass this house every morning").' She asks her students to make a comparative study of three spaces - which she terms the 'good, the bad, and the ugly' and to define the elements and qualities that enable classification of the space and differentiate it from other spaces. This leads to a level of reflection that enables real consideration of a place - well beyond the indifference to the environment that we often experience.

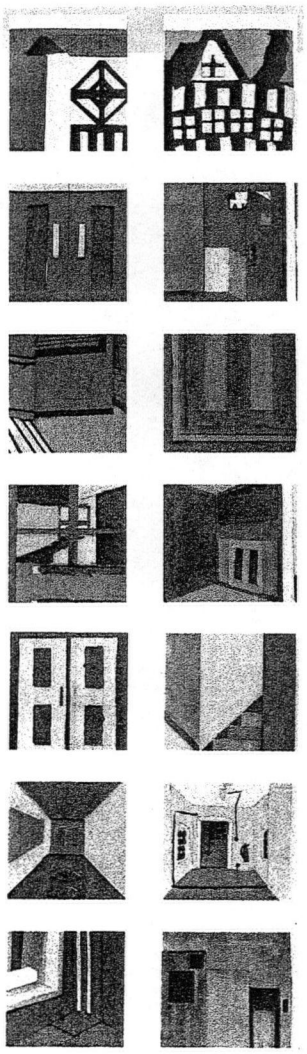
A design activity suggested by Eileen Adams is to ask students to choose a place in need of improvement and to propose a change. The first task is to describe it in some detail, then to analyse and evaluate the place with respect to aesthetics and design qualities, and then to propose improvements. Done with care, this can be a very meaningful activity, looking well beyond the superficial aspects of the space into a well-considered and thoroughly researched investigation. Adams noted that her North American students welcomed the idea that design could mean 'dealing with change' (ibid 11) rather than merely 'styling'.

To Eileen Adams, and through a look at her work, to all of us, it becomes clear that built environment education goes well beyond the transmission of information and techniques. It involves teaching students how to learn - how to

approach the environment with an attentiveness and wonder of the depth suggested in the phenomenology work earlier discussed in this document. She suggests that this approach has important implication for the role of the teacher - who needs 'to present the model of the good learner who can come to grips with new understandings and meanings' rather that being the 'expert who knows all the answers'. (ibid 11) Furthermore, besides shaking up the role of the teacher, Adams suggests that this approach to art education moves art out of the classroom and into the street - well beyond the point where we are engaging in recreational or therapeutic activity, but into the realm of an 'important and necessary educational medium' - in the manner of the transformation model suggested by Miller and Seller.

Eileen Adams is an important contributor to the field of built environment education. Besides the abovementioned course delivered to fortunate students in Vancouver in the late 1980s, and her guide for teachers, she has initiated and documented extensive explorations in her field, and presented her work in Europe, North America and Australia. A recent publication by Eileen Adams, titled <u>breaking boundaries</u>, published in 2002, documents and evaluates the work carried out in four secondary schools in England by the Kent Architecture Centre's Sight Specific Residency Programme. It is a document rich in ideas, clearly enriched by the insights of Eileen Adams. Some of the ideas suggested elaborate upon her ideas presented in the Vancouver courses of 1986-7. Particular ideas that could stimulate the tentative teacher wishing to try some place making activity might focus upon the school building

itself. One might begin with 'School Portraits' made with the aid of a viewfinder and enhanced by using strong colour and exaggeration of shapes and angles. (Adams 2002, 19)



Images of 'School Portrait'

Figure 51. School Portraits. (Adams 2002, 19)

Another idea which could be tried at the personal as well as the school level is called 'Cabinets of Curiosity', wherein students are encouraged to make an installation which would reveal personal histories, or which explore ideas that link a person with a place. A school community might be able to collaborate on such an installation, to honour and express the local school culture. A further project idea developed by Adams in several ways is to run a feasibility study for a perceived potential change and/or improvement to the school. This approach includes careful observation of existing spaces, (and could include an imaginative study of how outsiders perceive the school), present and potential patterns of usage, critical analysis of similar spaces elsewhere, redesign of layout and use patterns, studies of materials, and presentations of drawings and models to communicate visions.

Adams promotes the idea of envisioning and creating space through the making of small-scale models and then applying this understanding to full-scale models. Light recyclable materials can be assembled for various purposes - to shelter a small animal, to mock up a bus shelter for people, to explore various kinds of structure such as post and beam or arched constructions.

The work carried out in the Kent Architecture Centre and documented by Eileen Adams is rich, interesting and quite clearly communicated. I think the value of the program lies in the connections made with the tacit understanding that students and teachers bring to any study of places,

whether they recognise the depth of this understanding initially or not. The program draws on students' own experience of the built environment and the local area and the school facility are considered prime resources. This can lead to a straightforward and powerful educational experience, and could be a way to promote skills and confidence in meeting the challenges of living thoughtfully and creatively in a place. The work done at Kent and by Eileen Adams provides a very stimulating example and a fertile starting point for someone wanting to venture into the area of built environment education.

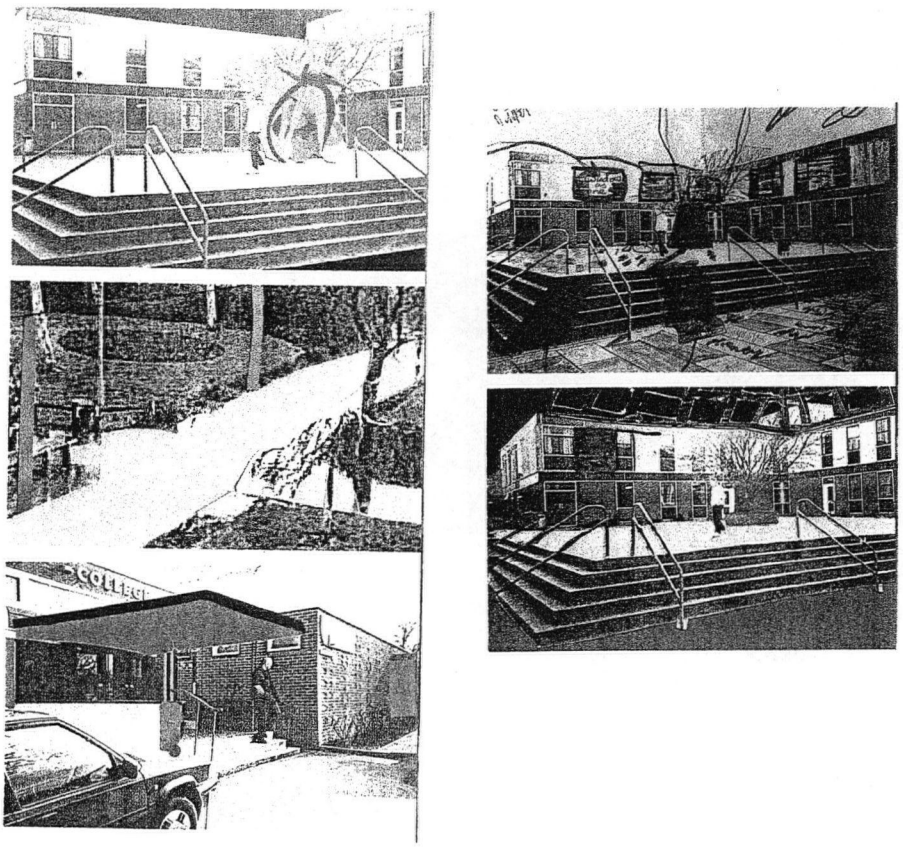


Figure 52. Photomontage showing positive change to the school environment (Adams 2002, 29)

Ginny Graves

In the summer of 1994, a group of Vancouverites interested in the educational possibilities of architecture were treated to two day-long workshops given by Ginny Graves, Director of the Center for Understanding the Built Environment (CUBE), of Prairie Village, Kansas. The workshops, titled 'The City as the Classroom: Walk Around the Block', and 'The City as Classroom: Box City', embody the fundamental philosophy of this energetic and generous woman, who has done so much to promote built environment education in North America.

Ginny Graves believes that 'by teaching children to understand and take responsibility for the built environment, she could indoctrinate a new generation'. (From an undocumented journal article by Andrea Oppenheimer Dean, included in the workshop 1994 package p.58)

The Walk Around the Block workshop provides what Graves believes is the needed focus for students who are out on a field trip, looking at their environment. She has devised a 'City Game' which requires participants to look and respond to what they see, for example:

*locate a symmetrical (and an asymmetrical) building

*find a column which supports something (and one which does not)

*look at a building from a worm's eye view

*record a shingle pattern

*where would you look for help?

In concert with Polaroid, who provided inexpensive cameras which produce almost instant images (this in pre-digital days), Ginny Graves' simple walkabout technique served to stimulate students' curiosity about their surroundings and sharpen their powers of observation and their appreciation as well.

Graves' idea in this activity is to introduce children to local history, mapping, and to connect the environmental study to basic literacy and numeracy skill acquisition as well. Students might be encouraged perhaps to write to city officials about something they noticed on their walk, or perhaps they might choose two contrasting structures and describe in writing a conversation the buildings might have with one another.

Ginny Graves believes that there is a need 'to stop building spiritually degrading, traffic-choked, sprawling wastelands of ticky-tacky tract housing' and instead to 'return to communities composed of neighbourhoods that contain streets designed and scaled to meet the needs of people rather than those of the automobile'. (ibid 59) Her 'Box City' workshop is designed so that the participants can increase their understanding of the <u>processes</u> through which architecture and city planning take place. Using a seemingly unending supply of modular cardboard boxes (four, five and six-inch sizes) participants construct neighbourhoods or towns, moving through a process that familiarises with the vocabulary of city planning, the complexity of decision-making, and the rigours of balancing

the conflicting needs of the participants. In this workshop, the participants are invited to choose a role - for example, mayor, or social planner, or police officer or ordinary citizen, etc. - and encouraged to resolve issues as they arise in the laying out of the 'box city'. In the workshop I attended, the 'mayor', a rather power-tripping, pompous sort of role-player, was turfed out by the citizenry and replaced by the rather less forthcoming, but thoughtful 'social planner' who tried to steer development in a gentler, less jazzed up style, and in a more apparently humane direction. Discovering and engaging in this process of community negotiation is an eye-opener for children and adults alike, and gives each participant a sense of the possibilities and the skills that are required in order to realise personal efficacy in the planning of one's own community.

CUBE has a website (www.cubekc.org), which bustles with energy like its founder. Ideas are shared. Workshops are announced. 'archiSources', a catalogue of available resources, connects the interested teacher with a wide range of materials relevant to the teaching of built environmental education.

I think Ginny Graves really means it when she says she believes in responsible action and knowledgeable community participation. In 2002, I found a letter she published on the CUBE website regarding the 911 catastrophe, which I see as a measure of her courage and commitment to these values. From her words:

…there are parts of it we can understand, and one is that when you are as lucky as Americans have been, then you need to act small, act in a more humble way, give more and understand that always being the winner of the game may not win the war.

Can we end the 'Mine's Bigger' mentality that has existed since the first building of a skyscraper, the contest that has led to the tall buildings of New York, Chicago, Hong Kong, and wherever money and power exist? Can we correct the behaviour that has governed us since the first white man came to America? Can we say "What can I learn here?" instead of "What can I force on this place?" Design is not the only answer, but it is one part of the answer. It is not too soon for the grown-ups (all of them, not just the design professionals) to understand that <u>what we build and how we build speaks of who we are, how we treat people, and as we have learned this week, how people treat us.</u> There has to be another way.

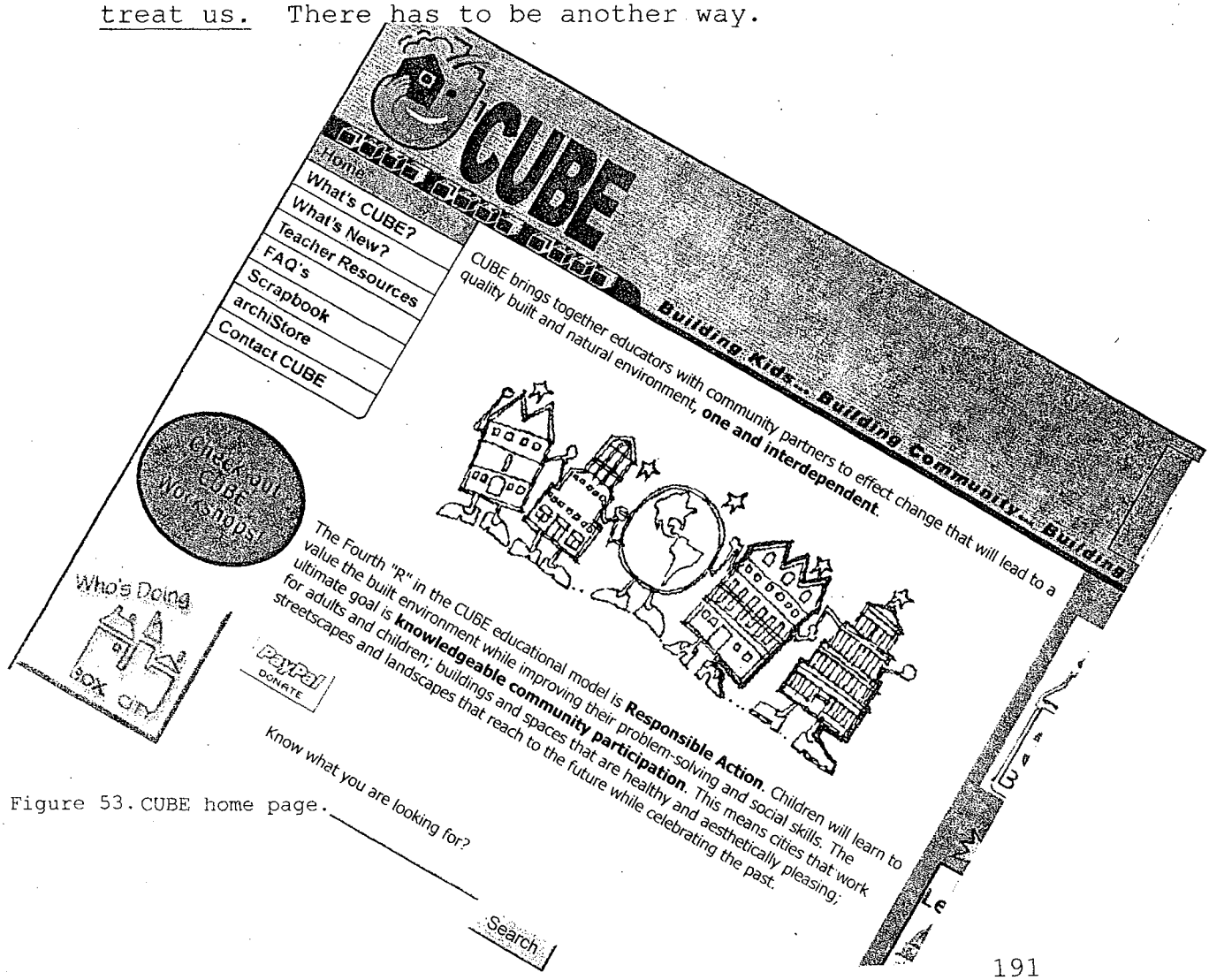


Figure 53. CUBE home page.

In the partial copy of the CUBE home page I am able to reproduce here, what is missing from the downloaded view is important. CUBE promotes Building Kids, Building Community and Building the Future. Ginny Graves' Box City program is now 35 years old and continues to have an impact on young people who might naturally move into design roles as the future becomes the present. Those young people are fortunate who move into the future equipped with the skills and insights that Ginny Graves' programs provide, whether they are confident laypersons exercising their entitlement as citizens to participate, or experts, specially trained to help us shape our surroundings. The value Ginny Graves puts on close observation of and participation in matters relating to our own community, as well as the larger consciousness of responsible behaviour in general, provides an inspiring model for anyone who is involved in built environment education.

Only one of the sample lessons published on the CUBE web site is suggested for students above the grade 8 level. This is the lesson titles 'Physics Park', which fosters students' ownership of a community project, and teaches some of the principles of physics as well. Although most of Graves' lesson plans are pitched to the elementary grades in the format she distributes, much can be done to adapt some of these ideas for presentation at the secondary level.

On to Another Iteration

Although I did not consciously realise it as I formed my own basic goals for architectural education - the three

R's: Receive, Respond and Responsibility - on reflection and in the course of writing of this simple profile of her work, I see that the Ginny Graves workshops have had a profound effect on my thinking and development as an educator as well. I have tended, in my own lessons, to focus upon the smaller scale skills which I theorise will accumulate and produce, with that accumulation, an interested, observant, confident, and courageous citizen - willing and able to participate in the shaping of his/her environment. After revisiting and reviewing the work of Ginny Graves for this writing, I am now newly motivated to attempt some of her processes which consider the environment on a grander scale.

For example, I decided not to try the 'Box City' exercise in my secondary artroom, reasoning that the idea of a new town popping up all at once is farfetched and too oversimplified. In revisiting this project in my mind, I see now that through such a project, some important issues and considerations can at least be raised in a way that could be meaningful to students at the secondary level. Issues such as zoning, neighbourliness and basic understanding of systems and the infrastructure can be addressed, though it would need to be understood that the oversimplification we would necessarily apply in this exercise is quite different from the complex reality.

Yet another iteration to come…

CHAPTER 5

The Primer

A series of lessons/learning experiences

The Primer is a teaching scrapbook - a collection of reports and reflections about project ideas written in a narrative style, perhaps in the spirit of a one-sided conversation with a teacher. I have pulled all the necessary pieces together from my journals, daybook plans and reflections, previews, student sketchbooks and commentaries and samples of student and artists' work. I describe what I do/did and why, and tell what I learned with respect to refinements and changes in goals and approaches over time. Where appropriate, I will connect my processes with the theoretical underpinnings discussed earlier in this document: the educational theory and broader themes of art and architecture, and with the work of others who are involved in built environmental education.

My work has been informed and inspired by the ideas of other teachers: certainly from outside resources such as those I have already named. Others who have enriched my practice include professors in Fine Arts Education and the School of Architecture, colleagues I worked with as architect and architect-in-schools, teaching colleagues at programs for highly motivated students, and most especially through opportunities with students and other teachers in the public education system.

The work of Ginny Graves and Eileen Adams in particular have given me courage to explore, and the understanding that the possibilities are pretty much limitless in the field of built environment education. I make no claim to supersede any existing work, especially the work of these master educators. The previous discussion, including my personal rationale and background support material, and

this section of lesson ideas are simply intended to add to the existing body of built environmental education work. I do not think that life is a contest - that my work needs to try to be better than anyone else's. What makes my contribution different from others' is the research approach and the attempt to narrate, in terms readily accessible to a teacher, an approach to teaching this material.

The action research format and premise of continuing reflection and refinement is intended to invite the interested, but maybe tentative and hesitant teacher to participate. I hope others will be motivated to explore some of these ideas, and discover their own unique approach to this wealth of opportunity we loosely classify as 'built environment education'. The simple, conversational format is intended to reassure and encourage those teachers who don't know where to begin.

As well, in the Action Research tradition, I might try, in the suggestions for learning experiences, to tease out some articulatable theory that might help me move forward in another iteration, and that might help others in their efforts too.

I think of this section as a barefoot practitioners' manual, which I have with good cheer, but definitely without any intent to signal oversimplification, called 'the Primer'. In this Primer, useable and teachable ideas are presented which connect to the organising principle = the 3 R's: Receive, Respond and Responsibility. This is also not intended in any way to patronise well-educated educators; but simply to help reinforce one of my principal goals: to help a teacher approach this content easily and without ever needing to feel that 'I don't know anything about architecture'.

We all know about architecture, and furthermore, we are equipped to bring this understanding to our students, whether we recognise that power or not. We are able to

1. <u>Receive</u> the messages and realities of our surroundings, and become ever more observant and aware our surroundings,

2. to envision a thoughtful Response based upon that clear awareness, and
3. to act with Responsibility in our participation in our own place making actions.

In general, we as teachers are able to employ the not-so-arcane concepts of architecture as a focus for learning. We can contribute to the development of the broader themes of architecture in the secondary school setting, whether or not we are initially able to recognise and articulate that latent knowledge clearly. As one of my 'research friends' lately stated, she has been in and around the designed environment all her life - of course she knows something about architecture. Another 'research friend', a designer and teacher, said the she is not afraid of architecture because she has been trained to look, and because her design training - in graphic arts - transfers to the built environment. To me this is a very powerful rationale for including some general design activity in the curriculum wherever it makes sense to do so.

Discussion, which helps to clarify rationale, and background considerations, are found in the early chapters of this document. To help clarify the learning experiences of the Primer, the third chapter, "Connection to broader themes of art and architecture" is included. This background discussion knits a connection between the actual project ideas and some of the fundamental themes we might examine: the importance of drawing, the design process, the concept of phenomenology, the sustainability of our environment, and social activism and responsibility. If I can be permitted yet another metaphor, these discussions are intended for the reflective times, when seeds become planted and germinate into, eventually, useable ideas. Carrying that metaphor a bit further than it probably deserves, this section, the Primer, contains what I think of as bedding plants, which the interested teacher will find are easily introduced into the soil, and which, after a little tending, begin to produce lovely results on their own. Put a little less metaphorically, the ideas are designed to get a teacher operating in this perhaps strange and new area, until personal knowledge kicks in and one can move ahead with some confidence.

This work is intended to encourage, reassure, give us educators faith in our own knowledge, both conscious and unconscious, and to provide some beginning ideas regarding how to put that knowledge, collected over our lifetimes, maybe even resident in our ancestral memories, to work in our classrooms.

I hope users will want to comment on what works, suggest new ways to operate by contacting me by e-mail: . This would enable continuing iterations and refinements in my artroom as well as in others', and maybe keep ideas growing and strengthening with cross-pollination. What I am offering is by no means an exhaustive set of ideas, but a sampling of possibilities, and I look forward to a continuing discussion and refinement of these ideas.

A note regarding the adaptability of this Primer

I don't mean to exclude elementary or post-secondary levels in this work, but it needs to be clear that the ideas in the Primer are pitched to the secondary school art studio. All the ideas can be adapted to any level. Many of the ideas can be used in other classrooms besides the artroom. There are obvious implications and connections to be made for teachers of Social and Cultural Studies, Language Arts, Science and Math, and Outdoor or Environmental Education; wherever the creative educator wishes to apply these fundamental and engaging concepts, it can happen.

It also needs to be clear that this Primer is not written in a prescriptive way. It is not a 'how to' manual, but it is intended to stimulate the reader's own experience in the recognition of one's own tacit understanding of the environment. I have imagined that the reader is likely to be a professional educator, and I would not presume to tell such a person how to present this material. I simply offer examples of how I used these ideas, sometimes over several iterations. I have grouped the lessons in what I consider to be a reasonable, logically expanding sequence. Each lesson idea is actually a collection of possibilities that might stimulate new ideas, or serve to be used in the way I presented it, but with obvious modifications to meet the needs of one's particular situation.

A CAUTIONARY NOTE Re:

knives, guns,

potentially intense outcomes of 3-dimensional model making

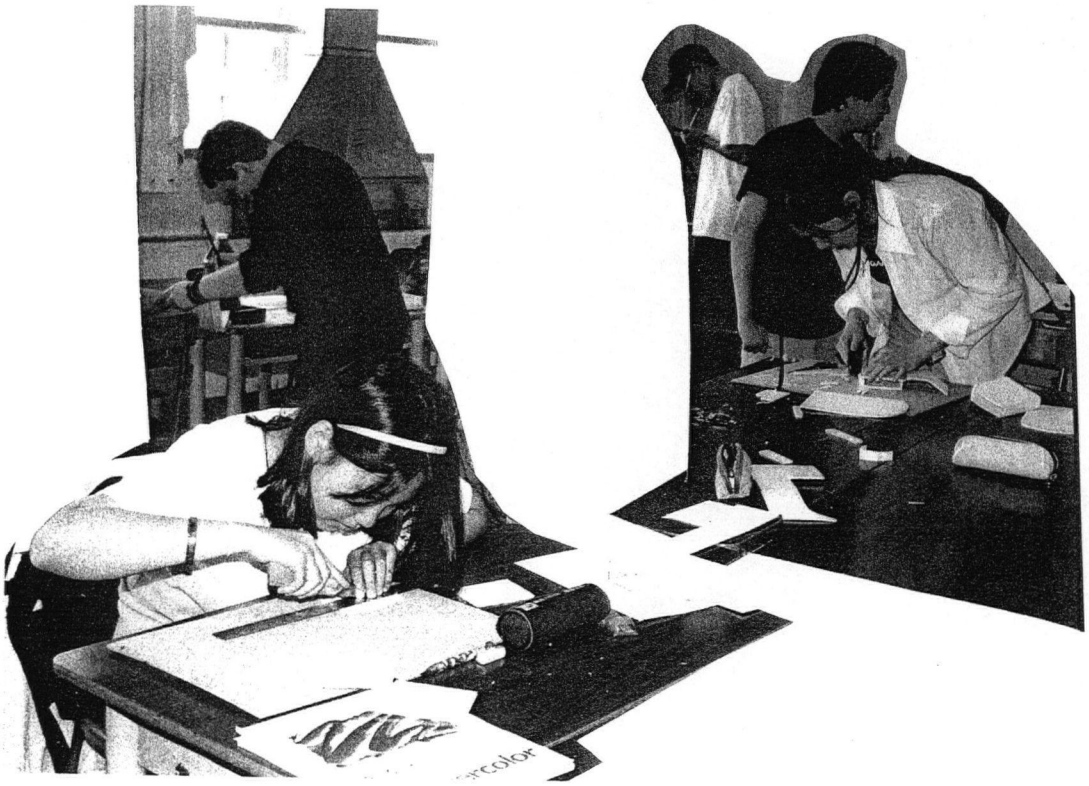


Figure 54. Students using exacto knives.

In order for me to feel responsible about potential outcomes of this work, I feel that the use of tools in the artroom needs to be carefully addressed. Of course there are many tools that can be brought in to the study of built environment education. In a recent e-mail, Joel Shack noted to me that

the key architectural tools are different modes of drawing, different modes of 3-D drawing, and now different digital integrated applications of camera, video and computer.

I realise that much of what goes on in a secondary school artroom will be limited to certain of the basic tools and practices - it is unlikely that many teachers will have highly developed technology to support their initiatives. I think that putting the hand (rather than the machine) into design is preferable - down the hall is the computer lab. for those wishing to go high tech. But beyond obvious and simple materials: the pencils, pens, colours, edges and measuring devices, graph/drawing/tracing papers, various thicknesses of cardstock and cardboard, (boxes cut down, or large, cheap sheets of cardboard will suffice), there are some tools which could cause some real trouble in the classroom if not handled with care.

The materials of model building, particularly exacto knives, and hot-glue guns, are not for sissies or buffoons. The faint-of-heart students are maybe easy to deal with, but those students with foolish tendencies (I think we must operate on the assumption that some kids could at least have a tendency to act silly) need to be tamed a bit before the knives and guns come out.

knives

I start by introducing each class I meet to the possibilities of the knife - exacto blade a.k.a. boxcutter.

I tell about my architecture professor who, when he was a student, watched a classmate bleed to death before his eyes. The young architecture student was overenthusiastically making a cut through heavy card - using far too much pressure. The knife slipped, severed the artery in his upper thigh. All efforts to stop the bleeding failed and the student was dead before medical help arrived.

Remarkably, this story has discouraged only one student, to my knowledge, from using the exacto knife. (Maybe others, unbeknownst to me, have stealthily made other arrangements

- getting their confident friends to make the cuts, using scissors, etc.) But only the one boy flatly refused to use the knife after my demo. Remarkably, again, this student graduated to win the top achievement awards in both Metalwork and Auto Mechanics, but he never did use an exacto blade in Visual Arts class.

Mostly this story serves to obtain the students' rapt attention, before I show them the safe way to use an exacto knife. Here is what I show:

1. Always use a cutting board - preferably with some 'tooth' to hold card from slipping. This roughened surface is nice, but not essential. Any kind of board is better than cutting on the desktops - and alienating the building engineers, administrators, students who need a smooth desktop to do their best work.
2. Score. This means make many lighter strokes with the blade rather than one hugely vigorous one to make the cut. Many strokes - depending on how much resistance the card makes, say 3 - 7, make a clean, unbloodied edge.
3. Always use a ruler. Metal edge is best; wood or plastic work. This seems to prevent random cutting any old where. My metal edged wood rulers all lost their metal strips mysteriously one year, before students were taught how helpful those bits of metal are for safety. They were some sorry when we got to the projects requiring exacto blades.
4. Always use a sharp blade. A dull blade is more likely to cause trouble/frustration than a sharp one. I carefully show students how to break off the blade end on blades that are made to break off - how to wrap it in recyclable paper and dispose of it so the building engineer doesn't bleed too. I show then how to change blades in the type of knife that doesn't have break off blades. They need to know this or they will persist with a blade long after its usefulness is outlived.

The results of these precautionary tales and admonitions are: most students move forward confidently with this tool, and my classroom tends to be an accidental cut/blood-free zone. (One student sliced off the first couple of layers of skin on his fingertip a few years back, but the incident did not produce actual blood. I keep band-aids and

bandages nearby in any event, and that student holds his ruler much more carefully now.)

I have actually seen a student use a knife across crossed hands. This is another technique that should be cautioned against, though few students would likely attempt it.

Another detail I might include in this initial demonstration of cutting architectural model making materials:

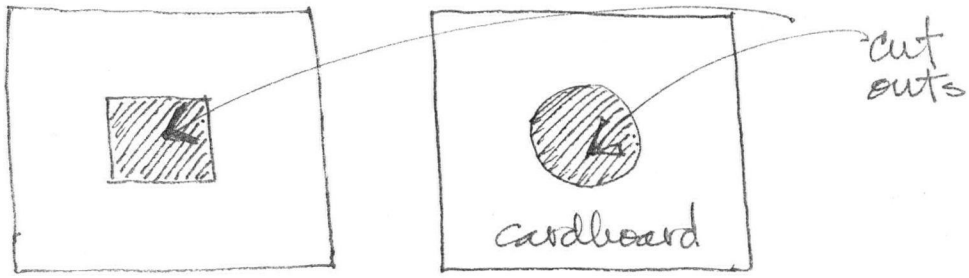


Figure 55. What is wrong with these pictures?

I am always surprised when I see that this discussion is necessary, but every year, it seems it is.

I find also, that some discussion or what constitutes a reuseable scrap, and some clearly marked place to keep the useful scraps is a way to minimise waste and keep useful bits of card circulating and available.

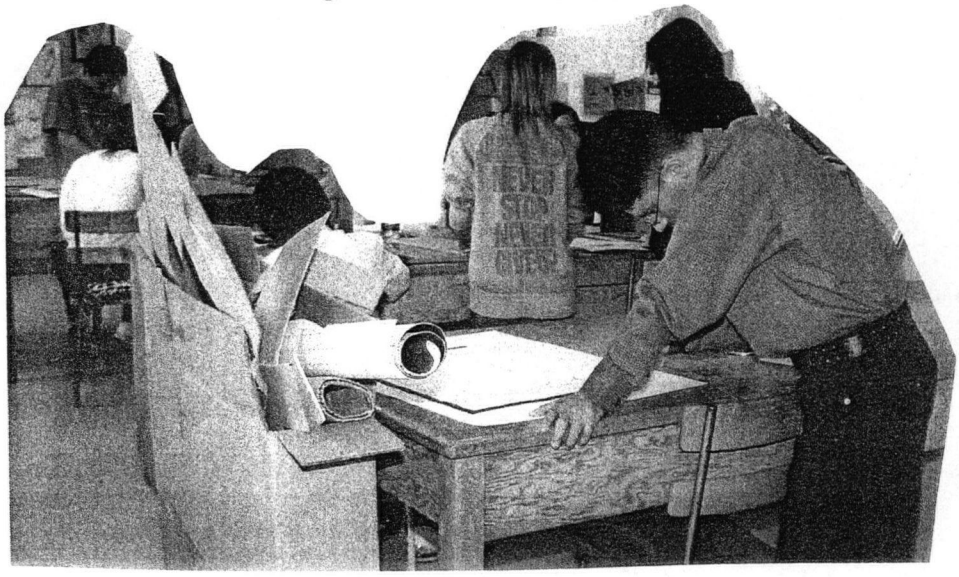


Figure 56. Part of the scrap collection.

guns

Students like to use hot glue guns. It is expensive to provide all the glue sticks necessary to keep the guns loaded, but the joints thus made are stronger and more quickly fabricated than those connections made with white glue.

Figure 57. Student using a glue gun - usually it is done on a board at a table, but this boy wanted to use an awkwardly placed electrical outlet.

A quick demonstration of how to join pieces of an architectural model together pays huge dividends as well. Students need to know that a little hot glue is all that is required, and how to move quickly to avoid glue gobs (expensive, ugly, unnecessary gluegobs.) Things to note about the hot glue gun:

1. It really is hot. Blisters can, but mostly don't, result - if the tool is introduced carefully.
2. It probably could burn down the school if a hot glue gun were left plugged in on a pile of newspapers over the long weekend.
3. There is a bit of skill involved. Students should practise on scraps before approaching their major piece.

alternatives to the glue gun

Common straight pins, used roughly like nails are used in actual building construction, are helpful in securing pieces together as a temporary or permanent measure. Masking tape can be used as a temporary measure as well, but it seems many students need to be guided to consider whether masking tape is an actual joining material. Some students, it would seem, consider masking tape to be an invisible aspect of their work. They don't <u>see</u> it, perhaps because it performs an important function, but is not part of the content. This is another time when interesting discussions about craft enter into the art studio.

So with this preliminary set of messages delivered, let us take a look at some actual learning experiences.

1. mapping

"We use maps, because they display, by a structural analogue, relations in space that provide a useful image of the world we wish to navigate. Maps lay it out for us… The inscription of visual images makes vivid certain relationships. They help us to notice and understand a particular environment and our place in it.

They also obscure. Thus the paradox: a way of seeing is also, and at the same time, a way of not seeing… maps also obscure what any particular map does not illuminate."

Elliott Eisner "Arts and Creation of Mind" p.11

learning experience links

3 R's: Receive (building awareness)

Educative value: Furthers understanding of student skill levels, point of view, learning styles; provides the opportunity to explore creative possibilities.

Connection to Architectural/Art themes: Drawing or otherwise 'reporting' increases ability to see; increases sensitivity to and appreciation of phenomena, encourages students to makes some judgements about what is important to them in the environment.

Every year I give a mapping assignment to each class - early on, because I learn so much about the new students from the resulting responses. And I see this project as a way to encourage students to really look at their surroundings, to consider what is important, and to think about how to report on and even honour what they care about in their environment. Students who are in my classroom for the second or third time (I teach Visual Arts 9-12 in a multi-level situation) also like to re-do this project, because there are so many different ways it can be done.

Mapping is a good introductory project, particularly when left very open ended, because good responses can be fashioned anywhere on the continuum of skills: minimal to very sophisticated. And at the beginning of the year, I have learned to call such a project 'introductory' and 'warm-up' so I can justify it not being tied to the great bugaboo for some students: marks.

Students come to my art class for a huge range of reasons, bringing with them a wide range of skills and competencies and concomitant levels of fear and confidence problems. I ask them on the first day to write a bit about why they are there, and I occasionally receive answers that are sometimes blunter than I might actually wish. Some students mention 'timetabling glitches', 'looking for an easy credit' - (are you in for a surprise, I think to myself), 'my mom insisted'. Some tell me: 'I want to be an artist, architect, designer…' Some responses scare me a bit with the importance of my part: 'art is the only thing I've ever been good at'. So when I ask them to do this project, I get a chance to thicken up the initial picture of who is in my classroom with a non-threatening piece of work.

I ask students to **Map, in any form that seems appropriate, your (typical) daily journey from sleep to the schoolhouse door.**

In motivating this project, I ask what ideas come to mind - what sticks out in their minds initially regarding this daily journey.

An interesting discussion topic to move this idea forward is the idea of 'landmarks'. And a warm-up project could be to report on, in any form, some of the objects and spaces they see and relate to on the journey to school. The first

time I tried this, I realised I looked forward to reading the headlines in the newspaper box as part to my morning journey, and the glancing at the clock tower as I bicycled by was another key part of the daily trip.

We also could talk about what maps are: and, inasmuch as we are all in the artroom, how might we creatively expand the definition of a 'map'.

We have a bit of a discussion regarding what form the rendition of their particular journey might take. Students are often relieved to discover that they are free to use found images, take photographs, build 3-D representations from found materials, draw, paint, colour; concoct in any way whatever. There are lots of ways to do this beyond the obvious, but much-loved, cartoon strip.

Students who have no perceived drawing skills or whose drawing gifts and confidence have yet to be discovered might find their gifts in this project in the area of assemblage. If students have skills in drawing and painting, they are able to use this introductory opportunity to utilise, hone and display those skills. Starting a course this way honours the creative possibilities of art and gives yet another way to understand students as they are at the beginning of the program, so that further explorations can be tailored to my growing understanding of the students' needs and potential.

Moreover, this project gives me the opportunity to gauge the powers of observation and the receptivity of students to their surrounds. This gives me a 'way in' to general and particular discussions with students regarding close observation in their lives.

Figure 58. The photo strip. This student wanted to show continuity in her morning routine, and tried to portray the sequence of events and views she observes in the morning journey to school. This project arrived very late - I allow for that always in the artroom - and because of the flexible deadline (or liveline) she was able to complete the many hours of loving labour needed to cut each hole in the strip with an exacto blade.

Figure 59. This map is a composite of snapshots this student's eye would take, rendered in quite sophisticated style from his point of view, beginning beneath the covers of his bed. These lovely little drawings evoke sound, movement, emotional response, mystery and skill; clearly the product of a thoughtful observant person. It is so interesting to consider the priorities of the teenage male. After seeing this piece, I was alerted to the reality that I had a gifted and potentially energetic student tucked back in the corner.

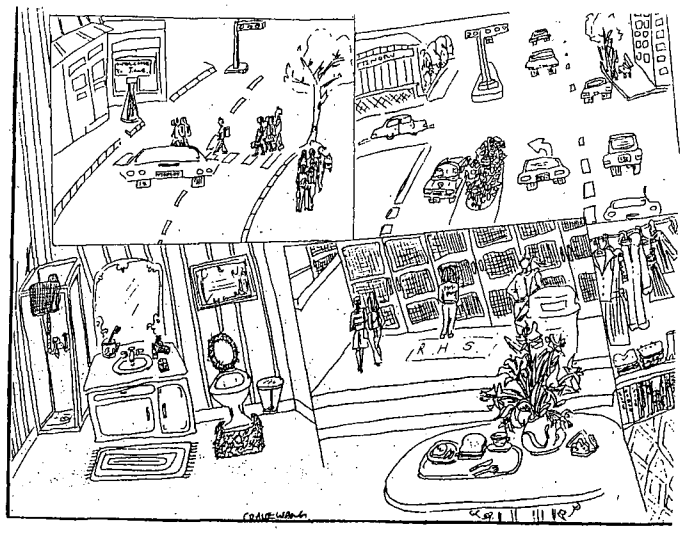


Figure 60. This is the work of another gifted student, whose style is as recognisable as her handwriting. Over the course of the year, her drawing became less symbolic and more observant, but her style, though deepening in sophistication, remained recognisably her own.

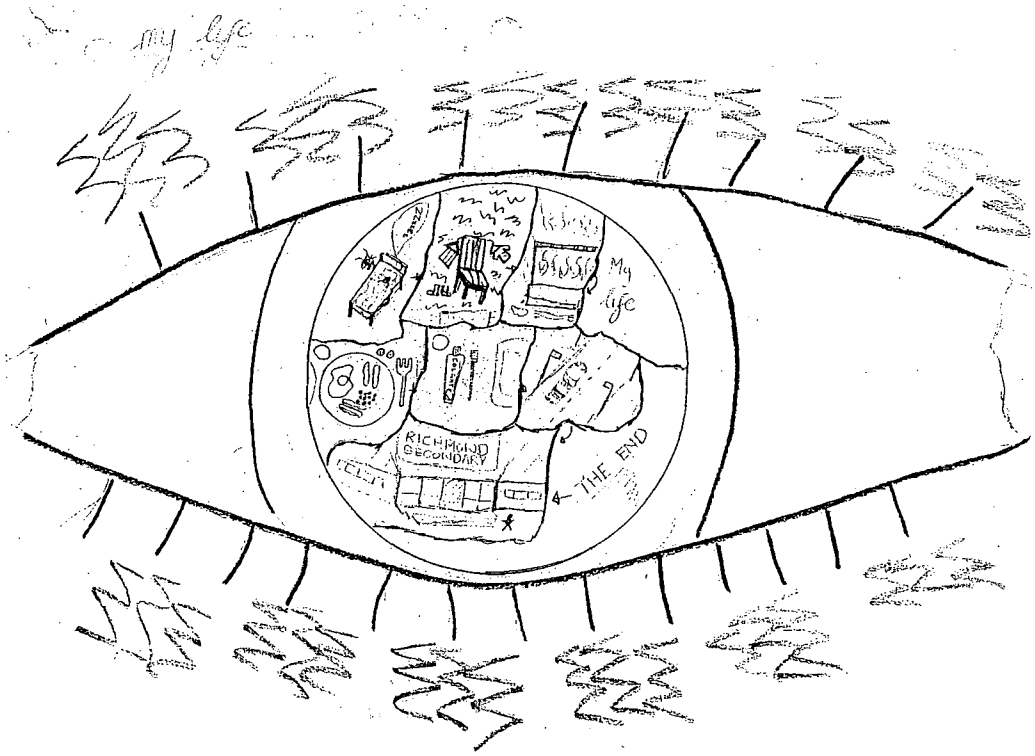


Figure 61. This student pushed off considerably from the obvious format, to plant all his impressions and perceptions squarely in his visual sense organ. I wish I had had a discussion with him about some of the elements of his drawing before it was finalised: I would have questioned the scrawly infill that figures prominently, and the need for verbal assistance to the viewer.

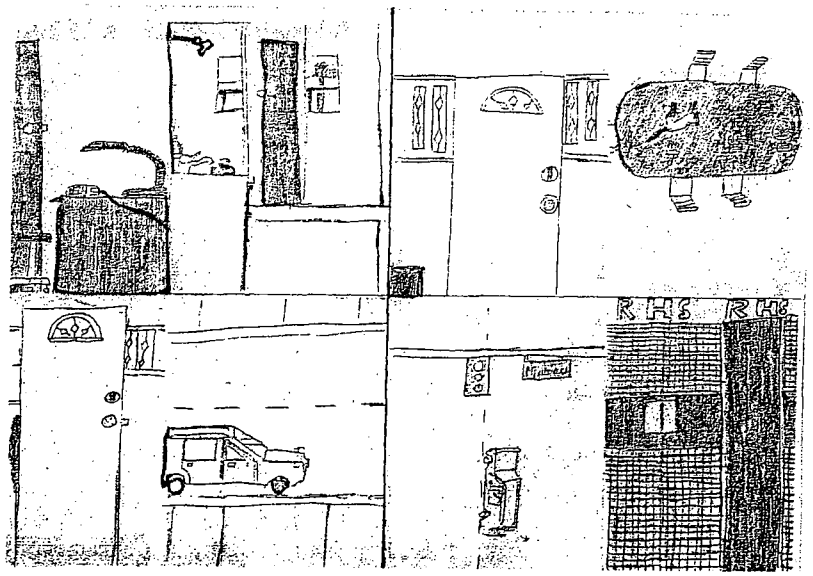


Figure 62. A grade 8 boy tossed into the class of grade 9-12 because of timetabling problems, was initially reluctant to even pick up a pencil. To further complicate matters, he had been home schooled for many years, and this was indeed a change for him. He stationed himself close to the magazine shelves and mostly looked for images for the first few weeks, then he began to draw cats. A few months after this project was given, he showed up with a large (approx. 20" x 30") response, which he had clearly been working on for some time at home. He needed to find his own feet, and I'm glad I didn't badger him too much to adhere to the 'schedule'. I think in art, that is not too difficult to accommodate.

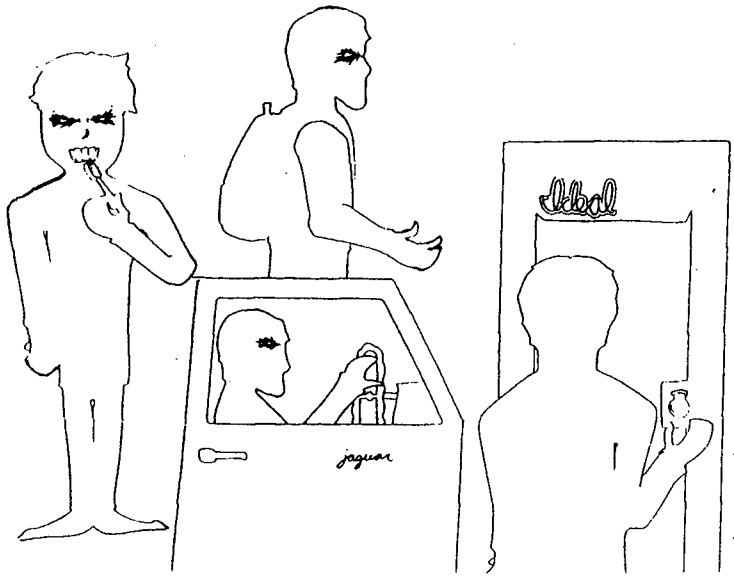


Figure 63. An unusual sci-fi interpretation of the assignment.

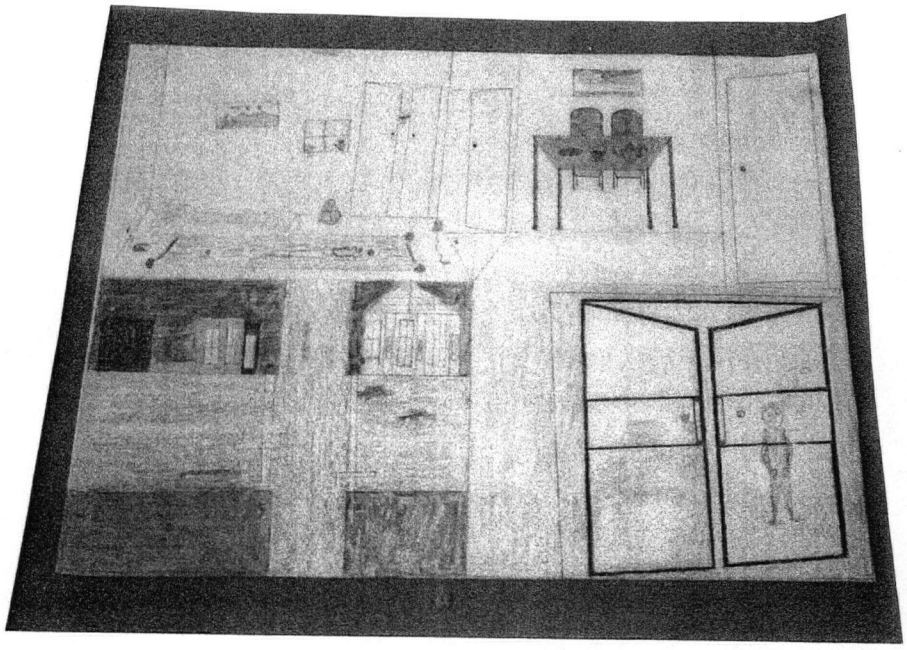


Figure 64. A student newly arrived from Afghanistan, this young man had never had an art class in his life before. His work also arrived quite a bit later than most of the other students' responses, but was definitely worth waiting for. Done on approx. 24" x 36" sheet, this represented a huge triumph for this student. It was such a treat to watch him zoom through the typical stages of representation. He did two blocks of art after the first two weeks of school, and became one of the most prolific and enthusiastic students I have ever had.

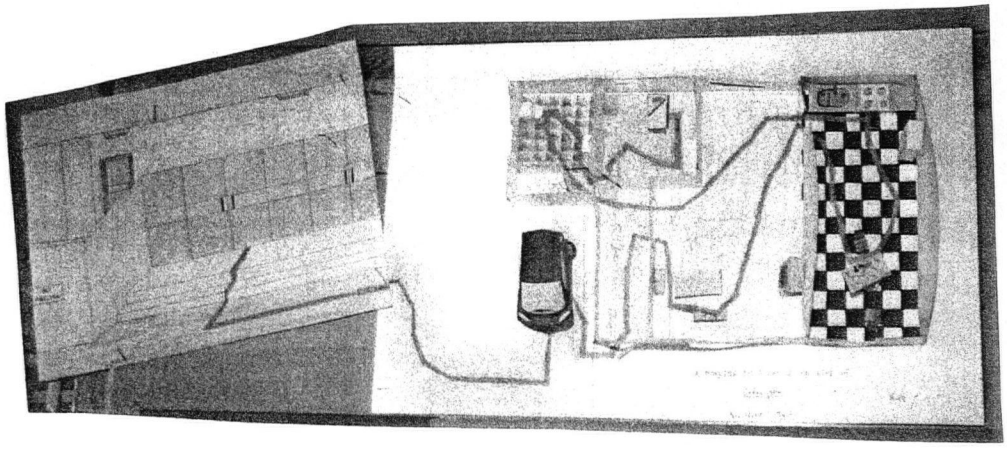


Figure 65. This very highly motivated student tried to model part of his morning journey. His 3-D capabilities grew and flourished over the year.

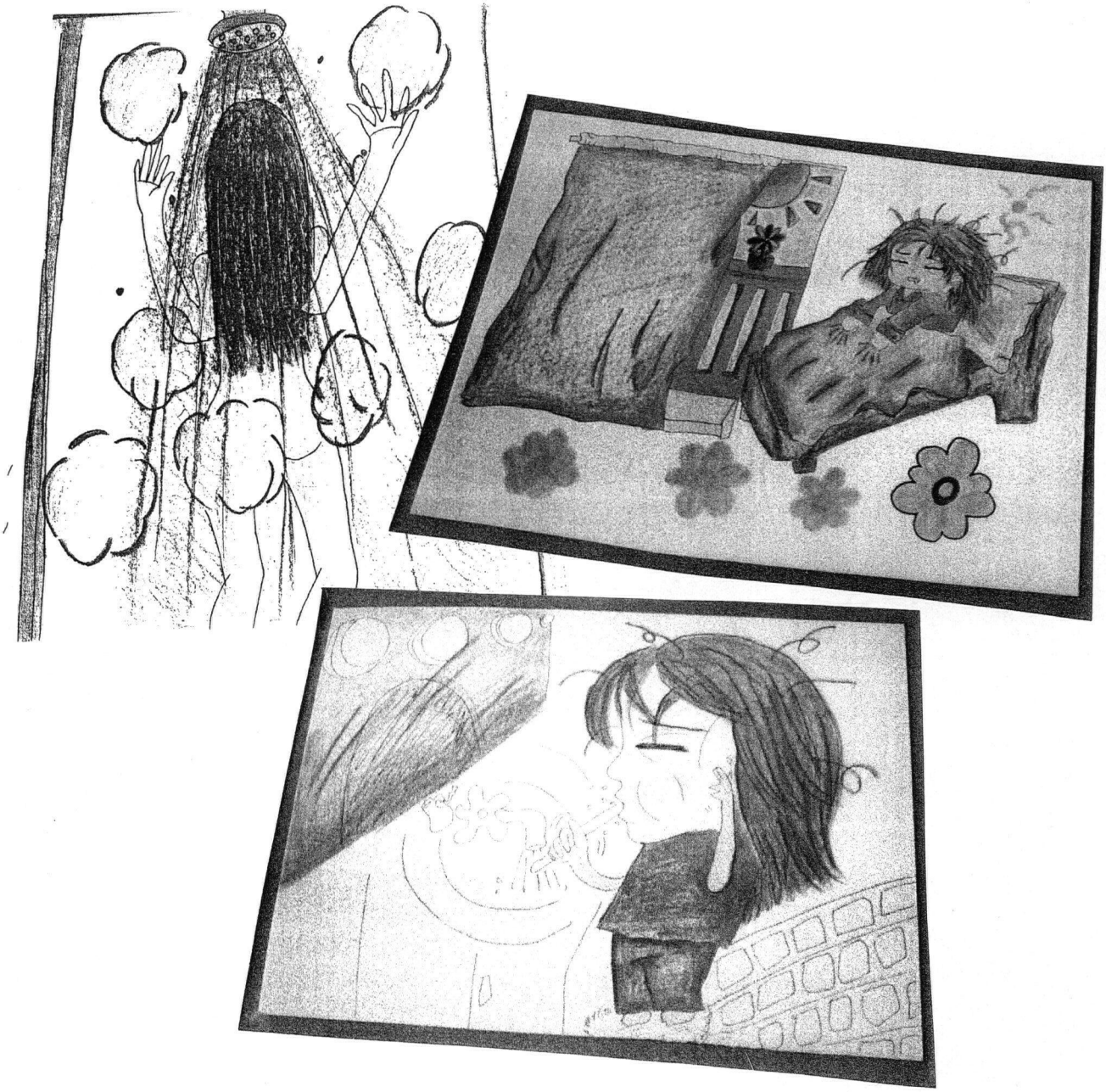


Figure 66. One of the senior students in the class caused a bit of a stir with her quite intimate rendition of her morning. She is Asian, and very into some of the lively graphic styles so popular in Asia, especially in Japan. She had no qualms about revealing the fact that she owns a butt, but some of the younger students were scandalised. I asked them why. The fuss quickly died down. This student became more interested, over time, in the broader world around her.

Figure 67. Some responses were low relief, leaning a little towards the three dimensional. Some students made more of an effort to work in the three dimensions. Some adopted the comic strip approach, perhaps with a bit of variation.

All the responses to this introductory assignment, which most students completed promptly and with enthusiasm, gave me some ways of assessing skills, faculties of observation, personal perspectives; and gave us all a low risk start to the year in the artroom. I think a project like this must not be heavily tied to marks, especially at this time of year. I simply said I was looking for effort and some creativity in the responses. I stopped short of saying 'detail', because I thought that might be too prescriptive. Next time, I think I will emphasise the words 'detail' and 'observation', to help some students think about moving past the symbol systems they have built up over the years, and not yet abandoned. I will always keep the response mode completely open, however, because some students were very relieved to be 'allowed' to collect othermade images. That tells me quite a bit about what is needed in the way of confidence building instruction in itself.

This introductory project connects to and starts to set the stage for a lot of different environmental observation type activities that will emerge later in the year. Future projects will involve, for example, 'sighting' interiors, simple drawings of architectural details, section and elevation drawings, ways of rendering 3-D forms - simple perspective for those who request this technique, and the craft of modelling.

Ways I've come across to enrich this project

In 2003, the Vancouver Art Gallery offered an outstanding suite of exhibits called 'Drawing the World: Masters to Hipsters.' This show presented a wide range of drawings from a diverse collection of cultural traditions. One section of the show, titled 'For the Record - Drawing Contemporary Life' included several fresh and exciting experiments that could generally be included in the area of mapping.

After spending many happy hours viewing, discussing and copying the Masters and the Hipsters, I realise there is much more I can do with students on the subject of mapping.

I have introduced very few, if any, examples of artists' maps into the motivation for this project over the years, and have thus overlooked a promising opportunity, especially with the senior students, to enrich this pursuit.

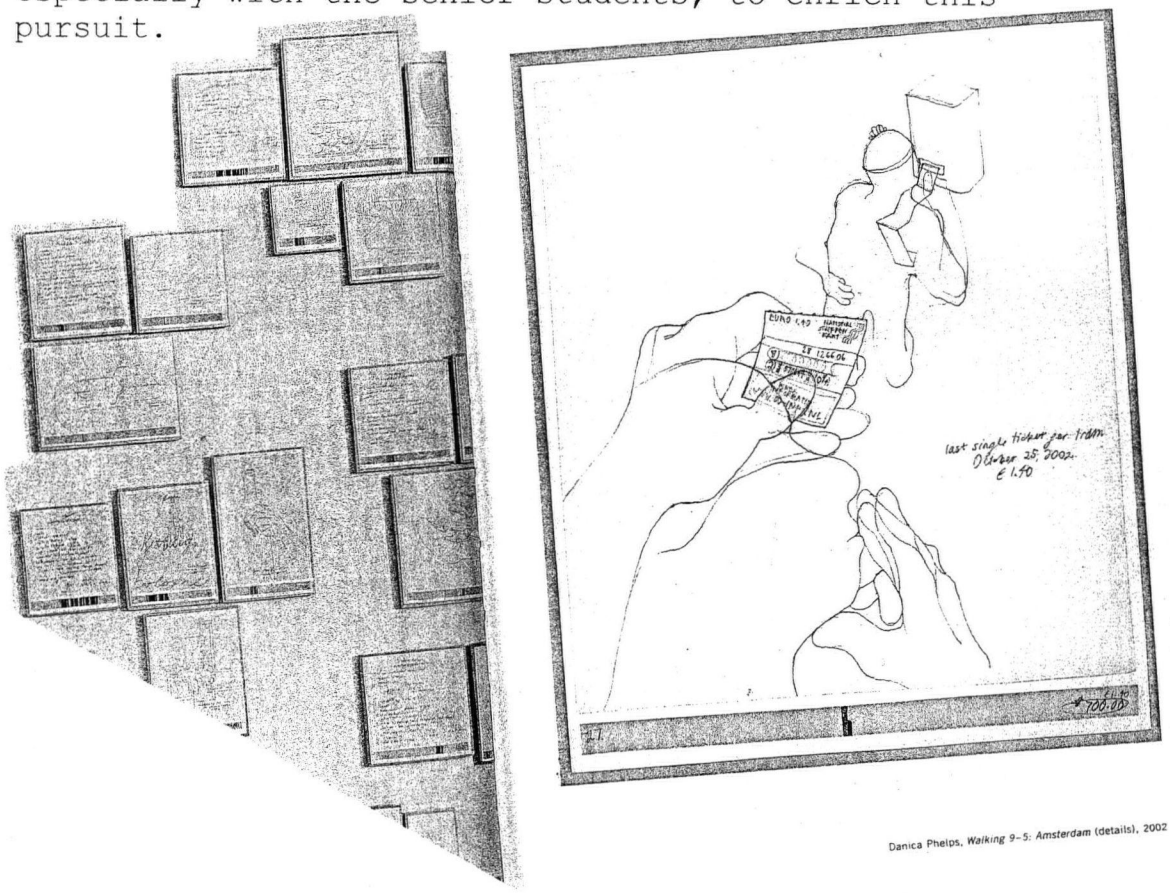


Figure 68. Danica Phelps - maps everything she gets and spends - we could map consumerism too. (Augaitis 2003)

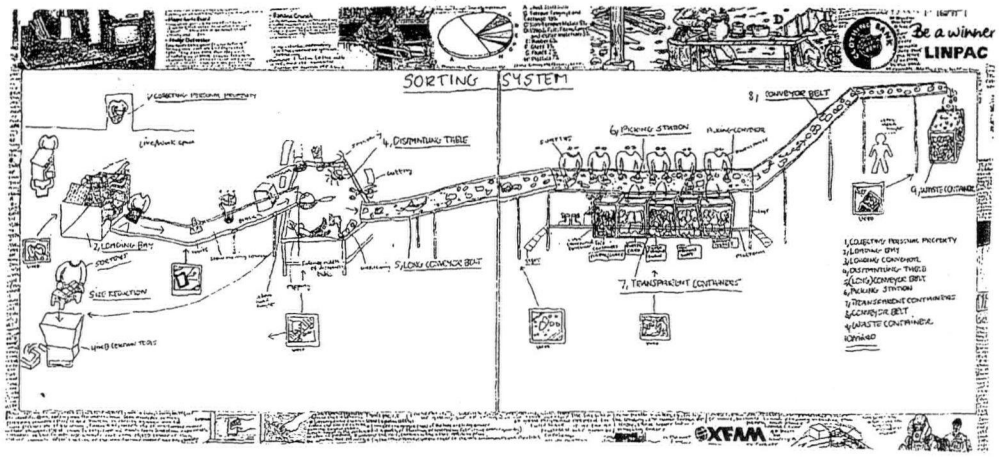


Figure 69. Michael Landy, who famously destroyed everything he owned, mapped that action graphically. (Augaitis 2003)

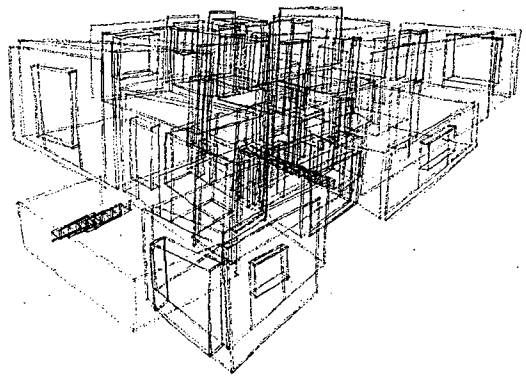


Figure 70. Alex Morrison made maps of his progress through 'Every House I've Ever Lived in Drawn from Memory'. (Augaitis 2003)

Mark Lombardi maps political intrigue from media reports. There is lots of intrigue in the lives of teenagers.

Raymond Pettibon keeps track of everything - right on the walls.

So what is a map? If we are going to map a piece of our lives, it might also be fruitful to explore this idea a little or even to expand out to the broadest definition possible.

Some examples: National Geographic magazine provides an array of beautiful examples, including pictorial, verbal, celestial… And there are city maps, plans of the school, and conceptual maps like all the different types of webs and graphic organisers we use in education.

If we were to push the definition of 'map' to its broadest extent, where would we arrive? Perhaps drawings of one's progress through daily life can be included in this

definition. As examples, another section of the 2003 Drawing the World exhibition show how artists in other cultures record the quotidian:

Figure 71. The Inuit artists often feel no need to draw their narratives in sequence. (Ruth Annaqtuusi Tulurialik, from Jackson.)

So why should we? Another way to break boundaries.

2. home, imagined and revealed

This two part lesson serves to illustrate to students how different it is to really look at a place instead of taking it for granted that we 'know' a place. It helps students to push past the stereotypical symbol making that many teenagers feel so safe with.

learning experience links

3 R's: Receive (building awareness of the environment)

Educative value: increases concrete perceptual skills - transmission of simple techniques

Connection to Architectural/Art themes: clarifies that the act of drawing is an act of seeing; suggests that drawing buildings is not difficult.

Students are asked, as a sketchbook exercise, to

draw the front elevation of your home, from memory, accurately and including as much detail as possible.

This exercise needs to be done in class, and it should be completed in an hour or less.

In order to clarify the term 'elevation', I use a green pepper - actually a few green peppers, so they can be distributed about the classroom and students can get a good

close look. This is the only vegetable easy to obtain that has 'walls' enclosing an empty space - like a building.

The outside view of the pepper, looking straight at it, is the elevation. We might have a few minutes to draw some continuous line drawings, noting the idiosyncrasies of the pepper. Students need to be clear that fancy angular views are perhaps delightful and interesting, but an elevation drawing is a straight ahead view of the object - no bird's eye, worm's eye views allowed.

Now is as good a time as any to explain what the terms 'plan' and 'section' mean as well. I might cut the pepper horizontally about one-third of the way up the pepper from the bottom. Looking down on the pepper is the 'plan' view. Typically, plans of buildings are drawn at an imagined cut about three or four feet above the floor.

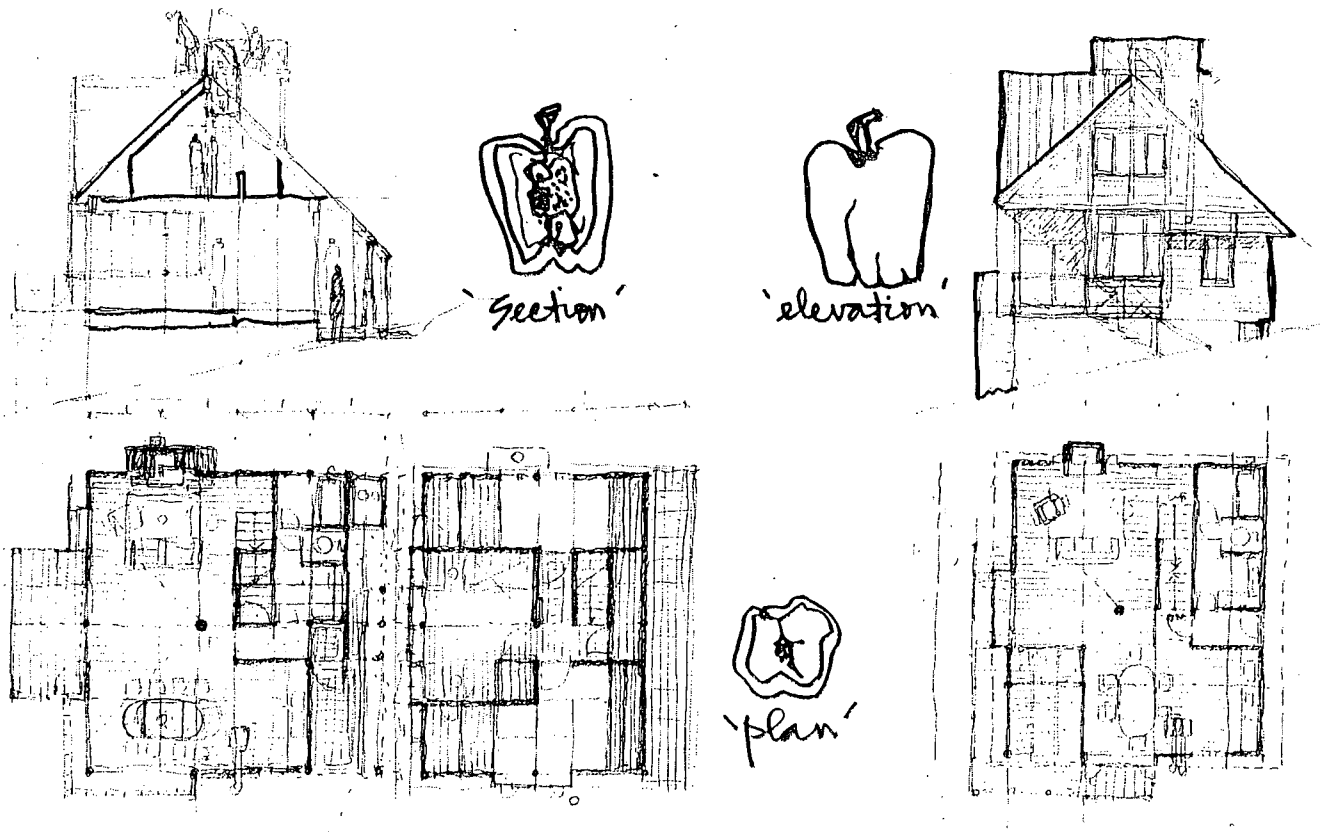


Figure 72. Plan, section and elevation views.

After students have had a chance to sketch this vegetable in plan, I would cut another pepper vertically, through the middle. The view of one side so cut is the 'section' view.

Although we won't be needing plan or section view for this exercise, I think it is a good idea to introduce all three architectural conventions/views at once, so students can start to think about the building as a whole, and how it can be represented. Although this exercise is concerned directly with the façade or face of the building, it is helpful for the student to consider what is behind the face, how the building fits together.

Additionally, before attempting this exercise, students could examine some well-drawn elevations to see how lines work together to illustrate all the detail of a building façade. Every edge can be recorded in an elevation. (Sometimes we take shortcuts, but every major designed edge should be shown.) Students should note that the most important lines are heavier than secondary lines, and some minor lines - say, parts of layered window frames, are drawn more lightly.

I ask students to think about the general massing or form of their home. Is it a single family dwelling, an apartment, or perhaps a basement suite? I ask them to visualise the 'face' of the building they see as they approach their home. What is the principal elevation of their home - the 'face' it presents to the world? (This may differ from the entrance they normally use.) What is the relationship of this façade of their home with the ground? Are there gardens, shrubs, trees" - these can be 'ghosted' or drawn very lightly, so as not to obscure the actual elevation. How large is the entry door related to the student? What is at eye level? Are there stairs up to the door? How do the windows relate to the entry door? What is the general arrangement of all the architectural elements and details? How is the roof placed over the general massing? If the student lives in an apartment, focus can be placed on the entry, but perhaps enough of the building can be sketched to show the relationship of one's own apartment to the main entry. What colours are involved? If there is time, the sketch could have colour added, at least enough to show the arrangement of cladding and trim colours. Materials can be noted. Visual notes

can be added to the drawing regarding materials, difficulties in sketching, any points of importance can be verbally added.

The objective is to draw a clear image of the home as visualised. The drawing must be finished in class, without looking at the actual building.

Students are asked, for homework only after this drawing is completed, to

go home, and compare your sketch with the actual building. Redraw your home from direct observation, accurately and including as much detail as possible.

I ask students to try to refine the rendering of the details, and to consider technique - particularly the use of line weight. It is a good idea to consider composition - how is the drawing arranged on the page, what materials are to be used to obtain the most appropriate effects. Pens of various thicknesses are often employed by students, various pencils of different hardness can be used.

It isn't necessary to belabour the point: students get it right away. They usually immediately see what they had not clearly observed about their homes before this exercise, and they note a major shift in their understanding of the place they call home. We might discuss how these increased powers of observation can be translated to other aspects of their lives, but few words are necessary - they get it.

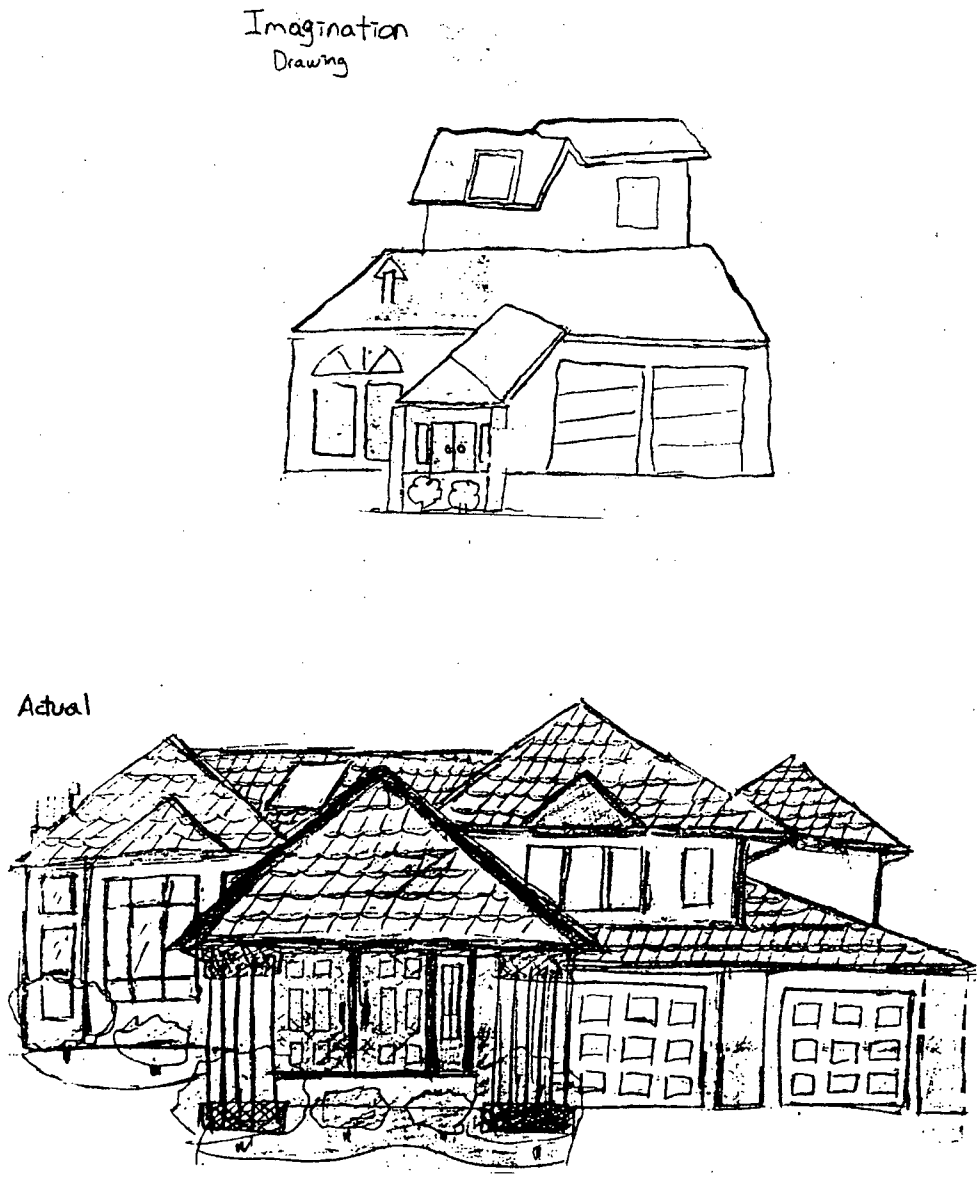


Figure 73. Two sketches of a student's home.

Students who live in apartments struggle valiantly with the complexity of their building, often with good results, as seen in the following examples.

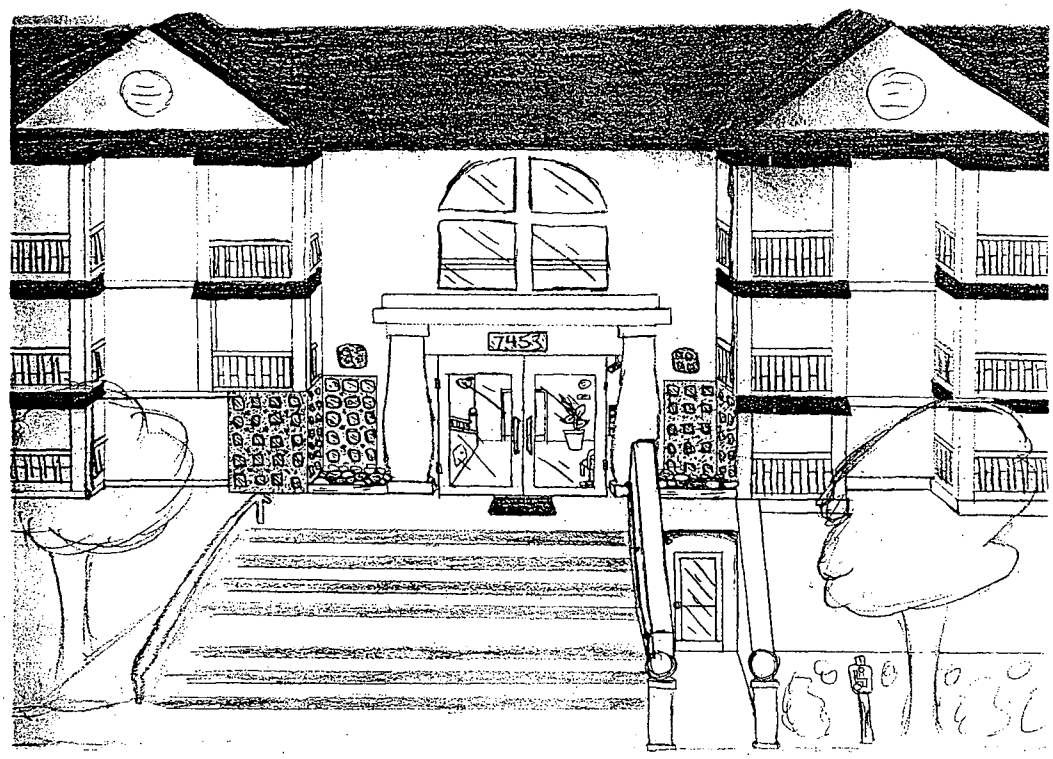
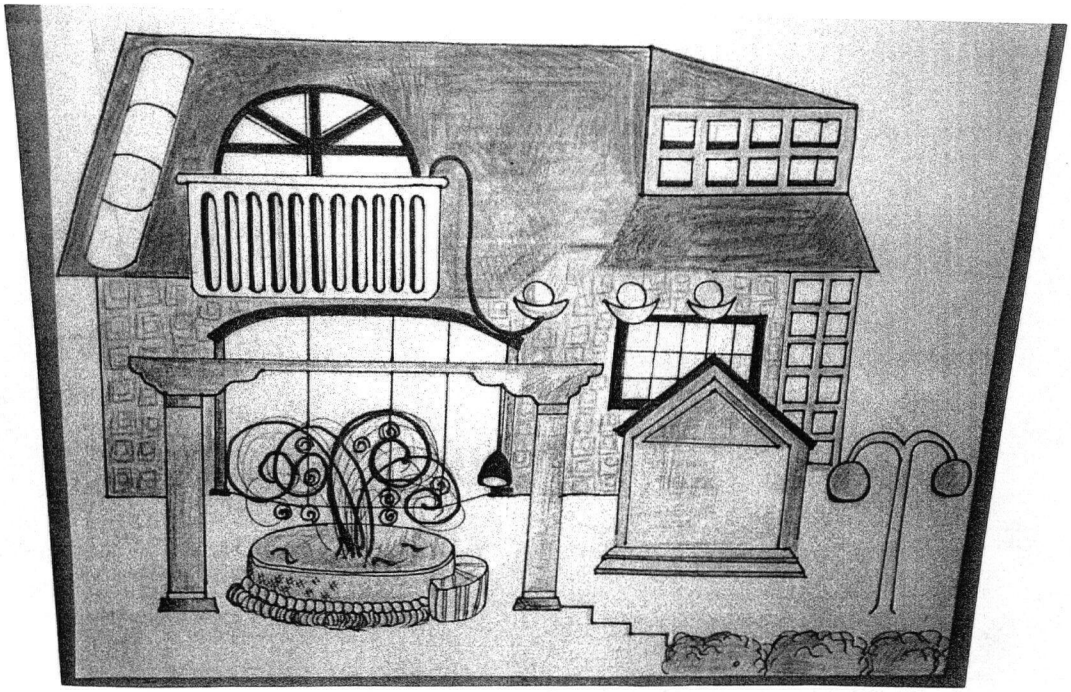


Figure 74. Two sketches of a student's home - apartment building - first is the imagined view, then drawn from reality.

Figure 75. A beautifully sketched house - the student was surprised at her success.

The images of these exercises can be used in other pieces later. They might want to personalise their image, adding details of the inhabitants of their homes to make a home 'portrait', or pieces of their home might find their way into other compositions. But the power of these exercises lies in the simplicity at this first effort - the chance to

see how to see - especially powerful when applied to a place that is as important as one's own home.



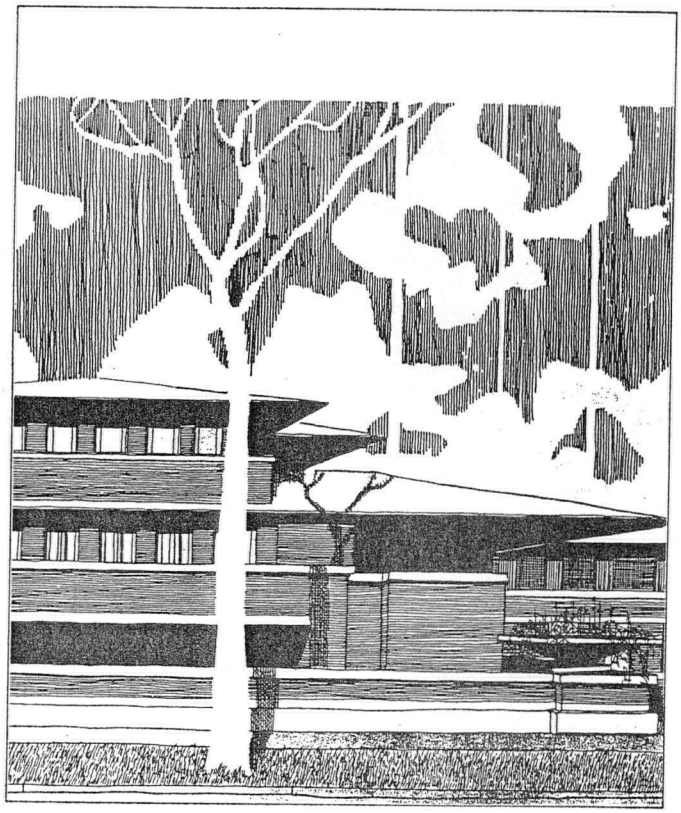


Figure 76. Some developments of the home image.

3.redesign

(frankly facadism)

learning experience links

3 R's: Receive (building awareness of the environment) and Respond to what we see - no traces of social Responsibility here though - the object is to explore possibilities

Educative value: expressive rather than analytical design process, playful exploration of form - right brain fun.

Connection to Architectural/Art themes: a gentle introduction to the design process, emphasising composition over practical considerations.

Once students are familiar with the elevation drawing, we can have some real fun with the idea. I ask students to find a building that is in need of some loving attention, and draw it in their sketchbooks. Inasmuch as I had gone one Sunday morning on a sketching expedition to prepare a demonstration drawing, I was able to give students some important advice. I worried that I might upset someone, standing in front of their house and making marks in a book, so I suggested that they use discretion in the choice of building to sketch. They all arrived with drawings of 'needy' buildings, and no reports of complaints, but I think it is a good warning. Students were than asked to

imagine you have unlimited resources to renovate a neglected building you have noticed. Redraw the main elevations, front and rear.

The elements of this assignment obviously do not include an acknowledgement of socially responsible design. I am explicit about this: we are just going to have some fun with facades. We will experiment with materials, we will try to think about what goes on behind the façade to some extent, but mainly the objective here is simply to play with the façade, to enjoy the possibilities of colour, texture, shape, form, composition, and to apply some design strategies to the newly created elevations.

One of my favourite results was designed by a student who took some offense at the plainness of the typical 'Vancouver Special'.

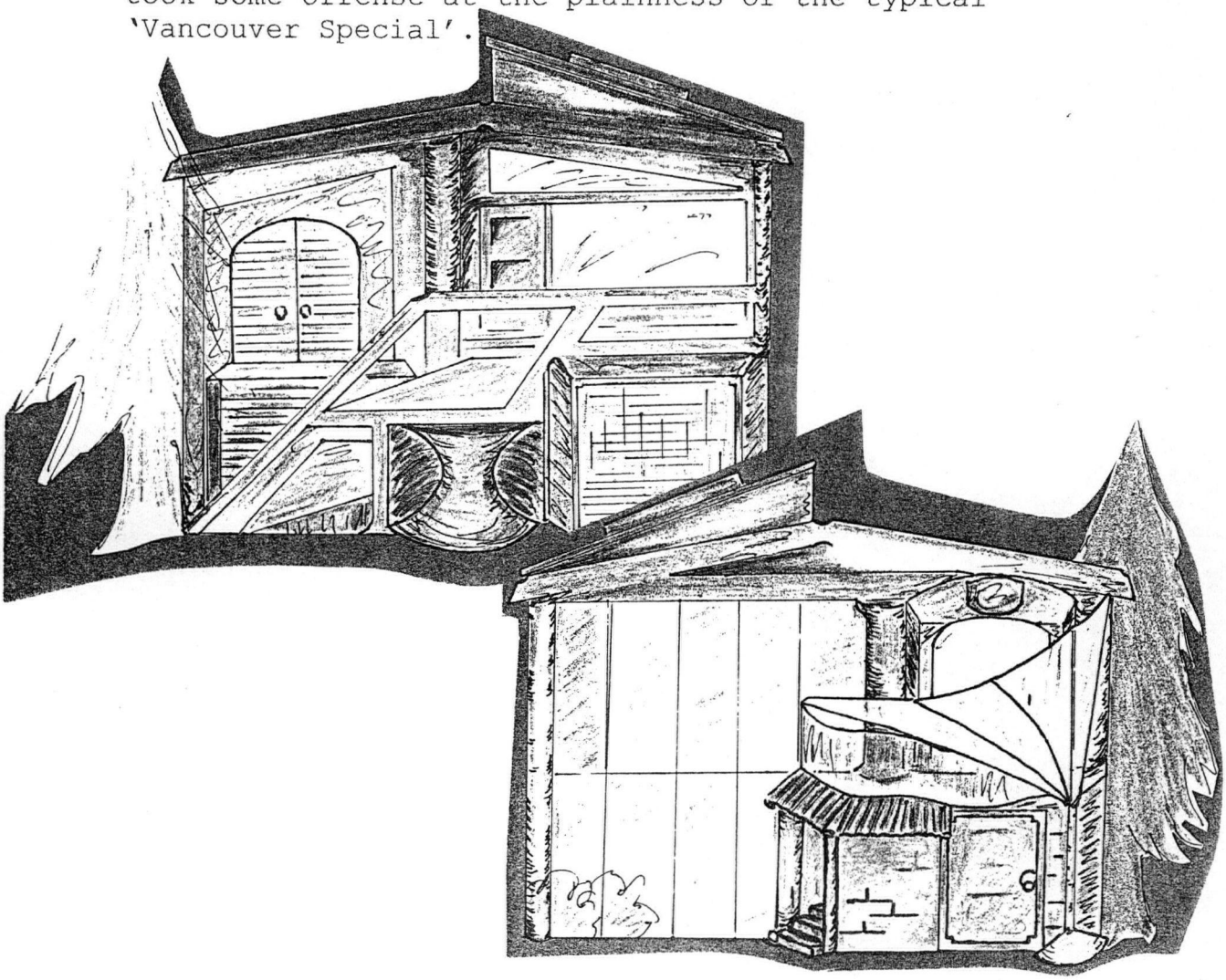


Figure 77. Reworked elevations of a typical 'Vancouver Special'.

Another student decided her house was too small, and she therefore attempted to renovate by adding a second storey to the building.

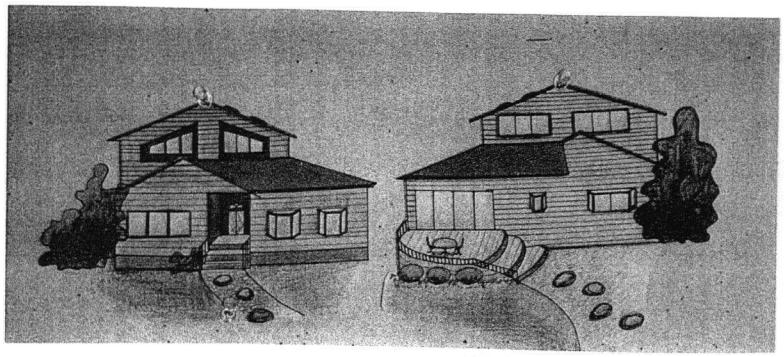


Figure 78. Renovated home.

Some students experimented quite creatively with textures, and low relief, creating results notable for their pictorial, if not architectural interest.

Figure 79. Collage of facades.

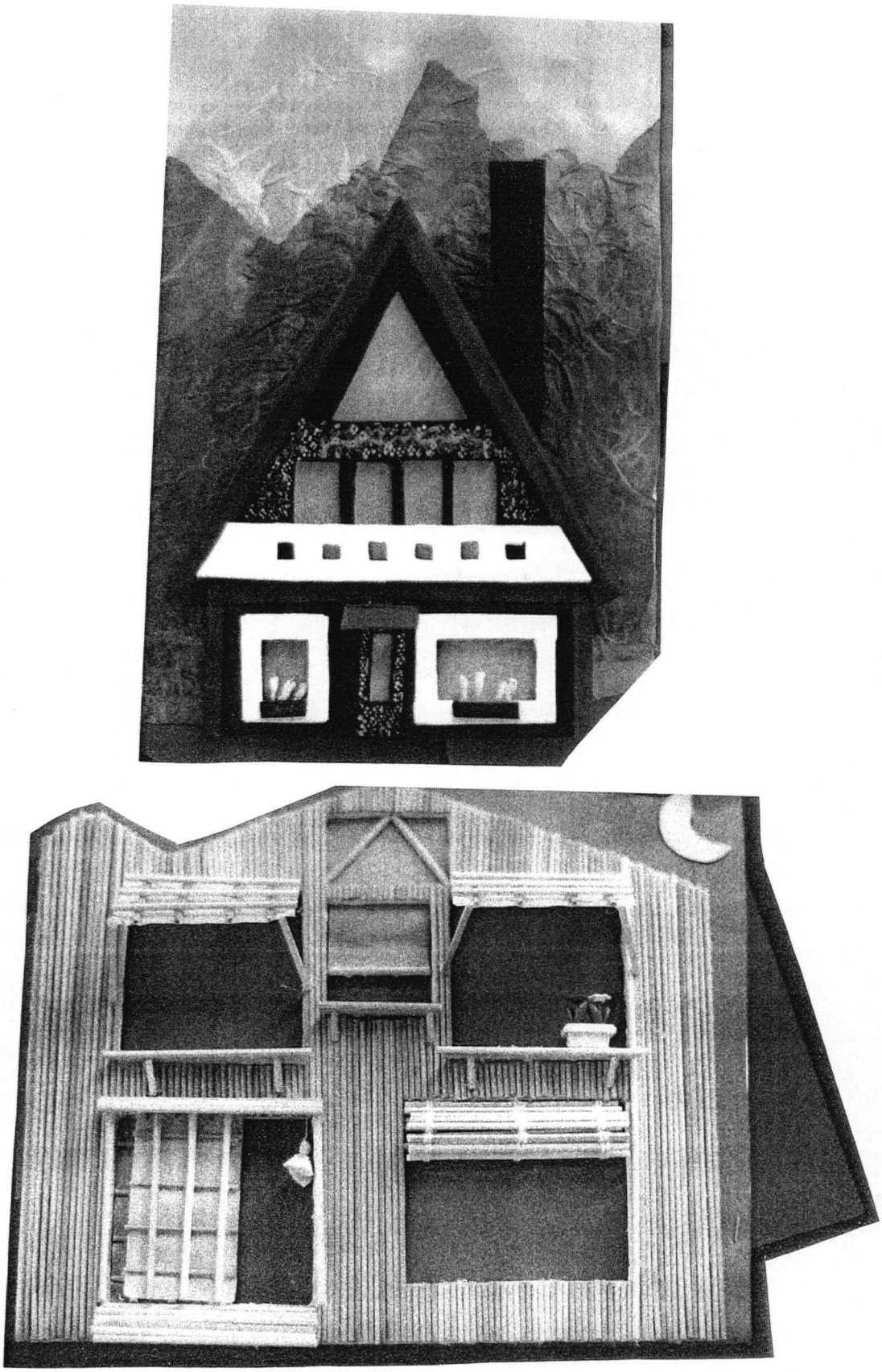


Figure 80. Low relief facades.

We grouped some of the facades into 'neighbourhoods' and suspended them together from the ceiling. I realised after making these mobiles featuring fancied-up facades, (including some that were simple line elevations made of bent wire) that we could been much more imaginative about the making of the mobiles. A look at the work of Calder might have stimulated a much more sophisticated response.

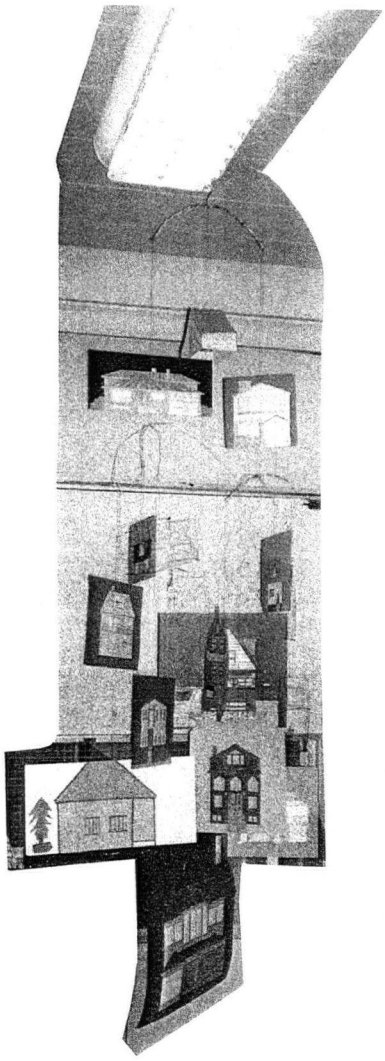


Figure 81. Mobile.

Another façade study that I have experimented with is more focused, but still potentially fun and pictorial rather than serious re-design. I ask students in the mapping assignment to end their journey to school at the schoolhouse door. They therefore have drawn the entry they use in some form or another already, usually without much attention to the actual detail of the door.

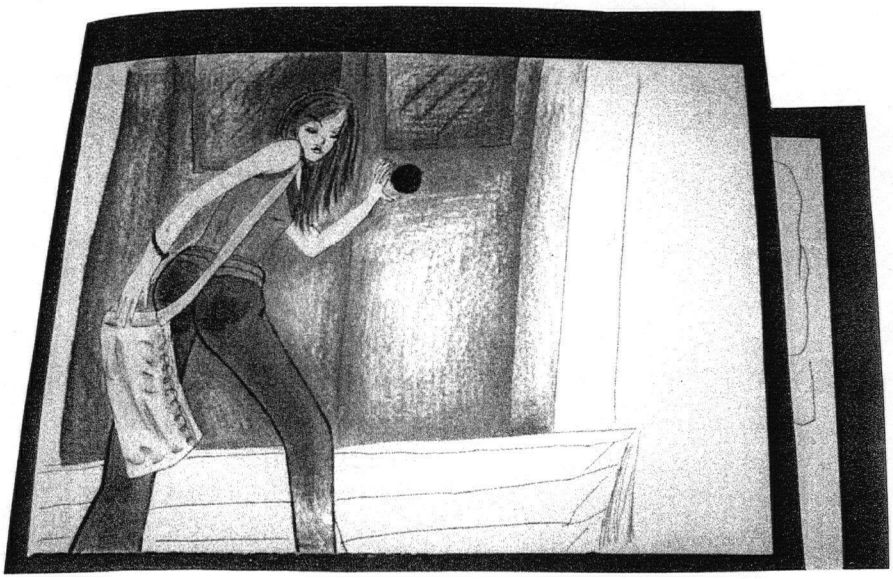


Figure 82. Student at the schoolhouse door.

I ask students to revisit the schoolhouse door that they most commonly use on their journey to school in the morning, this time observing the entry carefully, and drawing it in as much detail and as accurately as possible.

Again, I might say, given unlimited resources, how would they like to characterise the school, by altering the entry to reflect their views of the school community - how it is, and how it could be.

Figure 83. Study of the school entry.

This can lead to very interesting discussions about student perceptions of the school, and equally interesting discussions about how architecture both contributes to and reflects those perceptions. Some students are very explicit and imaginative about their renditions of the how the school might be renovated to reflect the character of its inhabitants:

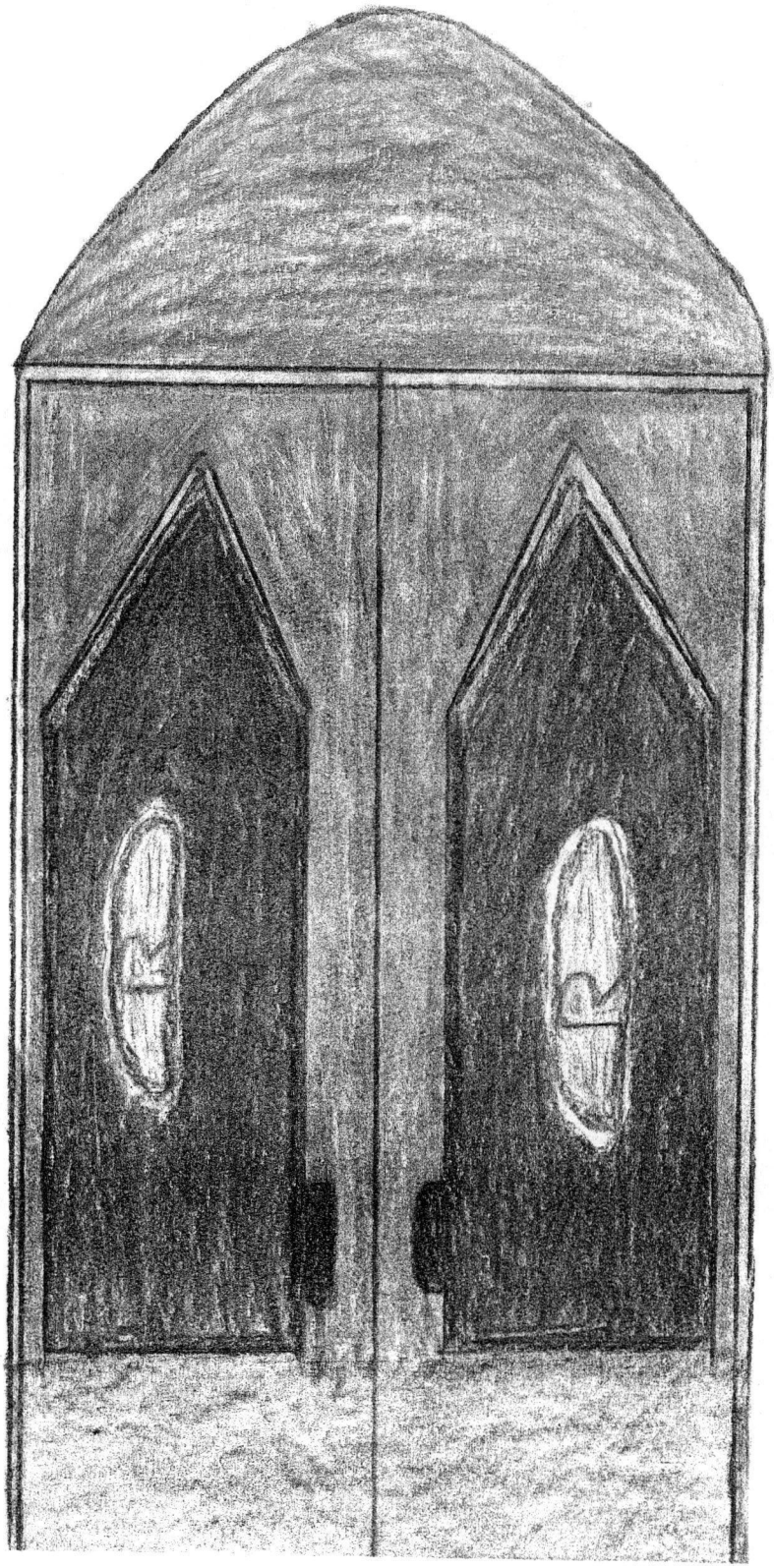
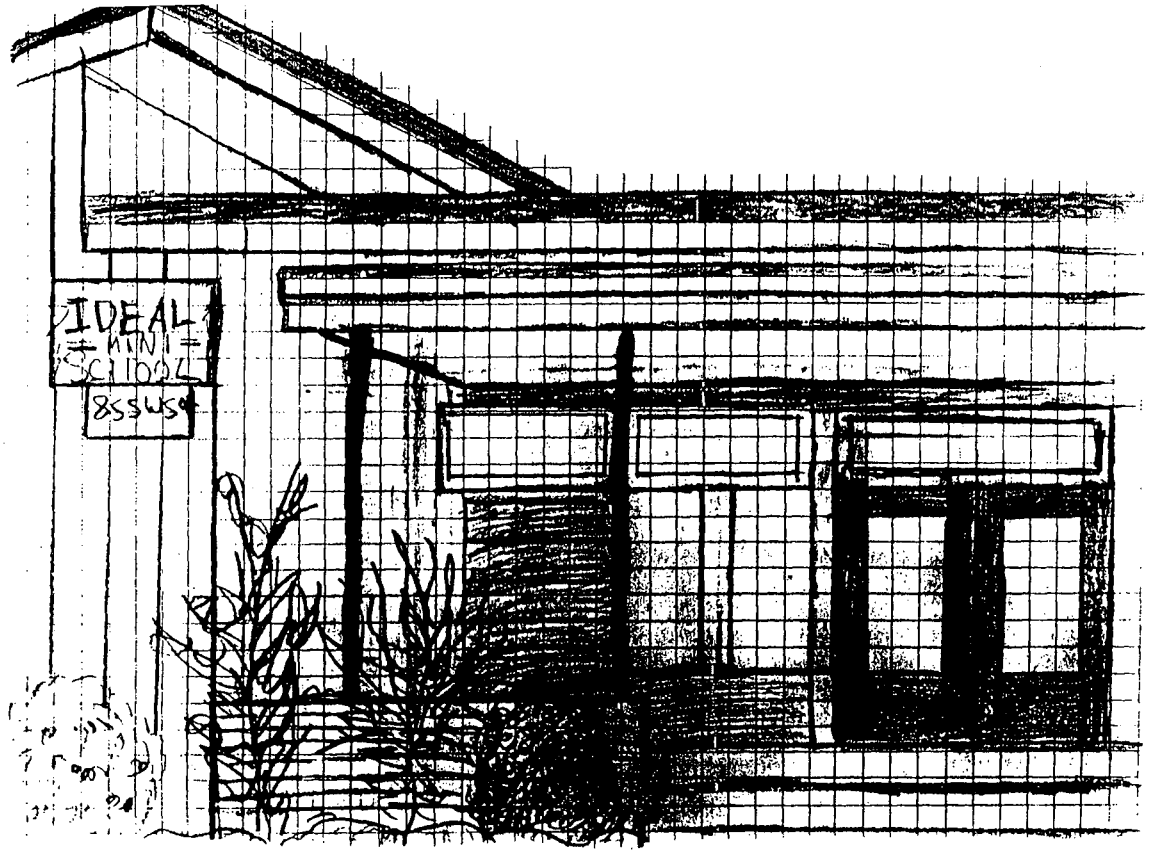


Figure 84. Reworked entry doors for the school.



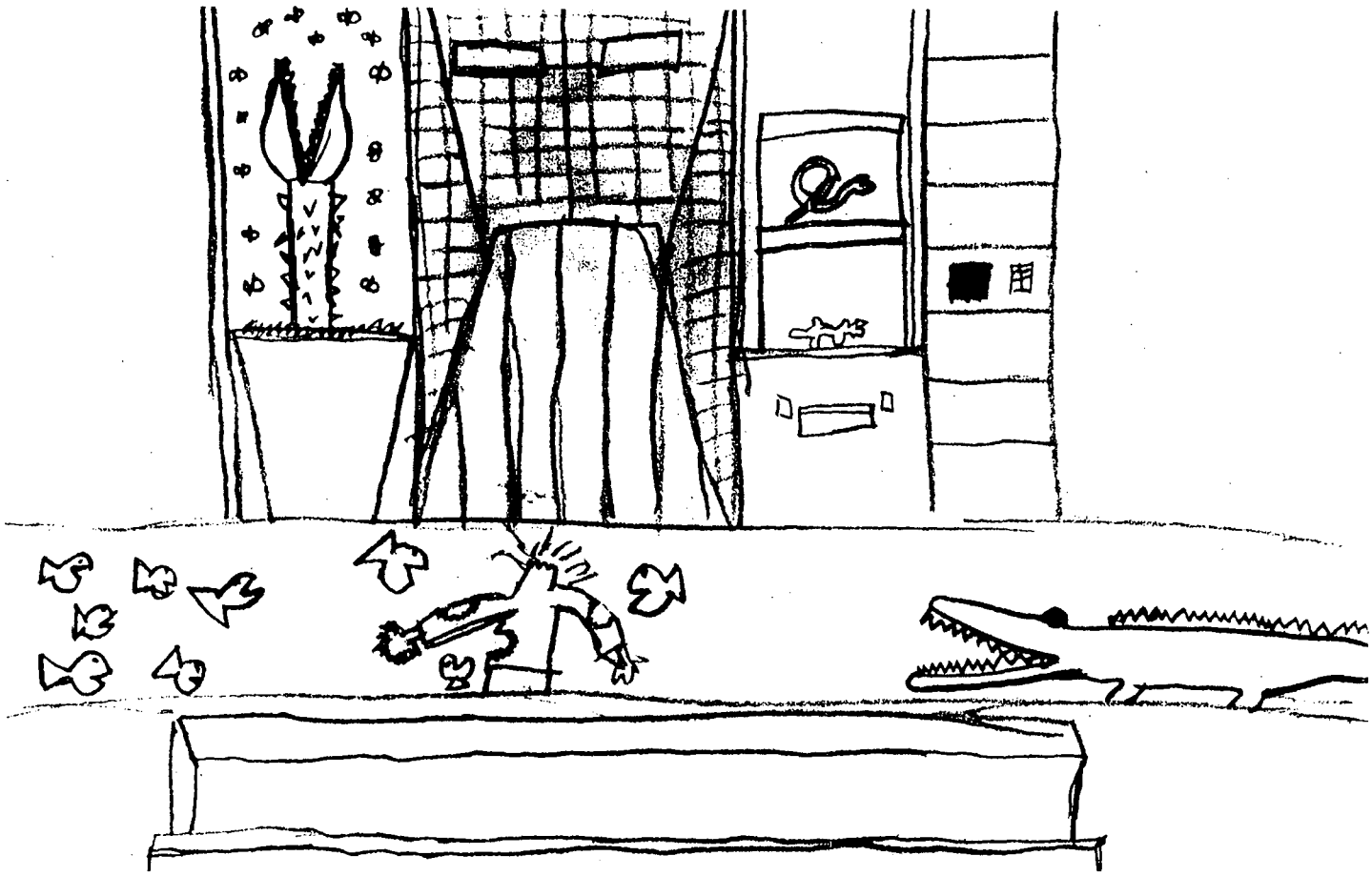


Figure 85. Elevations of a school as is, and as it might be.

4.doorways

- a method of drawing interiors

learning experience links

3 R's: Receive (building awareness of the environment) and Respond to what we see.

Educative value: strengthen perceptual skills, and encourage with a simple drawing task - the visual spatial ability is engaged more easily in a framed/focused situation. Transmit some simple drawing techniques.

Connection to Architectural/Art themes: drawing to see/communicate and some focus on some elements of composition.

When students have had the opportunity to try a few projects requiring energy and imagination, but not necessarily sophisticated drawing skill, I like to try to introduce some opportunities for observation and recording of architectural interiors.

These results can range from very simple interior elevations for students whose confidence and skill has not yet blossomed, to more complex and beautifully rendered images. Limiting the focus of the drawing is a way to assist students who are tentative.

I ask students to think about doorways. Go and look in some open doors in the school, and find one that is interesting. Then:

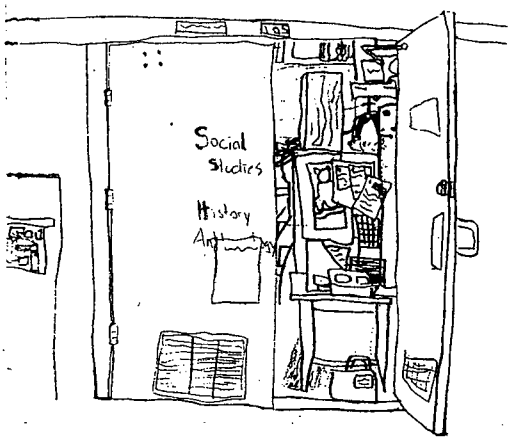
Draw the view through an open door, or through a glass door, as accurately as possible; aim to make an interesting drawing.

It turns out that locker doors are a great favourite with students, and simple but interesting drawings can be the result.

Figure 86. View into a locker.

I once asked students to form into groups, to work with chalk pastels to make large murals in response to this assignment. One group of students, who were initially very reluctant to participate because of their lack of drawing confidence, were delighted with their result when they tackled the simple forms of a locker.

Other students might produce efforts of varying simplicity and complexity, but even the least experienced student seems more willing to tackle the drawing of interiors (perceived of as 'hard'), if the area is framed by a door.



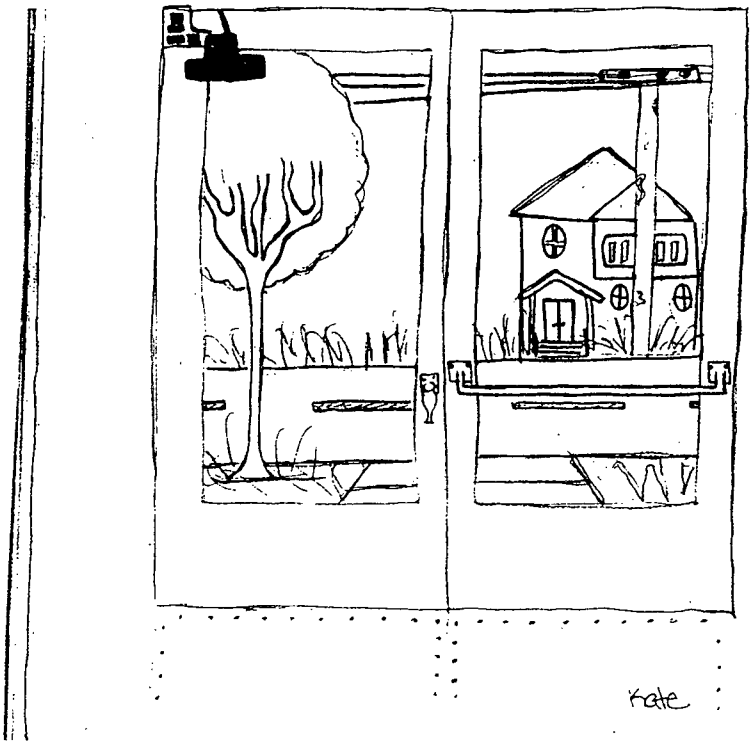


Figure 87. View through a classroom door, and the view through the entry door.

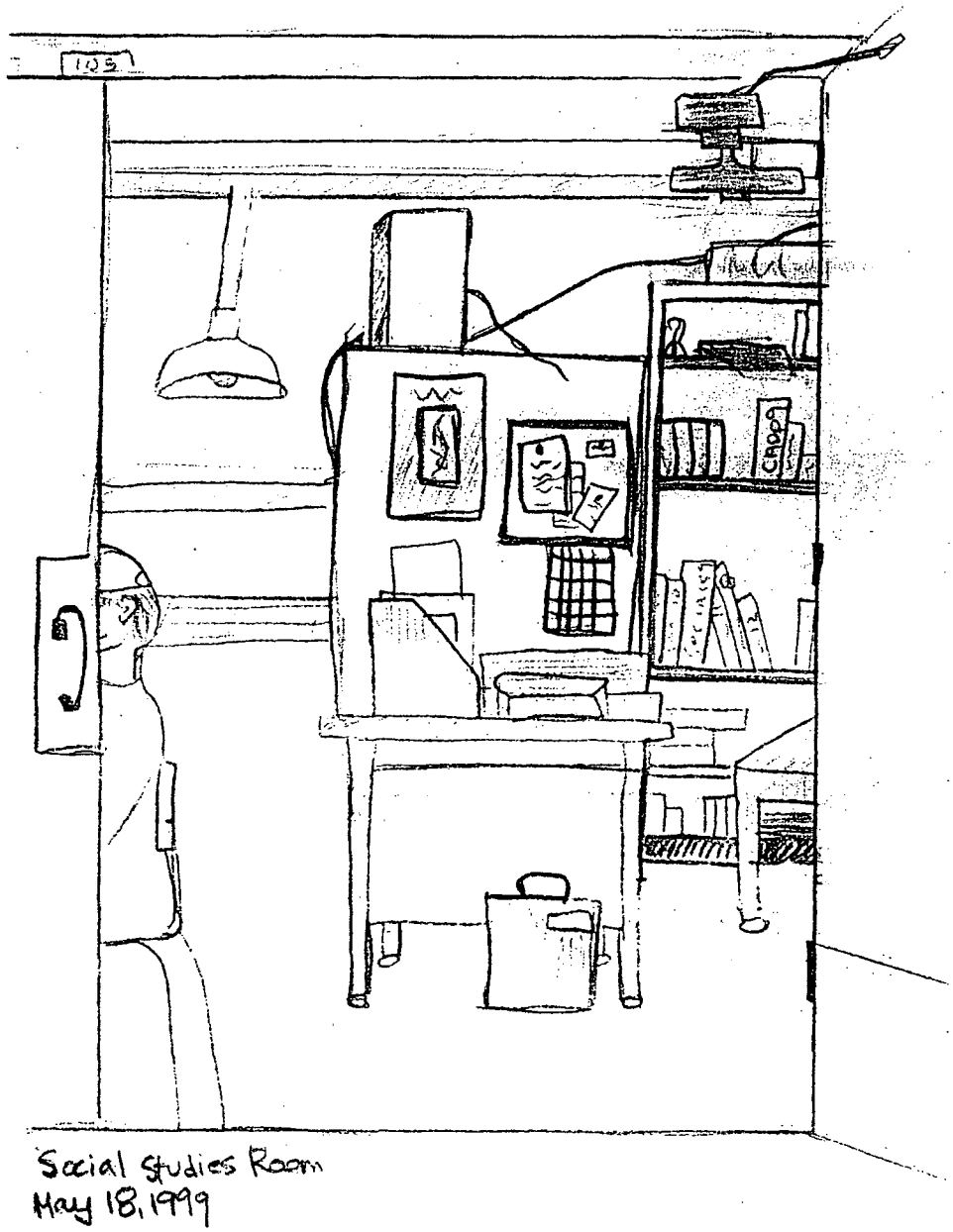


Figure 88. A simple view through a classroom doorway.

The project does give scope, however, for the student who has discovered drawing power and wishes to develop a complex image.

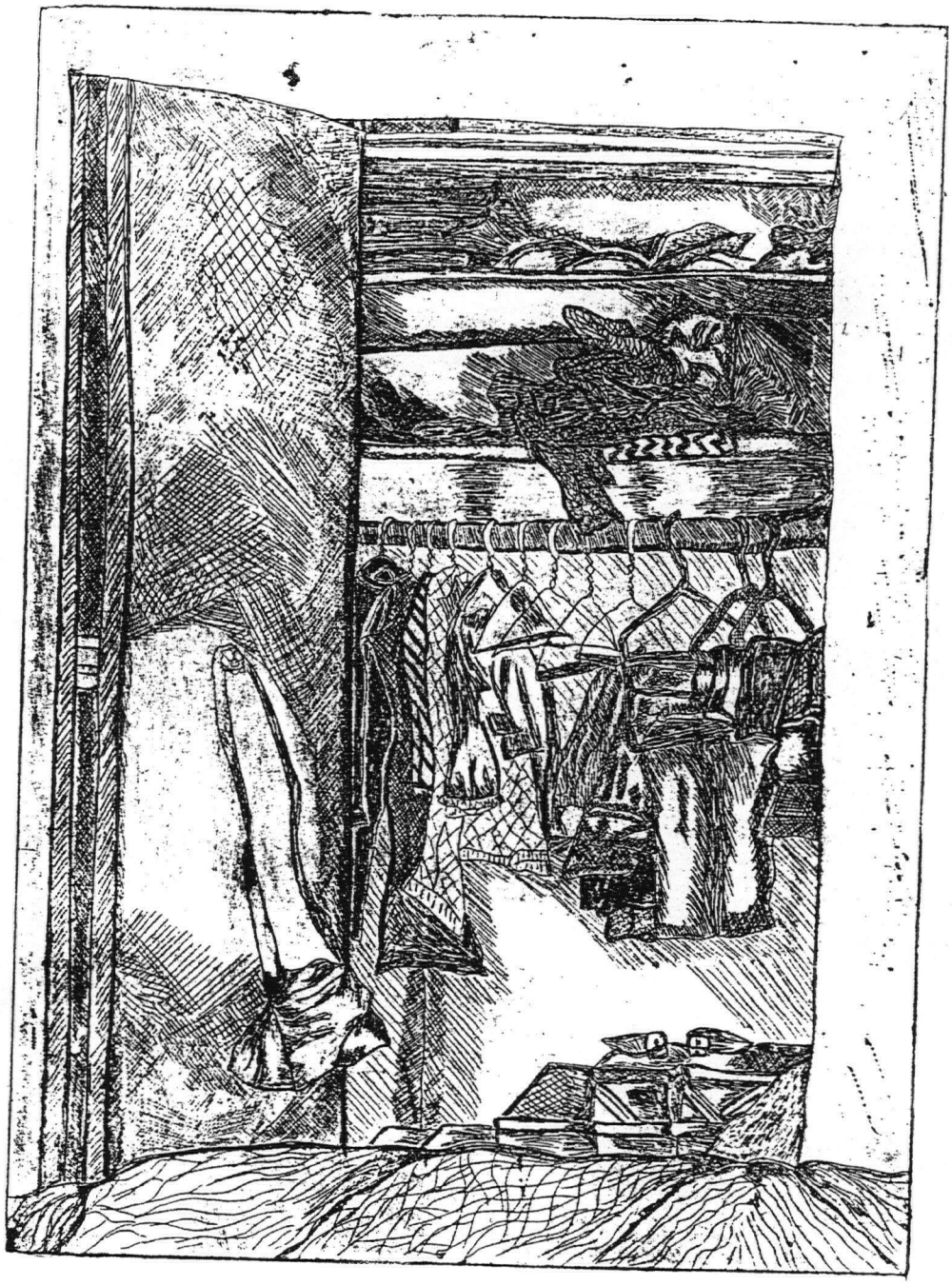


Figure 89. View into a closet (etching).

Figure 90. Views of a room.

It is not a painful step, after some drawing success has been obtained, to move to Betty Edwards' interior drawing methods - primarily the idea of 'sighting', in which students are shown how to use their pencil held parallel or perpendicular to the floor to help them determine interior angles. Many students who freeze like little animals in the headlights of a car at the prospect of drawing something so complicated as an interior, are ready to try if they have been led gradually to this point.

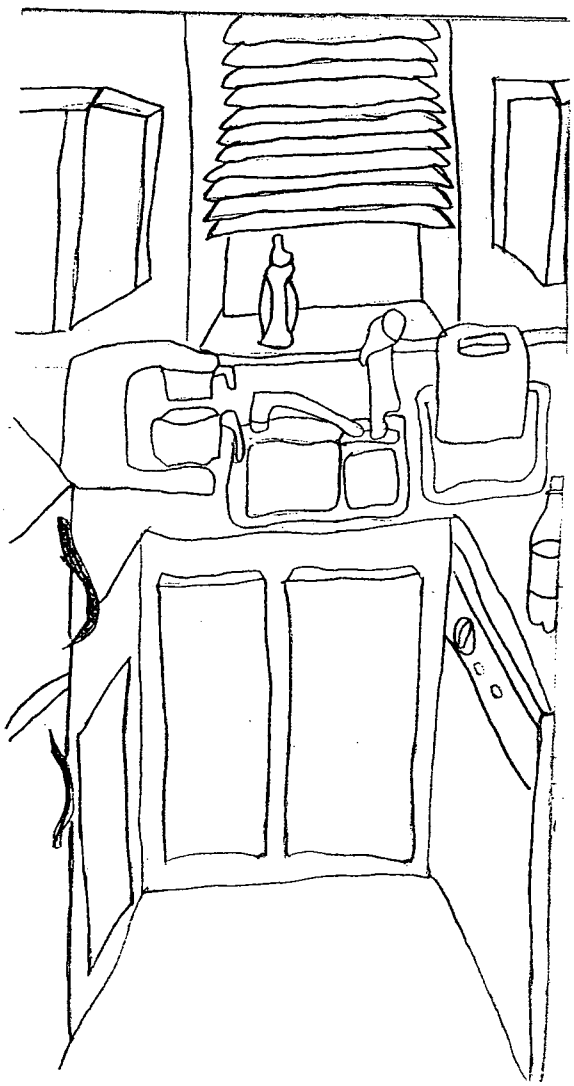


Figure 91. View of a kitchen.

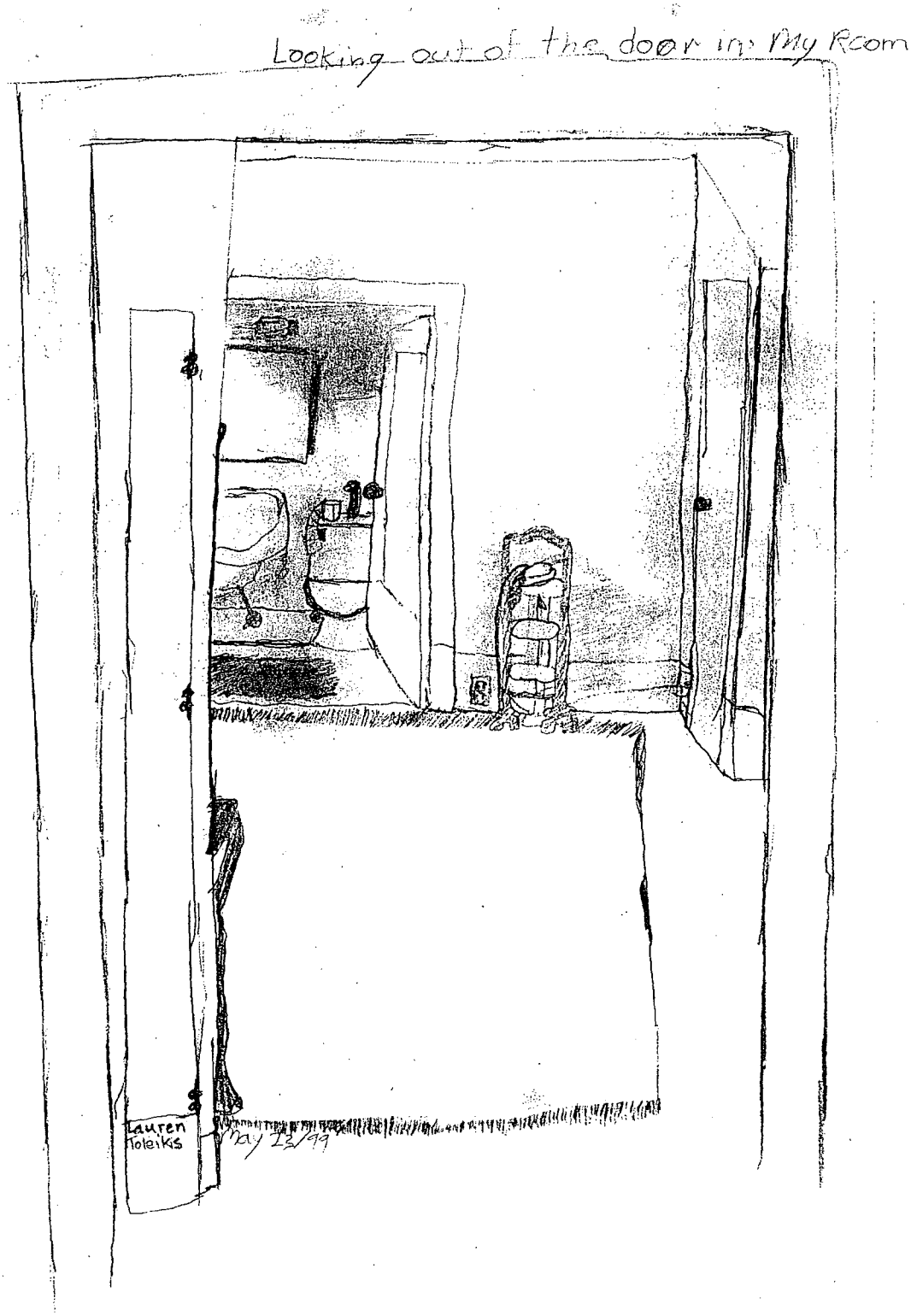
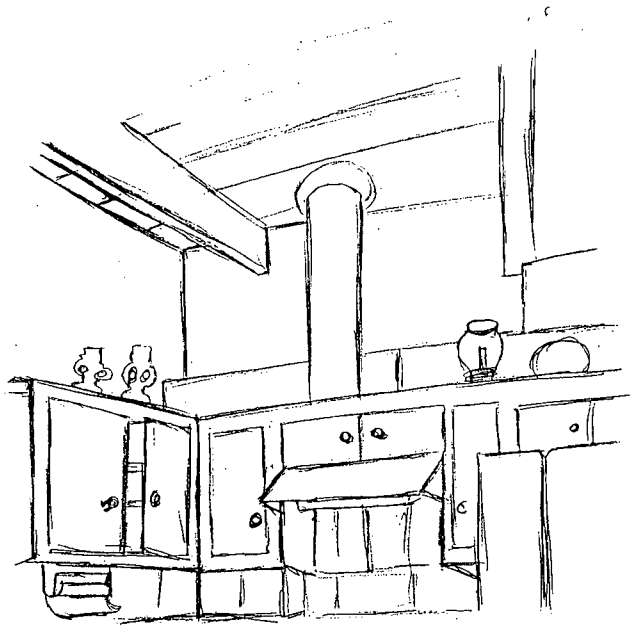


Figure 92. Through a doorway at home.



Practice #2

Figure 93. Interior drawings

5. sanctuary – within and without

> People give pain, are callous and insensitive, empty and cruel…but place heals the hurt, soothes the outrage, fills the terrible vacuum that these human beings make.
>
> Eudora Welty (quoted in endnotes, "A Conversation with Sue Monk Kidd" p.11 The Secret Life of Bees

learning experience links

3 R's: Respond to a need, Social Responsibility – secure place as an important aspect of our spiritual lives.

Educative value: Transmit simple understanding of architectural conventions, simple techniques of drawing and 3-D modelling. Begin to conceptualise/verbalise as part of the design process, develop visioning, spatial capability; Develop rational and reflective capabilities.

Connection to Architectural/Art themes: a gentle introduction to the iterative design process - analysis, synthesis, evaluation; phenomenological aspects - envisioning scenarios, details. Can introduce/tie in sustainability lens - explore ways to incorporate healthy housing principles, sustainable energy, etc.

After the events of September 11, 2000, I searched my mind for a project that could help some very unsettled kids find their way back to a feeling of peace and security. I was not surprised by how unsettling this nightmarish piece of

performance art was for students, and we talked a lot about it in Visual Arts classes as well as in English class. I later devised a project to consider how the site thus emptied in New York City could be redeveloped, (see Primer # 12), but at first I just wanted to think of a gentle, relaxing, centring sort of project that would give us a chance to regain equilibrium.

I decided to introduce the idea of mandalas. In many cultures, people have made art of one form or another to help focus their energies and to enable a meditative, peaceful state. The wonderful book Mandala, by Jose Arguelles, is full of inspiring examples, ranging from simple to very complex, and we went to work creating personal mandalas, in any form, using any medium, and at any scale. The results were surprisingly beautiful.

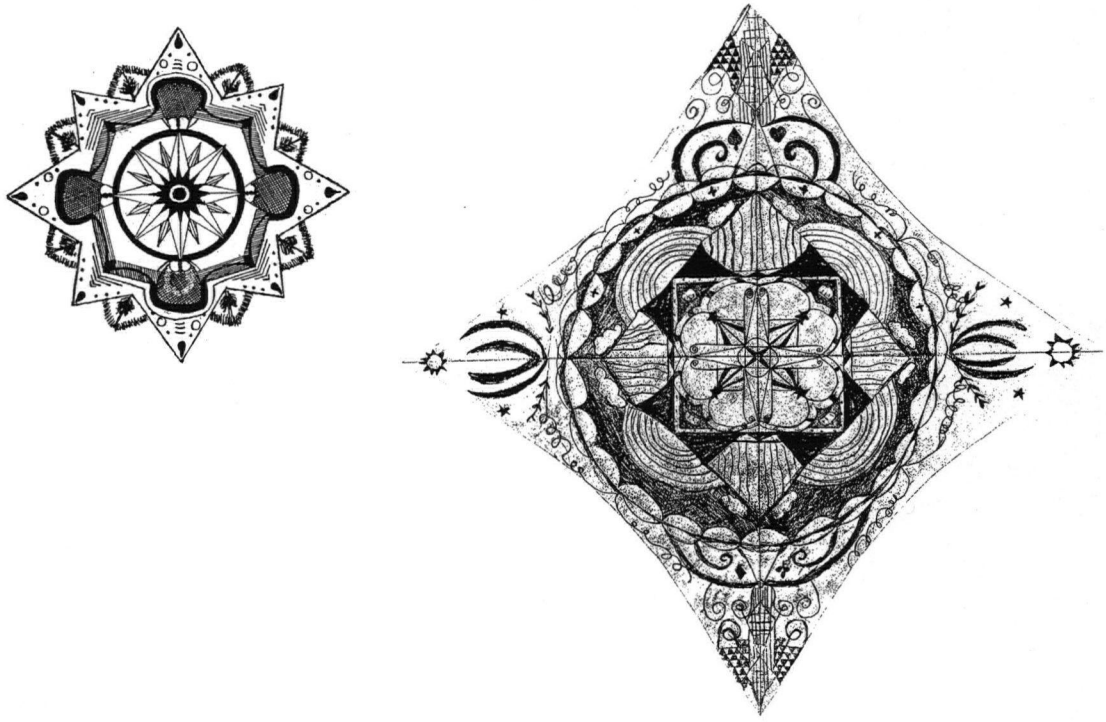
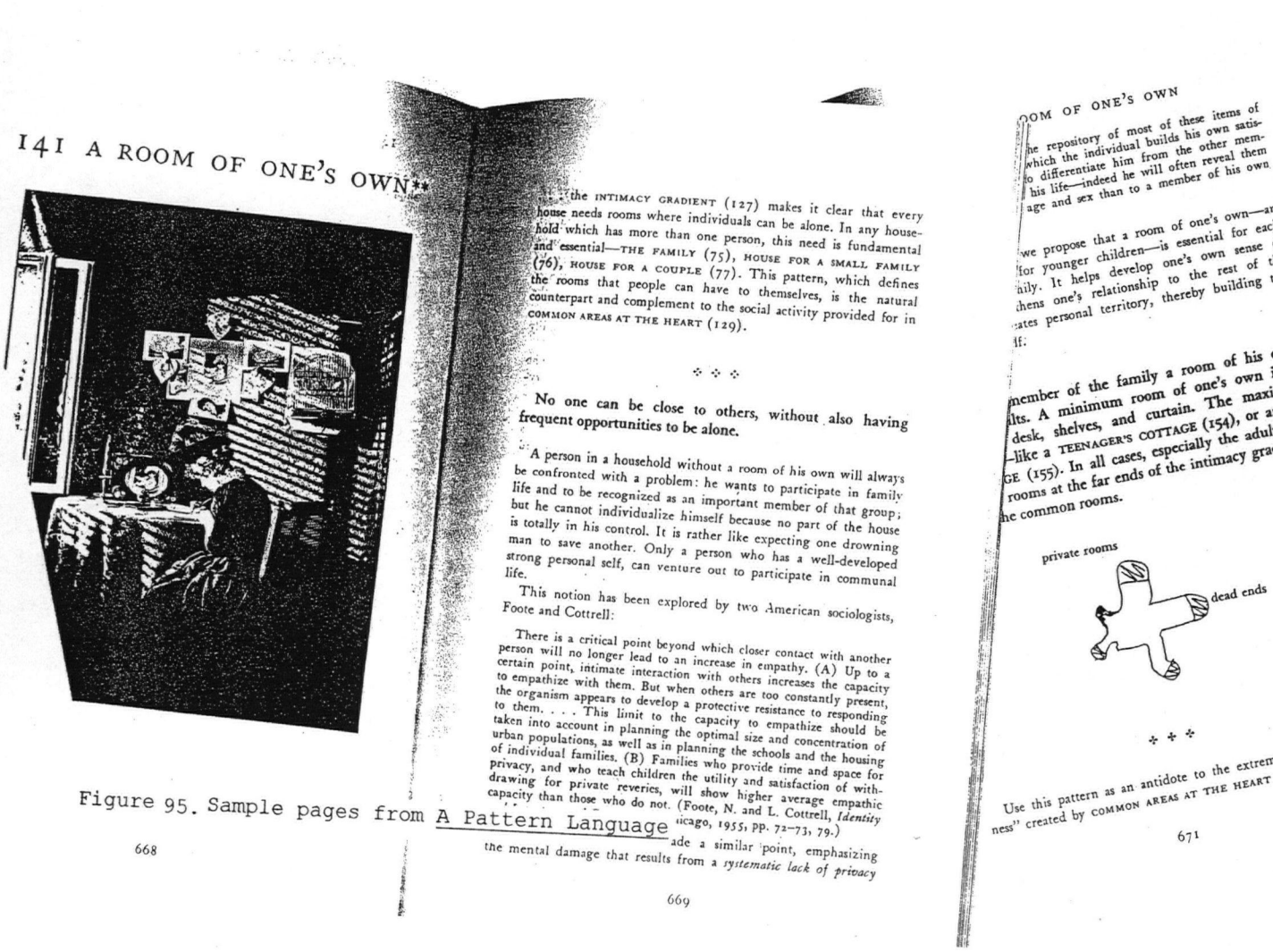


Figure 94. Two mandalas (25% of original size).

After making mandalas, I thought the concept of sanctuary might be appropriate inasmuch as students really did seem to take a liking to the notion that making art could help in stressful times.

The idea of a personal sanctuary or retreat is very appealing to most young people. I have tried to develop the notion of designing personal space every year in some form or another, but the idea of sanctuary seemed especially meaningful in the post 911 time.

In his wonderful omnibus, A Pattern Language, Christopher Alexander and his colleagues have several sections or 'patterns' that are relevant, including: #141 A Room of One's Own, and #154 Teenager's Cottage. These give a richly philosophical foundation for the idea of enabling young people, ready for some independence, the opportunity to have a private retreat. Many North American young people have a bedroom, over which they may or may not have design control. It is germane and intriguing to encourage young people to what they might do given space and some resources to develop their own personal sanctuary.



141 A ROOM OF ONE'S OWN**

the INTIMACY GRADIENT (127) makes it clear that every house needs rooms where individuals can be alone. In any household which has more than one person, this need is fundamental and essential—THE FAMILY (75), HOUSE FOR A SMALL FAMILY (76), HOUSE FOR A COUPLE (77). This pattern, which defines the rooms that people can have to themselves, is the natural counterpart and complement to the social activity provided for in COMMON AREAS AT THE HEART (129).

* * *

No one can be close to others, without also having frequent opportunities to be alone.

A person in a household without a room of his own will always be confronted with a problem: he wants to participate in family life and to be recognized as an important member of that group; but he cannot individualize himself because no part of the house is totally in his control. It is rather like expecting one drowning man to save another. Only a person who has a well-developed strong personal self, can venture out to participate in communal life.

This notion has been explored by two American sociologists, Foote and Cottrell:

There is a critical point beyond which closer contact with another person will no longer lead to an increase in empathy. (A) Up to a certain point, intimate interaction with others increases the capacity to empathize with them. But when others are too constantly present, the organism appears to develop a protective resistance to responding to them. . . . This limit to the capacity to empathize should be taken into account in planning the optimal size and concentration of urban populations, as well as in planning the schools and the housing of individual families. (B) Families who provide time and space for privacy, and who teach children the utility and satisfaction of withdrawing for private reveries, will show higher average empathic capacity than those who do not. (Foote, N. and L. Cottrell, *Identity* icago, 1955, pp. 72–73, 79.)

ade a similar point, emphasizing the mental damage that results from a *systematic lack of privacy*

OM OF ONE'S OWN

he repository of most of these items of which the individual builds his own satis- o differentiate him from the other mem- his life—indeed he will often reveal them age and sex than to a member of his own

we propose that a room of one's own—an for younger children—is essential for each hily. It helps develop one's own sense of hens one's relationship to the rest of the ates personal territory, thereby building ties lf:

member of the family a room of his own, lts. A minimum room of one's own is an desk, shelves, and curtain. The maximum -like a TEENAGER'S COTTAGE (154), or an OLD GE (155). In all cases, especially the adult ones, rooms at the far ends of the intimacy gradient— he common rooms.

private rooms

dead ends

* * *

Use this pattern as an antidote to the extremes of "together- ness" created by COMMON AREAS AT THE HEART (129). Even for

Figure 95. Sample pages from A Pattern Language

Sanctuary is a fascinating concept for teenagers, it seems. Many examples exist of lovely and imaginative measures which people have devised to respond to their needs for peace and privacy.

GEORGE BERNARD SHAW'S WRITING HUT

8′ × 8′
64 square feet

George Bernard Shaw, perhaps the most significant British playwright since the seventeenth century, wrote his most creative work, including his plays *Pygmalion*, *Heartbreak House*, *Back to Methuselah*, and *Saint Joan*, in a little writing hut at the bottom of his garden at his home in England.

Shaw designed the hut himself as a tiny office built on a central steel-pole frame so that it could be manually rotated to follow the arc of the sun. He worked alone and loved his privacy; he even adjusted his telephone for outgoing calls only.

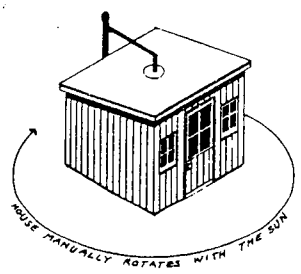


Figure 96. George Bernard Shaw's sanctuary (Tiny Houses).

I think that the opportunity to dream creatively is one of the fundamental joys of this project. Students were asked to consider possible 'programs' that would suit their circumstances and personal preferences. Simply put: who would be allowed to come in to the personal sanctuary, and what would be the activities that would take place there. Results of these deliberations tend to range from simple, singular design intentions, to complex, social, action-packed design briefs.

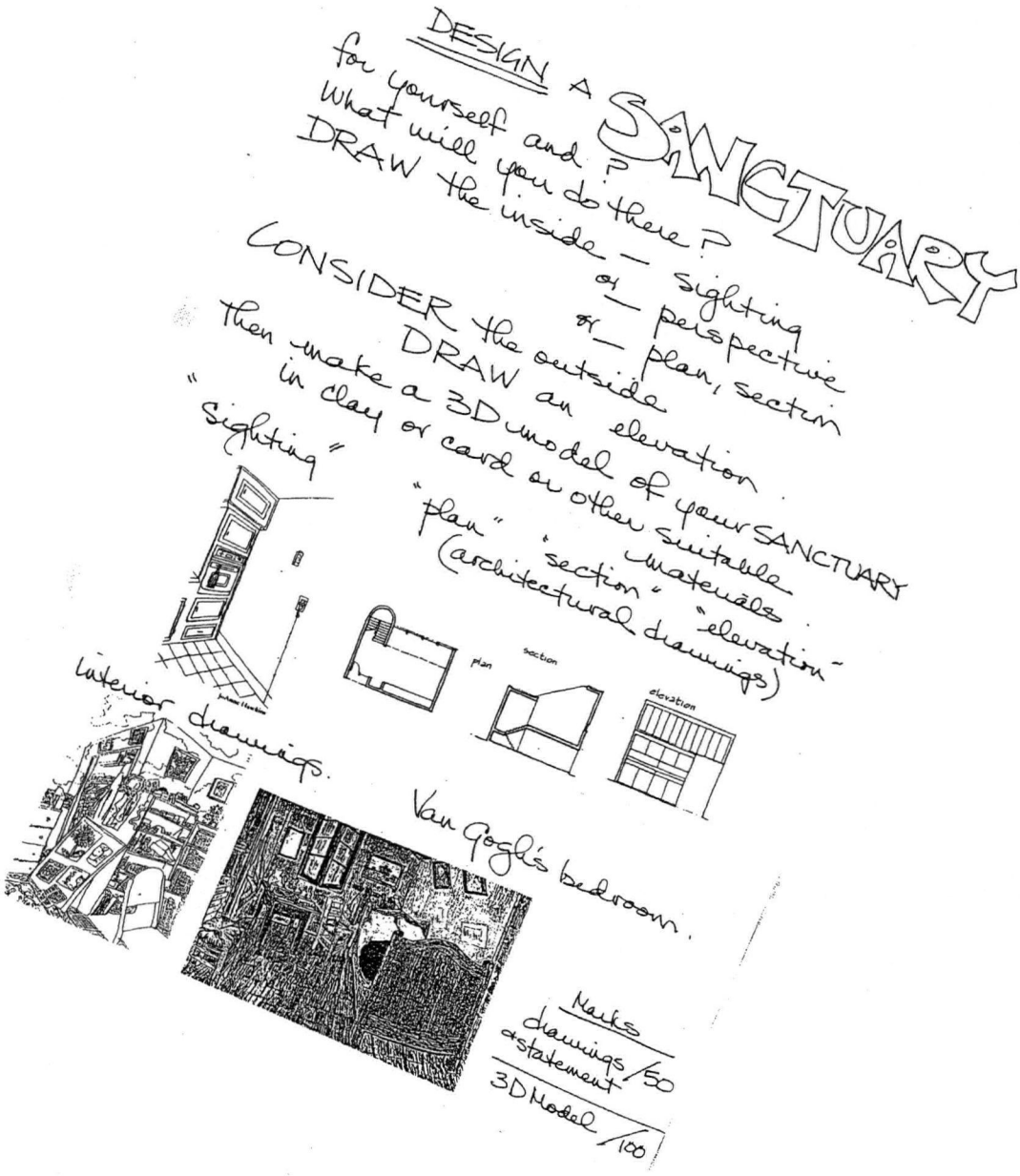


Figure 97. Student worksheet prepared for this project.

Students can brainstorm in their sketchbooks, and this preliminary dreaming phase can be a very enjoyable part of the project. Some students might want to simply convert their bedroom to a more elaborate or livelier or more pleasant place, others might want to design a fanciful free-standing building the likes of which has never been seen before. The task as I see it is to give students the design tools to enable the development and manifestation of the idea at least in drawing and model form.

Once students have accumulated some confidence in drawing buildings from observation, however simple the results may be, they usually understand that if approached systematically, drawing a building is actually not such a difficult operation as they may have once thought. (I have a secret theory that most buildings are actually quite easy to draw. If they weren't, they would likely never have been designed or built. This of course excludes some of the very exciting work done by some of the brilliant architects, some computer generated/designed structures, and some buildings made without the aid of drawings.) At any rate, buoyed by some success, students are perhaps less likely to be frightened by the prospect of drawing a building that doesn't exist - except in their own imaginations.

But first, the idea needs to be developed. Back to dreaming. I have never been as clear and articulate in my classroom about the steps in the design process as Bardach is in his eightfold path to design (discussed in Chapter 3), and I think I will try to be more articulate about the methodology of design in the future. I do believe that if enough envisioning takes place, the program, including cast of characters and range of activities becomes clear, and a good responsive design almost naturally flows out of this deliberation.

Bardach suggests the first step might be stated: 'define the problem'. Speculating about what might be or as Bardach puts it 'assembling some evidence' or 'thinking and hustling data' can engage students for hours if they are shown simple ways to express what they are thinking.

In order to plan effectively on paper, students need to know simple conventions for plan, section, elevation drawings and how to show walls, windows openings and to sketch massing.

Out come the green peppers to remind about these simple views, and a few lines sketched on the board or a chart are all that is really needed to get students moving towards a design. It is a very simple vocabulary that is required:

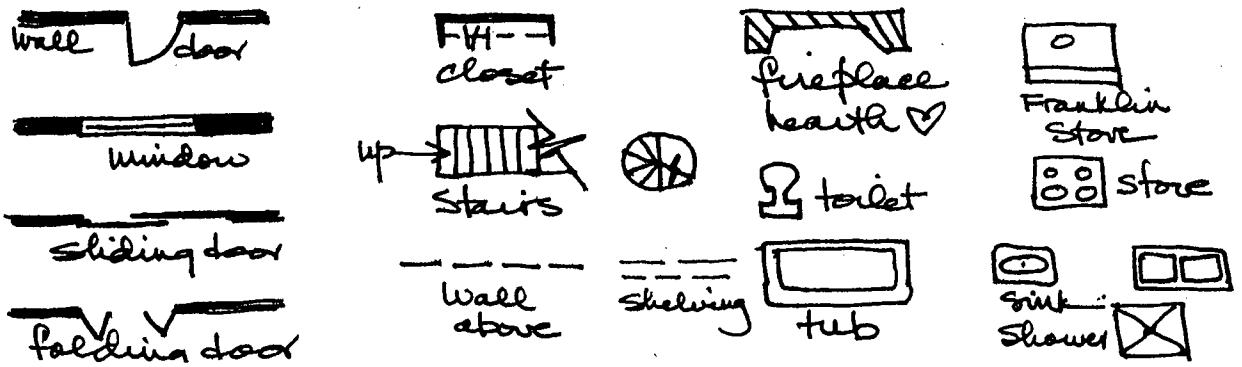


Figure 98. Simple conventions for drawing plans.

Students need to know these rudimentary drawing techniques so they can do what I might call fooling around with some ideas or what corresponds to Bardach's step 'construct the alternatives'. Ideas should be kept sketchy at this point; nothing done in this phase should be too precious. Otherwise too much energy gets invested in the product, and further exploration might be precluded.

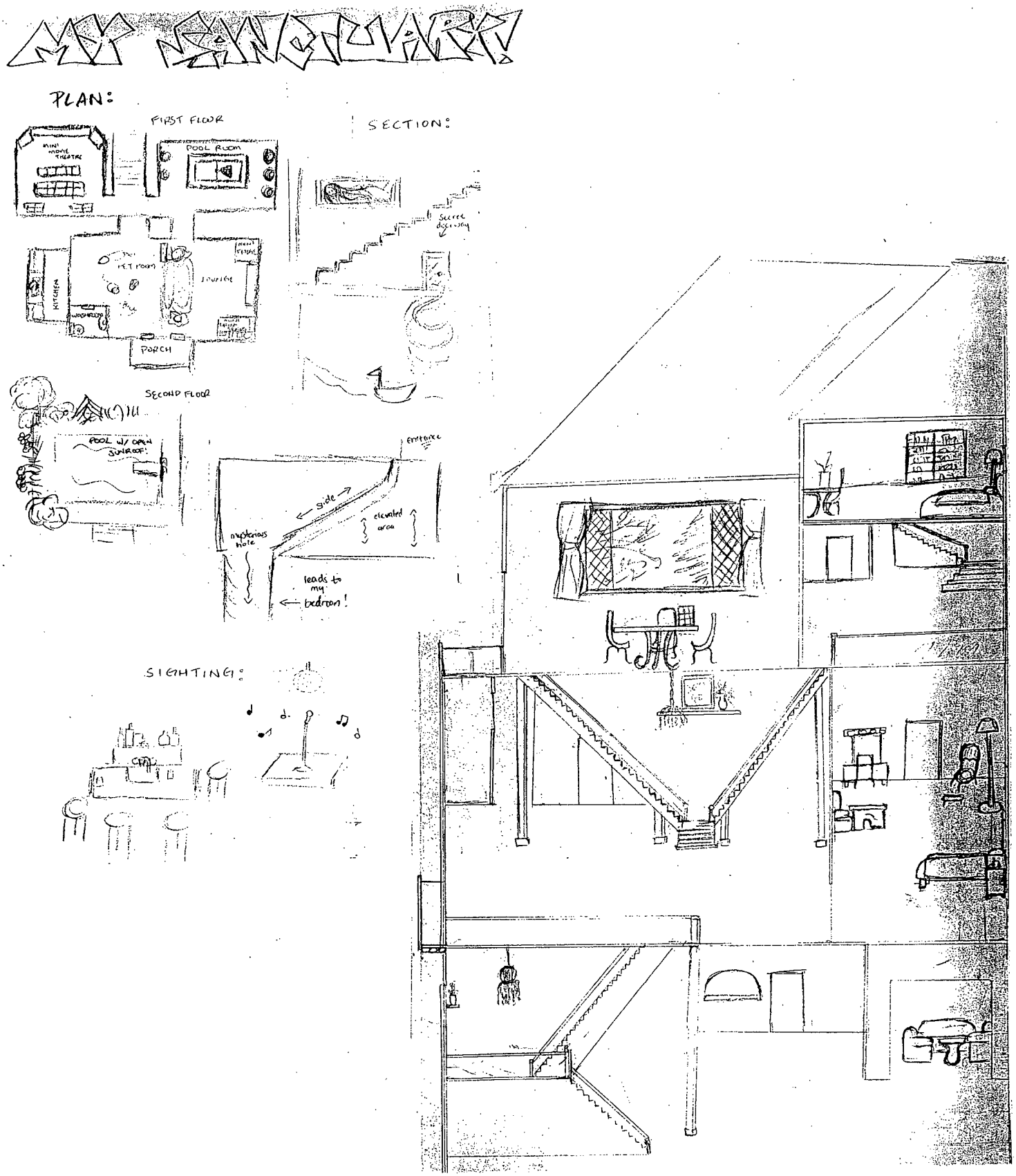


Figure 99. Sample preliminary sketches. Classes are usually multi-level. Results vary, but not necessarily consistently with level or age.

The generated ideas, wishes and dreams need to be analysed and evaluated in some way - what is most satisfactory, and which ideas are within the realm of possibility at least to be manifested in drawing and/or model form. This is the process that Bardach calls 'selecting the criteria'. In the reality of an actual building, many constraints are entertained at this stage. In art class, some of the 'real life' factors can be included or excluded at will: economics, materials, social realities, zoning bylaws, and the like.

We can decide if economics will matter in this project, and consider how different it might be if we take one decision about economic constraints rather than the other. We can assume that the planning department will accept our creations, or we could study the bylaws to see if our ideas will be welcomed or at least allowed. Or we can cheerfully ignore all these considerations if students are at a stage where learning to be free and playful with ideas is most appropriate.

Having generated some alternatives, we might push those ideas a little to see what might come of them. Again, Bardach calls this "projecting the outcomes'. This requires a level of patience that many students at high school level do not easily find, but if we can promote this sort of exploration, students will truly be engaging in the richness of the design process rather than rushing to the final solution too quickly. I try to encourage students to make working models, which are patched together roughly to test ideas - clearly different from the finished model in level of craftsmanship. All but a few students resist this idea and like to make their models as well crafted and beautiful as possible, right from the start.

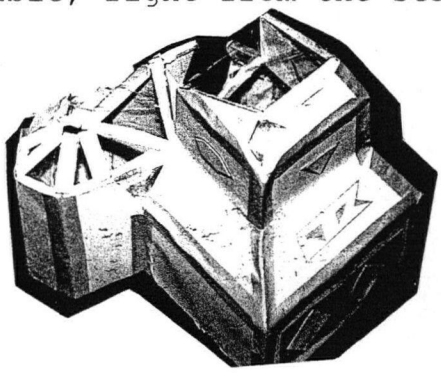


Figure 100. A working model of little investment in time and careful craft.

Once some exploration of possible alternatives has taken place, it comes time to decide upon a course of action and then clear drawings of the idea and a model to communicate the concept are prepared. This stage does not need to be too inflexibly tied to a decision - changes can still be made in the modelling up to the time of completion.

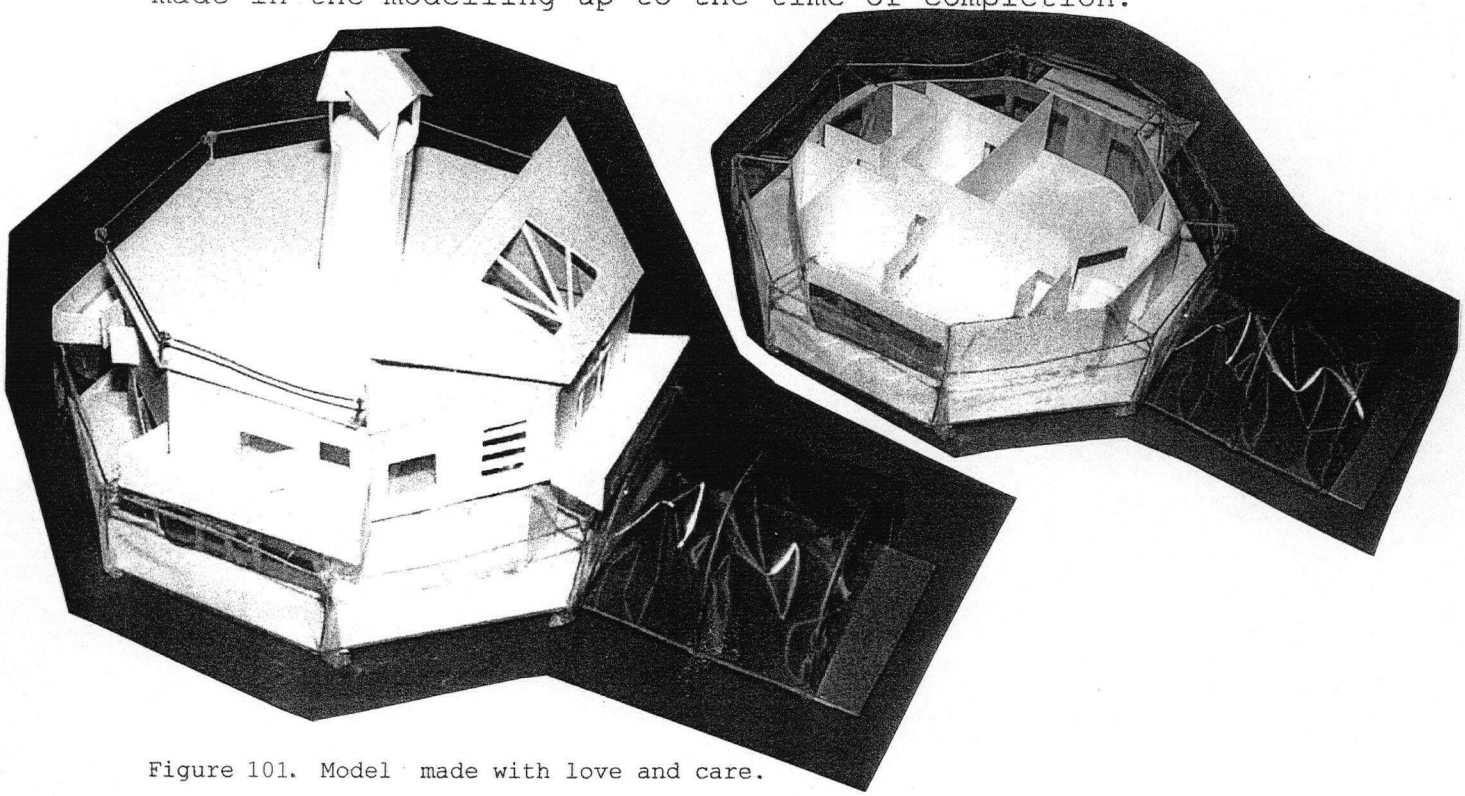


Figure 101. Model made with love and care.

I ask students to begin modelling by drawing a person to scale on card - then the house can be made to person scale. Interested students are encouraged to explore the use of the architectural scale, but some choose to forego this tool. Students often design on graph paper and set the scale appropriate to their needs. Some simply draw a scale person to help guide the drawing.

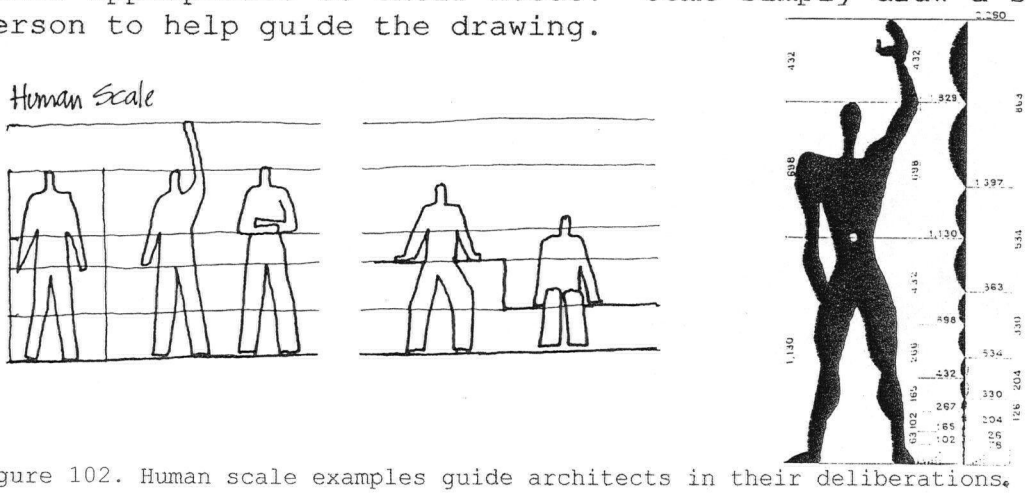


Figure 102. Human scale examples guide architects in their deliberations.

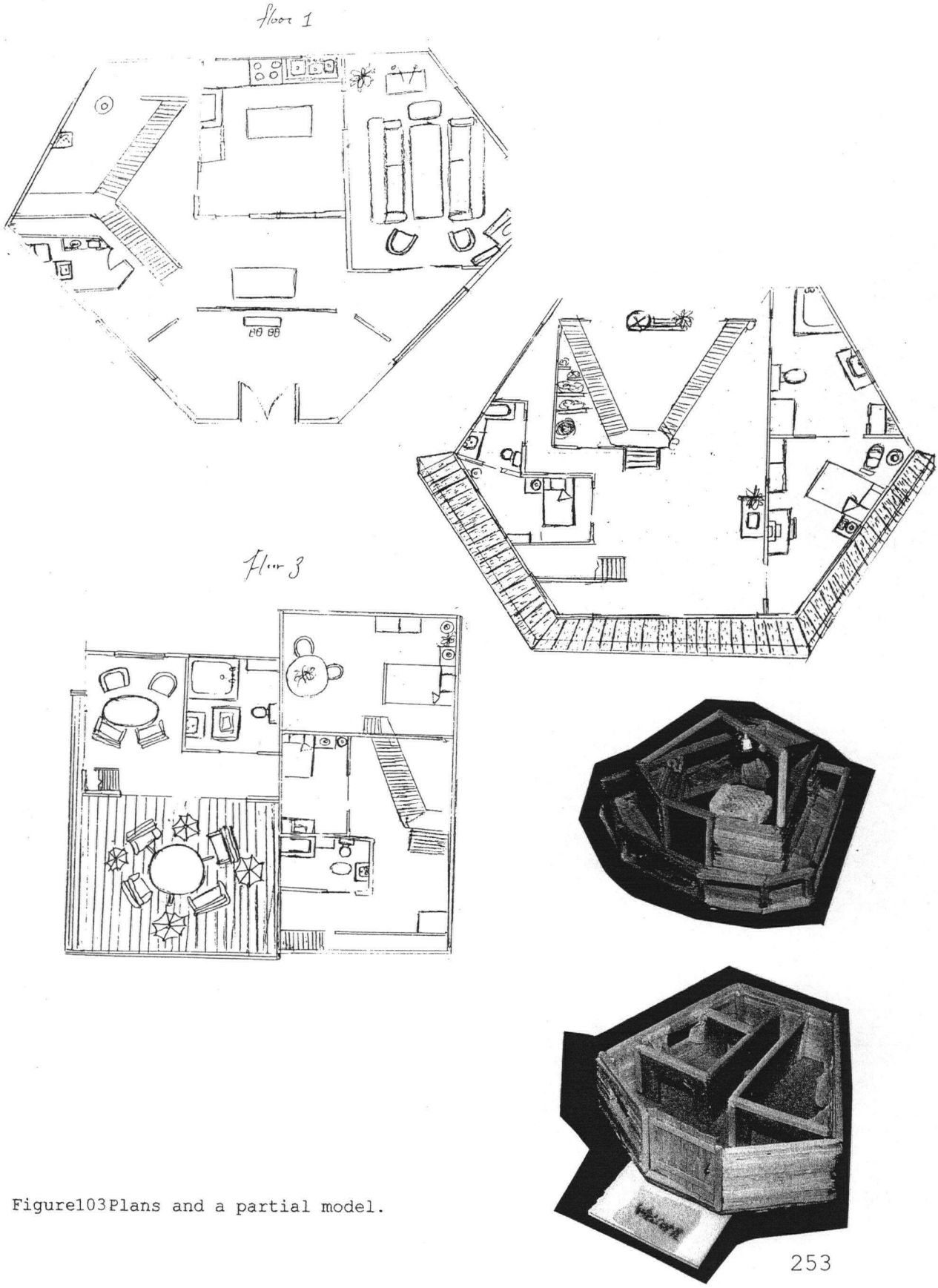


Figure103Plans and a partial model.

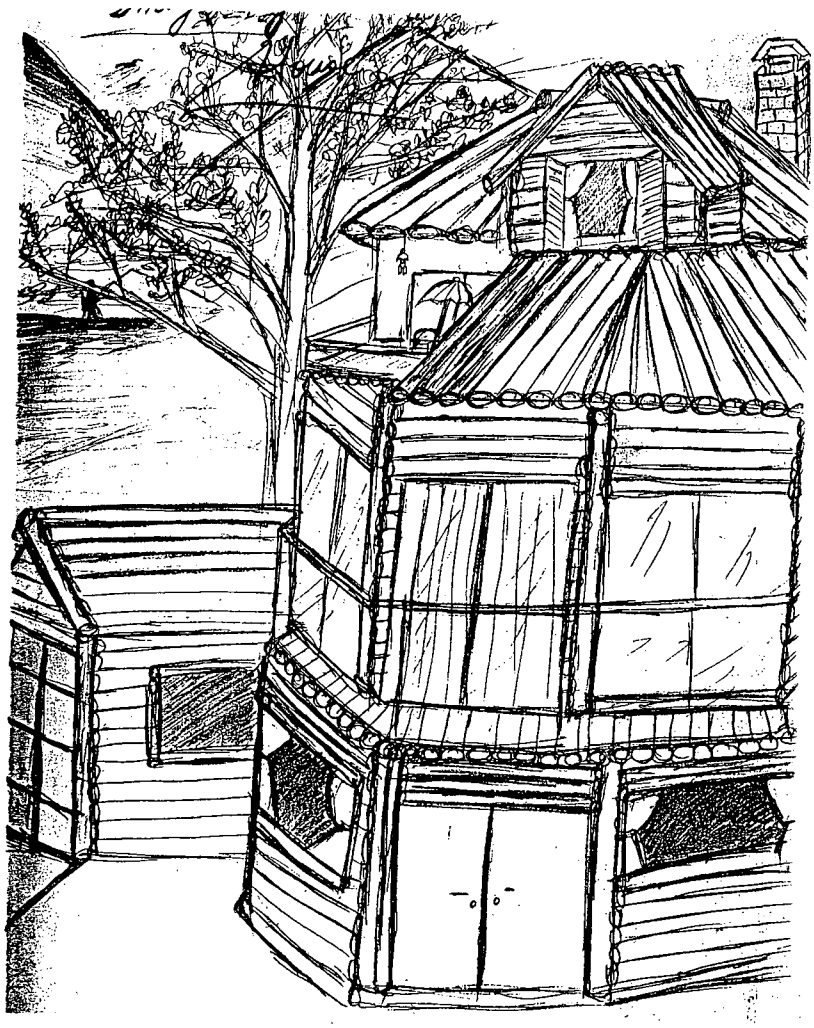


Figure 104. A rendering of a sanctuary.

I have found this to be a very satisfying project for students who are new to design. It can be from the heart and successful even for students who aren't ready to take too many chances in the artroom, and it can be a highly imaginative exercise for those students who are ready to take an imaginative flight.

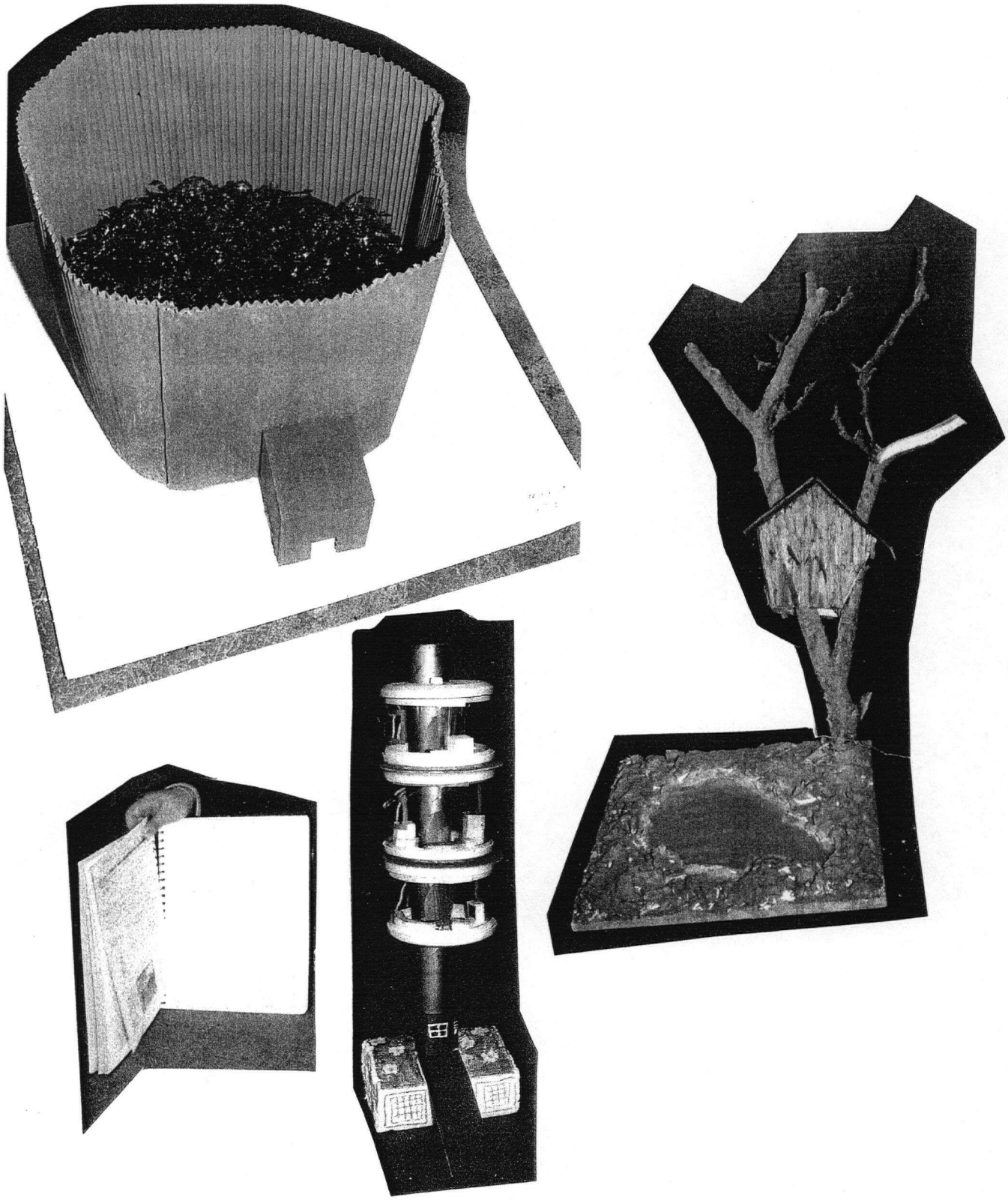


Figure 105. Examples of student sanctuary models. One student even nested her sanctuary below the water in a large pool.

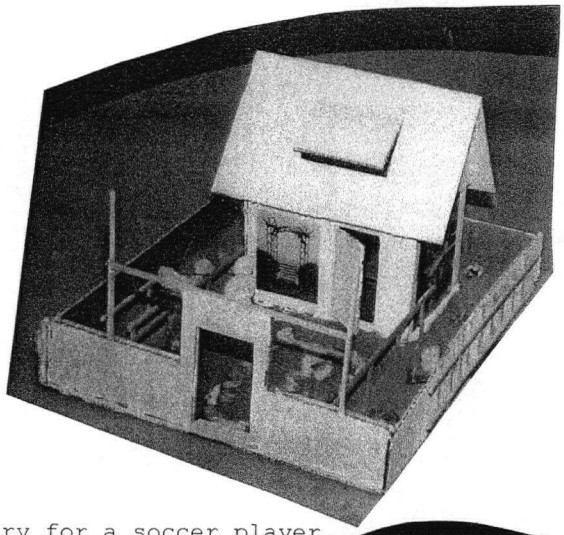


Figure 106. Sanctuary for a soccer player.

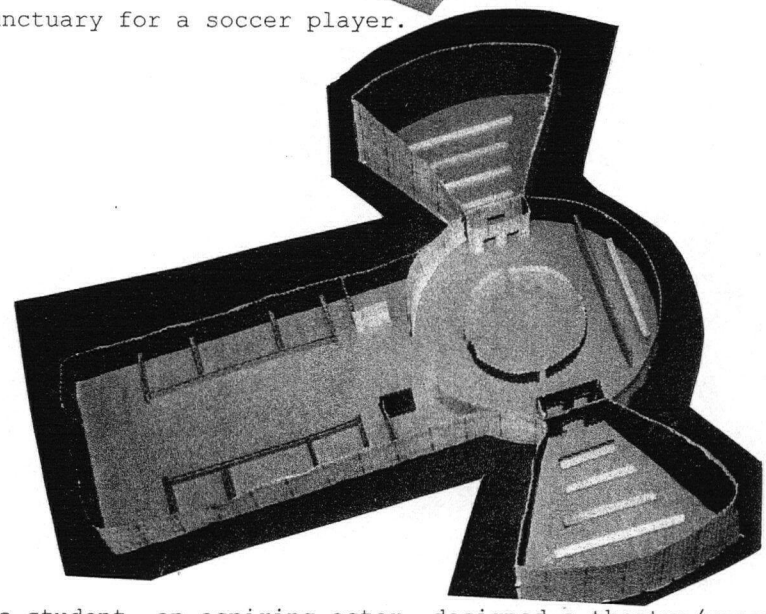


Figure 107. This student, an aspiring actor, designed a theatre/sanctuary for herself and her fellow actors.

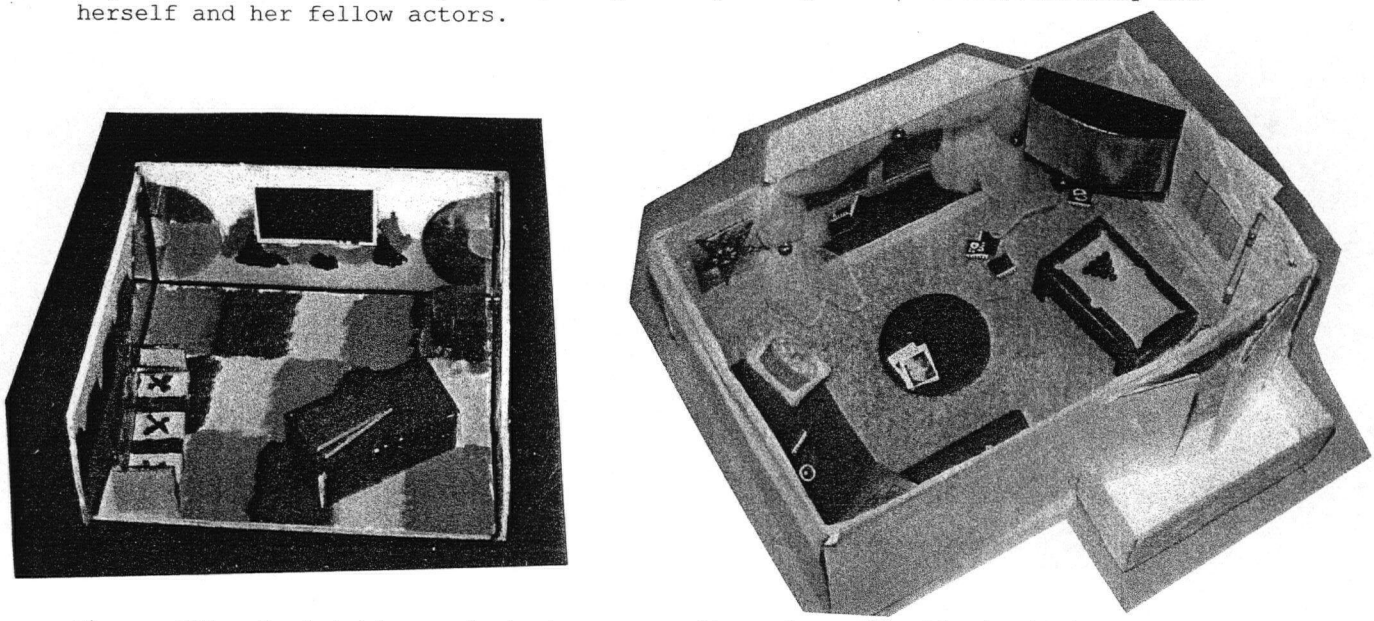


Figure 108. Pool tables and giant screens figured prominently in designs.

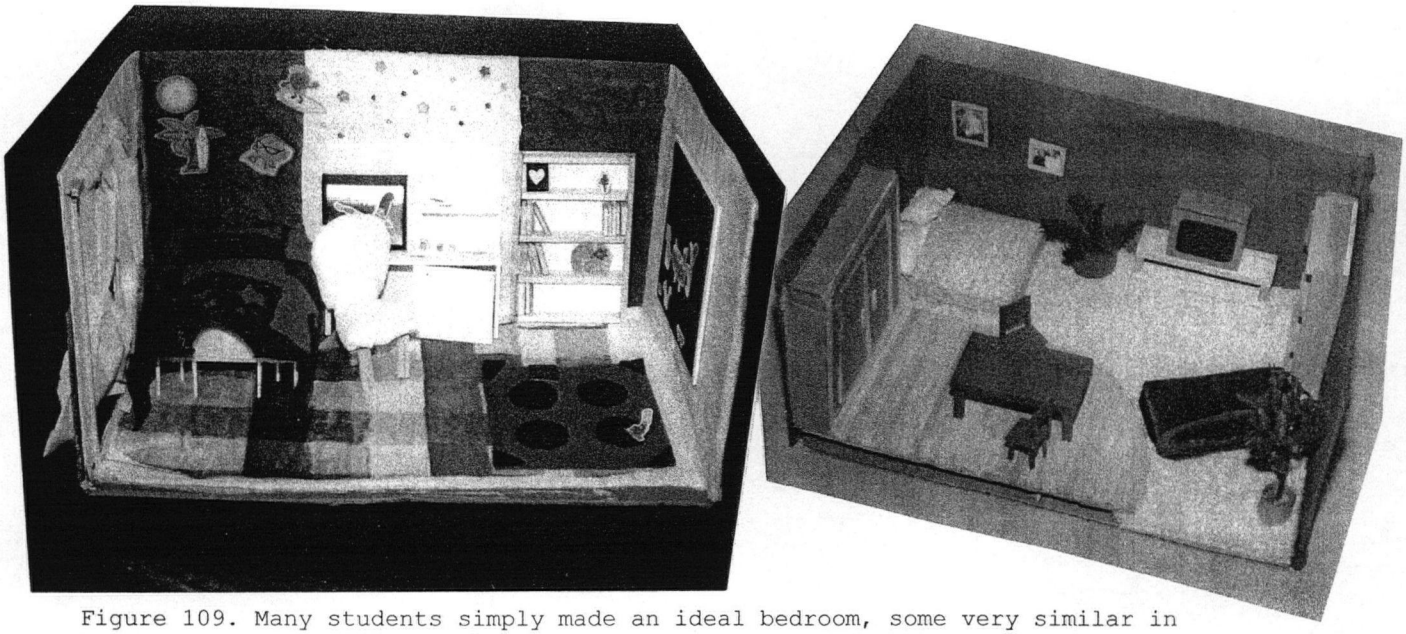


Figure 109. Many students simply made an ideal bedroom, some very similar in type to their own rooms at home.

On reflection I can see that this project is a good way to introduce the possibilities of pursuing alternatives and applying some rigour with respect to the analysis and evaluation of new ideas. In the next iterations, I will try to put more emphasis upon, and find more ways to express, the stages of the design process, particularly as articulated by Bardach, to give students a richer experience in the generation and consideration of possibilities.

Another way this whole lesson sequence (including the next topic - a family retreat) can be developed is by introducing and articulating as clearly as possible some of the concepts discussed in the phenomenology section of this document.

I could encourage students to understand their dreams more fully by appealing to their senses when they are dreaming their sanctuary: not just what goes on there?, who is allowed to come in?, (creating a place story) but what about the views, the colours, the textures, the style, the smells, the sounds, the feelings engendered, the moods evoked, the lists of adjectives we could make to describe it, the types of spaces - for example, cosy or open?, the comforts provided.

I could guide students to show in words and/or pictures what makes the place special? What makes it unique?, what

makes it decidedly yours? Upon reflection, I don't think I have ever done enough of this sort of dream-guiding when we have approached this project. I think it is helpful to lead students through some of these considerations.

Additionally, I might try, another time when this project is underway, to ask students to find a place that is alike in some quality - not the space they would create, but one that has some similarity. I might ask them to make notes about their experience in that space - much like my phenomenological trip to the pool, recounted in Chapter 3.

I might sometime ask students to find a poem or a story that could fit the place, some music that would go well with their vision, some art pieces that could be displayed there, some clothing they might wear to spend time there.

Students were able to look at materials catalogues and paint colours, and they could investigate these resources carefully, even to the point of preparing materials and colour boards for their creations. Alternately, most students enjoyed showing colours, sample materials, even specially designed furniture as part of the modelling exercise.

Also, although I did ask students to have some sense of the site or context for their design, much more could be done to bring the relationship of the designed space to the existing space to life. I once asked a prospective client to send me a small box full of bits of vegetation collected from her site, and a verbal/visual description of the views at various times of the day from her site. This was a very enjoyable exercise for us both. I could ask students at the beginning of the year to 'adopt a site' - to sketch it maybe once a week in their sketchbook, perhaps guiding them to focus upon a range of considerations: vegetation and changes through the seasons, views out and in, neighbours, passers-thro', even guesses about the history of the site and potential site development.

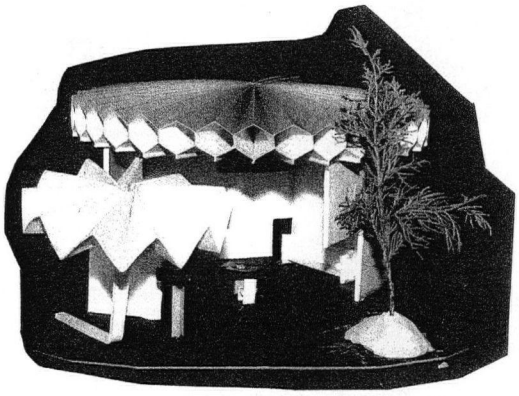


Figure 110. Some students considered site - the beach.

I asked students to write a design brief or program (who and what happens there) and to draw some sketches before commencing with model building. I would show students some of the inspiring, free sketches made by the masters in the design phase. (See Chapter 3 - the Phenomenology section for some examples.) Next time I would show students how to make axonometric drawings - which are surprisingly easy to prepare.

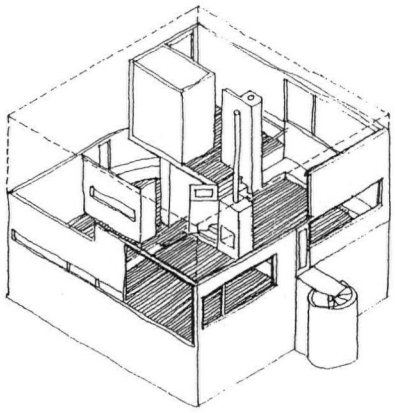


Figure 111. axonometric drawing - simply twist the plan to an angle, keep all verticals just that: vertical.

Next time as well, I would encourage modelling as exploration more, rather than letting the emphasis fall on the craft of modelling for this exercise. With a project of this scope, I would be inclined to save some of the

large modelling techniques suggested in the Phenomenology section for the more sophisticated project to follow - the family retreat.

This idea of sanctuary can take many forms, and can be a very personal or a communal project. It seems to me that the envisioning of sanctuary can be a wonderful way to lead students to the understanding that place can be, as Eudora Welty declared, something that heals, soothes, and fills the vacuum that humans, in the course of living their lives, can experience all too often. We can make places that make us feel better.

6. family retreat

A more complex project also on the sanctuary theme - a family retreat - might require a more sophisticated design process than the previous personal sanctuary project. Some of the more detailed phenomenological approaches to design might be here explored as well, as suggested by Joel Shack.

learning experience links

3 R's: Receive messages from precedents (awareness of the environment) and Respond to perceived human need

Educative value: More complex but similar goals to those in the previous lesson. Practice using the analytical tools, exploration of form - right and left brain integration.

Connection to Architectural/Art themes: Again, similar goals to lesson 5.with some emphasis on a phenomenological approach to the design question.

For this project, I have definitely emphasised the relationship of the designed building with the site or location. Perhaps sensible economic considerations can be thrown to the winds - perhaps not - it needs to be clear whether money is a constraint or not - but clearly site is likely to be an integral part of this project.

I have started with some guided envisioning of a place where one's family could go to retreat from the routines of daily life. Students might sketch some lovely settings, real or imagined, where they would envision their family could rest and relax together. Joel Shack suggests what he calls 'deep immersion' in the site in all seasons, which again, could be real or imagined, but would expand the understanding of the circumstances if all seasons were to be considered.

I have noticed that forests and water figure prominently in many schemes done by students in the past, but some students are reluctant to move too far from the arterials that could facilitate a quick transport back to their friends and their daily lives. Be that as it may, students could be guided to consider the group of people who will use the retreat, and the neighbours, and the neighbourhood, in as much detail as seems reasonable. Moreover, if at all possible, precedent examples can possibly be found, in reality and in the media, which might stimulate and inspire, but which should not be allowed to dominate the design process.

Inasmuch as families can be very complex entities, I introduce the idea of 'zoning' a building to accommodate the range of privacy-communal requirements, which even members of very small families clearly understand. The making of 'bubble diagrams', a tool used in the planning stages by designers to enable flexible testing of alternatives, is readily understood and easy for students to use.

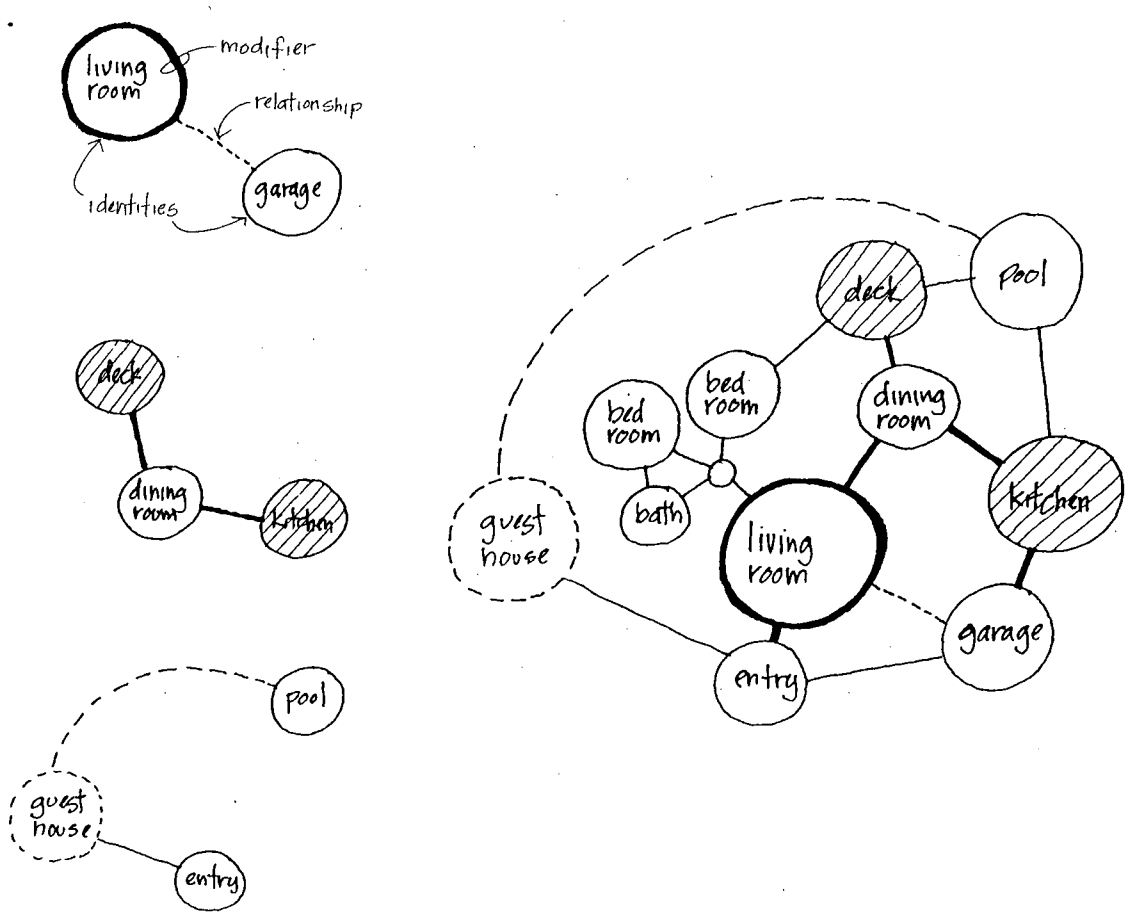


Figure 112. Examples of bubble diagrams.

I could show an example of a bubble diagram, which simply records, using nothing more fancy than circles drawn on a page, the relative size of spaces required, and some information regarding the relationship of spaces to one another. Codes can be developed: spaces that are very closely related can be joined with a thick line, thinner lines can join spaces of less important connection, jaggedy strong lines can separate spaces that should be kept separate. I use the word 'spaces' at this stage, rather than 'rooms', to help keep thinking open and flexible about what might comprise this retreat. 'Rooms' are in many minds quite defined spaces, with particular characteristics that may be difficult to question. A 'space' might take forms not yet defined and/or assumed. We could start with lists of inhabitants, their characteristics, and spaces required, or we could move right on with bubble diagrams once the initial envisioning of site and building users/inhabitants is done.

I tried a variation on the bubble diagram last time I did this project which was very successful. I made available a lot of light cardboard strips, lots of tape and some light cardboard sheets and construction paper. Students were asked to make a rough symbolic site on the card sheets, and then to work with the strips of card to form three-dimensional bubble diagrams on the mock-up of the site.

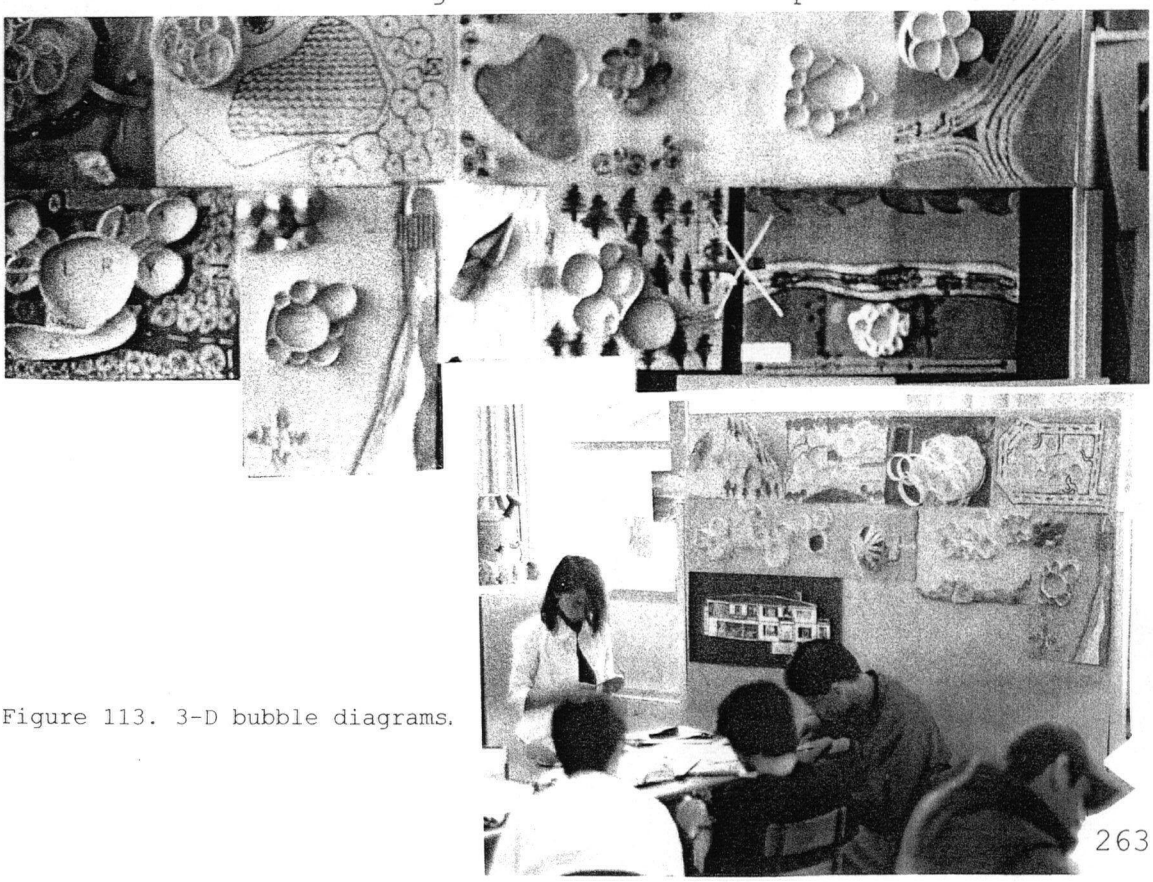


Figure 113. 3-D bubble diagrams.

From these preliminary studies with simple cardboard strips, my students moved to simple sketches and then simple modelling techniques and final presentation models.

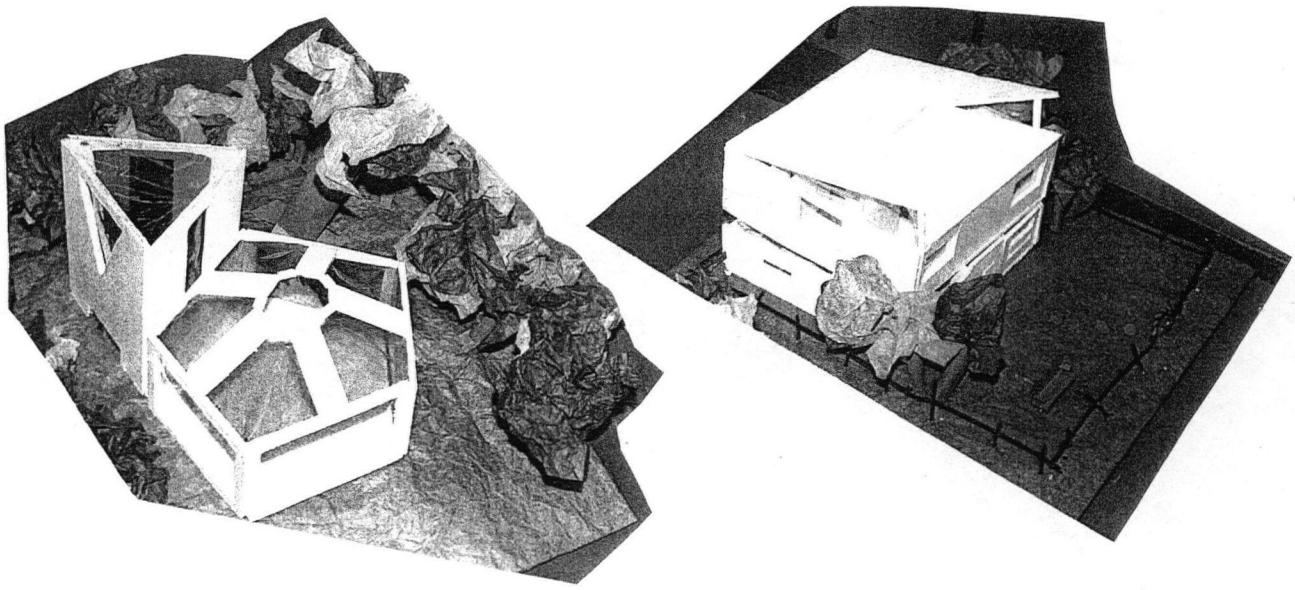


Figure 114. Simple presentation models.

On reflection, and from discussions with others, especially Joel Shack, I see that this could become a much richer exercise. Joel suggests that we might "make of every building a 'society of rooms'- (rooms, not just flexible space)" which this form of bubble diagramming seems to support. This is fine with me as long as students do not adhere too closely to their ideas about specific rooms: bedroom, kitchen etc. They need to be encouraged to invent new ways for a bedroom or a kitchen to be configured. They need to question what they know about these rooms. Joel further suggests that we think on what the building as a whole and each major part 'wants to be'- ideas which can sometimes be generated by a good bubble diagram and imaginative dreaming/sketching combined.

Developing a place story or possible scenarios that might unfold in the project is a delightful way for students to sharpen their vision of what might be in their designed place. But this can be deepened by further speculation regarding what might have happened previously on that site, and what might happen there as a family retreat comes to life. This kind of imagining brings to the project a vivacity and depth that a simple story or list (or program of building elements and space sizes) could not, on its own, provide.

Students can be encouraged to experiment with various ways of responding to these imagined place stories. They can be guided to try some alternative designs with respect to built form and arrangement that could accommodate their dreams. Annotated drawings wherein simple words and phrases help to thicken out ideas regarding how life might enfold in the retreat can be a lovely element of the design process. And students can evaluate their ideas by doing as Joel also suggests "read stories into their drawings to test authenticity" - i.e. imagine if their life stories really could be accommodated in their creation.

Students as well can likely be persuaded to try to do some simple drawings to illustrate key parts of their design - to show what a walkthrough of their creation might reveal. Perhaps this could be connected to the plan view. I have noted in the past that some students like to show with arrows on plan in which direction they are looking and to draw what they might see from that vantage point. Those that are drawn to this careful investigative drawing might benefit from encouragement to crystallise their visions in this way.

This project can be taken in many directions, and students can decide how far they individually wish to take the ideas. Some students choose to get very elaborate and grand, others choose the simple life.

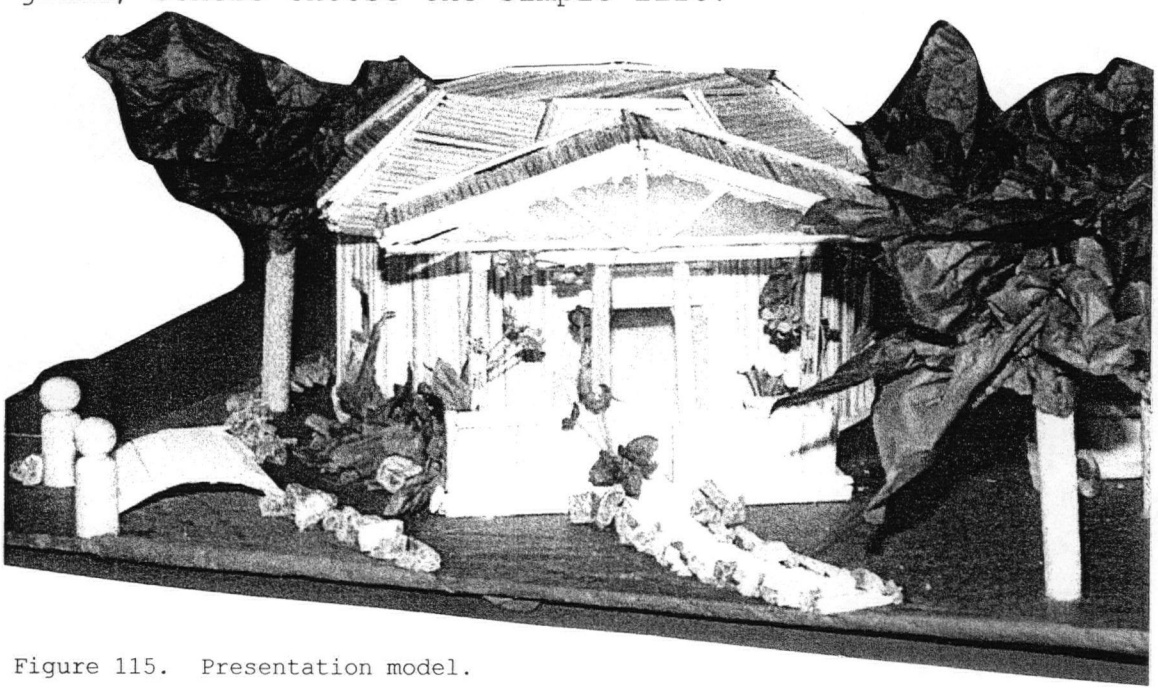


Figure 115. Presentation model.

The project also could be used to integrate some of the ideas of sustainable development: healthy choices with respect to materials and technology, the 'small is beautiful' approach can well be applied to rest and relaxation, and certainly such elements as alternate heating and cooling and waste management could be explored. In my next go'round, I am newly motivated to guide students to investigate how their family retreat could be based upon some of these simple principles of sustainability.

One student chose to design a tiny retreat that incorporated solar panels on the roof. She did some research and proudly described the green aspect of her design at the group presentation. With this project, the integration of technology occurred easily and naturally. I will do what I can to foster more of this investigation in succeeding iterations.

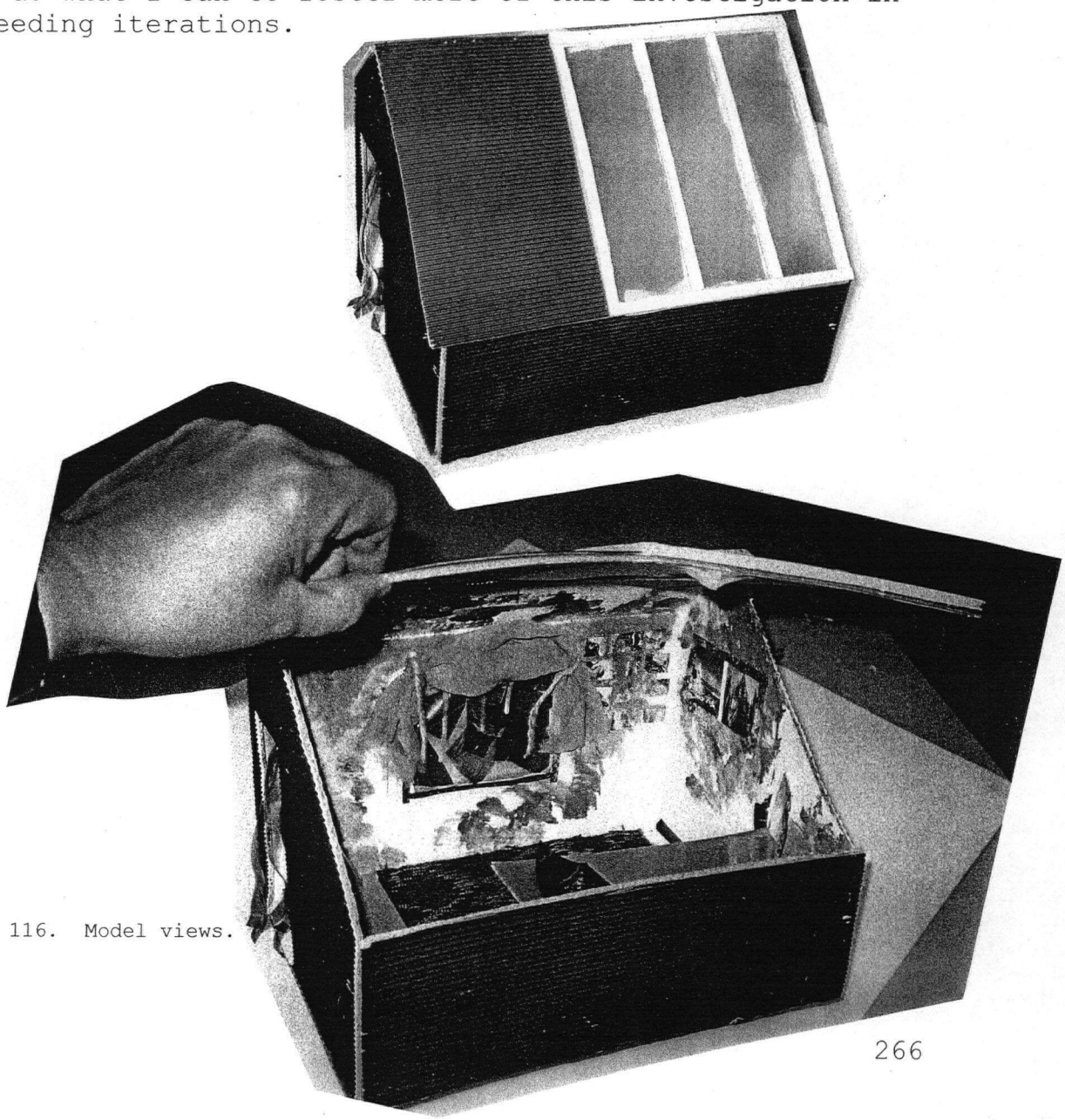
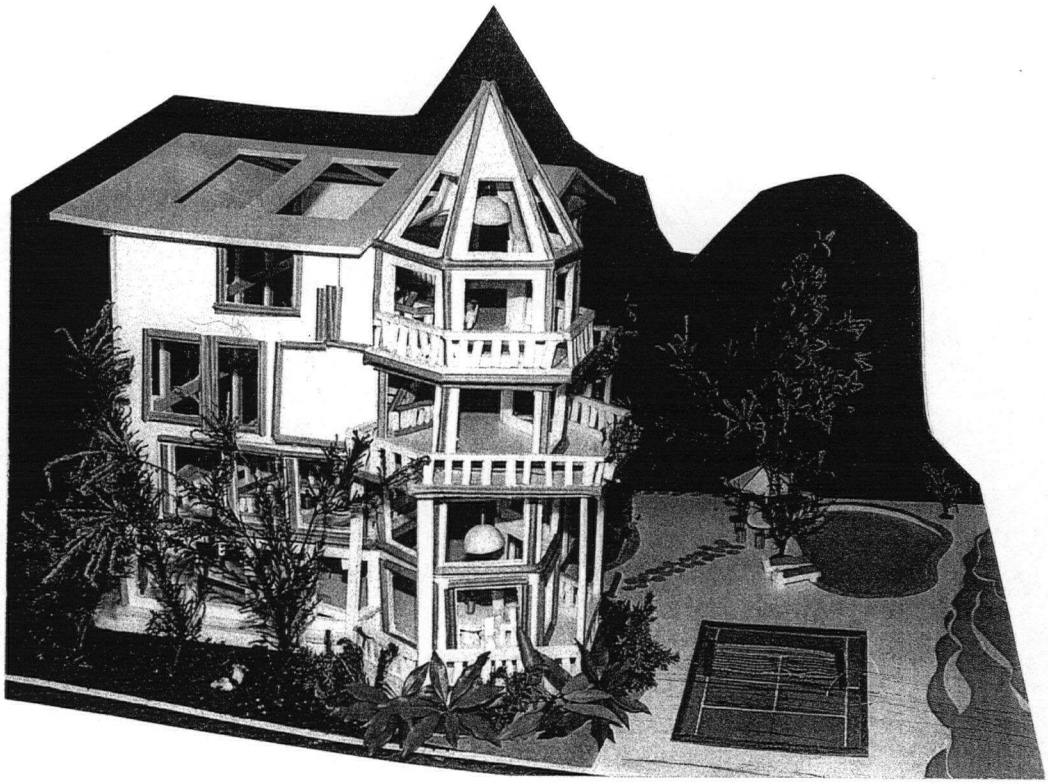


Figure 116. Model views.



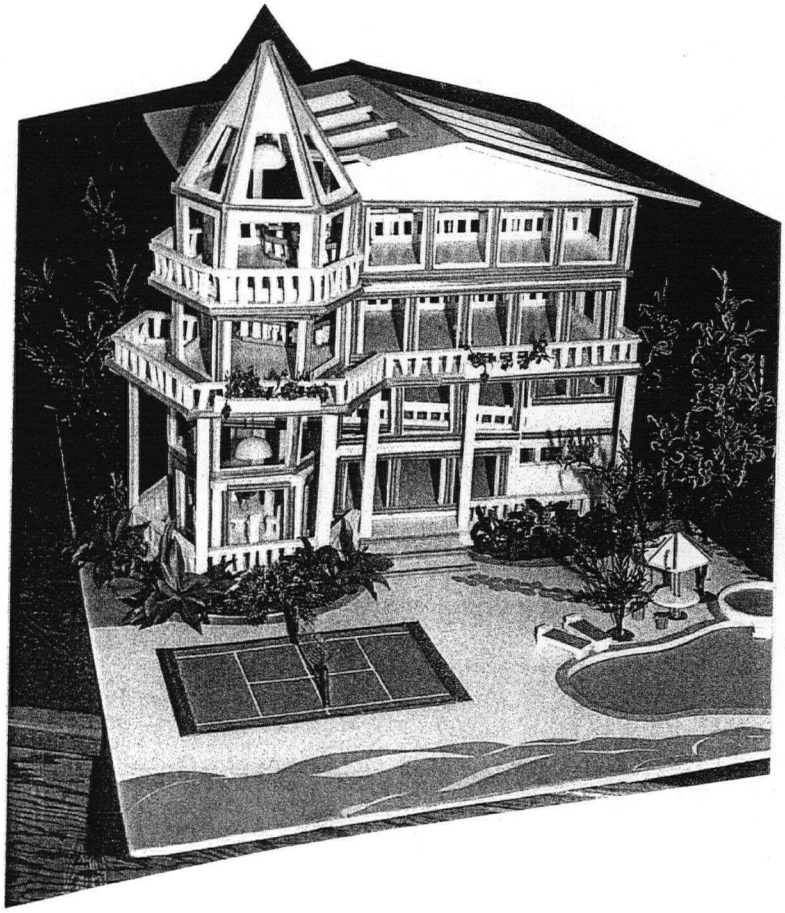


Figure 117. Model views - some chose to develop a very elaborate sanctuary.

7. unpave - community process

The individual site, and even the individual house and yard, are to the landscape region what the single cell is to the human body.

Just as the health of the human body is dependent on the health of all its cells, so the ecological health of a landscape region is dependent on the health of its individual sites.

Patrick Condon (quoted in the Vancouver Sun September 6, 2003 p.C2)

learning experience links

3 R's: Respond to human needs in a spirit of cooperation and social Responsibility

Educative value: Engage kinesthetic and mathematical logical ways of learning, and gives practice in visualising. Transmit simple concept of full scale. Practice interpersonal skills, exploration of form - right and left brain integration.

Connection to Architectural/Art themes: Large drawings to be made. Practice with the steps of the design process (on your feet for the most part) and a phenomenological approach to design. Community action with issues of sustainability to consider.

I would venture to guess that almost every area where students congregate to be educated has paving thereabouts. And I would further offer that some of that paving is not necessary. Moreover, the process of paving the earth can cause problems.

In a feature news article concerned with 'The New (sustainable) Suburbia' particularly Surrey's East Clayton housing development, billed as a part of North America's new housing revolution, some emerging ideas for planning sustainable communities are outlined.

In 1995, the Surrey Municipal Council, led by the mayor Doug McCallum, in concert with Patrick Condon, UBC's James Taylor Research Chair in Landscape and Livable Environments, began to move forward with a planning process and a scheme to design a sustainable community which conformed to emerging national, regional and local policies promoting sustainable development. Although this particular project demonstrates the controversy and messiness common to leading edge exploration and change, some of the operating principles attempted in the development might be of interest to students in the art studio.

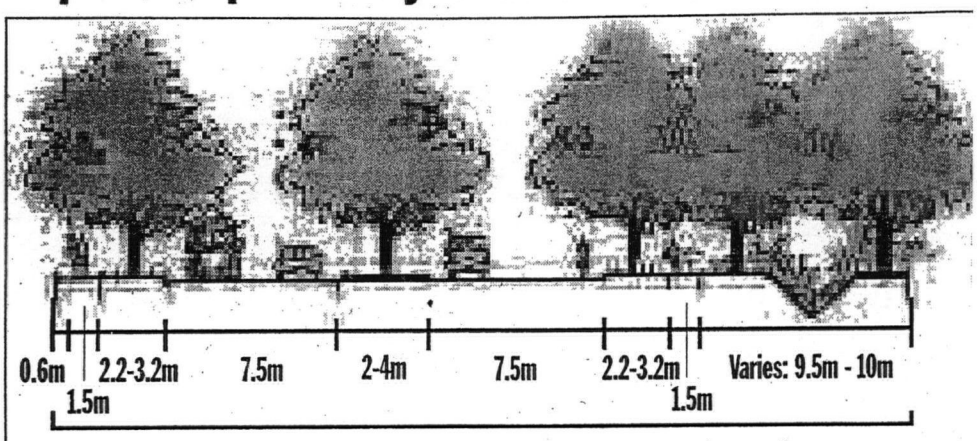
With respect to paving, one of the 'green' principles for sustainability is a clearly articulated goal in this housing development. The designers wanted to:

> Preserve the natural environment and promote natural drainage systems (in which storm water is held on the surface and permitted to seep naturally into the ground).
>
> William Boei, The Vancouver Sun, 6 September, 2003 page C4

Surrey is highly paved, and drainage has long been a problem in the municipality. In the article it is noted that "Low-lying parts of Surrey had been flooding more often since the old forests were cut down, and the more land was paved, the worse the flooding became." (ibid, C3)

Surrey provides a good example of thoughtful response to damage accrued by over-paving, and a further excerpt from this feature story in the Sun provides sufficient background to at least get students thinking about the rationale for reducing paving, and what measures might be initiated.

Riparian parkway cross-section



The East Clayton project features a proposed "riparian parkway" – a 27-metre-wide arterial road complex that includes four lanes of traffic, two walking paths, three boulevard areas with trees, and an artificial stream that would be green space most of the year, but during wet weather would carry excess rainfall to an artificial wetlands area.

Source; James Taylor Chair in Landscape and Livable Environments

Today, McCallum insists, development in Surrey is "well controlled," and "East Clayton is just a good example of that."

Surrey is civilizing most of the highways and major arterials that angle across its landscape, adding grass medians, trees and boulevards.

Even before East Clayton came along, McCallum says, Surrey was nudging developers to build more back lanes and narrower streets so as to discourage neighbourhoods from turning to parking lots.

"It's been very effective in the newer communities," he says. "By narrowing the streets, we're forcing the cars off the streets and they have to start to use their garages."

Surrey has been encouraging small-lot subdivisions for several years. And McCallum adds that Surrey has sworn off massive shopping centres like the one at Guildford, which require vast stretches of land to be paved. "You're not going to see those huge paved parking lots any more."

Surrey is also pushing the use of porous driveways that absorb water, and it has spent big money in the past four years to strengthen dikes, build pump stations, improve drainage and reduce the frequent flooding that has plagued the lowlands, especially in the flood plains of the Serpentine and Nicomekl rivers.

Perhaps most significantly, the city has built Surrey Lake, a four-hectare artificial lake on the boundary between the uplands and the lowlands, which serves as a massive detention pond for runoff water. McCallum, whose administration built it, calls it "an environmental masterpiece" that not only helps control flooding by holding water until it can drain through natural systems, but is also growing into a bird sanctuary, salmon habitat and recreation area.

Surrey Lake opened just last year and "what we have found this year for the first time is a huge number of fields being farmed which had never been farmed in the history of Surrey," McCallum says.

That includes Fry's Corner, a low-lying area near the Serpentine River where the Fraser Highway crosses 176th Avenue. It hadn't been planted in at least 30 or 40 years due to frequent flooding, but McCallum says it's growing a crop this year.

Figure 118. Excerpt from the article quoted above.

I think this (or a similar package of) information is sufficient to make students aware of the issues surrounding natural drainage, and the rationale for thinking about

'unpaving' our land. I would not want to produce a resistance to this information by providing too much scientific data in the artroom. Certainly interested students could be guided to investigate the questions of natural drainage more thoroughly, but in general, a simple rationale should suffice.

Once students understand that unnecessary overpaving is causing problems, it is a fine, life-affirming initiative to find such a place and consider what might be done if the paving process were to be reversed: 'unpave'.

I see this project as an opportunity to pursue two goals - a small contribution to greening of our neighbourhood, at least in theory, and an opportunity to practise working communally to achieve a desired goal.

I tried this project at a school that had a massive parking lot that was underutilised by cars. While some parts of the paving were used for games, some of the hard surface was not needed and could have been unpaved.

We talked in the classroom about other ways the paved area could be utilised. Suggestions were made which included gazebo type shelters - some of rather futuristic design, and others which included provisions for simple sanctuary.

Students organised themselves into groups, and with some preliminary discussion and sketching on paper at their desks, began to plan what they might do to redevelop the excessive paved area outside the school.

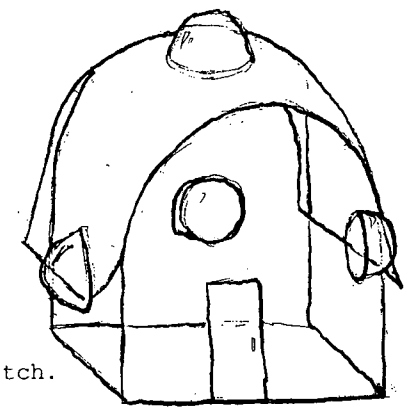


Figure 119. A simple preliminary sketch.

When the time seemed ripe, and I think I made a poor call as to when that time arrived, each student was given a piece of chalk and ushered out the door to begin sketching, directly onto the pavement, their schemes at full scale. They were very highly motivated, and keen to get out there and begin drawing on the asphalt.

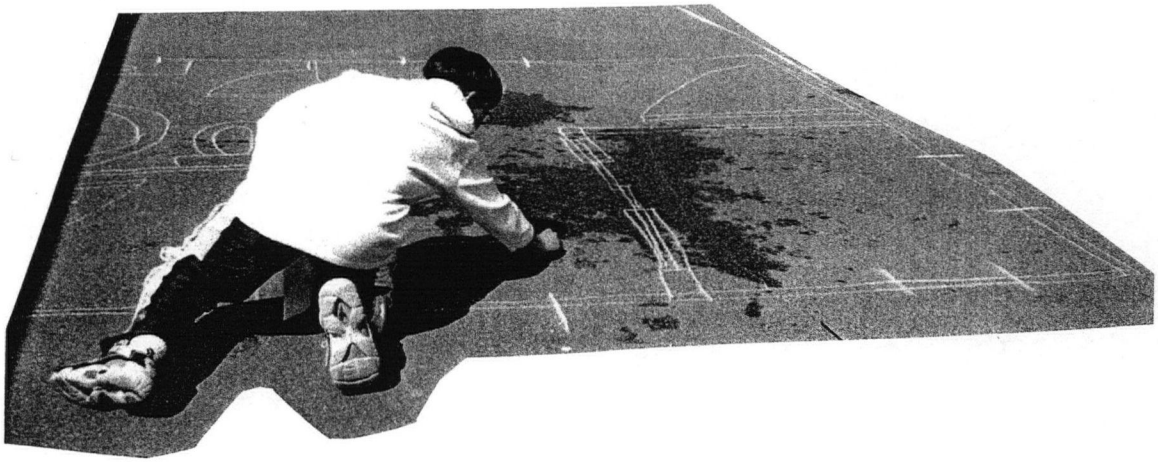


Figure 120. Student at work on the paved area.

I wish I could call those students back together into the classroom now. I saw, upon reflection then, and even more clearly now, that I missed a wonderful opportunity to encourage collaboration amongst the groups. While the small groups were very successful at working together to decide what their creation might be, and how to set it out upon the paved surface, the entire arrangement lacked coordination. When the students and I noticed this, we tried a trick often attempted in the built world: to soften our mistakes with vegetation. To the students' credit, they were able to see the joke in this, and we all learned something about community planning by recognising our error. The rain soon washed away our efforts, and I wish I had found the time to revisit this exercise with that group.

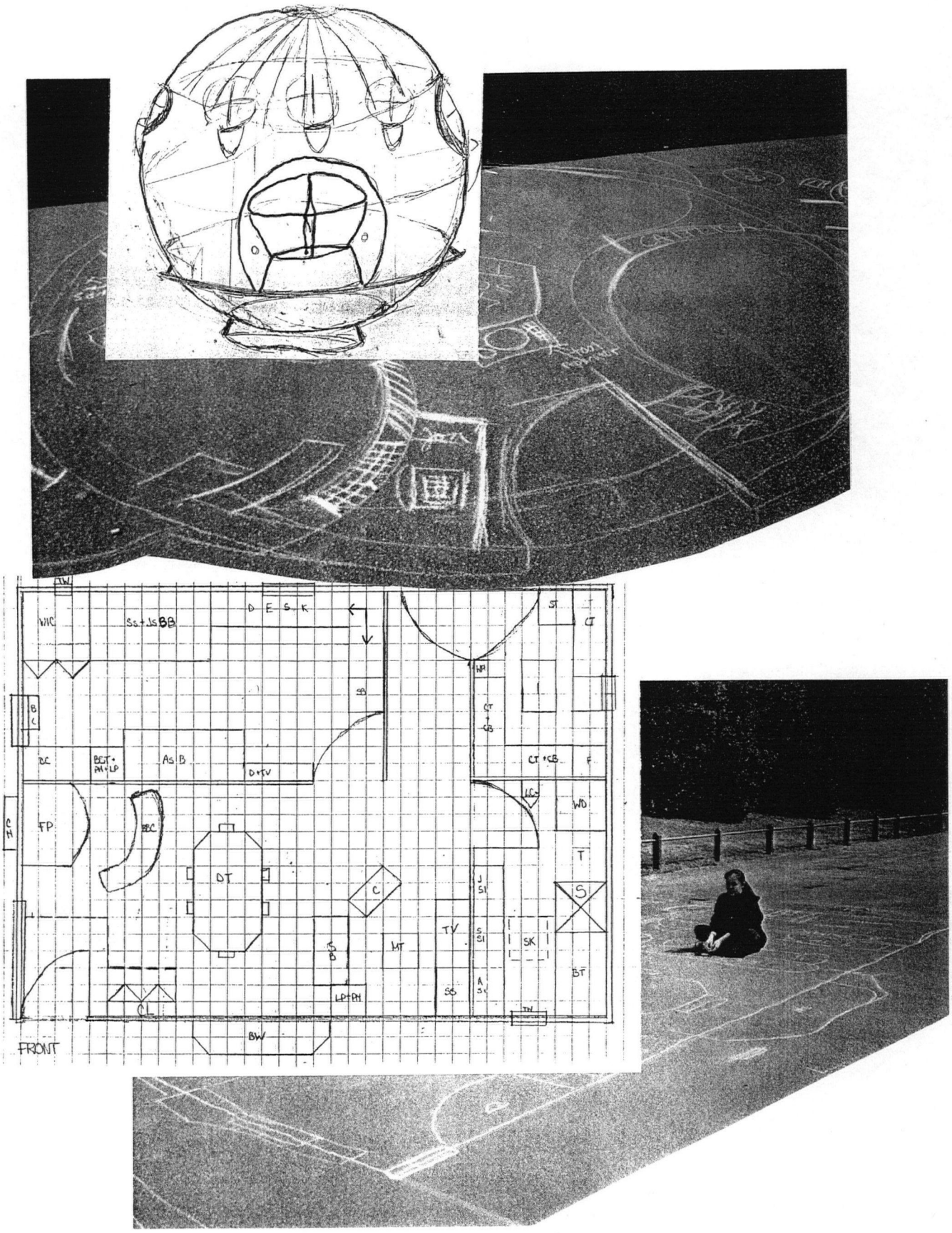


Figure 121. Drawings and full scale plans on pavement.

I have tried this project with other, younger students, who were thrilled at the idea of chalking their designs at full scale as well. It is a wonderful way to clarify the plan view and to encourage the ability to visualise.

I now see that although each effort I have made in this project 'unpave' has produced some exciting results, the idea can be very much enriched by including consideration of the rationale for sustainability, and the exercise of collaborative skills at both the small group and larger group level. With this emphasis, the aspect of socially responsible design can be focussed upon, and valuable skills obtained.

Furthermore, the action of working at the full scale creates the opportunity to explore the ideas offered by Joel Shack in the section on phenomenology. We might, after making a full-size layout on the ground, try making a sketch collage of views of what we might see in other dimensions as we actually move through the horizontal plan view. This action would bring the plans to life in a way that might extend the visioning into a new and exciting realm.

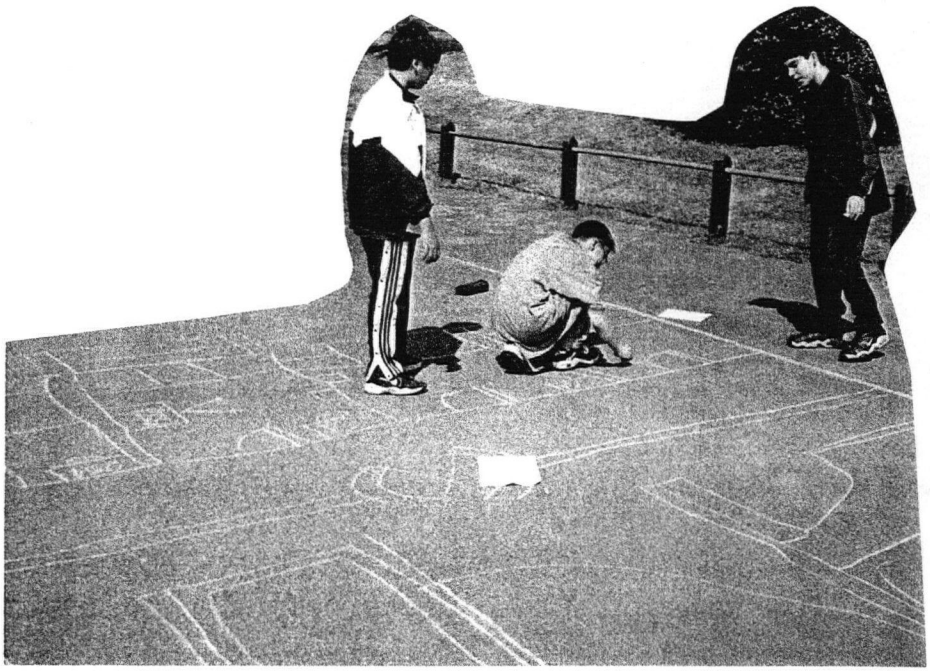


Figure 122. Students working together on this cooperative project.

Generally, when we think of paving, we think of asphalt: parking lots, driveways, roads, and the like. I am stretching the point here, but perhaps when a patch of land is inaccessible for some reason, we could metaphorically at least, call it 'paved'.

A beautiful variation on the idea of sanctuary, discussed in the previous section, is the creation of a communal sanctuary by a group willing to donate some energy to the common good. I have seen a few lovely examples of this, and would include them here in the lesson sequence called 'unpave'.

The first example is a recent development by the N'gystle Society, a group of people dedicated to forming a healing community on Haida Gwaii (formerly called the Queen Charlotte Islands). This group and supportive volunteers decided to make a sanctuary space behind their community offices, on a patch of land badly overgrown, in effect 'paved', with brambles and weeds. After countless hours of very difficult labour removing the thick and prickly growth, they cleared a place where together they could begin to envision a peaceful outdoor space. They wanted to make a place where they could sit outdoors and quietly meditate or converse with others. Various people in the community offered ideas and hard work, and soon a lovely communal sanctuary was underway. Gravel was decided upon to thwart the return of the brambles. Someone contributed an evocative piece of driftwood, another added a precious glass float found on the beach, plantings were introduced and garden statuary, a bench and a picnic table were provided.

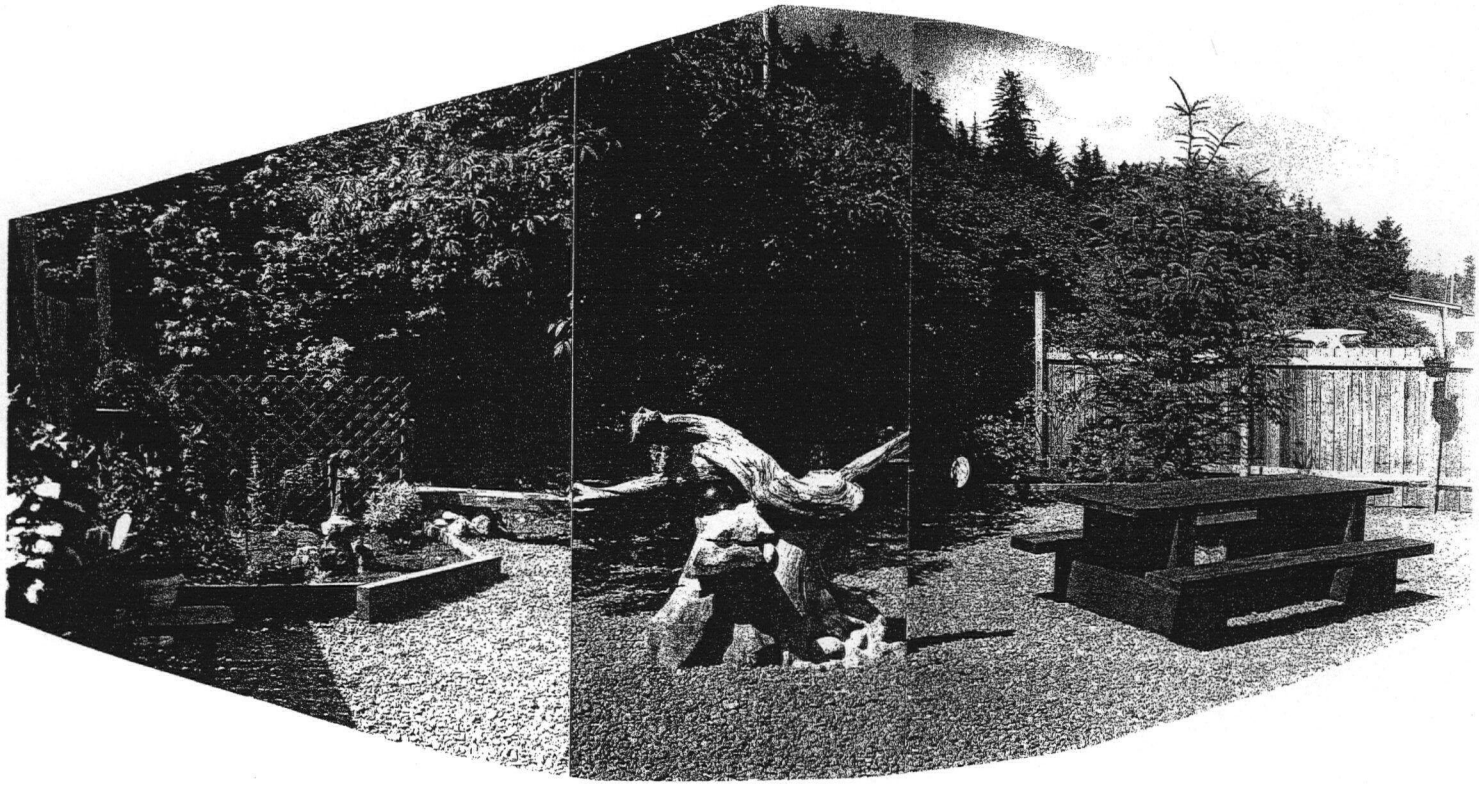


Figure 123. The sanctuary garden in Skidegate.

Inasmuch as my students have recently moved into a new school, and complaints are heard along the lines of "our school looks like every other school now", there may be some opportunity to try some communal development of spaces in my very near future. I think it is quite safe to say that each school has some little area that could benefit from collaborative student attention. Perhaps this is a wonderful art project waiting to unfold.

8. community uplift providing a refit

learning experience links

3 R's: Receive messages of the environment, Respond to human needs in a spirit of cooperation and social Responsibility

Educative value: Gives practice in visualising what might be appropriate interventions. Practice interpersonal skills, negotiation and working together.

Connection to Architectural/Art themes: Recognise that simple interventions can raise the quality of the environment and discover personal efficacy. Expressive art making.

I spent four very happy years teaching in an old school, slated for demolition and replacement. Although the school could have been said to be crumbling about our ears, the school community was generally happy there. Over the five decades this school had operated, many layers and accretions - signs of life had been applied, and few would ever have commented that the school lacked 'soul'.

The fact that the building's shelf life was soon to be reached provided a stimulus for me to do some serious decoration. I saw it as the opportunity to dress up and honour this old building before the demolition crews arrived. After some serious negotiation with the school district and the head of the painting crew in particular, I received permission to launch a refit initiative at the old school. (This permission is sometimes difficult to obtain as union regulations discourage anyone other than CUPE members from doing any action that might be part of someone's job description.)

painting lockers and murals

My request was for permission to make paintings on the lockers and, where appropriate, murals on the walls. I needed to show that the operation would be well controlled, and that inappropriate art work would not be included. At the agreement stage, after many months of sporadic discussion, the painting crew foreman even gave me a number of used cans of paint to use in the project.

In order to 'control' the locker painting project, I devised a design sheet for students to use to plan their artwork, and to demonstrate appropriateness. It had to be signed by myself before paint would be given out. In the initial stages, until our very supportive principal was assured that there wouldn't be inappropriate paintings lining our halls and frightening the grade 8's, (not to mention their parents), the designs had to be vetted by the administration as well.

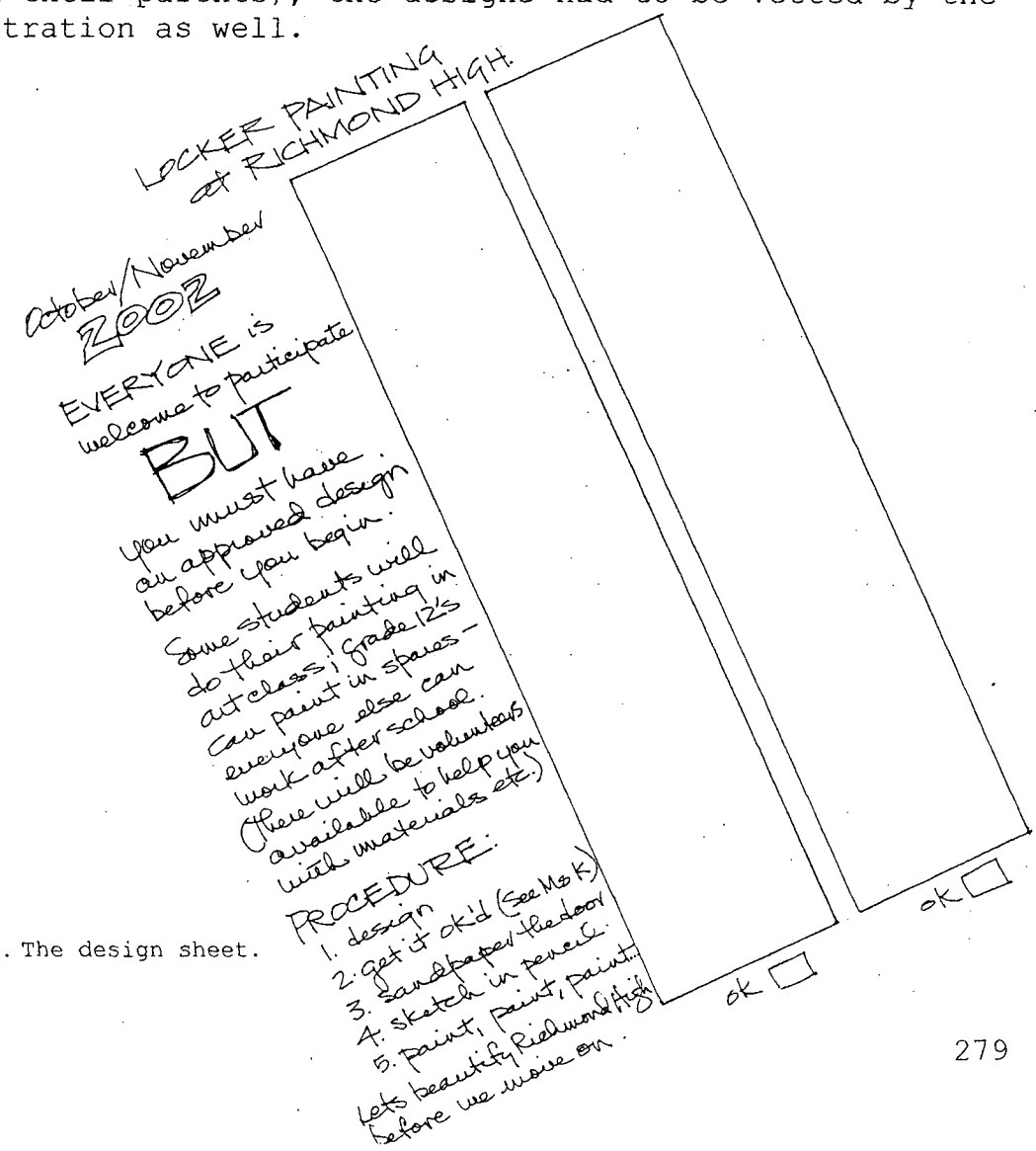


Figure 124. The design sheet.

The design sheet proved to be a good idea. Students had a chance to develop their ideas a little, both in their sketchbooks and finally on the design sheet, and any wild, frightening or otherwise inadvisable ideas were converted into workable ones.

Initially, only students enrolled in my art classes were allowed to participate, but soon another art teacher got involved for a time in the project as well. Before long, the project was opened up to the entire school and many students who were not enrolled in Visual Arts got involved. All students followed the same procedure of design/approval before sandpaper, paint and brushes were received. A few students tried to inject some subversive, not to mention unapproved, content into their paintings, but painting over was the accepted next step. After three years of painting, our old school looked delightful. Some fine paintings were painted over by new owners of the lockers at the start of new school years, but mostly students arranged to paint someone else's locker if they were assigned one in September that already had an artwork on it.

I was able to purchase ten of the painted lockers from the demolition/salvage company. These will be mounted on a concrete wall in the new school to bring some 'soul' and even 'ghosties' of the old building into our new, industrial style facility.

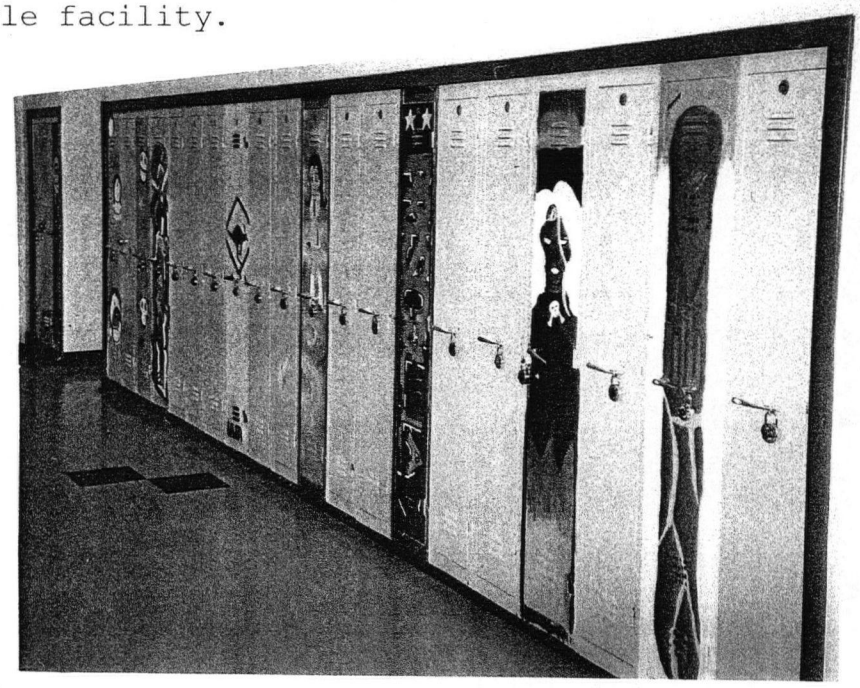


Figure 125. Lockers.

Figures 126. Locker painters at work and some samples.

Figure 127. Embellished lockers

murals

The painting of murals was organised according to a similar plan. I showed students a model of a design approval drawing, for which it was necessary to draw a simple elevation of the wall to be painted, complete with landmarks to identify location. Students then would design their mural and show the colour scheme. Approval received: let the painting begin.

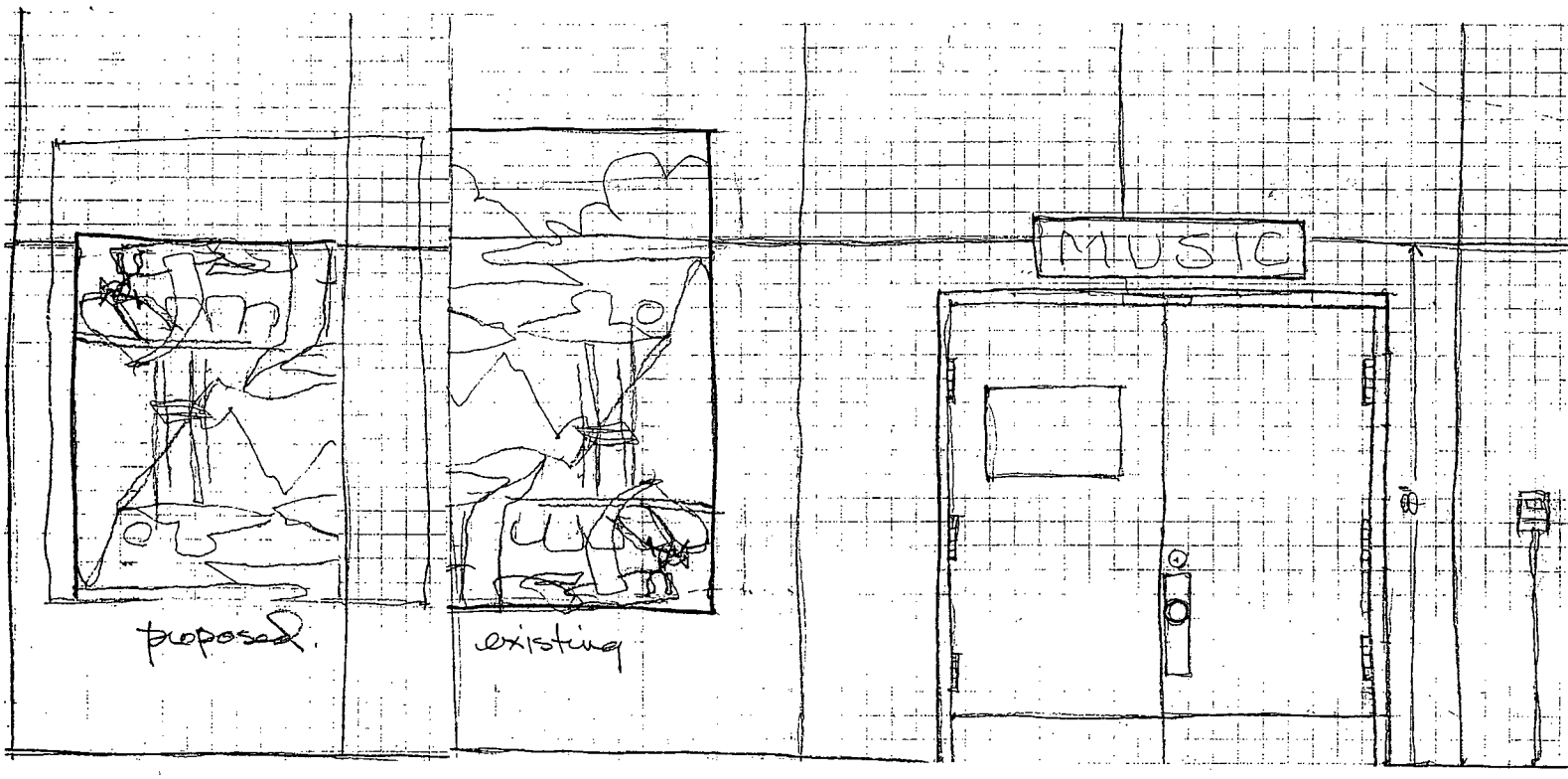


Figure 128: Sample mural approval drawing.

It turned out that far fewer students wished to be involved in mural painting than in locker painting, but a few good murals resulted from this initiative.

Figure 129. Sample mural proposals and a painted mural.

the scrapbook

Throughout the time leading up to the departure of our school community from our school building, I asked students to look very closely at this beloved old building and draw. Sketchbook expeditions were frequently taken when projects were complete, and some of the in-class drawing assignments such as sighting, practice with elevations, shading exercises, etc. were directed to the subject of our school.

Students were often surprised to note that a very familiar place becomes much more familiar and understood when the place is carefully studied and drawn. We made a huge scrapbook of drawings of the school and of the new school under construction as well.

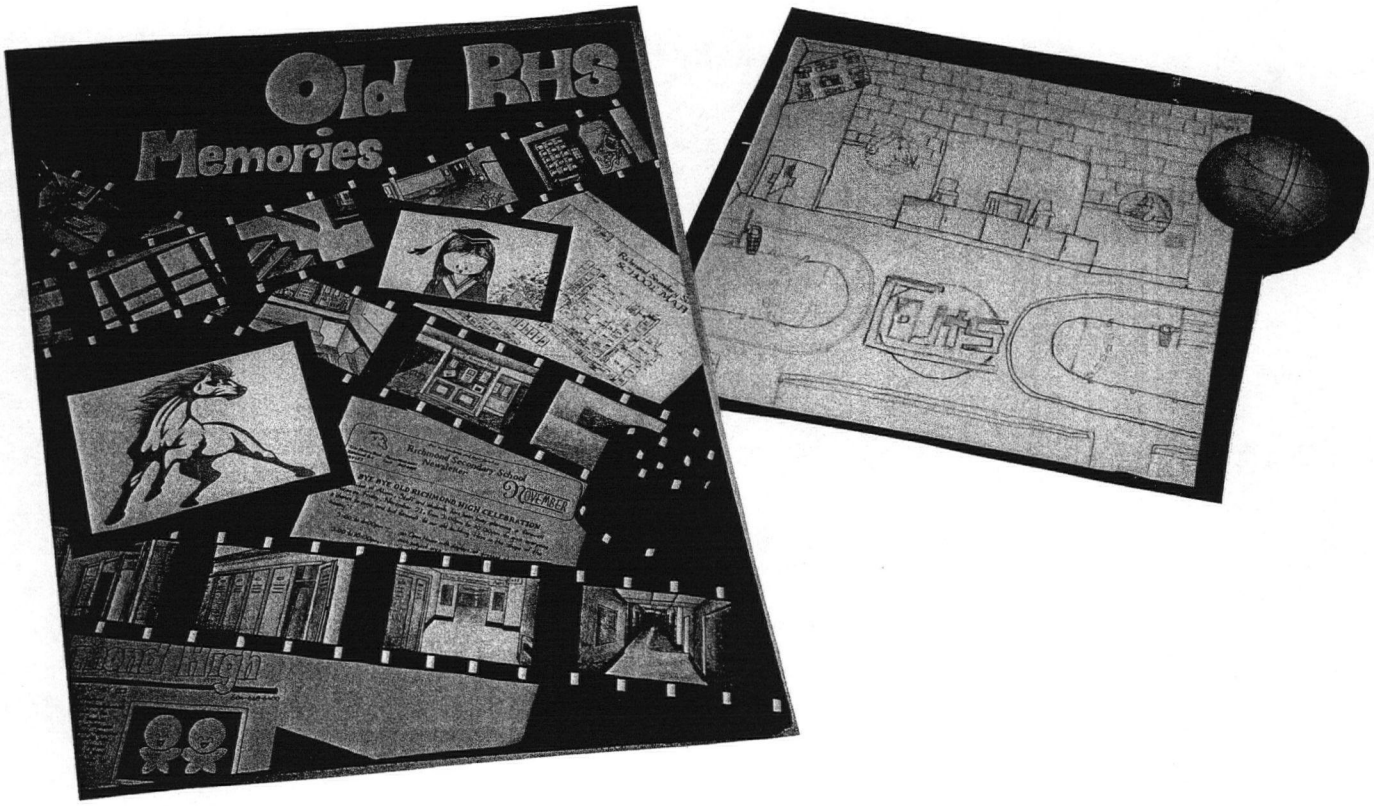


Figure 130. The completed scrapbook.

I wish I had been familiar with Eileen Adams' ideas about stylising views of familiar surroundings before we left the school. I can imagine a lovely set of colourful simple views of the old school, within and without, would have been yet another way to catch the essence of our grand old place.

design for a new school - community visioning

Although the prospect of a new school for our school community brought with it many opportunities to learn about architecture and to dream about what might be, I was reluctant to get my art students too involved in the planning process. Budget cuts.

Many students were naturally interested in what the new school might be like. Several of my classes - English as well as Art, had done some 'imagineering' exercises when we heard that the new school had been approved. These involved considering the general style and tone of the building - 'techy' and 'homelike' were the leading preferences. And I kept the design drawings available in the artroom for interested students to read and study. One student, on his own initiative, made a lovely scale model of the school. Others drew the new buildings under construction. And some got involved in the architect's competition.

The architect of our new school, Ladi Holovski, offered a $200 prize for the best idea, drawn by an art student, regarding how to fit out and decorate the 'student place' which is actually just a very wide part of the corridor of the new school, near the multi-purpose room and across from the teaching cafeteria.

I was reluctant to carry any very specific dreaming too far because I knew that the deep budget cuts were going to take place. I did not think that students should become too involved in a frustrating situation where dreams were clearly not going the come to pass, and where even the simplest visions would likely be compromised. (It turns out that the 'student place' in our new school is completely unadorned, painted grey, and full of old furniture from the old school. Budget cuts.)

Notwithstanding these considerations, I did tell my students that the architect had made this offer, and,

although budget cuts would be likely, perhaps we could do some envisioning for this area, maybe for future reference, maybe just for the exercise. Quite a few students participated, and certainly the discussions about how teens might like to develop a large, busy and important space in the school were fruitful. But the economic constraint was foremost in my mind - our budget was severely slashed - and I did not want to set anyone up for disappointment.

Some student schemes involved cheery murals and graphics, lighting effects, special colour schemes and wall coverings, raised platform arrangements, simple but comfortable furniture arrangements, (such as we had in the student entry lounge in the old school), and wonderful floor patterns. I did not keep the entries, but many students were happy to be recognised by the architect - he agreed to split the money prize seven ways, so the 'contest' aspect was somewhat diminished and the dreaming/wish-list aspect was underscored in a low-key manner. Perhaps some day we will be able to afford to do some creative interventions in that area of our new school. I think we all need to inhabit the space and think about it for awhile, and then eventually we will be able to marshall some energy to develop thoughtful, realistic, and achievable design proposals.

future iterations

I am inspired by the work of B.C. public school teacher Linda Faulks, who recently delivered a keynote address to the B.C. Art Teachers Association Conference in Richmond. This energetic teacher has worked with students to produce over 250 murals for schools, as well as hospitals and other community venues. I am inspired as well by the town of Chemainus on Vancouver Island, which is beautifully refitted with murals by a range of artists and themes.

Teachers and students might also want to investigate the political mural painting traditions in such places as Ireland and Cuba, to name only two of the diverse global sources of inspiration and guidance.

BELFAST MURAL

Figure 131. Public art.

Embellishment of public buildings sometimes takes courage and always requires careful planning, but it can be an enriching contribution to the built environment, and a delightful way for people to put a positive imprint upon their surroundings.

collaboration

The art department is often asked to collaborate with other disciplines within the school to provide artistic support for projects. One other scheme which Visual Arts students participated in was the embellishing of a graffiti wall for a school play. This project became the backdrop in the drama classroom for years after the play, adding a lively touch to an otherwise drab area.

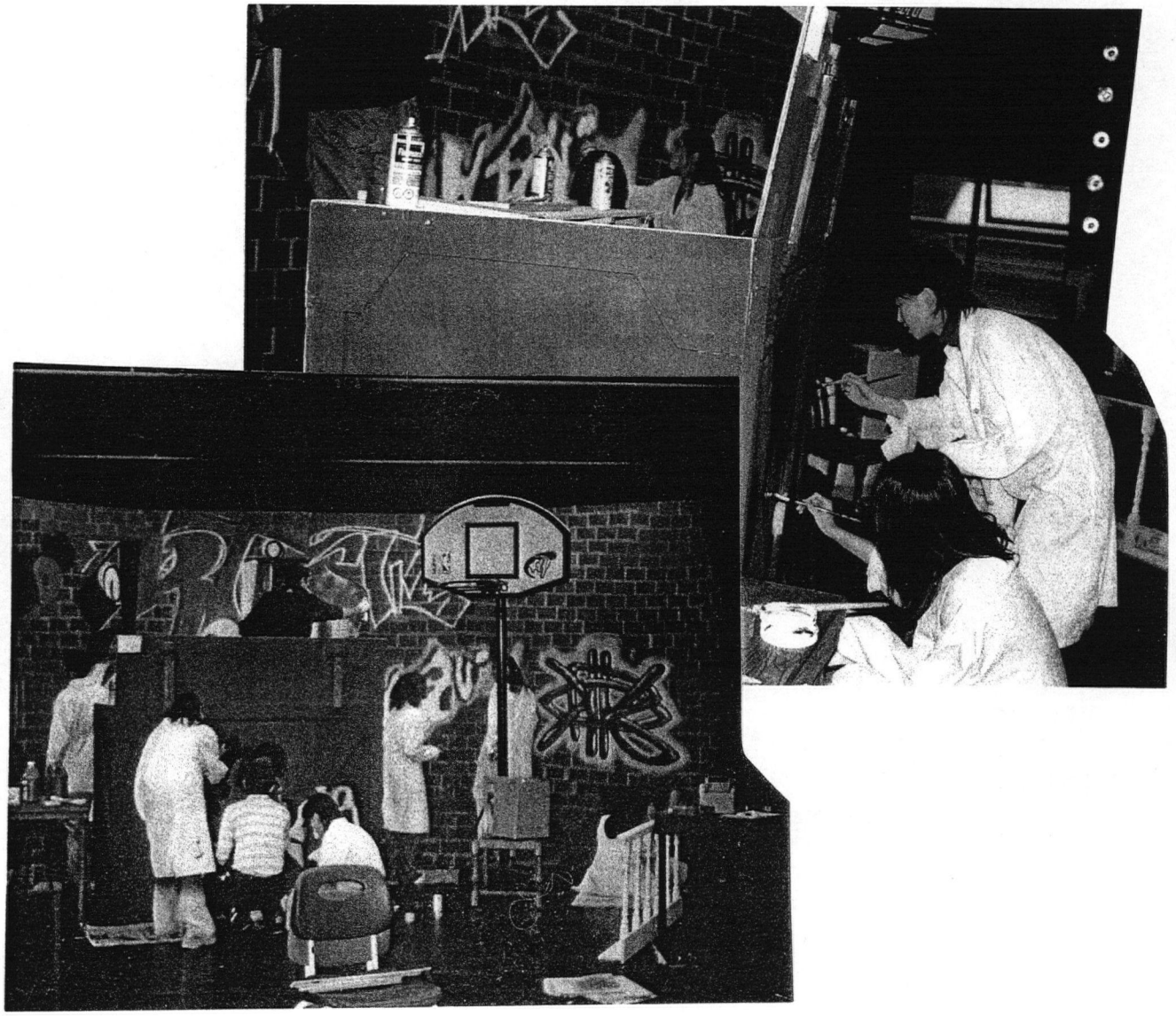


Figure 132. Art students painting sets.

9.product design

learning experience links

3 R's: Receive - sharpen perceptions of some thing we take for granted. Respond to particular needs of an individual. A component of Social Responsibility - creativity vs. mass consumerism.

Educative value: Opportunity to develop analytical problem solving and expressive skills. Visualise what might be appropriate. Engage verbal/linguistic intelligence.

Connection to Architectural/Art themes: Develop drawing to communicate ideas, develop ability to generate and evaluate options. Sustainability considerations - products that are kind to the planet, reuse of recyclable materials.

chairs

On the assumption that everyone likes a good place to sit, I first introduced the topic of chairs to a Woodworking class in which I was the Teacher on Call, and in which I was unable, legally, to turn on the power tools. This story is more fully recounted earlier in this document. Additionally, in that situation, I had no idea how long I would be substituting in the class, so the project was confined to one 75 minute period.

I very briefly outlined that designing for a specific person is quite different from mass production for the speculative market, and I asked the students to start by listing at least five characteristics of the person who would be the recipient of their chair. I explained that they could experiment to find a way to communicate their ideas, and that words and pictures together, and sketches from as many angles as seemed necessary would be the scope of the work. I suggested that students try to generate a

few alternatives, but we were all very mindful of the amount of time we would have to complete this project.

The results were actually quite delightful, though the constraint of buildability of a model, or eventually, of an actual product, was not a key part of student considerations.

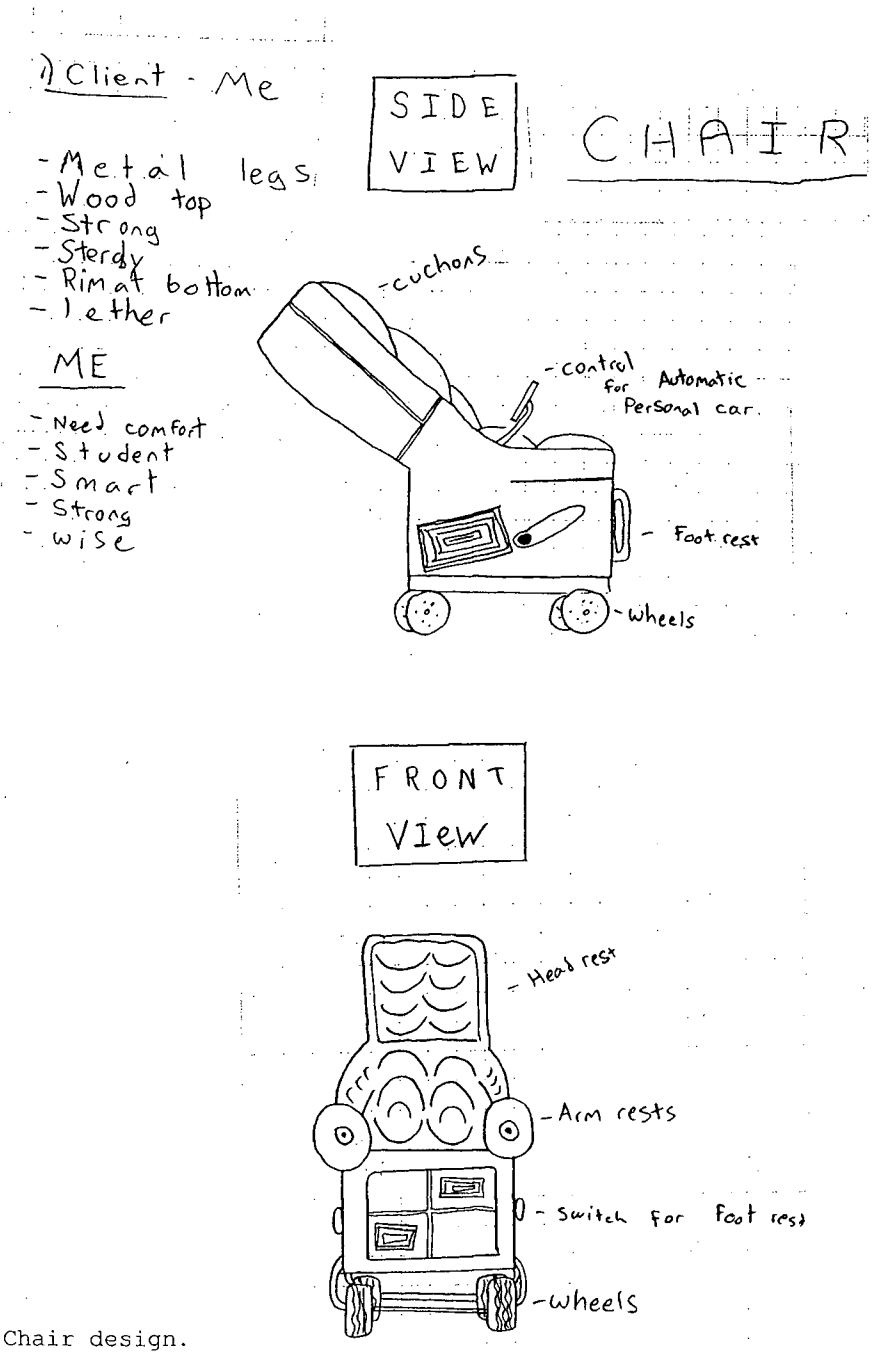


Figure 133. Chair design.

The next time I attempted this design project, also in a T.O.C. situation of unknown duration, I copied a few pages of chairs: out of a woodworker's manual, from a shop drawing book of Shaker furniture, and from a modern industrial design journal, to distribute around the class. The goal mostly was to give insecure students the idea that sophisticated drawing skills are not required to think visually on paper. One student, who insisted he could not draw, was very happy to discover that he was good at making annotated diagrams. This worked similarly for a number of students. Moreover, students warmed to the idea of making a chair that was tailored particularly to the needs of a person they had selected.

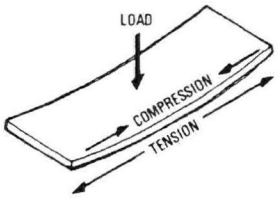
Figure 134. Unknown designer (clothespin chair), David Colwell (middle chair) and Tony Winteringham (right).

splayed back legs, they are ideally placed to support the additional weight at that angle. The structure is, in fact, superbly suited to its intended purpose.

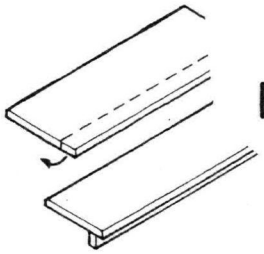
An overloaded shelf sags and may eventually break because of the combination of compression and tension. But if you cut off a 50mm (2in) strip, turn it through 90 degrees and glue it to the underside of the shelf, it will be able to support more weight without bending – by turning the strip on edge you have constructed an effective beam. The rails supporting a table top or chair seat perform a similar function.

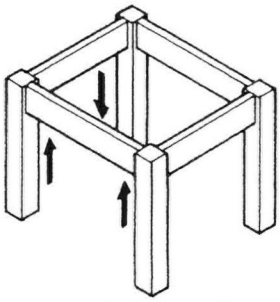
The load on a beam is transferred to whatever is supporting it at each end – the legs of a table or chair, for example. The joints between the rails and legs must be capable of resisting shear forces (the downward pressure of the load being opposed by the rigid supports). Shear forces are increased considerably when sideways pressure is applied to a structure, exerting leverage on the joints. A strong dowel joint or the tongue of a mortise and tenon is able to cope with this leverage, especially if the rail is deep enough to provide decent shoulders for the joints and if glued corner blocks are used to reinforce the structure on the inside of the rails.

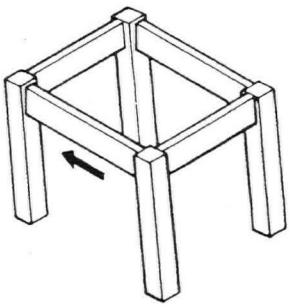
The joints of a cabinet or a box are especially vulnerable to sideways pressure, which causes the frame to 'rack', forming a parallelogram. However, a rigid back panel, vertical pilasters or corner plates will prevent movement in the joints and create a rigid structure. A built-in plinth or shelf-support rails will achieve the same purpose, while metal-strip cross-bracing prevents racking by tying opposite diagonal corners together.

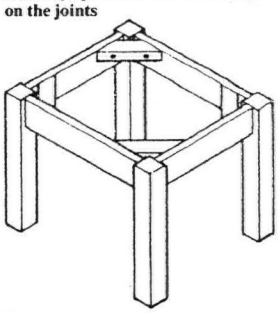


The effects of load on a shelf


A strip on edge provides support

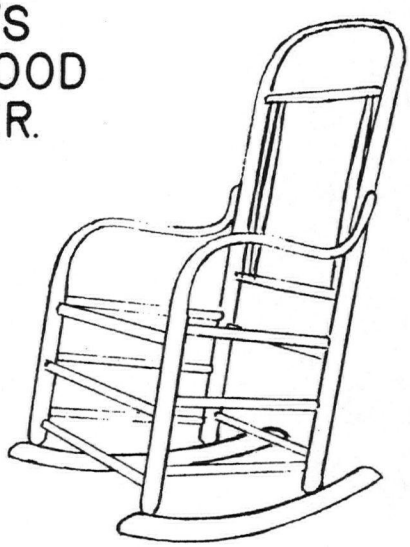

Legs oppose the load on a rail

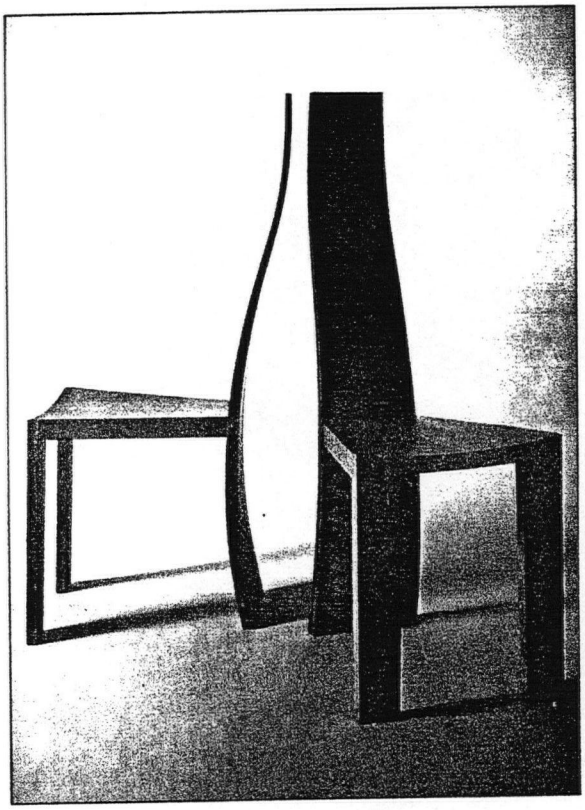

Sideways pressure exerts leverage on the joints

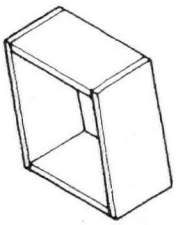

Strong joints and corner blocks hold the frame rigid

Handberg, Ejner.
Shop Drawings of Shaker Furniture and Woodenware
Vol. 1.

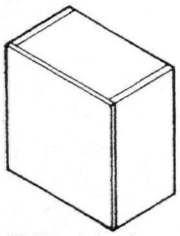
CHILD'S BENT-WOOD ROCKER.

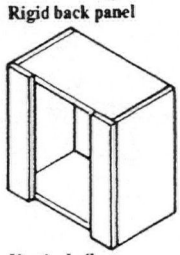


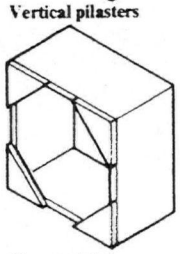


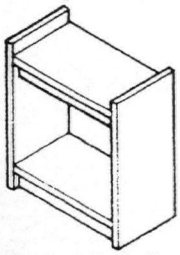

An unsupported box will collapse

Making a box rigid
To create a rigid structure the joints of a box or cabinet must be reinforced using one of the following methods.


Rigid back panel


Vertical pilasters


Corner plates


Plinth and shelf rails

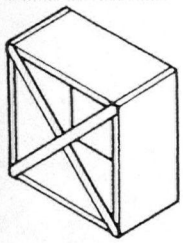

Cross-bracing

Figure 135. Inquiring into chair design

A. Jackson Day. Collins Woodworkers' Manual

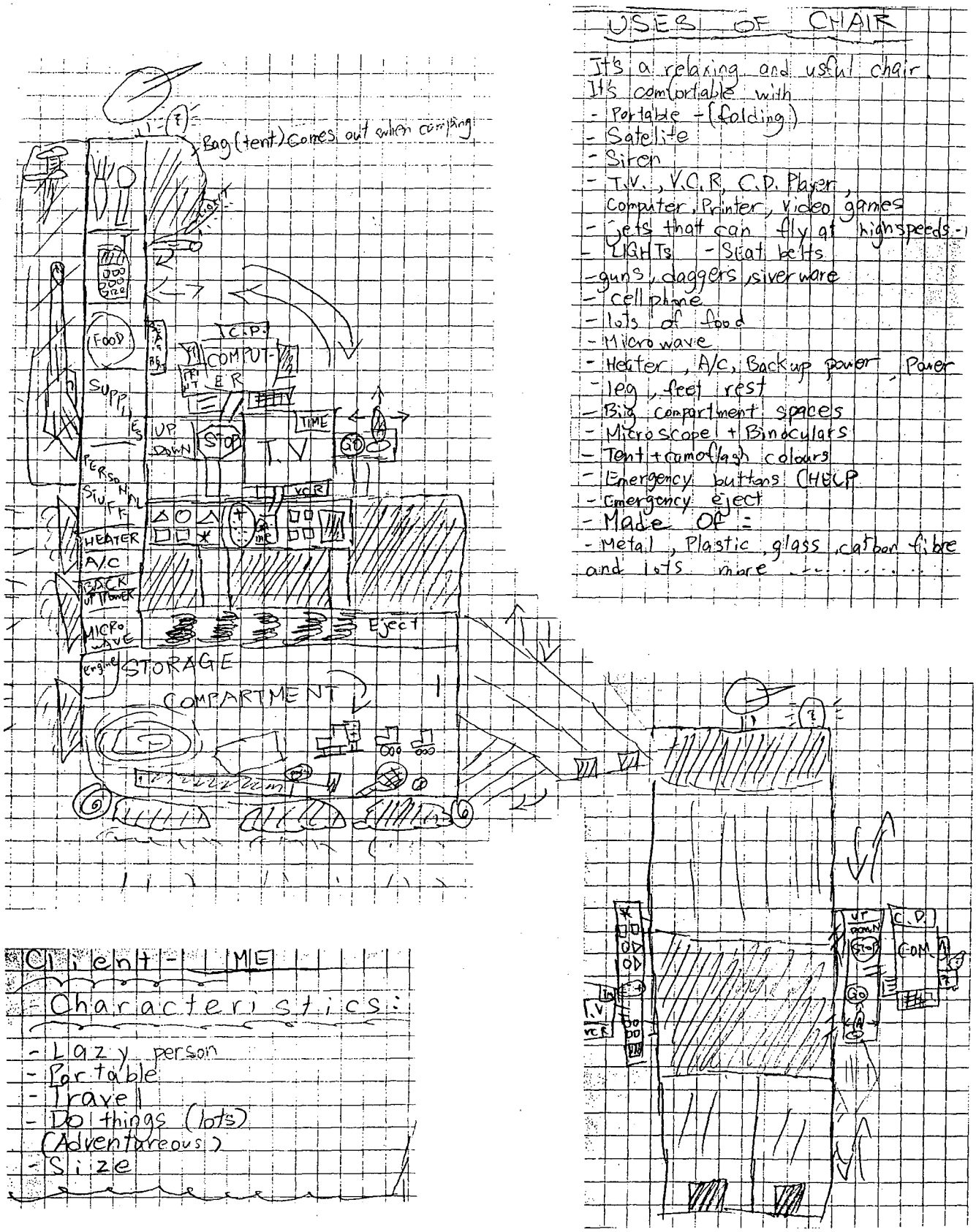


Figure 136. 'Annotated diagrams'.

The first few times I introduced the idea of product design with Visual Arts 3-D students, I did it near the beginning of the year, because I thought that a design project of more limited scope than a building, however simple, would be easier and therefore a confidence builder.

Although the product design process is similar to the process for designing a building, I don't now think it necessarily should precede some attempts at building design. Sometimes it might be better to wait until students have acquired some skill at three-dimensional model building before the potentially more intricate product design project is tackled.

In a Visual Arts 3-D class, students know they will be developing the design into a 3-D model. This tends to settle some of the wilder ideas into the buildable realm, but I haven't noted, over the years a lack of imagination in the built forms.

Again, I would emphasise the careful choice and consideration of the person for whom the chair is to be designed - the 'design brief'. In order to underscore the importance of this decision, I expanded the character study somewhat, and gave some marks for a 'Profile' of the person for whom the product was being designed. I asked for basic data, and details about the person, and even a simple sketch or illustration of his/her appearance as well as an expanded list of interests, likes and dislikes and characteristics.

Some students elected to design for a person well-known to themselves, some chose to design for a celebrity or even for an imagined character, such as one of the Simpsons. The goal at this stage is simply to analyse needs in order to start problem solving. I think this goal can be realised just as well for an imagined 'client' as a real person.

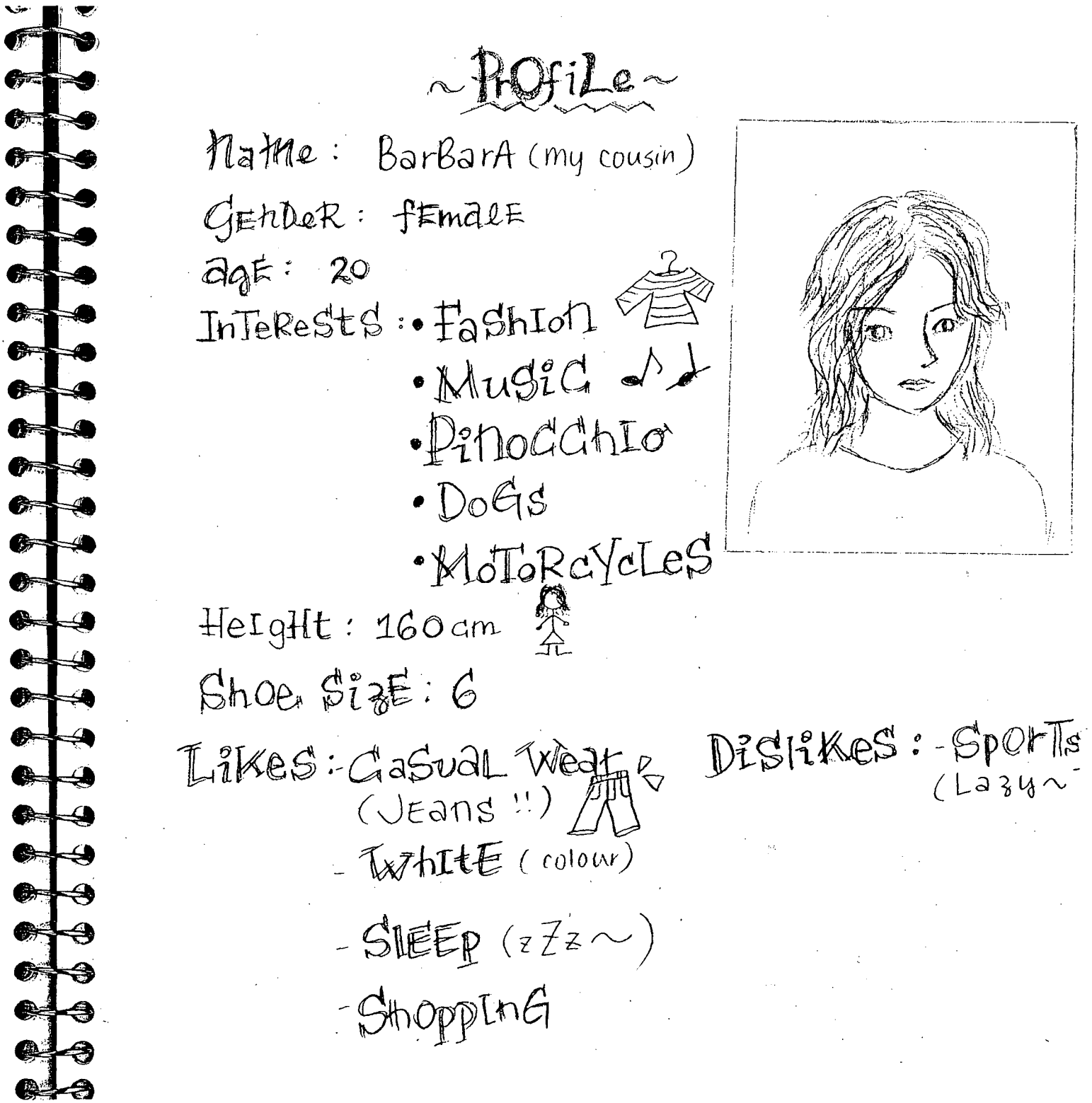


Figure 137. Profile of an intended recipient.

It is important to consider what are the functions of a chair, what comforts can it provide; what qualities can a chair have, what characteristics must a chair have? What constituent parts might a chair have?

The history of chairs is fascinating. Although I was nervous initially that if we did too much research, only copies would result, this was not borne out in practice.

I ask students to consider several possibilities for their 'client', sketching alternate designs in a simple, diagrammatic way initially, and adding annotations to enrich the expression of their ideas. I have used the green peppers in this instance as well, to introduce or remind students about plan, section and elevation views. Simple axonometric views can be demonstrated as well.

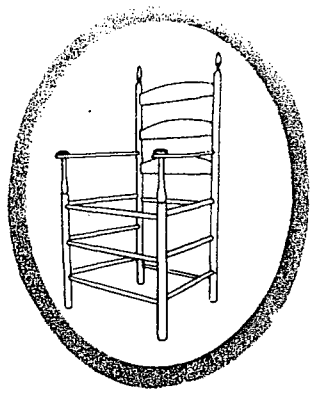


Figure 138. Simple axonometric drawing. (Shaker Shop Drawings)

In order to reinforce the importance of generating alternative solutions, I made this exploration a markable task - so that the design brief and the alternatives, taken together would be valued as highly as the eventually resulting model in students' minds. For example, one could decide to make judgements based upon suitability to the recipient, the energy with which several optional solutions are developed, the imaginative power of the ideas, and the quality of the craftsmanship in the development of the selected idea. This evaluation approach is, of course, always adjustable to reinforce learning goals. Each teacher using these ideas would develop specific learning goals, out of which would naturally fall the marking criteria.

Once students have developed several alternates, they meet the need to do some evaluation of the options, decision

making, basing their choice on the intended recipient of the chair and the buildability of their idea as well. An important consideration is what materials are available for building, and whether we can build successfully with those materials.

I might ask students to make a simple model of the person for whom they are designing the chair, then the chair can be built to the scale of the model person. Students with a mathematical strength like to do the calculation to determine how big the model should be if it is built at scale 1"=1'-0", or in a metric equivalent. One student brought in a Barbie doll to build a chair for. Sometimes students choose to work in groups, and decide to build a chair at full size. Sometimes groups choose to work together to build a very intricate small scale model.

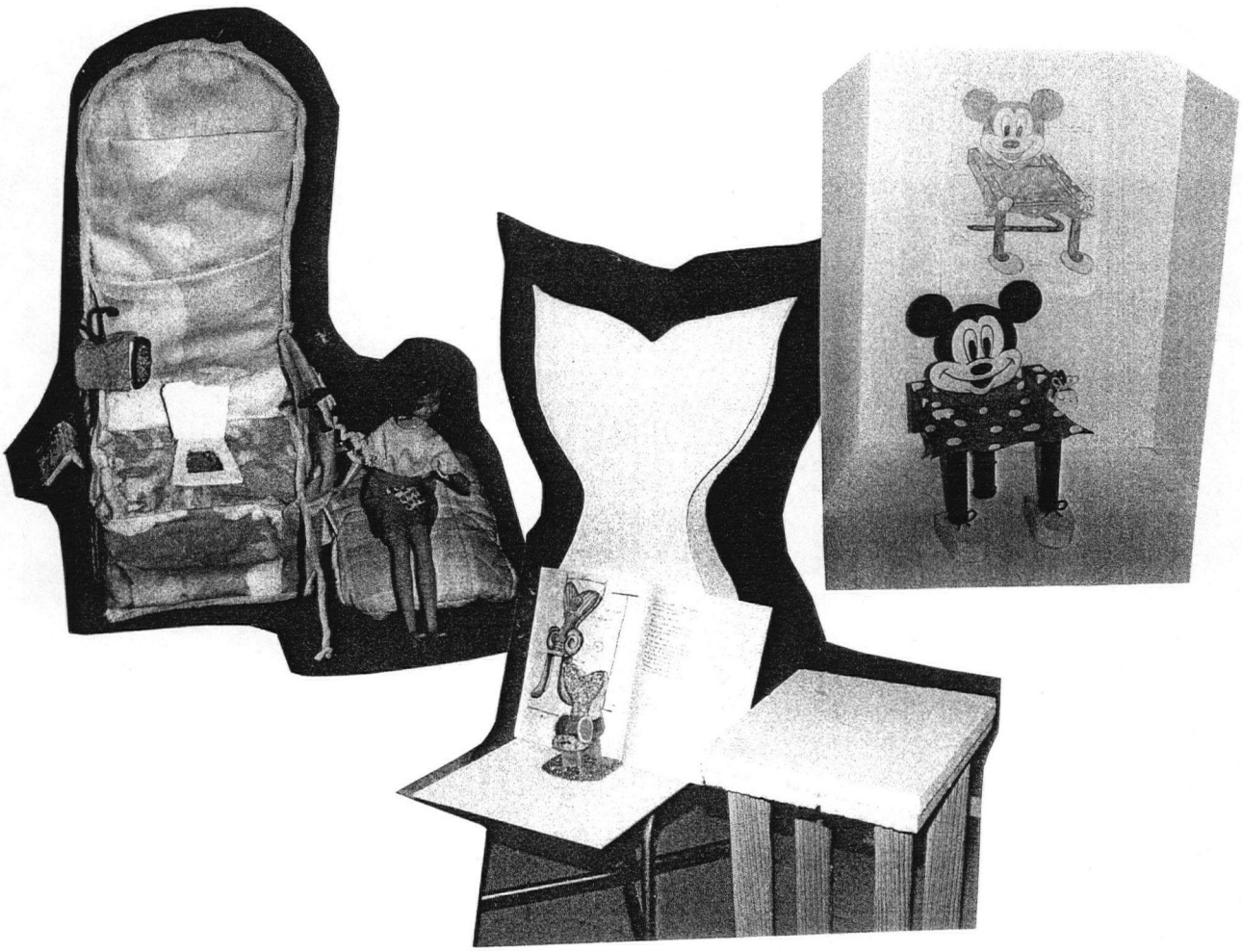


Figure 139. Chairs - Barbie scale, full scale model in progress, toddler scale.

Some simple techniques for model building need to be demonstrated: safety measures for cutting card with blades, gluing, 'nailing' with pins, neat taping practices, reinforcing for strength with card. While most students seem to select to work with cardboard of various thicknesses, some foamcore and some specialty papers from the scrap box, others choose to upholster with cloth, some elect papier mache on a chicken wire base, some choose balsa wood or even collected sticks of various types. Lovely revelations can take place, both about the designed for, and about the designer, as the projects come alive over time in the artroom.

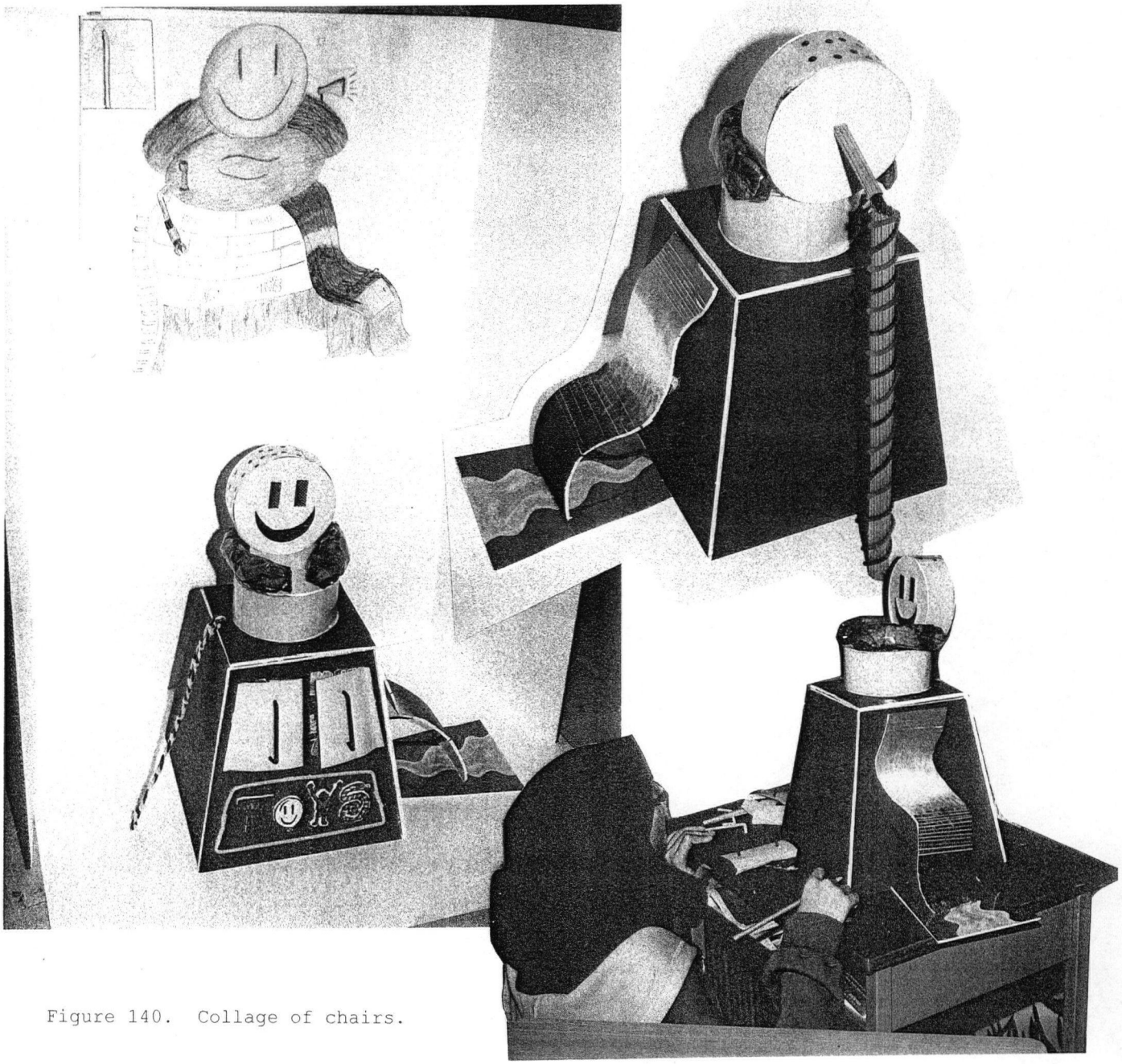


Figure 140. Collage of chairs.

Our class decided to have an art exhibition the first time we tried the chair project. We displayed everyone's work who wished to participate, and it seemed like half the school came trooping through the artroom that day at lunchtime.

Figure 141. Chair exhibition.

Figure 142. More chairs.

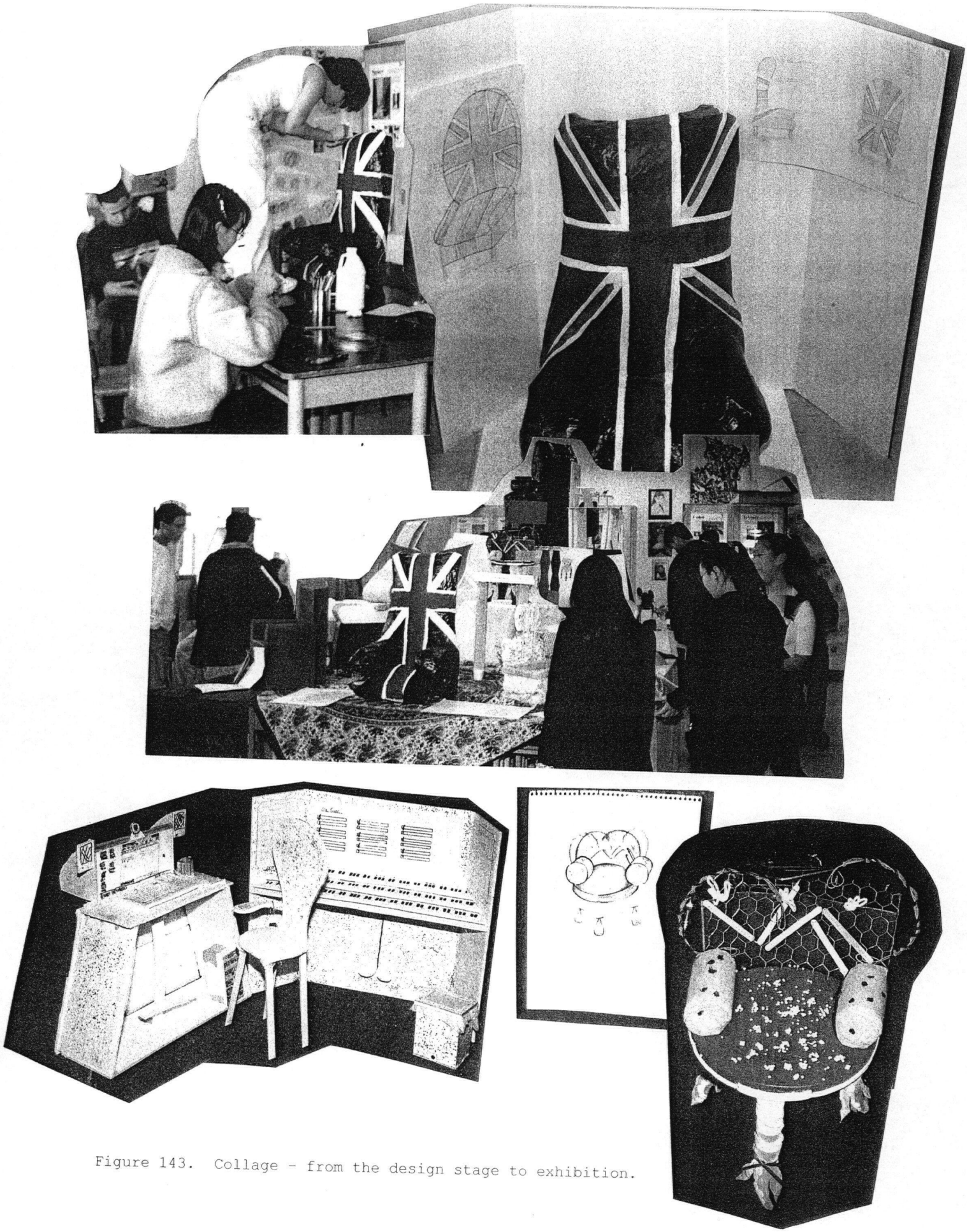


Figure 143. Collage - from the design stage to exhibition.

toys and other gifts

The same general approach can be followed for the design of other products besides chairs. Once a student suggested that we design toys, which turned out very well. Another year we attempted the broader topic of gifts, which for some reason was less successful. Perhaps the topic was so general as to be confusing, perhaps it had to do with the motivation technique I used at that time - though, upon reflection, I was unable to discover what was different about the teachertalk associated with the introduction to the project, perhaps it was just a less eager class.

Figure 144. Toys and gifts.

vehicles

Other design topics classes have addressed using this approach include vehicles - specially designed to accommodate the particular needs of a recipient, and vehicles specially designed with general principles of sustainability first and foremost in mind. The class identified auto emissions as 'unkind to the planet', and some students did research, albeit somewhat limited, to determine what other power sources could be employed for moving about the planet that would be 'kind'. Some of the results were somewhat whimsical, some rooted in real consideration of the pollution issue. I resolved that the next time this topic is introduced, I will make more material available for students to peruse. I have noted that some students in the artroom like to combine scientific research with their artistic explorations.

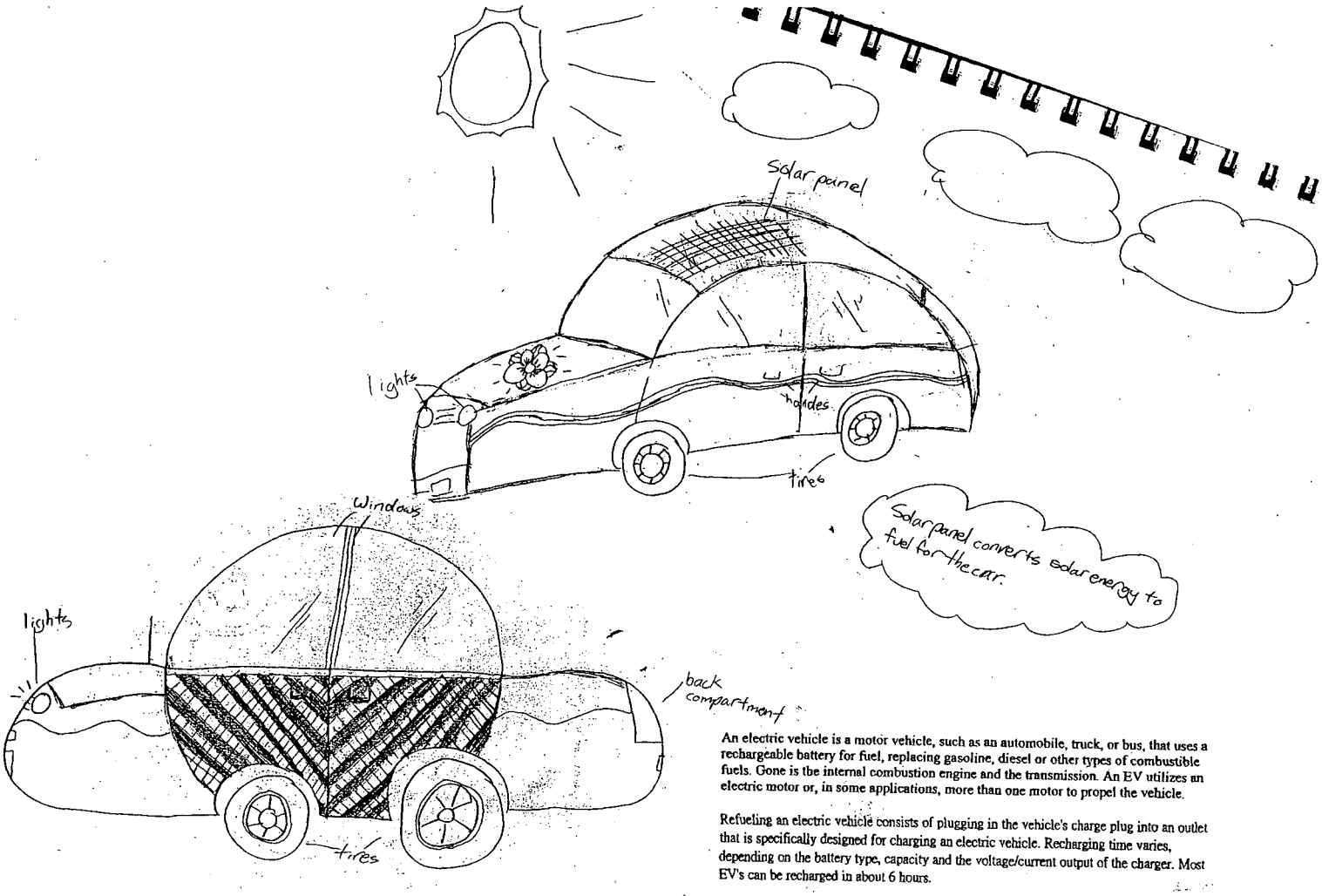
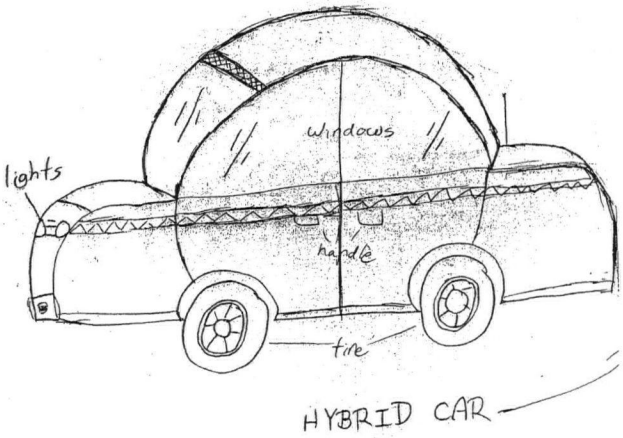


Figure 145. Cars that are kind to the planet.



What Are HEVs?

Hybrid electric vehicles (HEVs) combine the internal combustion engine of a conventional vehicle with the battery and electric motor of an electric vehicle, resulting in twice the fuel economy of conventional vehicles. This combination offers the extended range and rapid refueling that consumers expect from a conventional vehicle, with a significant portion of the energy and environmental benefits of an electric vehicle. The practical benefits of HEVs include improved fuel economy and lower emissions compared to conventional vehicles. The inherent flexibility of HEVs will allow them to be used in a wide range of applications, from personal transportation to commercial hauling.

HEV Advantages

HEVs have several advantages over conventional vehicles:

- Regenerative braking capability helps minimize energy loss and recover the energy used to slow down or stop a vehicle.
- Engines can be sized to accommodate average load, not peak load, which reduces the engine's weight.
- Fuel efficiency is greatly increased (hybrids consume significantly less fuel than vehicles powered by gasoline alone).
- Emissions are greatly decreased.
- HEVs can reduce dependency on fossil fuels because they can run on alternative fuels.
- Special lightweight materials are used to reduce the overall vehicle weight of HEVs.

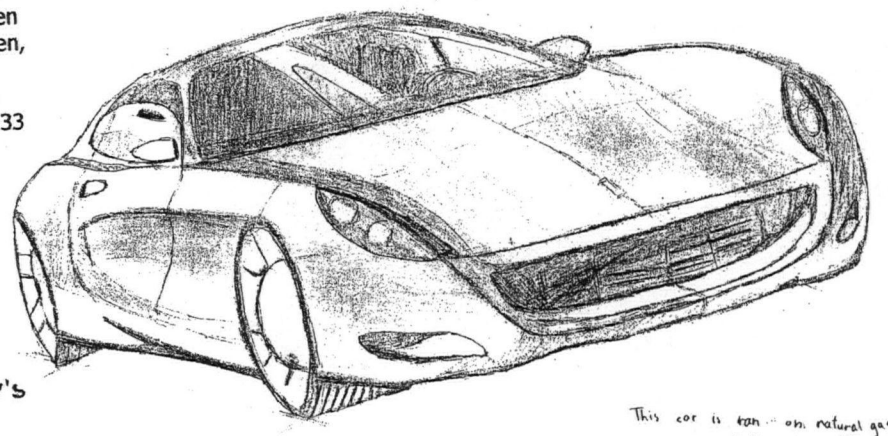
The Hydrogen Highway: Hype or a Happening?

The BMW 745h, powered by a bi-fuel 4.4-liter V-8 has a driving range of about 190 miles on hydrogen, about 600 miles combined. When operating on hydrogen, the engine produces 184 horsepower and has a top speed of 133 mph.

by Larry E. Hall

Three questions everybody wants answered about hydrogen fuel cell vehicles today are: how soon, how good and how much? The answers are: who knows, it's hard to say, and it's anybody's guess.

The fact of the matter is, fuel cell vehicles for general consumption are still years away from showing up in car dealer showrooms. Yes, there are upwards of 125 of these vehicles that are being tested on streets and highways around the globe, including buses, and a delivery van; however, a real world hydrogen fuel cell electric car for everyday driving is still a long way off.



This car is run on natural gas, it can prevent the pollution from getting into the environment. This car can also protect people from getting wet.

Figure 146. Cars that are kind to the planet, and some evidence of research.

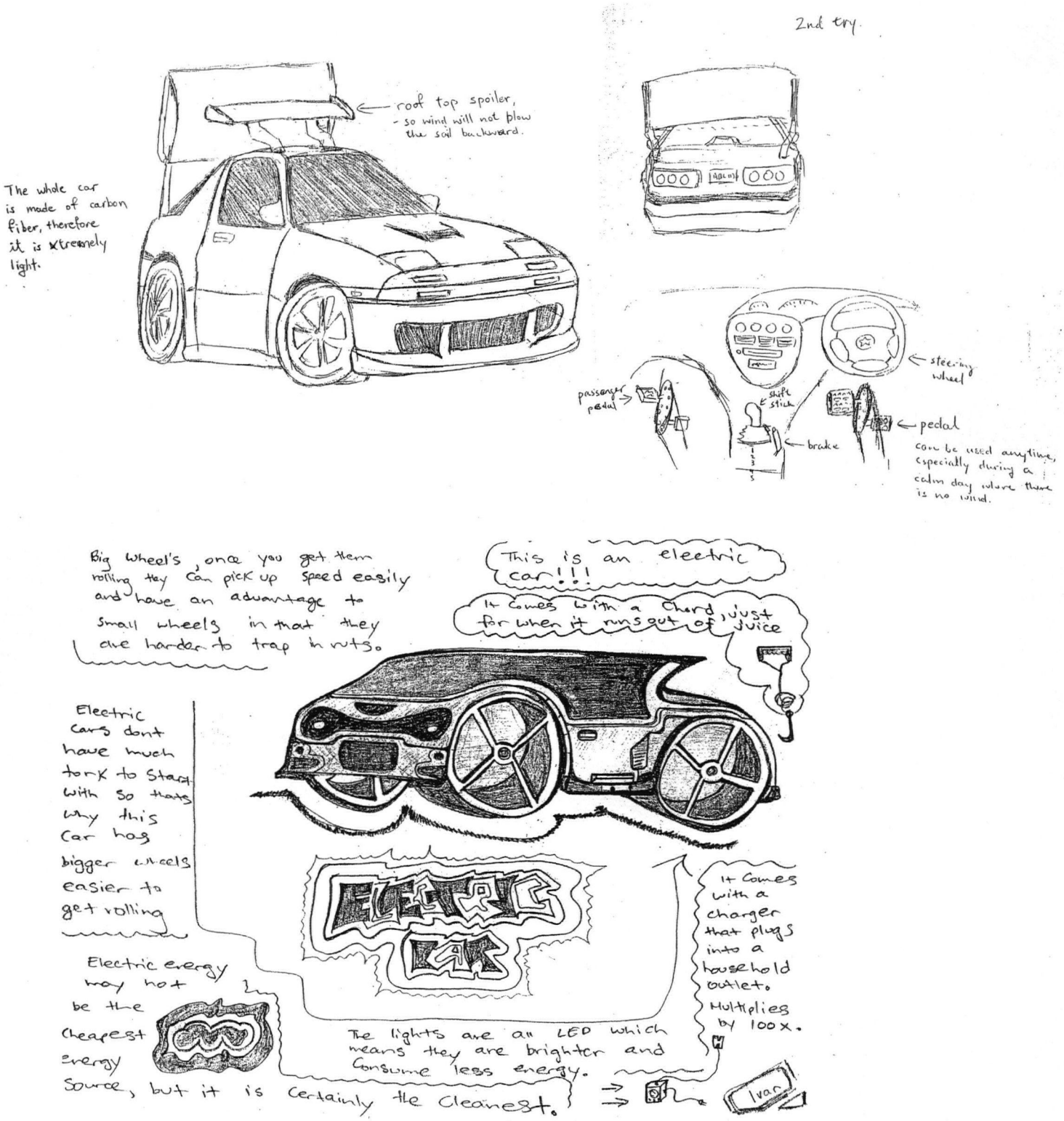


Figure 147. Snazzy eco-cars.

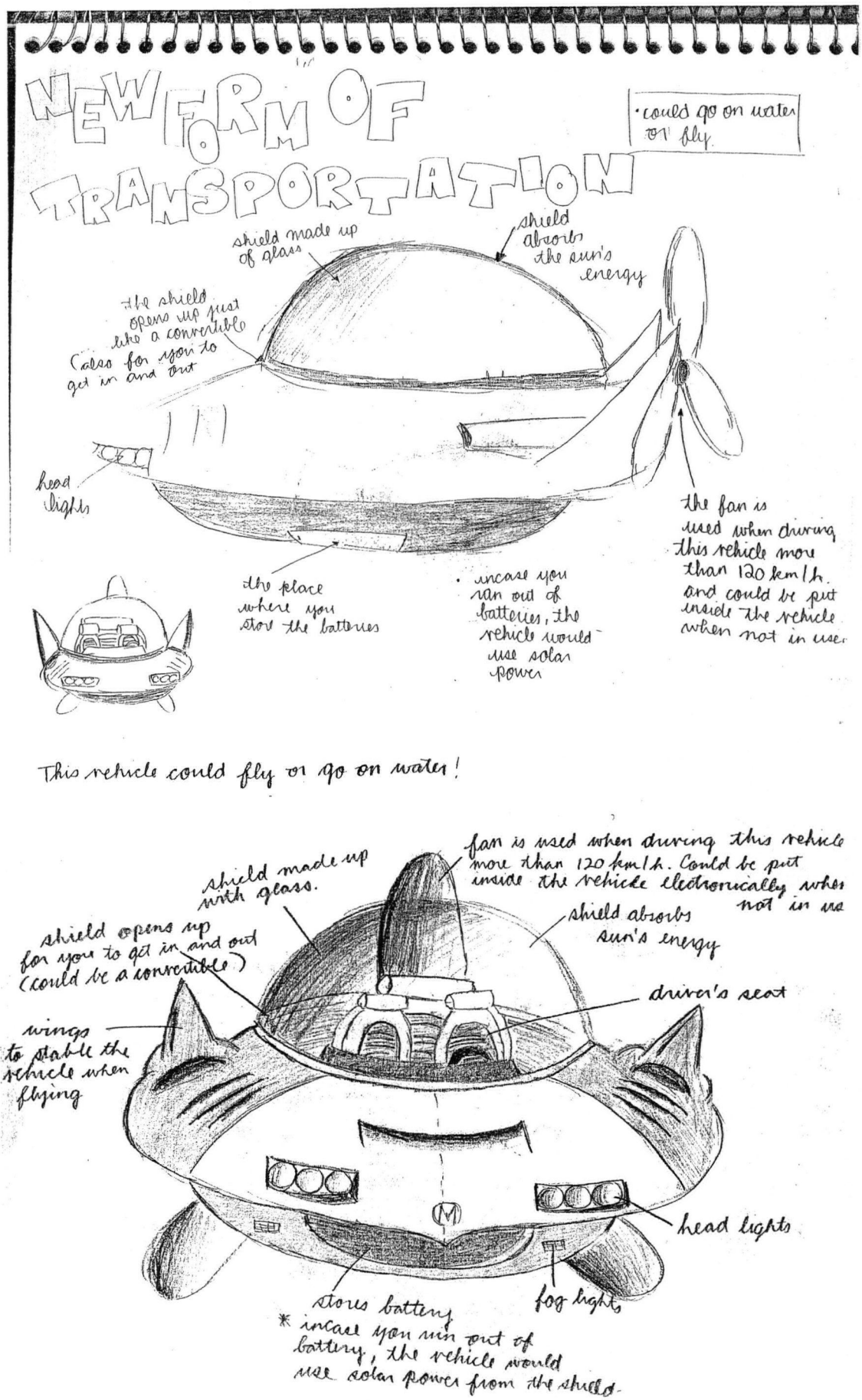
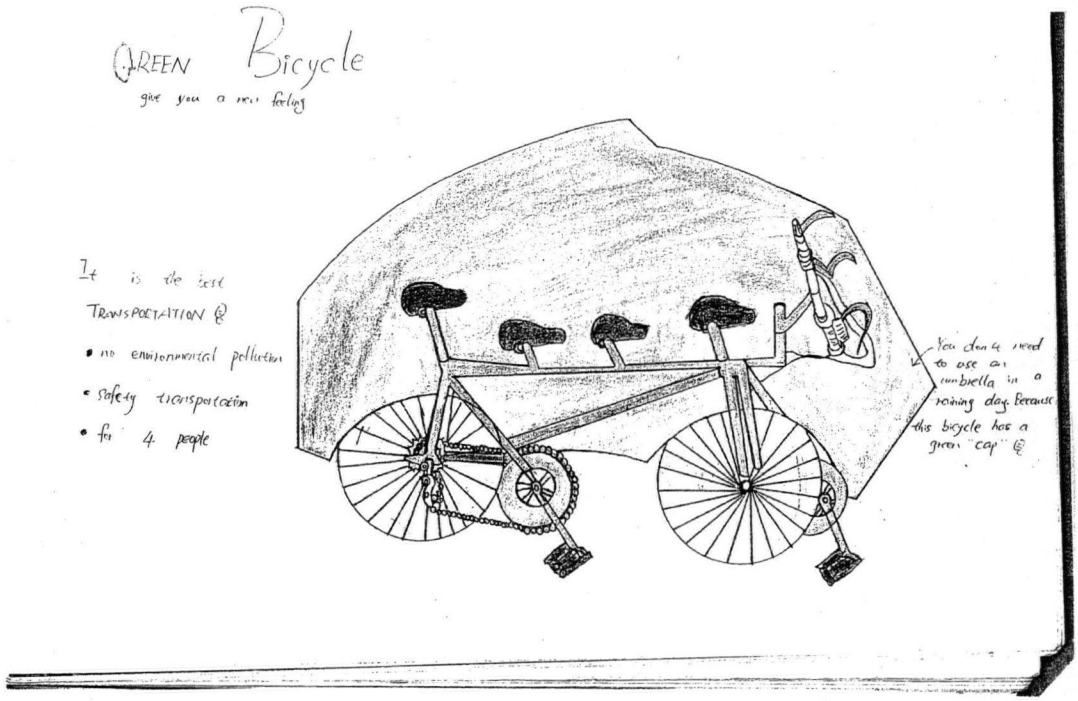


Figure 148. A new form of transportation.



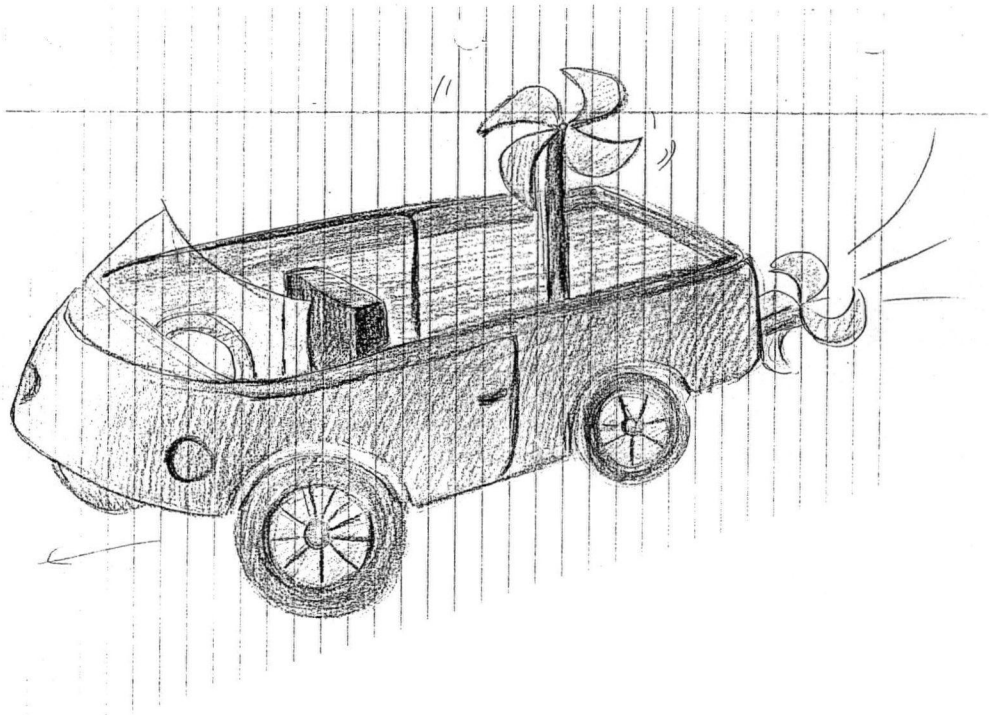


Figure 149. Green bicycle and fantasy car.

other possibilities

Two other topics that might be interesting to explore using this approach occur to me. Students might like to investigate the design possibilities of birdhouses and doghouses. I have over time collected some lovely examples of both:

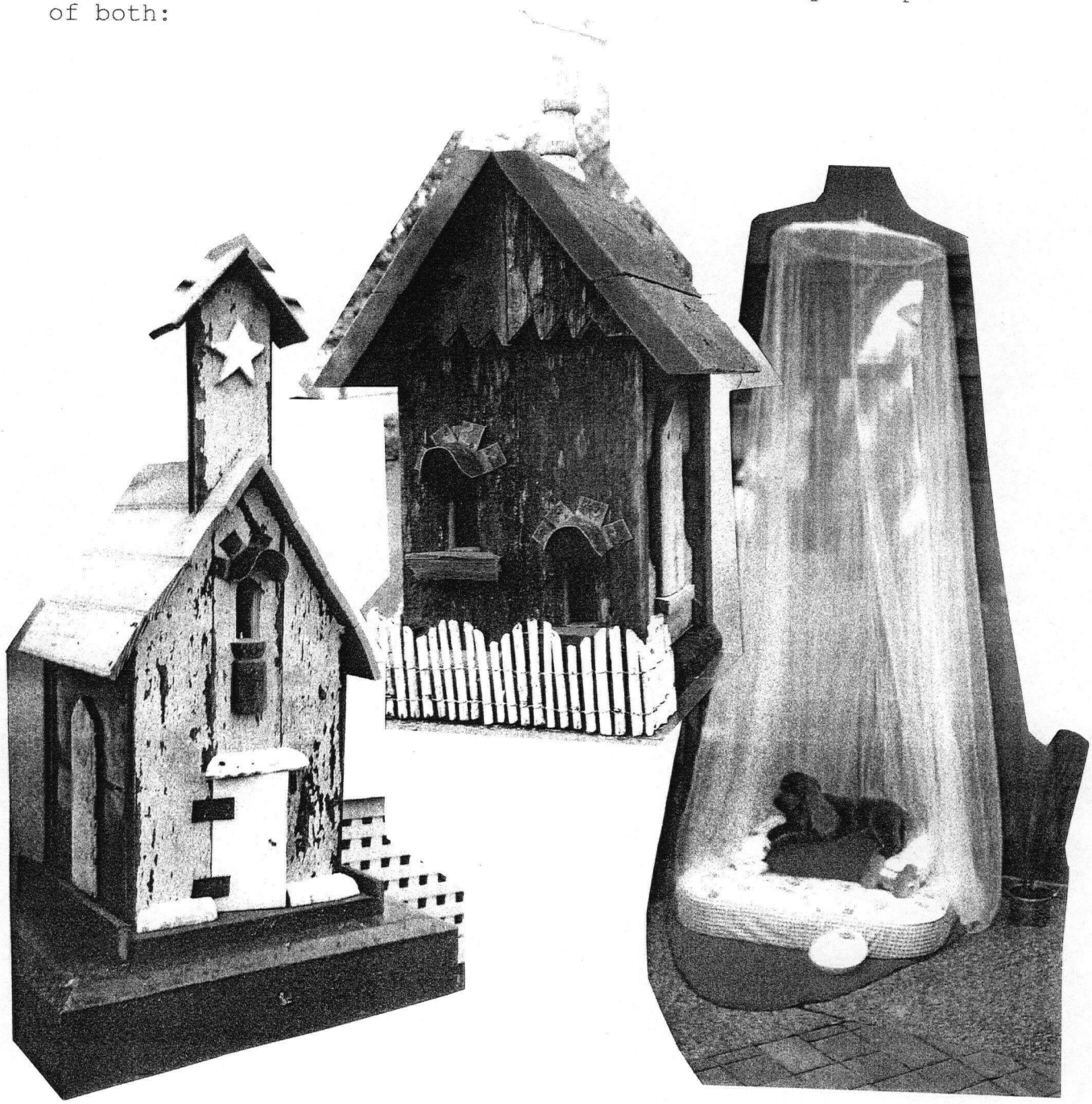
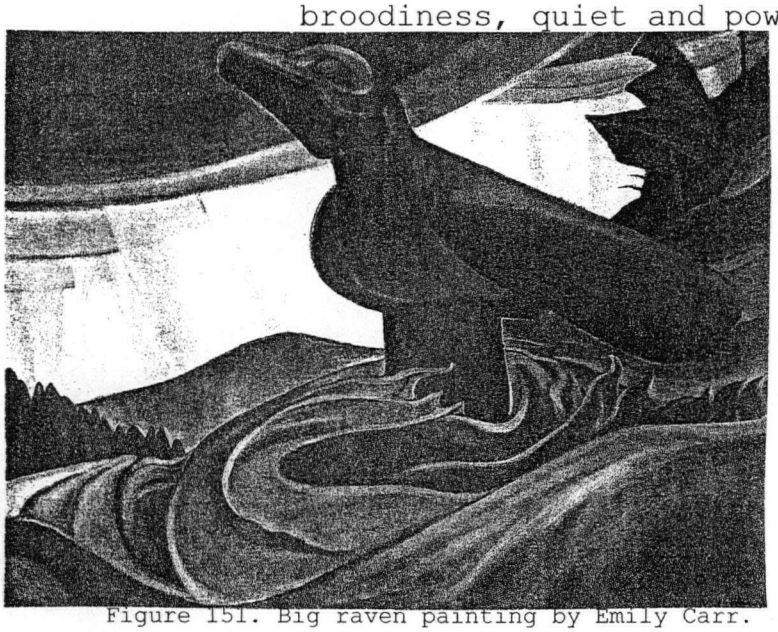


Figure 150. Pennsylvania birdhouses and the 'barkitecture' competition, Vancouver, summer 2003

10. travel to make art

Put in a good day's painting below the skin. Got the Cumshewa big bird well disposed on canvas. The great bird is on a post in tangled growth, a distant mountain below and a lowering, heavy sky and one pine tree. I want to bring great loneliness to this canvas and a haunting broodiness, quiet and powerful.



Emily Carr Hundreds and Thousands: The Journals of an Artist

Figure 151. Big raven painting by Emily Carr.

learning experience links

3R's: Receive, Respond to particular requirements, component of Social Responsibility built into the vehicle.

Educative Value: Problem solving, verbal linguistic skills, transmit modelling and painting techniques.

Connection to Architectural/Art themes: drawing and painting of context, phenomenological observation and connection of form to context, design process, sustainable transport an option to be explored.

After the rich museum based exhibition honouring Emily Carr at the Royal B.C.Museum in Victoria in 2001 - 2002, I realised that this treasure of our West Coast heritage needed more attention in my art program. I was especially taken with the reconstruction of her practical caravan, in which she lived as she travelled throughout the province. I have noticed in the past that whenever I showed students a photograph of her caravan, they suddenly become very receptive to stories about this remarkable woman, even more than when I show examples of her art.

Figure 152. Photograph of Emily Carr sitting with visitors outside her caravan.

A wealth of resources is available to bring this eccentric artist/author/genius, Emily Carr, alive in the minds of students. I would especially recommend the CBC Home Video 'Life and Times - Emily Carr: A Woman of All Sorts'. Emily Carr's life, especially when viewed in the context of the times in which she lived, is inspiring, and provides a model, not only of an energetic and hugely successful approach to painting, but of courage and persistence against strong and unsupportive forces.

Some of my students struggle against similar forces today, particularly in families where art making is not valued and students are pressured away from careers in the arts by parents whose ambitions for their children include other goals. Perhaps some of this explains the immense popularity of Emily Carr with students, especially, it seems, when they find out about the caravan, and Emily's

travels to remote and beautiful locales on her mostly solitary and therefore very courageous, not to mention fruitful, painting expeditions.

Figure 153. Brochure material from the Provincial Museum exhibit.

I decided that this romantic and practical notion of travelling to make art could be translated into an interesting and engaging art project. After familiarising students with the biographical details of Emily Carr's life, I suggested that they could do some dreaming of their own. I asked them to imagine a location they would like to visit - to study, observe closely, sketch and use as inspiration for their art. After selecting a location, I then asked them to consider what mode of transportation/lodging would best meet the needs of their particular choice of venue.

We studied the caravan in some detail - I was able to draw from memory a simple plan of the interior of the caravan, and photographs are available of the exterior, set up as a very efficient campsite. Students then set to work to design for themselves a 'caravan' of some sort in which they could travel throughout the landscape of their choice, and live temporarily, working at their art making.

The results of this prompt were wide-ranging and delightful. Some students wanted to be just like Emily Carr, and designed themselves modern day 'caravans'.

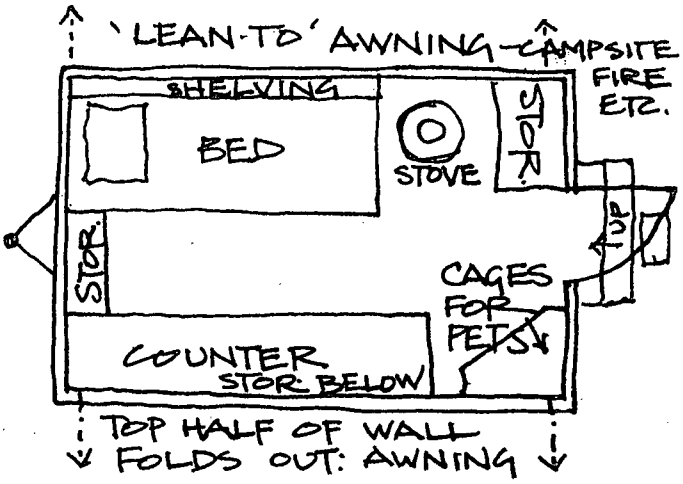


Figure 154. Sketch of Emily Carr's caravan - plan view.

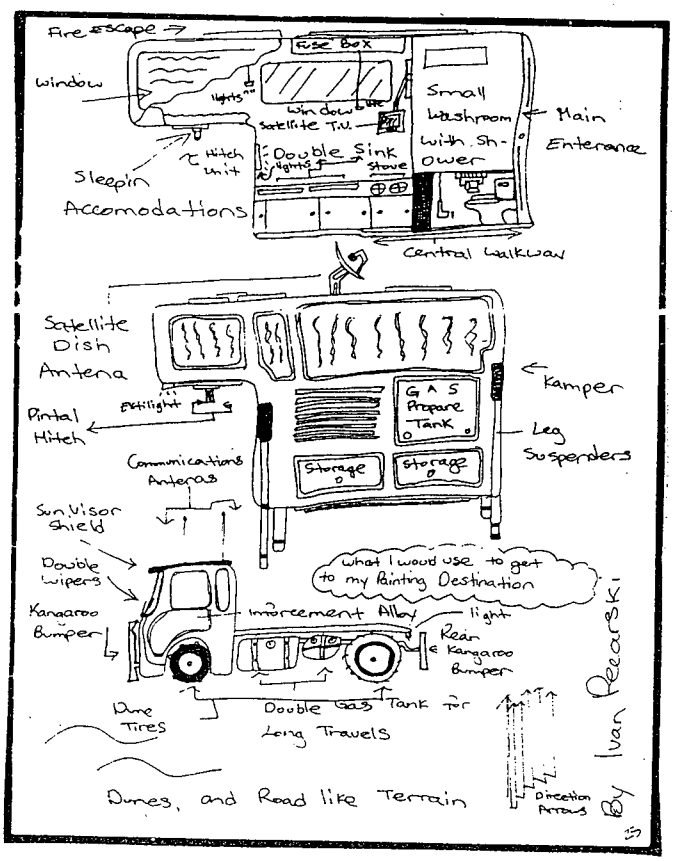


Figure 155. Sketches of a student caravan.

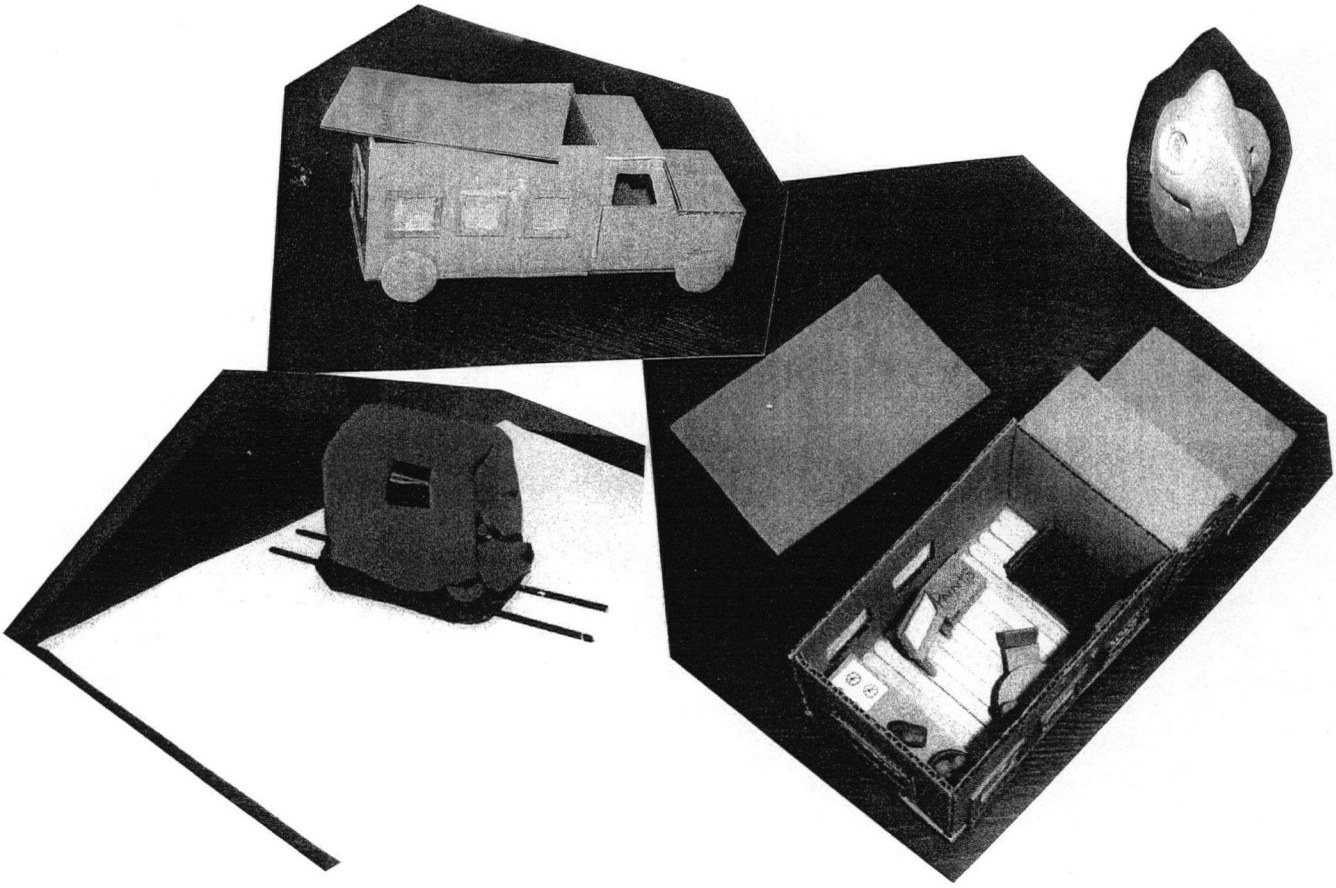


Figure 156. Collection of student models: Caravans.

landscape

I asked the students then to make a painting of the landscape in which they were immersed and again the results were far reaching and varied. It helped this project a great deal that just before it occurred, our classroom received the donation of a full set of National Geographic magazines dating back to the fifties. Students spent a lot of time poring over these photographs, choosing their locations and adapting scenes for their paintings.

Figure 157. Emily Carr landscapes used as motivator.

landscape, viewed through a specially designed window

A variation on this design/landscape theme which I attempted earlier might well be noted here. I asked students to envision a landscape, from memory or imagination. Next, I asked them to imagine themselves looking through a beautiful window, of their own design, at this landscape. The goal was to make a painting that the viewer could look at through the window.

Plenty of books and resources are available in the artroom for the student who wishes to research windows. Manufacturer's product literature is easy to obtain from any company, and there are also plenty of specialty books which focus, say, on handmade doors and windows, stained glass windows, and culturally generated windows that we might not see in the immediate neighbourhood.

There are windows in buildings all around which can be observed and adapted to stimulate the imaginations as well. The landscape and location was expected to inspire the window to some extent, but there was no insistence that the window should be recognisably of a certain contextual style.

Perhaps that might be a way to introduce style in another iteration, but this time I was interested in encouraging the designer to take cues simply from the landscape.

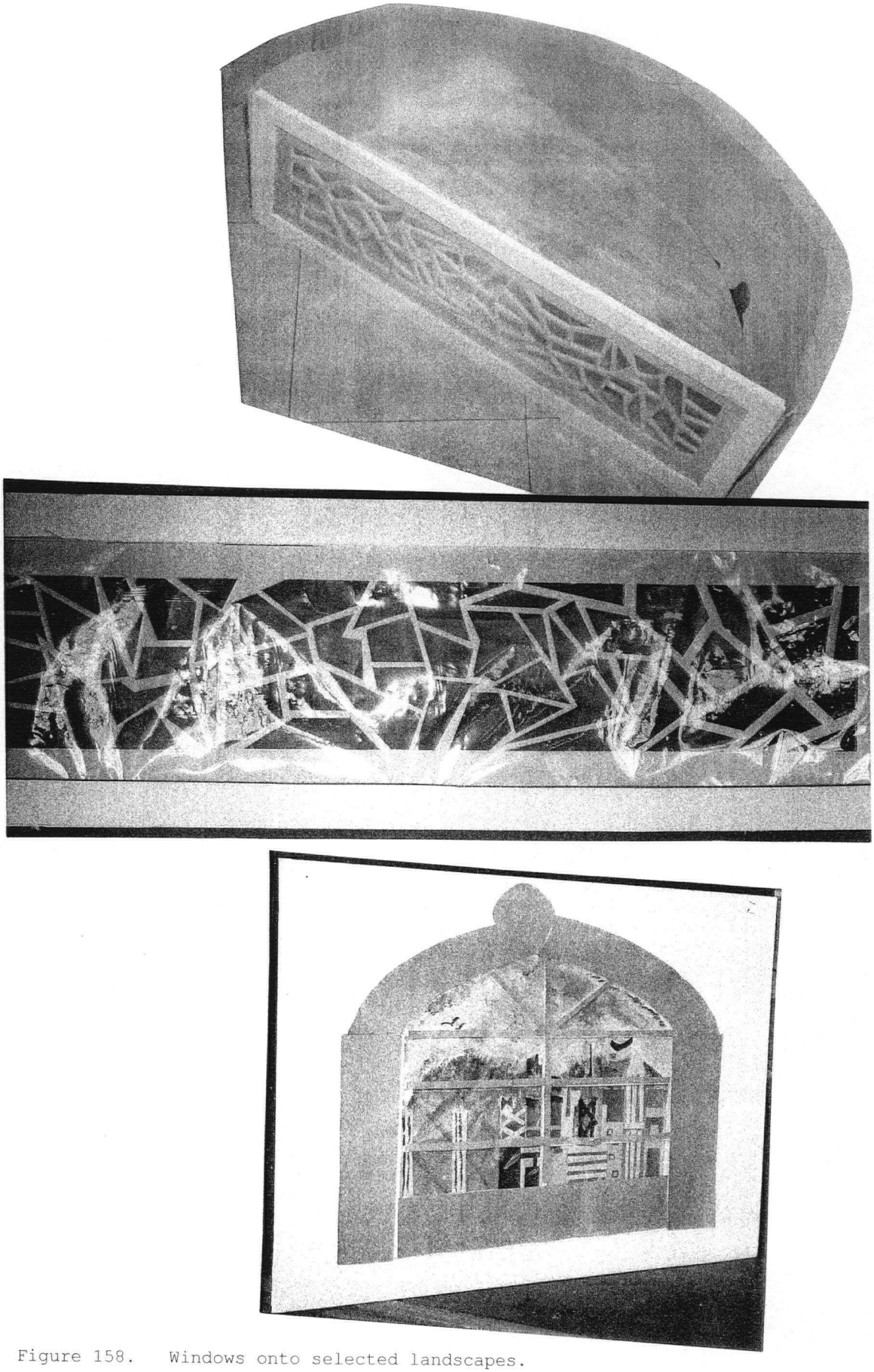


Figure 158. Windows onto selected landscapes.

11. the culture of poverty

learning experience links

3R's: Receive messages of context, Respond to needs appropriately and imaginatively, Social Responsibility.

Educative Value : Social ethical debate - interpersonal and intrapersonal, analytical problem solving, verbal linguistic skills, transmit scale and modelling techniques, transformational possibilities.

Connection to Architectural/Art themes: phenomenological observation and connection of form to requirements of the situation, design process, human sustainability considerations to be explored, community awareness and action.

In a multi-cultural society such as our own, students are often exposed to the artistic expressions of the rich array of ethnic cultures represented in our own. Often students are called upon to make presentations, introducing and documenting their native culture, in my observation, from Kindergarten on up.

There is one culture, also represented in our own Canadian scene, which, I have noticed, is largely ignored in the schools. I am referring to the culture of poverty.

I have seen that when I have introduced and motivated discussions regarding the disadvantaged groups in our country, whether it be in English classes, in Theory of Knowledge discussions (Philosophy), or in the Art studio, students are interested and pretty much immediately engaged in the issue. They are eager to understand why this group exists in our affluent society, and to consider what can be done to respond to this societal problem.

I start with questioning students about their knowledge of the disadvantaged and homeless population in our communities - what have they seen, what have they thought, felt, observed, speculated. Almost every student has an experience to relate, much to say.

I might show any sort of current documentation I can locate at the time in the local media, and I have collected a wealth of news clippings and journal articles over the years. Videos, such as the Blue Lens series and other documentaries, can supplement the information base. I have also collected a few short stories that engage the attention of students in the art studio as well as in the academic setting. Poems about the Downtown Eastside, particularly some of the powerful works of such poets as Bud Osborne, or the journal writings collected by Sheila Baxter, evoke some strong responses in students. And there are drawings, paintings and photographs easily located and obtained. This year in the art class, I asked students to locate some materials themselves and bring them to class.

(I will admit I offered a few marks to encourage the research initiative, but in this case the means perhaps justified the end - they arrived with more material than I have seen them collect in other years. Somehow this business of research in the art class needs special promotion.)

We made a huge collage of news clippings, downloaded images, copies of photographs and other assorted background material, to which we referred often in ensuing discussions.

After I was assured that there was sufficient grist for the mill, I introduced the first assignment in the series of learning experiences hereafter to be called the 'Homeless Project'. I asked students to visualise a homeless person, real or imagined, and to think through how that person might spend a 24 hour period of time. I asked students to consider the basic human needs, which we listed, and to imagine how the homeless person might manage to meet those needs.

I stopped short of asking them to find out about the Hierarchy of Needs articulated by Abraham Maslow, a search that has been very successful in some English classes in the past. I know when I am beginning to push my luck in

the artroom. But we constructed together a list similar to Maslow's in some respects.

I gave each student a strip of adding machine paper about two inches wide and two to three feet long, and asked them to illustrate the 24 hour period of their imagined homeless person, starting with them going to bed, and ending with bedtime the next day. Students responded with cartoons or beautifully drawn and coloured descriptions, stories, and some abstract collage type works.

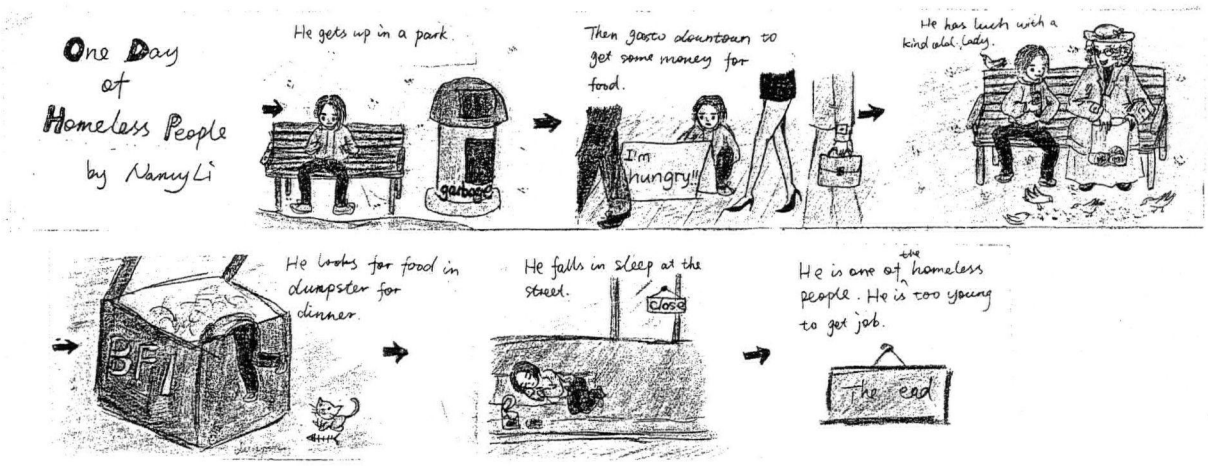


Figure 159. Strips telling the day in a life on the street.

Many of the responses to the above project involved the imagined character staying in a shelter. I found a few drawings of warehouse type shelters and we studied them carefully, trying to determine which, if any, of the basic human needs might be met in such a situation. Some students already knew by this time that people in shelters often sleep with their shoes on to prevent theft, or that if that is still not a sufficient security measure, they might sleep with their shoes under their pillows.
I might also show students the work of some architects directed towards mitigating the circumstances of homeless people such as is discussed in the earlier mentioned article in the Vancouver Sun, by Trevor Boddy, (Chapter 3) regarding the Forsythe/MacAllen innovations like the 'tissue blanket' in the Soft Housing project.

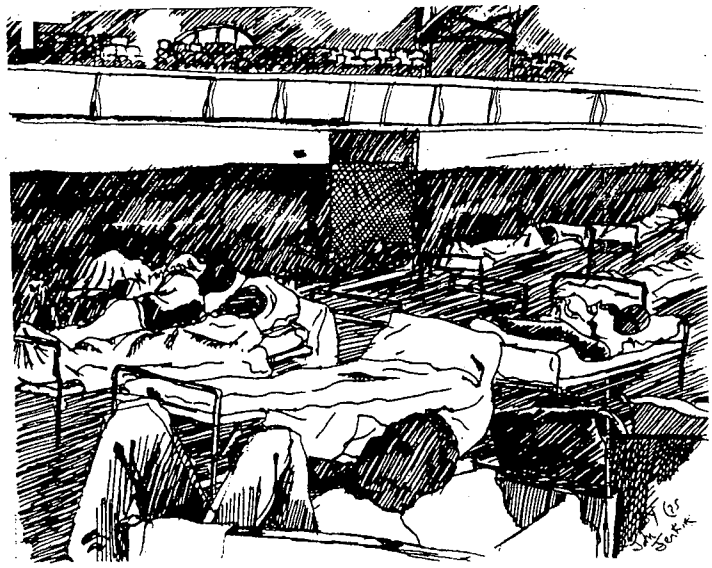


Figure 160. Drawing of beds in a shelter. (AIA)

I asked students to consider what sort of an arrangement we might make in a shelter situation to arrange for some human comfort and to meet some of the basic requirements that we had discussed. Each student was given an 8"x11" sheet of graph paper, at 1'4" inch scale. I asked several students in the class how tall they are, and remarkably, most answered in imperial measure. So we decided that each 1/4"

square would represent one foot in imperial measure, and that the entire sheet would represent a room in a shelter. I had calculated that such a room could contain twenty-four beds with some modicum of comfort, and I asked students to try to plan the room so that twenty-four beds might be thoughtfully accommodated.

Some students struggled with drawing this simple plan for awhile, but it became a satisfying exercise in the end.

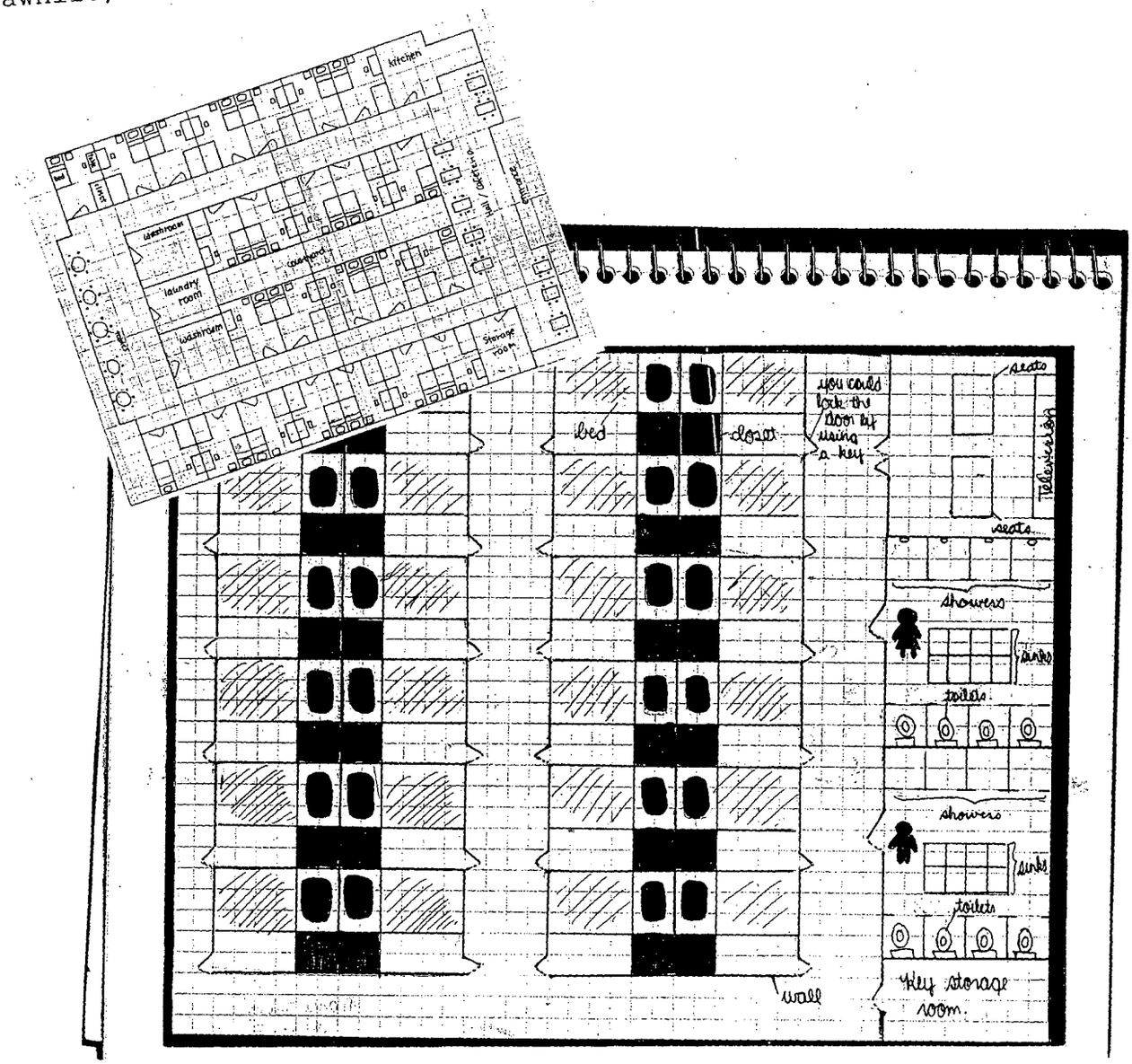
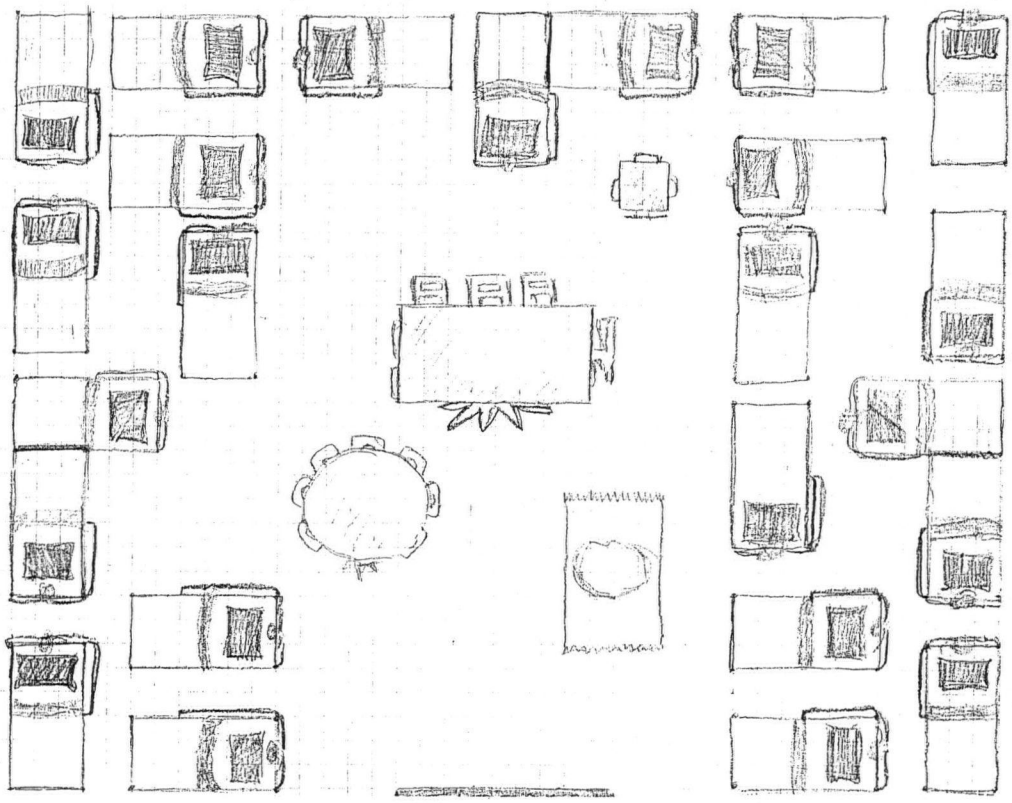


Figure 161. Reduced examples of plan.



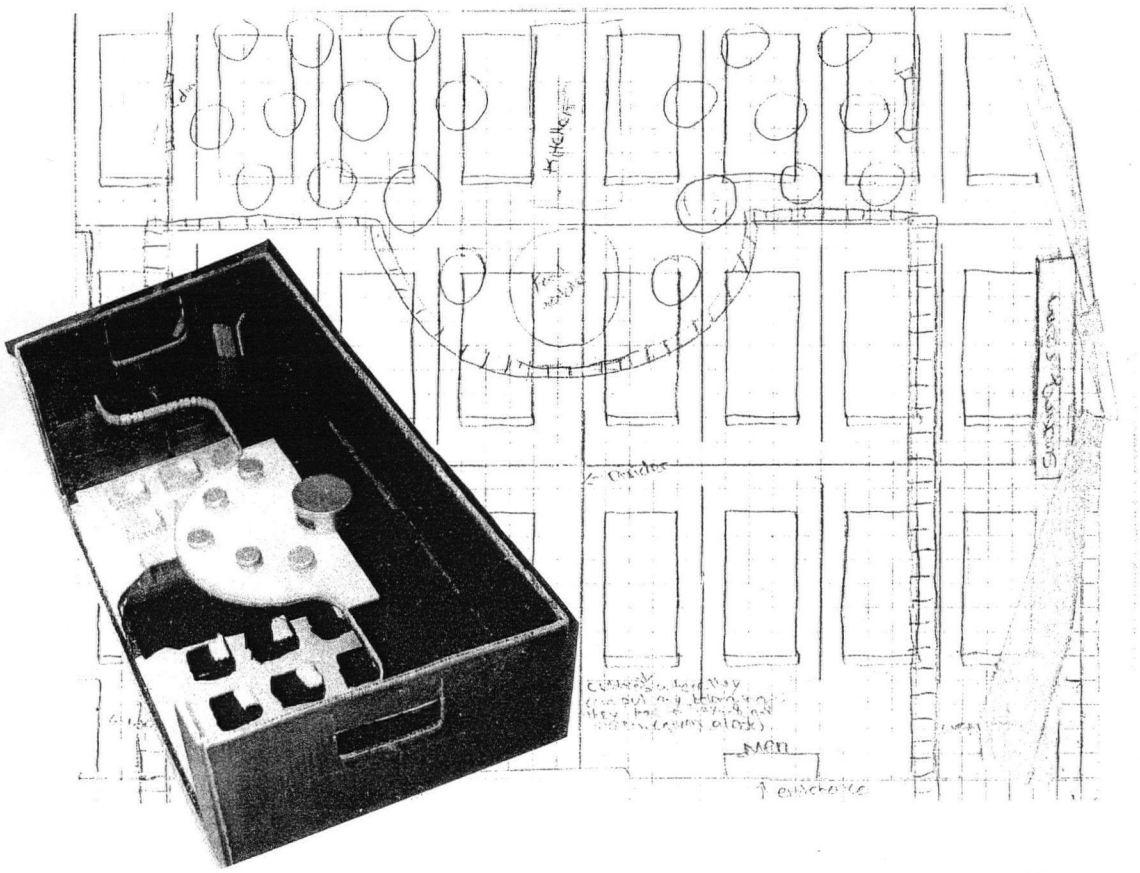


Figure 162. Plans and a model for a shelter - students experimented with stacking beds to provide space for amenities, and one student used tracing paper to consider a mezzanine.

I asked the students as well to consider how a simple bed might be developed to offer some of the comforts of home, at least on a rudimentary level. The bed-arrangement was to be drawn at a larger scale, in elevation, section if necessary, and if possible, in the axonometric view. The results were thoughtful and sensitive throughout the class.

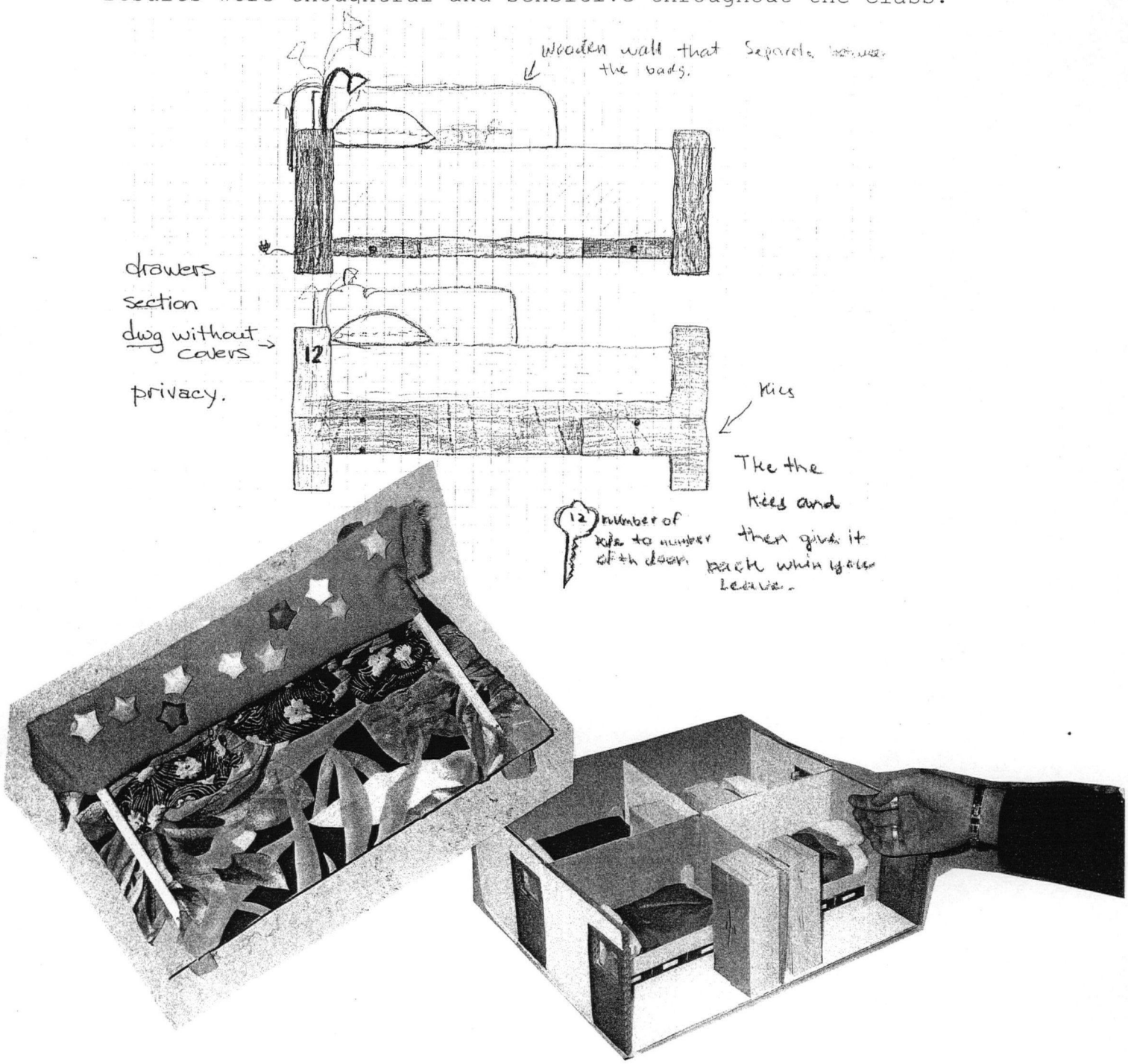


Figure 163. Designs for shelter beds: drawings and models.

It is important to understand that the Vancouver-Richmond area can no longer accommodate all the people who need shelter in this region, especially in winter. We read a news story, published in the winter of 2003-2004, which told how the staff at the shelter had to lock the doors securely at night - not to keep people in, but to keep people out, after all the beds were filled.

A graphic description was included in the news article of people outside, knocking and scratching at the doors of the shelters, trying to get in out of the cold. The next part of the project thus became the design of something that might make a person's life easier who had no choice but to live out of doors, again especially in cold weather. A wide range of responses was generated, drawn in section and elevation or axonometric view; some ideas were very thoughtful and appropriate.

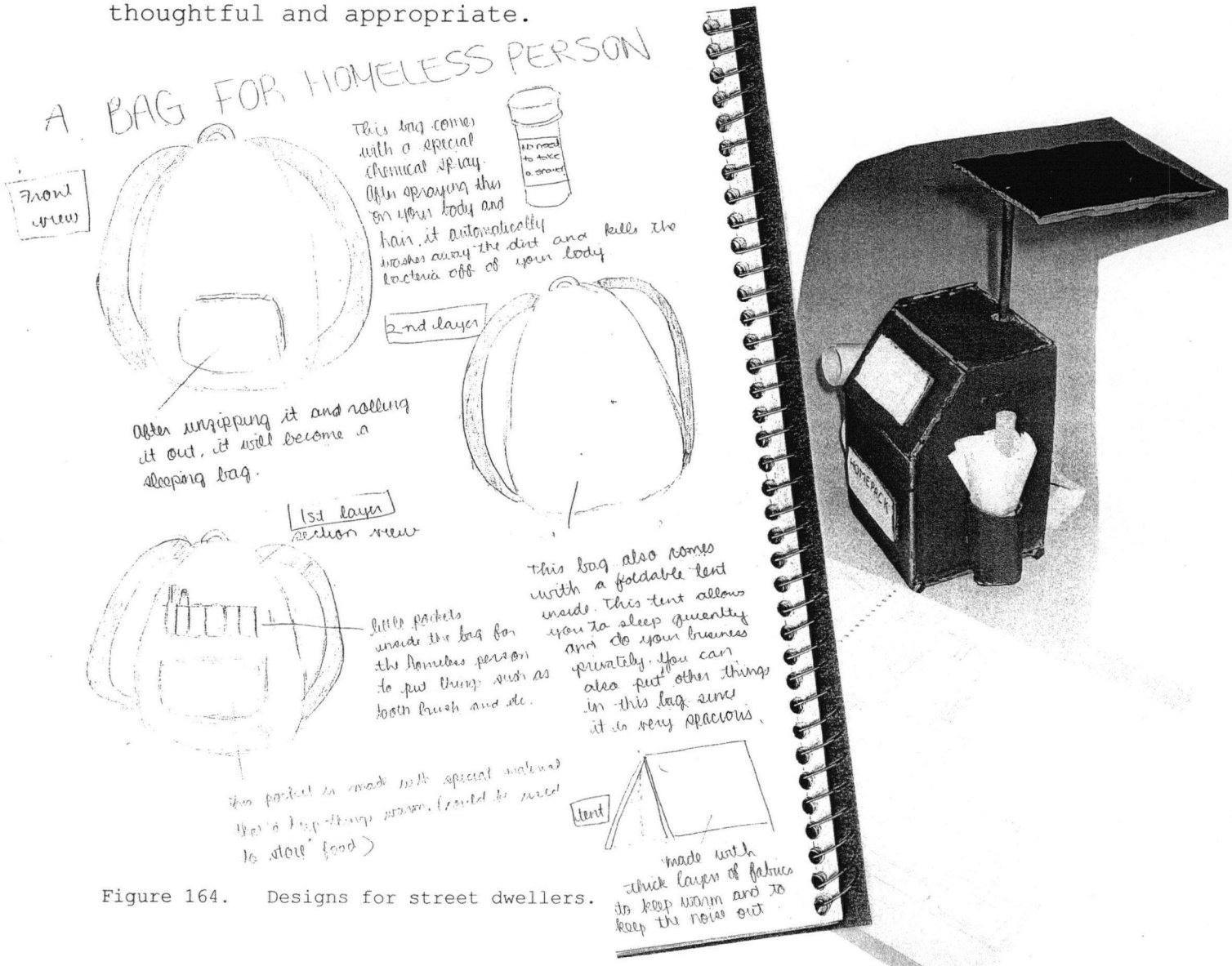


Figure 164. Designs for street dwellers.

I asked students to choose their strongest design idea generated in the previous two sketch exercises, and to make a model at a scale appropriate to the nature of the project. They were to make a clay or cardboard model of their homeless person first, so the relative scale of the model could be fitted to the person.

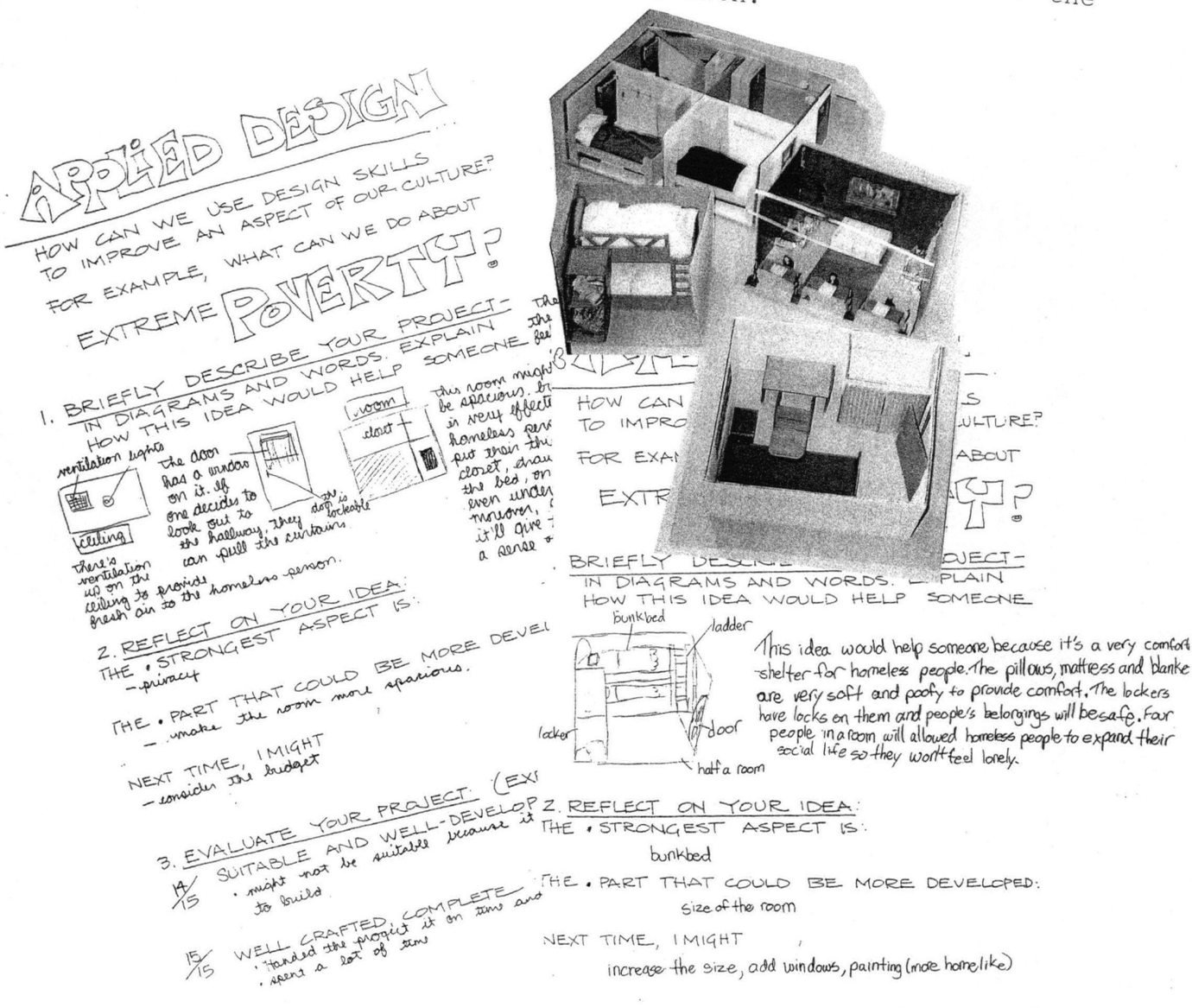


Figure 165. Worksheets and models of ideas.

The next aspect of the project might be to consider what sort of home a person who has been living on the street might want. The debate rages in the Downtown Eastside of Vancouver whether the provision of very small studio apartments is a humane gesture or simply perpetuates the substandard living conditions of the disadvantaged. Some social housing advocates insist that apartments must be a minimum of 400 square feet. Students are interested in this debate and offer well-considered opinions. In another iteration, I would extend this project one more step: to consider and design a dwelling space that might ideally meet the needs of the original homeless person envisioned in the 'day in the life of...' exercise.

global perspectives on sharing

I have introduced the Global Perspectives program earlier in this document. The participants identify and respond to a need in a different disadvantaged or stressed community somewhere on the globe each year. Students enroll in the course, called Global Perspectives 12, and commit to fundraising and learning about the country of concern throughout the course. In March of the school year, the students, usually numbering about twenty, visit the community and help to complete a building project of some type, initiated and enabled by the funds raised.

The art students support this program in any way they can: making models of the building project to help participants understand the building project, advertising with posters where needed, donating art works to the fundraising auction.

In 2003, the Global Perspectives group travelled to Cuba, assisting rural Cuban workers in a small interior town in the construction of a community building near a school, to replace structures flattened by a recent hurricane.

It was a wonderful opportunity for students to see a vernacular building first in plan and then in reality, partially powered by their own energy. The students were grateful for the opportunity to see first hand and to

participate in an actual architectural project. They came away with many new insights, not the least of which was a new appreciation of the energy required to produce built form - particularly in an area where horse-drawn carts were used to move building materials and workers as required.

Figure 166. Students at work on a building in Calimete, Cuba

12. the world trade center

learning experience links

3R's: Receive messages, Respond to situations appropriately and imaginatively, Social Responsibility

Educative Value : Social ethical debate - interpersonal and intrapersonal, analytical problem solving, verbal linguistic skills, transmit scale and modelling techniques, transformational possibilities.

Connection to Architectural/Art themes: phenomenological observation and connection of form to requirements of the situation, design process, human sustainability considerations to be explored, community awareness and action.

After the events of September 11, 2001, I noted that many of my students were quite shaken. I invited them to comment in journal writing activities, and in class discussions, reasoning that if they needed help processing their responses to the events, the more avenues open, the better. Kids seemed relieved to know it was ok to be upset and to share their fears and nightmares. After a certain time had passed, I began to think that some sort of rebuild/recovery response might be helpful, so I initiated a brief project to encourage some possibly healing creativity on the 'ground-zero site'.

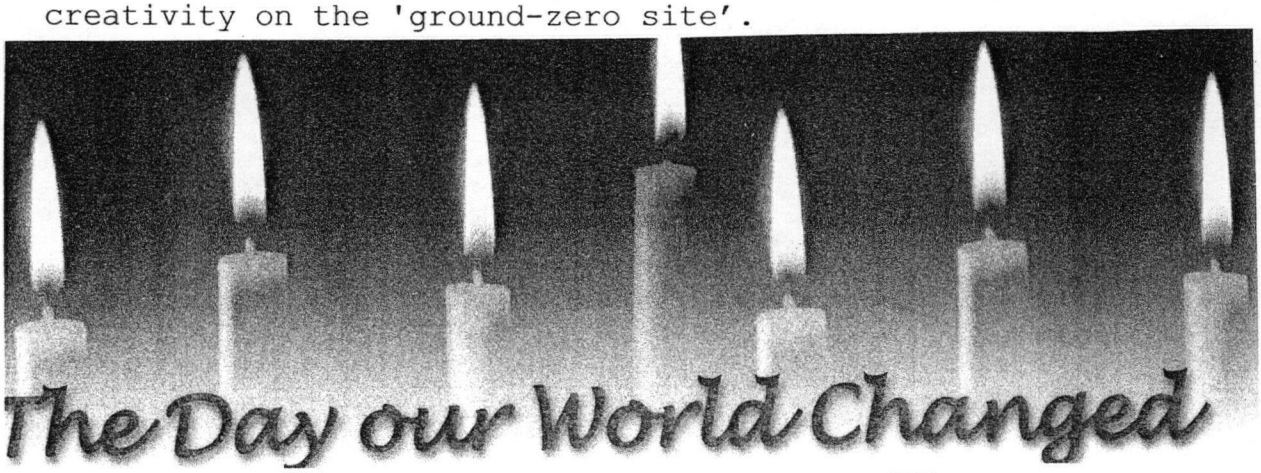


Figure 167. Vancouver School of Theology 'Perspectives' Winter 2001

We started by looking at tall buildings in general. I found a fascinating article in the newspaper which featured a meeting shortly to take place at a seven-star hotel to seek solutions to world poverty. Nelson Mandela, Bill Clinton, and Bill Gates were slated to make the opening speeches, and the guests included many heads of state and luminaries. The irony of this discussion taking place in a hotel in which suites cost upwards of $10,000 Cdn. per night was not lost on my students, and they were definitely interested in speculating about this building - the world's tallest hotel.

WORLD

Elite to meet at $10,000-a-night Arabian hotel to solve poverty

World leaders and celebrities will gather for three days this fall at seven-star hotel

LONDON — The world's first seven-star hotel will play host to some of the world's most influential figures in a unique attempt to thrash out a solution to global poverty.

World leaders, scientific pioneers, billionaires and music superstars have answered the call from the crown prince of Dubai to a luxurious summit by the Arabian Sea.

Bill Gates, Bill Clinton and Nelson Mandela will make opening speeches at the Burj al-Arab hotel, where diners take a submarine to the restaurant and suites cost more than $10,000 Cdn a night.

Michael Jackson and Rod Stewart will perform at the October gathering as an added incentive for the dignitaries, which it is hoped will include Tony Blair and U.S. President George W. Bush, to lift billions of children from poverty.

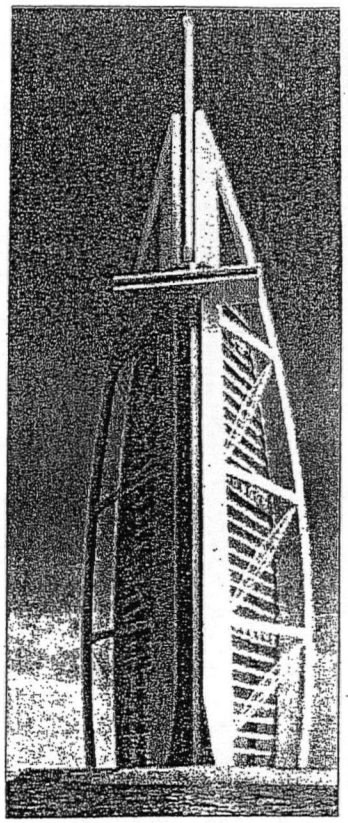
The Business Leaders Forum is supporting the event and an invitation has been extended to the Prince of Wales, its president. Prince William and Prince Harry have also been invited to join a celebrity polo match.

Organizers hope to raise millions for UNICEF and the Nelson Mandela Children's Fund by broadcasting the all-star concert, held on a beach, on satellite and the Internet.

Kofi Annan, the UN secretary-general, is expected to sit at the top table with James Wolfensohn, president of the World Bank, and Michael Moore, the director-general of the World Trade Organization. Richard Holbrooke, the American diplomat who masterminded the Bosnian peace accord, will be on hand to steer the participants through any tricky negotiations at the three-day event.

The Burj al-Arab is the world's tallest hotel and contains only suites. Visitors arrive by Rolls-Royce or helicopter.

The Daily Telegraph



Some of the most influential people in the world will attend an October fund raiser at the Burj al-Arab, the world's tallest and first seven-star hotel.

Figure 168 Reprint of the Daily Telegraph in the Vancouver Sun. (date unknown)

I explained to the students that architects begin their process of designing a building, however complex, by developing a 'program' which takes into account and forms a record of the basic considerations of the project. Decisions are made and data is collected regarding the activities that will unfold in the building, the proposed building users, the types and location and size of the spaces that will make up the building, budget, building typology and the like.

I asked students to speculate about the program for this hotel, and to fill in a very simple chart recording these speculations.

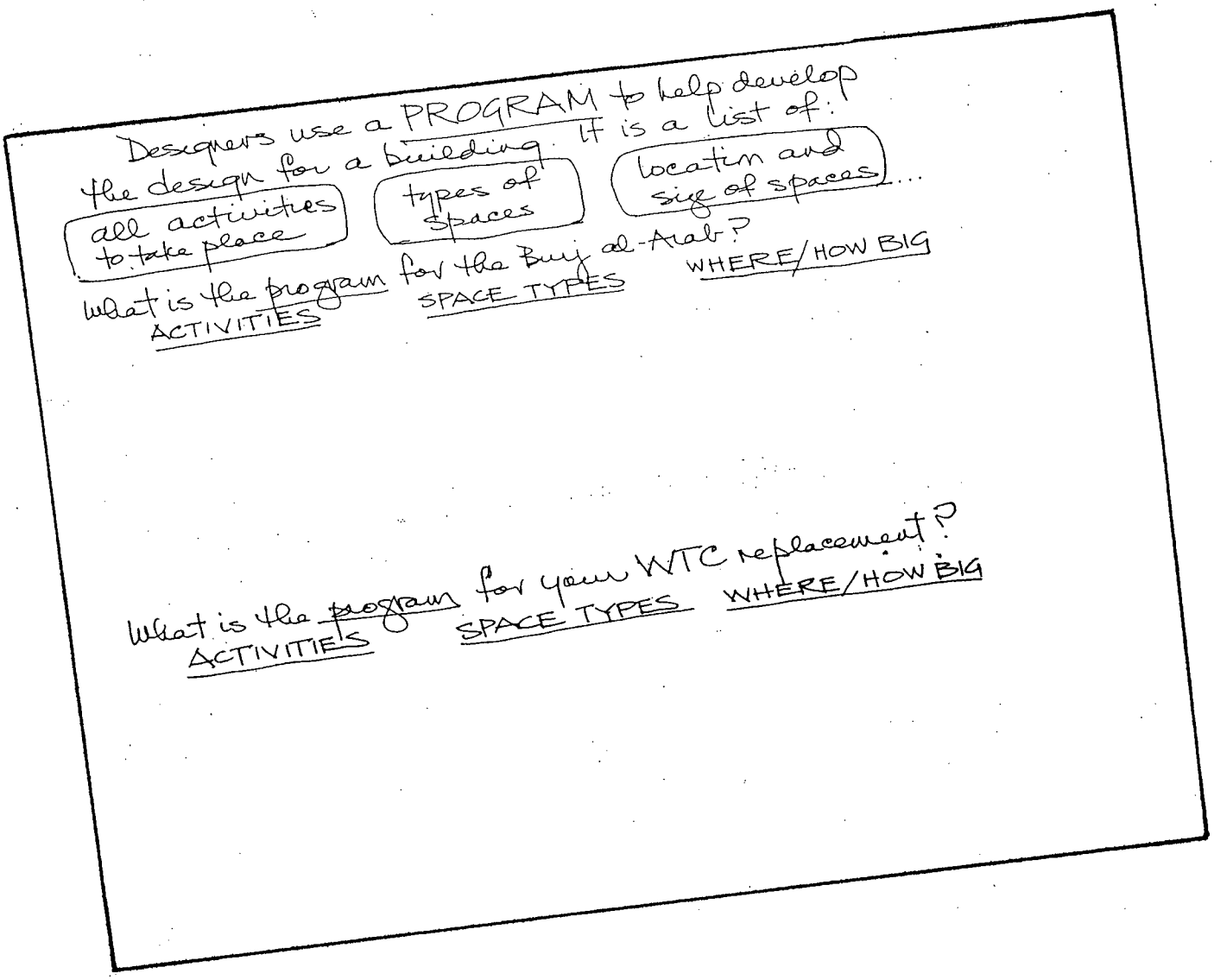


Figure 169. Program sheet.

When we began to discuss what might be done with the site of the former World Trade towers, spirited discussion resulted in the classroom. We addressed questions about whether the towers should simply be replaced as they were arranged initially, or whether something very new and different should be erected on the site. Some students resisted the idea of thinking about the site, stating their view that too much attention had already been paid to this event, however awful it was. Others took a more sentimental view, suggesting that the dead should be memorialised and that monuments to peace and harmony should be erected there. Several students wanted to explore skyscrapers more closely, and to propose that a new, but different sort of skyscraper should be built on the site. One student thought only small scale, very life-affirming projects should be built there: small hospitals, rest homes, daycares, and other community enterprises should be scattered throughout a park.

Those who showed an interest in skyscraper typology and technology studied the profiles of some of the world's tallest buildings, and some went further to research in more depth.

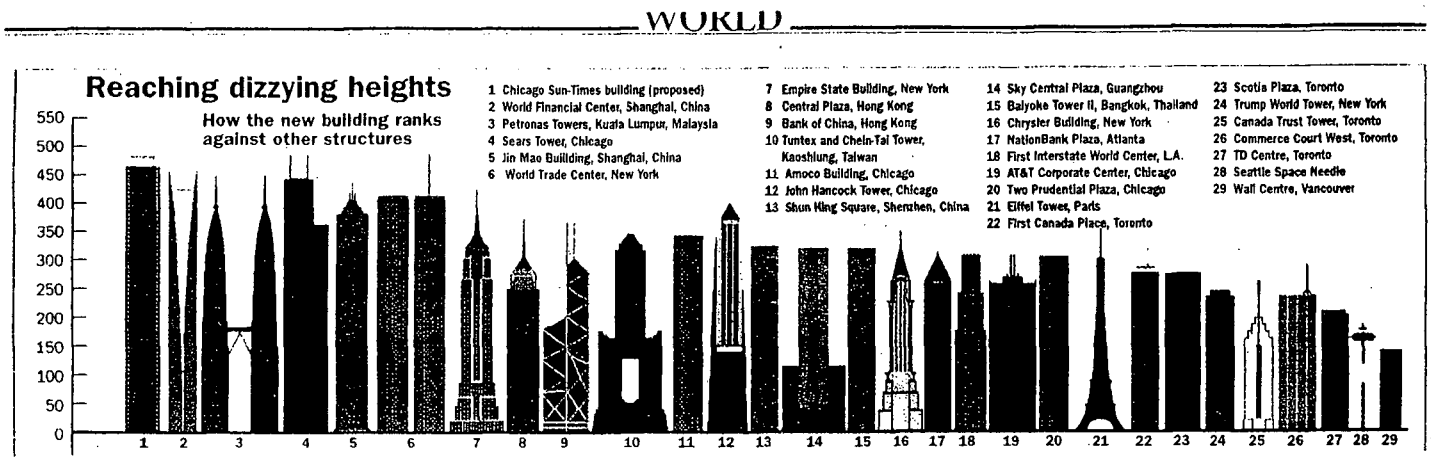


Figure 170. Diagram of skyscraper profiles. (Vancouver Sun, 21 July, 2001)

Some students began to program their own tall buildings, others made a rudimentary program, some simple sketches, and moved to model making. It was the end of the school year, and students were anxious to move into the third

dimension, so we did not spend a lot of time on the design process. But at the year end exhibition, the room was enlivened with a variety of responses to the 911 event, and somehow, things felt a little better on that subject.

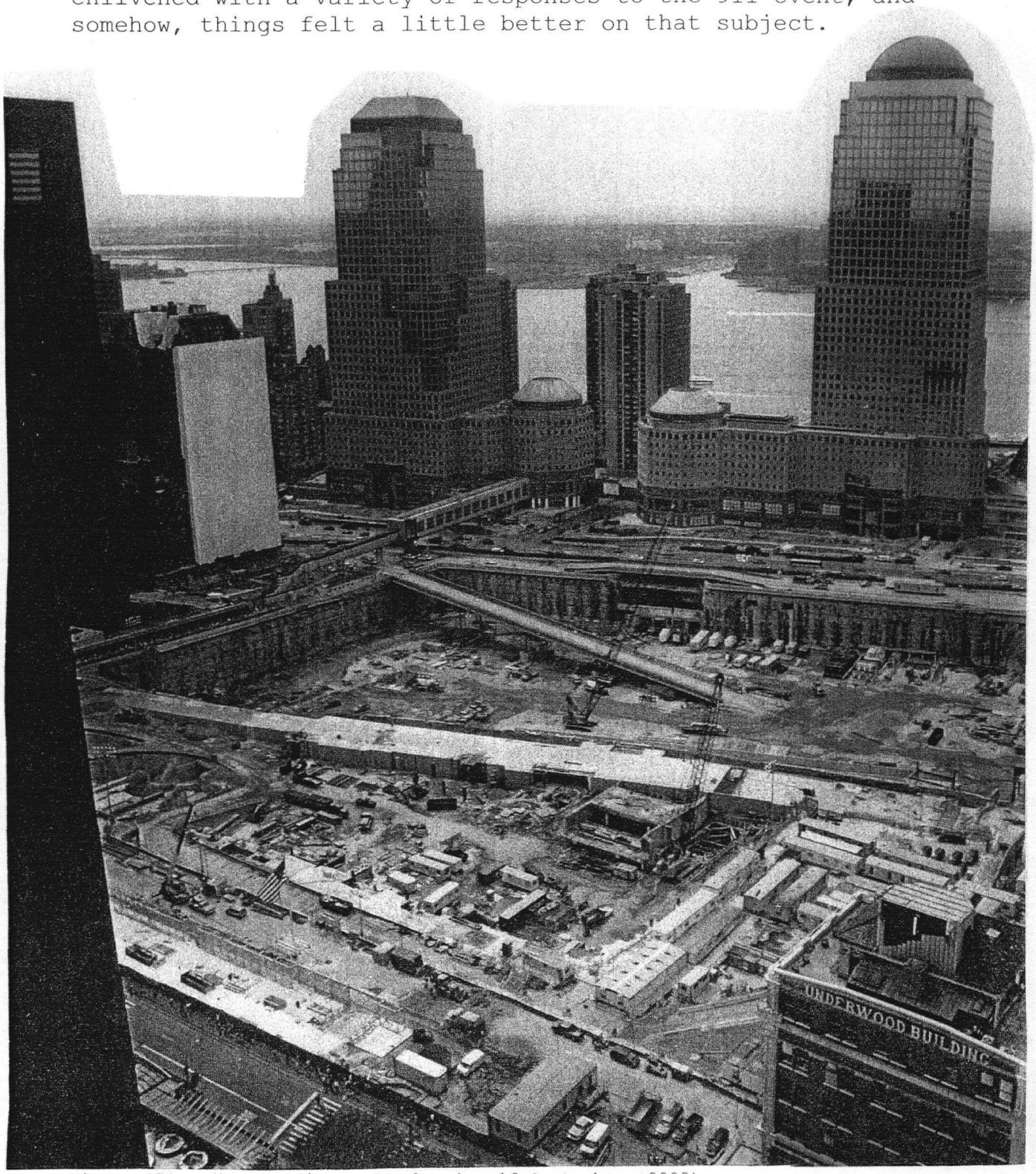


Figure 171. The WTC site (Maclean's 16 September, 2002)

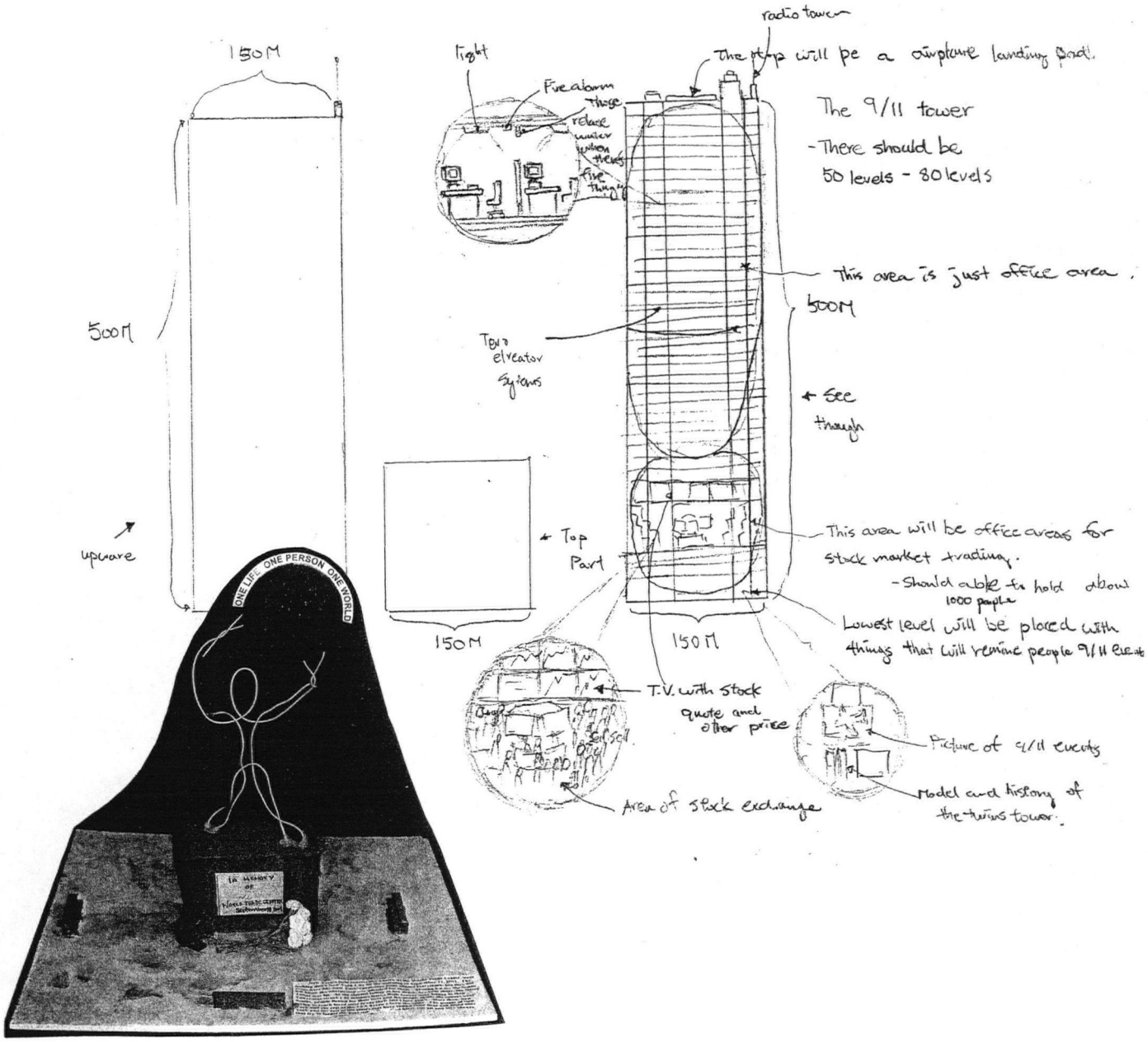
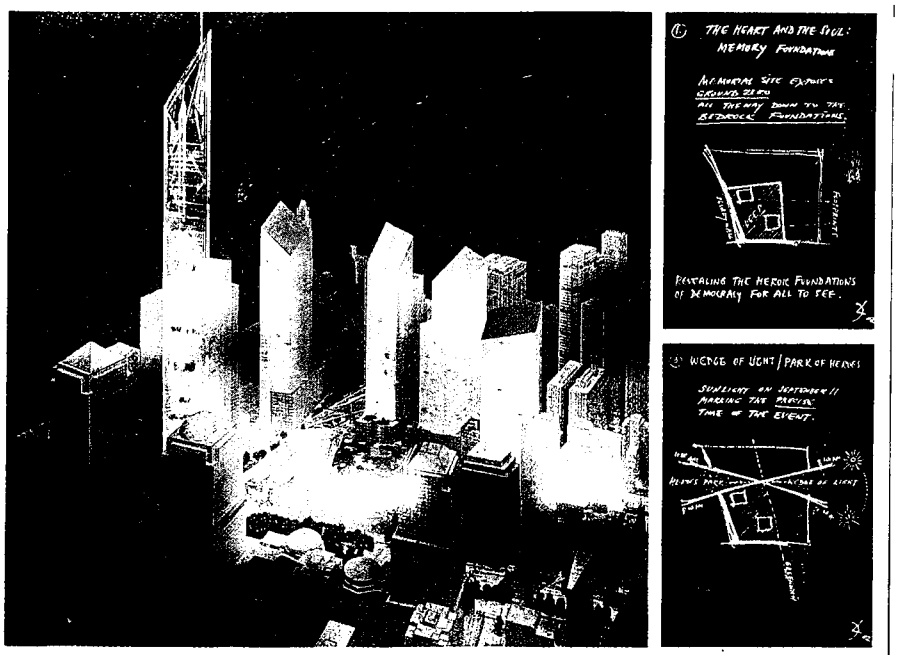


Figure 172. Collage of responses to the question.

I do not think that I will return to this project again, except to perhaps draw some attention to the winning proposal in the design competition to rebuild the site.



Models for Libeskind's WTC 'Memory Foundations' project. 'I'm not an old-fashioned architect, sitting in a corporate office in a penthouse—I'm on the streets'

Figure 173. Liebskind proposal (Maclean's 26 May, 2003).

I did discover, however, in the course of this project, that there is a deep fascination with skyscrapers for some students. I would like to spend more time on looking at these tall buildings in some detail, and will provide the opportunity for students who are thus inclined to explore the creative possibilities more fully. I think the students will be as interested as I am in an article I lately found in the Vancouver Sun about buildings in Dubai which bear a great resemblance to Vancouver's False Creek. Yet another iteration…

False Creek in the Arabian desert

ARCHITECTURE | Except for the dome-like fins on the towers, Dubai Marina is a virtual clone of Vancouver's famous waterfront community

TREVOR BODDY
VANCOUVER SUN
COLUMNIST

DUBAI

et at the edge of an incongruous lake carved out of the desert, a half-dozen thin apartment towers rose o 40 stories out of the dusty und, each sprouting from a ntinuous row of townhouses. was standing in the middle of ive of construction cranes in desert outside Dubai with ir Hagkull and Robert Lee, h former Vancouverites and ior managers for Concord ific Developments, when the lization of what I was looking egan to dawn.

Take a good look at the shore-, then tell me what it reminds of," said Lee, then general nager of development for bai's EMAAR Properties. I ed at the water's edge, then the twinge of a thrill when I what looked like a familiar wall along its edge. When I gnized the familiar forms of artificial bay, I couldn't con- my excitement.

can't believe it — you guys rebuilt False Creek, full-scale, here in the middle of the Ara- desert." I turned to a laughing kull and gave him my critical ict: "It's Very False Creek!"

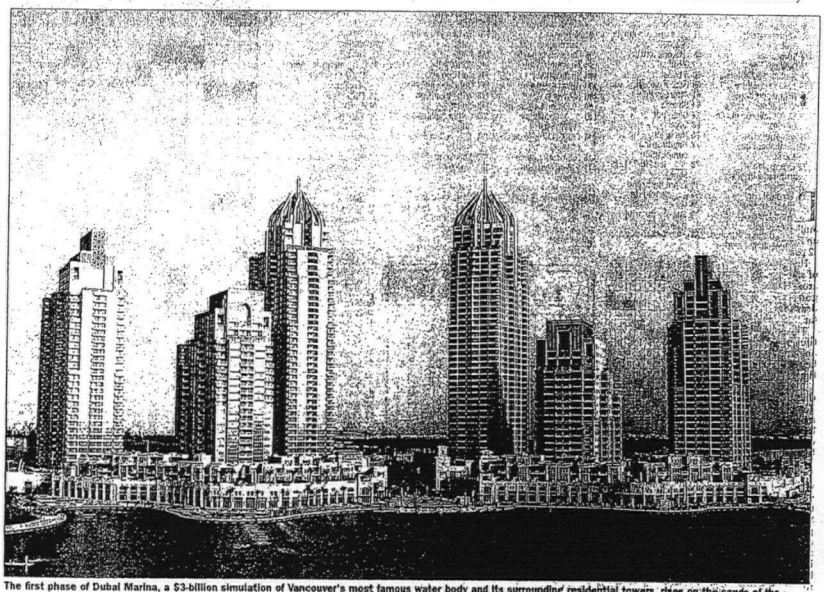
's actually known as Dubai rina, but it's a virtual clone of ncouver's own little inlet, cre- d by carving away 49 hectares sand, lining the depression h stone and filling it with 227 lion litres of water diverted n the sea. I soon learned that y more Vancouver-style con- minium towers are planned for site — a squadron worth up to billion, much larger than our ncord Pacific development inspired it.

he only clue that this was bai and not Davie or Drake, et was the dome-like fins at top of the condo towers. I ld later learn that Islamic reli- us authorities had rejected re fully rounded earlier ver- ns of these as too closely mbling mosques.

ubai Marina is "Very False ek" in both senses of the ase: an intensification of the ncouver original and very false king to anyone who knows l loves its source. In an era n all architectural history is ndered in Las Vegas' fantastic constructions — and even ai boasts a saturnine Planet llywood — it still seemed nge for me to find so perfect one of a Canadian city here.

ut what is amazing is not just Canadian expertise built a ror image of a prominent part ancouver so far away, but what borrowing says about our 's place in the world. Dubai rina reveals the collision of our f-conception with how the rld actually regards us.

he similarity of Dubai Marina False Creek is no accident. In 9, developer Mohammed Al bar toured the world looking the right approach to the gest housing project ever lertaken in his country and ped in Vancouver on the last of his journey home. One of Abbar's closest advisors had rked at Grosvenor Interna- nal Property's Vancouver ce with Stanley Kwok in the 1960s, when the Shanghai- ned architect had just arrived n Hong Kong.



The first phase of Dubai Marina, a $3-billion simulation of Vancouver's most famous water body and its surrounding residential towers, rises on the sands of the Arabian desert just outside of Dubai. Developer Mohammed Al Abbar decided that the Concord Pacific-style towers would be the best option for his housing project.

PETER BATTISTON/VANCOUVER SUN

False Creek highrises are similar to those being built in the Dubai housing project, which looks to Vancouver for inspiration.

Kwok said his original concept for Vancouver's Concord Pacific development came out of 1970s tropical resorts, combined with the tall, thin towers of Hong Kong he knew well from working there. To these distant sources was added something already established in Vancouver's False Creek South — a commitment to mixing social classes and building community and wealth for all through public amenities like parks, day-care centres and arts facilities.

This social diversity is missing in the Dubai project, designed and built as it was by imperial fiat, not democratic process. The will and financial wherewithal of EMAAR's Al Abbar and the company's effective owner, Crown Prince Mohammed bin Rashid Al Maktoum, made Dubai Marina materialize with blinding speed because the company functioned as developer, banker, marketer, city planning department and even community, all rolled into one and all rolled out instantly.

But the tiniest of Dubai Marina's details echo their Vancouver source. The first building con-

Blair Hagkull (left), Daniel Majjar (middle) and Robert Lee are three Canadians who were involved in the Dubai Marina project. Hagkull and Lee were senior managers for Concord Pacific

soon be converted into condo- minium apartments.

Many of downtown Vancouver's condos are sold to a mobile golden class speculating globally and many more to Canadian baby boomers waiting to retire. Don't be distracted by the vital energy of younger renters occupying "safe haven" condos these days, giving our downtown its temporary patina of diversity — this group will be kicked out just as soon as the arthritis kicks in.

Judging by Dubai Marina, the world regards Vancouver affectionately, though as a jejune resort, not a mature and serious metropolis. Anyone not desiring a descent by this city into permanent status as a "resort" needs to join the debate soon, because perceptions build realities even quicker for cities than for people.

Dubai's thinking in this regard may be more advanced than ours, obsessed as we are for the moment with our condo boom, plus an Olympic building crest to come. The Jan. 4 edition of their daily English-language newspaper Khaleej Times drives home that point, saying: "Dubai has to start thinking less about construction as a driver of growth, and more about qualitative improvements that can make assets more productive."

That may be one reason why Lee, Hagkull and Daniel Hajjar, a Canadian who was project architect for the Dubai Marina project, are all still in the United Arab Emirates, although the first two are with new employers. More impressively, Lee and Hagkull are now raising families in a city they regard as safe, stimulating and full of superb infrastructure.

And they're not alone. While in Dubai, I met many other members of the expatriate Canadian community there: Ismaili Muslims with families in North Vancouver, bankers from Calgary, building product salesmen from Kamloops, SFU students starting in the

Figure 174. News article, the Vancouver Sun 7 Feb.2004 p.F21)

CHAPTER 6 Outcomes and conclusions

6.1 What the people said

Some very busy and active people have been involved with me in this project. They have listened to my stories, and agreed to read this document throughout the course of its writing, and I am very grateful for their time and commentaries. This is a critical step in the process of action research. While I have been able to incorporate many of these shared insights into renewed cycles and incarnations of ideas in the classroom, much that has been given to me by my 'research friends' will enrich subsequent work undertaken after the completion of this project.

It is appropriate to record, albeit sketchily, feedback received; particularly those ideas that are not explicitly incorporated into the Primer at this time. Many suggestions got folded in to the body of the work upon receipt, and I will not reiterate that commentary here. Suggestions for future iterations and alternative approaches are noted in this section, and general commentary about the Primer and its applications and achievements, and flaws too, are recorded here.

My 'research friends' are a varied group. The most intensely involved people are those who agreed to act as my thesis committee. Dr. F.Graeme Chalmers, Professor of Art Education and David Lam Chair in Multicultural Education at UBC, is the chair of my committee, and Joel Shack, Professor of Architecture, UBC, and Dr. Freda Pagani,

Director, Sustainability at UBC, joined the committee at my request.

thesis committee

Graeme Chalmers is a noted art educator whose work has been published extensively throughout the world, in places where people want to improve the state of art education. His guidance has been valuable to me for this project and over the long term as well.

It was an initiative of Graeme's many years ago that first helped me to understand the value of built environmental education to the classroom. His books: British Columbia Houses (with Frances Moorcroft), Greek and Roman Buildings, and Romanesque and Gothic Buildings, were (and arguably still are) the most prominent of local resources available when I first started to search in 1982. I was a fledgling architecture student, just beginning to understand how these interests of mine, in education and architecture, could be combined. His books helped me to find that path.

Many years and lots of exploration later, Graeme encouraged me to believe in this 'Primer', which is an accounting, in part, of my experience with built environment education. He thought other teachers might like to view my perspectives, at a time when I wasn't yet thinking that my experience might be valuable to others. At his suggestion, I participated in two B.C. Art Teachers' Conferences, giving workshops to interested teachers who wanted to know more about the possibilities of architecture for their

classrooms. These workshop presentations represented a great step forward for me, as I had definitely not considered giving a workshop to teachers about teaching ideas before that time.

Moreover, Graeme suggested that I study with his colleague, Dr. Rita Irwin, to learn about action research, which became the methodological underpinning for this work. I learned that action research can be a key process in teachers' development, based on critically examining one's own practice and sharing ideas, and I was emboldened to start considering what contribution I might make. Rita helped me to understand teaching as an art, and led me to understand that the autobiographical search, resolved into narrative, can be a legitimate form of research. The cycles of planning, action, observation, reiteration - all punctuated by thinking, analysis, reflecting, recording, have led to a rich collection of material on my study shelves. From this 'data', I have cut the shape of the Primer.

The developing tradition of Action Research in general, and advisors such as Graeme Chalmers in particular, in my life, encourage ownership by teachers of teaching. Graeme shared with me the historical perspective of built environment education in our region, telling me of the provincial Program Implementation office in Richmond in the 'seventies, where locally developed curricula were collected and promoted. I began to imagine a series of my lessons about architecture put together so that others could try them out.

Graeme arranged for me to do a re-entry practicum through SFU with Neil Prinsen in the course of my return to teaching. Neil has been teaching over thirty years, and is a fund of knowledge about the existing art scene. He famously said the words, 'I don't know anything about architecture' one day in conversation, which I recognised as an important statement in forming my thesis question.

In multicultural Richmond, Vancouver, and to a lesser extent, Burnaby and other municipalities of the region, cultural pluralism is the reality. Graeme has written extensively on this subject. Reading his works and engaging in discussions regarding cultural openness helped me to think about inclusivity in ways I might not have previously understood, and helped tie my recognition of the issues surrounding disadvantaged and homeless people in our affluent culture and in our global village to the classroom.

He introduced me to the work of Eileen Adams British art educator, some of whose ideas are set out in Chapter 4 of this document. I wanted to include built environment educators who had actually presented material to teachers in B.C., and I learned that Eileen Adams had been here to deliver a course in the 1980s.

Graeme's extensive writing experience has given him many skills to pass on to the less experienced writer. I am thankful for the hours he spent reading my initially rough document, finding errors and making suggestions as to how I might refine this work. His emphasis on clarity was important at the initial stages when ideas were emerging

from my head in a form that would eventually require more shape and focus.

At an earlier stage in his career, Graeme worked with June McFee. His recommendation of her encyclopedic work Art, Culture and Environment - A Catalyst for Teaching, helped put my lessons into a broader educational context and helped me to establish what art educators can learn from the psychologists. He insisted as well that I needed to articulate explicitly how my ideas are grounded in existing educational theory. This has given me a much stronger grasp of the educative value of these lessons as well as of built environment education in general.

Prof. Joel Shack was one of my mentors as I moved through architectural education towards a B.Arch. Later he was chair of my thesis committee as I completed the requirements for a MASA (Master of Advanced Studies in Architecture). He is a highly regarded professor both in the design studio and as a teacher of the fundamental area of architectural programming, and he shared his perspectives on the critical ideas of phenomenology and sensitive design with others at the School of Architecture at UBC.

Joel challenged me to consider what is architecture, and how do we know if we are actually doing it? He kept asking, "what makes architecture 'sing'?, and what is the place for architects in the process of place making?", while I searched to find the place for the other

participants besides the experts. He caused me to question my sometimes unscholarly rhetoric, and insisted that I think through all the definitions, terms, assumptions, biases and perhaps unrigorous indulgences that I produced in the course of settling my position. I have a stack of e-mails that took hours for him to write, full of questions, challenges and encouraging words. Most of what he said caused me to rewrite, refine and strengthen the body of this document. His questions and advice have clarified my understanding of what we are collectively trying to accomplish in our actions of place making. Moreover, as an educator I have a renewed sense of what is possible, and how I can keep growing as a teacher because of his uncompromising and stimulating commentary. Question everything.

Joel's questions and commentary have sharpened my ability to consider context, circumstance and what might evolve from that: how we can come to really understand a place and consider the appropriate responses and processes for developing that place. He embodies reflective observation and sensitive response, and shows me yet how to find the true stories in life - to look into my own experiences and see what I know - both in the practice of architecture/education and the writing about such practice.

Joel insisted throughout this exercise that I "honour the declaration made by teachers: 'I don't know anything about architecture'", that I look at this statement from all sides, including the architects'. In that challenge he forced me to refine and focus the articulation of my intention, which again found its way into and throughout

the documents. I am more clearly understanding that need to honour the students as well, like the ones who discovered they were 'allowed' to paint my ugly old beige filing cabinet, which has improved the environment in my classroom in a small but very positive way. Four years later those students still occasionally bring friends into my room to show their contribution off. Even such a simple act of environmental embellishment puts one on the path towards confident and fruitful collaboration with others in the process of place making.

Joel recognises the difficulty of understanding the complexity of our environment, and makes a suggestion that I find challenging and helpful when I worry about introducing too much hard science into the art program. As an educator, he initiated the idea of 'seed projects', wherein students could grapple with an aspect of a complex situation, instead of taking on more that they were capable of handling. For example, he suggests that a better locker provided for users of a building could change the whole nature of an institution. (I understand this all too well - budget cuts forced the installation of half-size lockers at our new school. This was a big adjustment for students accustomed to full-size lockers; most of the user comments in the initial stages of occupancy had to do with this matter.) Looking at a focused project is a way of beginning to understand and cope with the complexity of issues without becoming overwhelmed. Carefully chosen projects can in this way yield extended benefits and insights, especially when students are at the beginning stages of environmental awareness and responsiveness.

Joel forced me to look again at the basic questions of architecture: and with this insistence he raised the quality of the dialogue a great deal. He asks:
What does it mean to make with sincerity - habitable places of real beauty and comfort - that are truly humane - well built - of authentic material - good neighbours - to improve the ethics of sustainable environment - accommodating without irony - (a place that) contributes to the commonweal?.

He challenges: find the poetry - be alert to the environment - draw - look with attentiveness and wonder - find the essentials and search for evocative ways to describe the essentials - find the inherent poetry of everyday life - look with special ways of asking.

These are good words for architects and for anyone who wants to be involved in the fitting out of our settings, whether they be trained or simply want to be active rather than passive dwellers in the places that result from our efforts.

Dr.Freda Pagani was also one of my teachers at the School of Architecture, in the design studio and as co-author of a practical course in graphic expression. In her current capacity as Director, Sustainability, at UBC, she is a force behind many of the innovative sustainable developments on the campus.

Freda observed early on that this thesis needs to address the professional expertise of the architect. I have alluded in general to what an architect does, but it is not my intention to get students to understand how to practise as architects. I am looking for ways to encourage confident collaboration with the experts, and to help laypersons appreciate and apply their own latent understanding of the environment with the recognition of their right and ability and responsibility to participate.

She draws a parallel between the move to increase participation in the shaping of the designed environment with the increased involvement of people in our society in the care and healing of their own bodies. We are less likely, in current times, to unquestioningly accept the verdict and direction of a medical doctor than in former times. It is commoner now to ask questions, to do some independent research, to consult alternative practitioners, and to trust one's own instincts in the search for best health practices. In the same manner, what we might call emerging 'people power' can be directed towards environmental initiatives, rather than passively and unquestioningly accepting the decisions of the architect. This is a key point that I have made in this thesis, and the parallel serves to illuminate the point. As Graeme noted in the same regard, decisions do not arrive from the top down anymore, people with ordinary powers in society, rather than just the leaders, are learning to take a responsible and active stance in many ways. Certainly this is observable with respect to our health, and it is perhaps in some ways also a growing trend with respect to the making and fitting out of our places. A basic intention of

this work is to encourage students and their teachers to be involved. I hope we all will learn to ask questions and find answers more readily, to look with scepticism at the idea that decisions regarding our settings are best left to the experts alone, and to try some alternatives. This action is all predicated on having confidence in one's own ability to find appropriate and life-affirming answers to our environmental needs.

Further to the democratisation of our society, Freda urged me to justify action research as a process of investigation and caused me to clarify this process in a way that has been very valuable. I embraced this research tradition with enthusiasm and perhaps somewhat unquestioningly, and am more convinced, after looking at action research from a less convinced perspective, that it is indeed a way for teachers to take hold of teacher growth, and to claim ownership of teaching. These iterative and reflective processes have been an important vehicle for my professional growth and for the formalised recording of some aspects of that growth, embodied in this document.

Freda makes the point that there are many ways to understand a building, and suggested that this work relies very heavily upon drawing as an approach. I see drawing as an important tool for seeing what is, and for communicating what might be possible, but by no means would I suggest that a program be limited to drawing. Aside from the phenomenological approach documented here, which involves the recognition and use of senses beyond the standard five, students are given the opportunity to go well beyond mark making. In some of the lessons, students are asked to

combine both visuals and verbalisations in their outputs, we work from existing visual and verbal narratives of our society to understand what an appropriate response might involve, and invent narratives of what might be. A variety of materials and a range of scales are explored in the lesson sequences, and an attempt is made to connect outcomes to both personal positions and broader interdisciplinary context. She suggests that we might visit more actual buildings in the community; to find ways to question what exists in buildings beyond the ones we commonly inhabit and examine, and so learn to describe and consider the important aspects of built form - perhaps even to invent narratives regarding what we observe. Students would clearly benefit from this sort of exploration, and I begin to consider some more architectural field trips for the future.

Freda asserts that students need to understand our dependency on the infrastructure. Perhaps this is where my own insecurity reveals itself. I'm not sure I understand the infrastructure and our dependency upon it well enough to properly foster this understanding. Although I have the benefit of a good architectural as well as educational background, there are mysteries in that infrastructure that I'm not ready to tackle. I need help. Reading David Suzuki helps to at least give me the courage to think about sustainability. And some of the work done by the Association for the Promotion and Advancement of Science Education published in Prism, and FORED BC published in Landscapes inspires me to look further. But I have learned to be careful not to push my art students too far into the science realm. Some of these considerations fall generally

beyond their perceptions of the scope of the art curriculum. On the other hand, some students are keen to tie scientific exploration to their art projects. I see that having materials available and encouraging research is part of my responsibility, and I will continue to seek ways to further connect the scientific aspects of our environment, including our dependency upon the infrastructure, to our art activities.

She offered some insights on the Primer lesson titled 'unpaving': that perhaps control of groundwater is better than natural drainage in some instances. This proves to be a big job to discover the necessary information about the infrastructure. I have been motivated to investigate this further and perhaps will collaborate with some knowledgeable experts to devise ways to teach myself and my students how to approach this complex subject. I recognise that I need some actual useable ideas regarding how to understand our dependency upon the infrastructure. I understand that it is important to work with the integrated whole rather than isolated systems, as Freda asserts, but I still wonder how much specialised knowledge is needed to do this with any meaning.

Freda suggested that the value of sustainability might be used as the ground for the 'Primer', based on the view that sustainability is a value that we can use to inform all our basic decisions. She suggested as well some ways that sustainability could be woven into built environment education, and I repeat those suggestions here:

-emphasize the interconnectedness of things and people
-uncovering of community values

-care with the use of resources and production of waste
-long-term thinking
-considering the social and ecological consequences of decisions as well as the economic ones
-the creation of place that will be valued
-enlarging the context of design decisions to include the local ecology and community.

I know that our chances of maintaining life as we appreciate it on this planet are very much tied to our understanding of and increasing commitment to principles of sustainability. We can strive to integrate these principles in our decisions and in our teaching.

other 'research friends'

I asked several teaching and architectural colleagues to comment on these ideas I have collected and documented.

Dianne Coulter, one of the Vice-Principals at our school, has just completed a graduate degree in Education. She is therefore very much in tune with the process of writing a thesis, and gave me very valuable advice and encouragement. Quite aside from her feedback, reading Dianne's thesis proved to be an inspiration for me. She is brave, unafraid to speak her mind, and clear about what she believes. I found that after reading her document, I was more inclined

to state my case with a firmer clarity that had been my initial stance.

Like everyone else who participated so generously with me in this project, Dianne is a very busy person - particularly this year. She is the administrator in charge of liaison with the architectural firm that designed and supervised construction of our new secondary school. We are taking occupancy of this complex new building as I write. Although a layperson with respect to architecture, this fearless woman participated up to her elbows in the entire process of bringing the school to completion, and I never once heard her whine or whimper.

I appreciate her involvement in this process on behalf of the school community. Mrs. Darlene Macklam, the Principal of the school, provides another example of how an interested layperson can become a wise client, capable of helping to steer the design process to a satisfying conclusion. These two women are heroes worthy of emulation as interested and committed participants in the important work of designing our environment. And that is what this thesis is all about.

Dianne thinks, after reading some parts of this document, that I could teach even teach her to draw 'in this safe environment'. She identifies herself as 'one of the "I can't draw people"'. Moreover, she thinks she might possibly be able to teach students to draw and to do some of these lessons. I was very pleased to hear this. One of Dianne's daughters teaches elementary school and has lately been required to teach art, without the benefit of much

training. Dianne thought she might pass some of these ideas to her daughter.

She wrote as a marginal note in Chapter 3 that she 'thoroughly enjoyed reading this', and continued 'You cover so many themes: poverty, the environment, and others, and yet the overriding theme - of everyone being involved and capable of being involved in their place making carries through. Who you are is very much a part of this thesis.'

Susan Viccars, art teacher

Susan has a wide ranging experience as an art teacher in the public school system, as both a Faculty and School Advisor to pre-service teachers, and lately as a participant on the Visual Arts 11-12 Integrated Resource Package (2002) Writing Team.

Susan's response to this document is enthusiastic. She likes the 3 R's as an organizer for the rationale and the actual lessons, and agrees with the premise that we know a lot about architecture, whether we recognise this or not.

As a very experienced art teacher, Susan found the initial material, particularly regarding knives and guns in the Primer, to be 'comforting', but not really necessary at this stage in her career. She did suggest, however, that it might be good to include some additional information about sources of glue sticks for the guns as well as a bit more detail about setting up a designated area for their

use, for the inexperienced teacher. As well, she found the early lessons to be a bit oversimplified for her needs, though she acknowledged that the opportunity is provided in these activities to gauge students' powers of observation as well as noting how they perceive their surroundings - a 'multisensoral' approach.

Susan questioned how my position with respect to flexible deadlines works in meeting administrative deadlines for reporting. It is a position I have considered quite a lot, and experimented with from time to time as well. I have found that, particularly in the art class, students work at different rates and set themselves goals that may not fit easily into the general schedule. Some students like to expand and elaborate on a project that has particularly caught their imagination, and I feel that forcing such students to conform to a deadline could preclude the possibility of this satisfying and fruitful exploration. I simply explain that the schedule is negotiable, and students need to keep me informed with reports of their progress if they are doing an extended exploration. They know that at the end of the term and at year end, they had best appear with a completed project, but that I am willing to give what we call 'progress marks' where appropriate.

Often students come to me after a school holiday, or a period of absence from school due to sickness or travel, to say that they spent much of their time working on the project and that they thoroughly enjoyed themselves in the process.

I often explain to classes that I think one of the chief differences between a 'student artist' and an 'artist' is external or internal motivation, and I am quick to comment when I see that someone is becoming an internally motivated artist. I have seldom seen this flexibility abused by students, and often seen very highly developed results, well beyond my initial expectations, when extra time was given.

Susan observed that the initial 'mapping' exercise bears a resemblance to the well-known entry portfolio project for Emily Carr Institute of Art and Design. Although I have advised applicants regarding this Emily Carr challenge over the years, I had not consciously recognised this similarity. I suppose that curriculum connections can be made wherever art is going on, but this connection particularly pleases me.

Susan sees some real merit in the use of the green pepper to teach the concept of plan, section and elevation views. This was new to her, and she thinks it will prove useful in her own classroom. She has asked students in the past to make models from building elevations - specifically from the elevations shown in Graeme's British Columbia Houses, and this idea of thinking in plan and section as well as viewing elevations would lead to a more realistic appreciation of the whole building.

The ideas of considering existing building, both from memory and as a focus for a drawing, and the possibilities of altering existing architectural elements, at least on paper, appeal to Susan. She thinks she might like to try

some of these in her classroom, as well as the drawing through doorways exercises and the programming and planning and modelling of a sanctuary and a family retreat. She particularly likes the idea of using bubble diagrams, both drawn and in three dimensions, to develop plans for more complex projects such as the retreat. This is something that I learned as an architect which easily transfers to the classroom, but is not apparent to someone who hasn't been shown this simple device.

She thinks the ideas around 'Unpaving' are interesting, and might be inclined to try a variation on this theme. As well, she recognises that initiatives to brighten the environment both within and without the school are worthwhile and relevant. She is presently engaged in similar embellishment of corridor walls at her school. Other ideas that might find their way into Susan's program are the product design projects and the connection of caravan design to the landscape and to window design. The sequence of lessons regarding poverty, and of the demise and rebuilding of the site of the World Trade Center are also strong ideas for Susan. She said the activities are 'wonderful', and I was very pleased to have this verdict from a teacher who is experienced in many aspects of art education and well aware of existing possibilities.

One aspect of this work that Susan felt could be further considered is evaluation. She thinks it might have been useful to include more ways to evaluate drawings, and some explanation of how I marked my students' work. I have explained my position with respect to avoiding over-prescriptiveness in the introduction to the Primer, but I

recognise that some teachers would look for more guidance in this matter than I have provided in the worksheet samples in the Primer. Susan suggested that teachers could refer to the newly available Visual Arts 11 and 12 Art Foundations and Studio Arts Integrated Resource Package (2002), easily accessed on the B.C. Ministry of Education website. She noted that there are some assessment and evaluation samples in the appendices to that document, including rubrics and evaluation sheets that could be easily adapted for use with these lesson ideas. (Susan actually wrote three of the samples herself.) These evaluation tools also focus quite explicitly upon some of the skills and image development strategies that are prescribed in the IRP. My assumption is that teachers would use these resources in setting goals as well as in evaluation of learning outcomes, in a way that would reflect their personal perspectives, values and methods in program development and implementation.

Susan suggested that I should make an effort to have the Primer included on the Ministry of Education List of Provincially Recommended Materials and Learning Resources. The Ministry evaluates educationally appropriate materials intended for use by teachers and students, through a process that is carried out by practicing teachers. The learning resources for use in B.C. schools fall into one of two categories: provincially recommended materials or locally evaluated materials. I have deliberately tried to keep the ideas of the Primer non-specific to my area, opting instead for a more general thematic position. Susan's comments have started me thinking about ways I

might make this work available to teachers through the provincial evaluation process.

Marnie Tamaki architect, teacher

Marnie and I went through graduate school together and formed a business partnership, with three others, after we graduated in the MASA program. For several years we worked together not only as architectural colleagues, but we did a series of graphic design projects together, and also formed a teaching partnership - working with highly motivated youngsters in extra-curricular programs. I value Marnie's feedback particularly, because we have worked together so much and have explored together what is involved in teaching, both from the architectural as well as the practical, educational point of view. She clearly understands the context from which several of these ideas have sprung.

Marnie's first comment was that the lessons of the Primer should be published. She has viewed much of the document and felt that the Primer needs to be altered a bit in order that it might stand alone, but her strong view was that these lessons should be shared. She appreciates the quality of the lessons that she calls 'gentleness' and sees the lessons as a way of encouraging creativity, both in students and in teachers. Inasmuch as Marnie has had no teacher training, but considerable practical experience as a teacher, she wondered if I could perhaps be a bit more prescriptive with respect to how to teach, how much time

might be spent on each of the lessons, and how the results might be evaluated if that were part of the requirement. Inasmuch as these ideas are pitched toward the trained educators of the public school artroom, I feel the sharing of insights would be compromised by too much detail regarding 'how to'. I have included some sample worksheets for interest, but I worried when I added them to the Primer that they might even be a bit too explicit. When I explained this to Marnie, she replied that probably a careful reading of the Primer and the chance to try the ideas would be enough to reduce the fears of an untrained teacher when approaching this material. She thinks that perhaps the many samples of student work might stimulate teachers and help them to clarify their own personal lesson objectives.

Further to this point, Marnie suggested that I should make more obvious connections between the lessons and the educational scaffolding and the five themes of architecture. Again, I had earlier thought that making these links too explicit would be unnecessary and perhaps a bit insulting, but on this point, she was adamant. (Graeme made the same point about two days later.) The result is that I went through the Primer lesson by lesson and used a simplified, almost coding type of system, to explicitly link the theoretical bases to the projects. In retrospect, this has strengthened the whole document, and woven the material into a much more coherent whole. Perhaps beginning teachers would appreciate this linking more than veterans, but the reminders at the head of each lesson serve to keep my mind alert to the deeper possibilities of each project as well.

Marnie is very supportive of the idea of doing research of various sorts to enrich project results. She observes that architecture is an applied art/science, and in doing research this connection with the real world becomes clearer. She especially likes the product design lessons and noted that she was moved to 'go do it' with a class when she read this and other parts of the Primer. She likes that art can be applied to everyday but meaningful objects in our world. She also likes that within the narrative style of the Primer she was able to get an idea of how ideas for the classroom can be generated, citing the 'travel to make art' sequence featuring Emily Carr as an example of this. Further to this project, the window and landscape alternative appeals to Marnie's regionalist stance as an architect. She was delighted to note that catalogues of local products and materials are made available to students in the artroom, and emphasised that through such vocabulary, regional characteristics can be created.

In the course of her architectural education, Marnie spent several months in Venice, on the 'studies abroad' program. She observed that in Venice, the existing built environment is used as the basic text for architectural education. Conversely, she notes that at UBC, the natural regional environment provides the basic stimulus for study and design practice. She notes that I do not include a close analysis of many public buildings with respect to regional style, nor do I focus much upon aspects of heritage architecture in the Primer. (This is another deliberate decision on my part, inasmuch as there are many ideas available, specifically tailored to this particular region,

for teachers who wish to pursue stylistic aspects of the built environment.) She sees, however, that the lessons included in the Primer are designed to address some of the serious issues of our times in general, and that through the Primer, students are given the opportunity to apply art to life in a way that is meaningful and germane.

Mary Ann Green is, according to my definition, an architect, though if she introduced herself that way, the Architectural Institute of the jurisdiction would be obliged to intervene. Institutes of Architecture have strict regulations about who can be described as an 'architect'. Although I was formerly allowed to call myself an architect as a registered member of the AIBC, now, as an 'associate member', I am no longer entitled to use the term. (This is in sharp contrast to the term 'teacher'.)

Mary Ann has been designing buildings and building them and dwelling in them too, for much of her adult life. And I would hasten to add, she has become, over the many years she has involved herself in place making, a splendid architect (or designer or place maker, depending upon who is describing her.) I have for many years been inspired by her example.

After building herself a wonderfully crafted and funky houseboat on a barge, and a beautiful house high on the ridge overlooking Skidegate Inlet, Haida Gwaii, Mary Ann and her husband decided to build an upscale home and office

complex on Gabriola Island. One of the most fruitful projects of my architectural practice was working with them to program and design the innovative concept they were visualising. The nature of my practice was always to encourage as much client participation as possible. The level of participation varied with the type of project and the natural inclinations of the client, I found. With Mary Ann and Bob, the interaction was stimulating and fruitful. They both had burgeoning ideas; they wanted my expertise to become part of the mix. Over the course of several months we worked together to articulate, clarify and realise their dreams. The result of our collective effort was a lovely configuration of built forms arranged around a central outdoor living space, well crafted to meet their domestic, social and professional needs.

In the fullness of time, Mary Ann and her husband decided to relocate to a warmer climate. I have lately returned from Anguilla, a tiny island in the British West Indies, where Mary Ann and her husband now live. I spent two weeks enjoying the 'commodity, firmness and delight' of one of the loveliest tropical style domestic-professional compounds I could imagine.

When Mary Ann first arrived in the West Indies, she spoke with several architects about what she wanted to do. I am sure she spoke with some confidence about her vision. She decided that 'some architects are too defensive' after her discussions. It seems that the architects she contacted had ideas of their own about how Mary Ann and her husband wanted to live, and they did not seem to respond well to the idea that they were welcome to participate in, but not

to take over the process. She decided, with some trepidation this time because of the magnitude of the project, to take charge of it herself. She opened communications with local builders and researched tropical building design, materials and practices with some intensity. She studied the land - exquisite waterfront property, but dry and barren - with care, and planned for buildings and landscape. She discovered some of the principles I learned from Joel Shack at Architecture school on her own: she found that in order to get certain of the details 'right', she needed to make full scale models. She is on intimate terms with each splendidly detailed area of her home/office compound, which consists of four major buildings and numerous outbuildings - all architectural gems. Even the pump house and the laundry house are beautifully designed and crafted.

When Mary Ann read this document, as one of my research friends, she wasn't too keen on the dissertation style and the theory, (she did her university education 30 years ago) but she definitely got the point. She already knows that architects'R'us. Bob knows it too, after living with Mary Ann these fifteen years. She is one of the reasons I could write all this with a steady hand. Without any formal training in architecture, but with keen powers of observation and a growing ability to visualise and seek and find solutions, she has accomplished a resounding architectural success on her property in Anguilla. And the experts who shied away from collaborating with her missed a wonderful opportunity to take a fresh view of the process.

Marian Schellenberg is an artist and designer, and proprietor of her own graphic design firm for many years, as well as a teacher of graphic arts. Unlike many of my 'research friends' who have not undertaken specific training in architecture, Marian would never say 'I don't know anything about architecture.' She explains that this is because she has been trained to SEE in the course of her art education and training at Emily Carr Institute of Art and Design, and other design training over the years, and has sharpened her powers of observation and reflection through years of practice. She recognises that she knows very little about engineering and mechanical and electrical systems, but states that her 'design confidence' and ability to see clearly make her 'unafraid of architecture'. Marian believes that her ability to recognise place making as a natural activity, and her willingness to participate as the opportunity arises, springs from what she calls 'design confidence'. This, she believes, is a good reason to have general design a part of the art curriculum. Her design background and orientation have served her well to enable a feeling of entitlement to participate in this process of place making.

I agree that it is definitely not necessary to teach the explicit 'how to's' of architecture in the classroom in order to enable students to recognise that they have something to contribute to place making. These insights of Marian's reinforce my original position that this curriculum is not about learning to be an architect = specialist. It rather is about helping the 'uninitiated'

recognise that their tacit understanding, propelled by certain somewhat generalisable skills - of observation, receptivity, considered response, and powered by a sense of responsibility, entitle and enable interested dwellers in the environment to participate in its arrangement.

As a teacher, Marian found the sections on action research and the educational scaffolding for the Primer to be useful in considering her own practice. Although her background as a student at Emily Carr (where criticism was couched in generous terms in order not to discourage development) gave her a good understanding of the need for diplomacy in the creative process, this program did not otherwise explicitly prepare her for teaching practice. She, like many teachers in the field of art and design, teaches from her experience as an artist and designer, but without much grounding in educational theory. After reading the first two chapters of this document, Marian declared that access to this knowledge could make teaching design even more interesting, and could help her to understand how to better reach some of her students and operate more meaningfully with them. She said that the sections dealing particularly with ways of learning are potentially useful in dealing with the diverse array of students attracted to graphic design. Moreover, Marian noted that she sees now how 'action research', a new concept for her, can become a life philosophy - an outlook and an orientation as we progress through not only professional life, but as well, a way of moving reflectively and observantly (think phenomenology) through all aspects of life.

Marian thinks this work should be shaped into a course directed to teachers and others who would like to engage in environmental design. She described the initial lessons in the Primer as 'win win': students get to know themselves and what they can do, and teachers get to know their students so they can move along together knowingly. She thinks it is good to reaffirm even small interventions in the environment as place making, in order that we don't diminish the value of embellishment. She thinks that we need to be clear that whatever we do, for good or ill, to our surroundings, has an impact on our places, and by extension, on ourselves. Marian has been very encouraging about this work, and her support has been a real factor in the development of these ideas, and subsequent plans which are forming for future iterations and developments.

6.2 Self evaluation of the process and the product of this work

Although there were some times along the way when I fervently wished I had not committed myself to the writing of a thesis, now that the document is nearing completion, I am very satisfied that I have made this effort. I have discussed earlier how the Action Research cycles and processes of close observation and reflection upon daily life in the classroom, journal keeping, and the questioning, evaluative stance I adopted as a Teacher on Call has served me well in the process of becoming a reflective practitioner. Without these processes, the wealth of insights I was able to glean from my short career as a substitute teacher would have been lost to me in the blur of that very intense area of teaching. Instead, I have an abundance of 'primary documents' which I return to from time to time, to reflect upon teaching practice in general.

The events leading to the writing of this document have represented a similar process: planning, experimenting, observing, recording, reflecting, re-iterating, sharing. All these elements form part of the journey, and the iterative nature of my practice continues, even though this stage of the journey is concluding. It is true, as some sage or another in my life once said: 'You've got to draw the line somewhere'. I can't keep writing about this forever. It is a bit like design which, as architecture students we joked, can be endless - the only thing that ever stops us is a deadline. Perhaps that is the beauty of

such an initiative as well. I am stopping this discussion, but I make absolutely no claims that the discourse is complete. And built into the process is the idea that iterations continue and new ideas are born. For me this process is natural and fruitful. The deliberate, active and reflective operations of action research have become deeply integrated into my life, both professionally and personally.

The research question, formed early on in this project, reads:

> **What is the nature and scope of an architectural primer designed to assist educators to encourage a citizenry that is aware, responsive, willing to become involved and capable of responsible participation in the shaping of our collective and private places?**

How successful is the 'nature' and 'scope' of what I have produced?

This Primer represents a slice of what might be done, by a teacher who might be unsure where to begin, but who is operating at least upon a conviction that built environment education is worthwhile. The sequence has been carefully arranged to move from simple, easy to teach lesson ideas, quite naturally into a more complex and sophisticated realm. Of all the people who read this document, Joel was the one person who made an observation about the sequence of lesson experiences. He noted:

> There seems to be a good progression of these projects from simple to complex, from not too loaded to very loaded with socio-psych-ethical issues, from self-serving to community oriented.

I tried many ways of sequencing this material, and was pleased that my organising principle of increasing the complexity, and progressing forward into more complex, issue based material, was clearly understood and logical in someone else's mind as well as in my own.

Joel asks: "Which starting ideas and questions turned out to be especially central and productive in the thesis investigation?"

I started with a list of lessons that was much longer initially than what was finally included in the Primer. Any ideas that seemed intimidating to the teacher, or that required specialised knowledge not readily available to someone without rather specific architectural training, were pruned out early on in the process. For example, I have worked in the past with students using ideas associated with scale: measuring actual rooms and recording them to scale, using metric and imperial architectural tools at scales ¼"=1'0" or 1:50 or 1:25. I recognise that some teachers might be dismayed to find they need to understand the intricacies of scale to teach these lessons. Instead, I offer the suggestion that making a 'right-sized' cardboard or modelling clay person before building a model settles all the problems of scale in a simple and direct way that does not divert attention from the main problem of designing a place. Some students love to explore the mathematical aspects of architecture, and it is good to encourage this, but I don't think a beginning primer is the place to tackle a question of this intricacy, especially from the point of view of the dubious or reticent teacher.

The lesson ideas that are included in the Primer are the ones I judge to be the most richly instructive and which require the least specialised skills. I think the Primer lessons, as they are presented, demonstrate that much can be done in the field of built environment education without specialised skill, but relying on the latent knowledge that we all carry within us as a consequence of living our lives mostly in the designed environment.

We can all recognise that it is in us to

> really look - not just glance,
>
> see/appreciate our surroundings - not just use them,
>
> record what we see - not just assume we know what is,
>
> visualise - learn to dare to dream,
>
> use the systematic approaches of the design process - not just leap to form with the most obvious solution,
>
> participate in the shaping of our places - not just take a passive stance,
>
> and approach our world and the ethical issues we encounter with care and a sense of our own efficacy - not just shrug and demur.

These are the goals, reiterated over and over throughout this document, which are embedded in the Primer. These are goals that I think teachers can easily understand and, most importantly, through the lessons of the Primer, can pass on to students.

Put another way, I would ask why it is that so little built environment education takes place in the schools? Why are so many young students, their teachers, and so many adults reticent about impacting their environment in any way beyond the safe and most tentative acts? To me these

lesson ideas propose a way out of the passive dependency upon the experts, or the bland, unimaginative and conformist design responses we often see in the built environment. Built environment education is important, and if it is to be part of lifelong learning, these lessons are a good place to begin.

And where does it all end? How can we limit or even foresee the scope of responsible praticipation for the aware and active citizen? I don't presume to know where one might go with the empowerment that is realised through learning to participate as a caring, responsible individual in the world. But I have seen the tentative acts of people who do not feel a personal sense of permission to participate in the shaping of the environment, and I have also seen students begin to find their power, in small ways, that I think can lead to more major acts. This brings me to the belief that this approach can help to convert that tacit understanding and passive stance to something much more proactive and life-affirming. This is the central point of the investigation, from which the Primer has been produced.

I have put together a program that could be used with good results by educators who are reticent, perhaps, but interested in engaging students in studies of the built environment. One metaphor I have used is that the lessons could serve as bedding plants, somewhat more developed than seeds, but not simply 'instant landscaping', to get teachers started in the practice of environmental education. The lessons are not prescriptive, but presented in a narrative or even conversational style, in a way that

is meant to encourage active participation of the teacher in choosing, planning and developing the ideas.

The other unifying metaphor has been to build the Primer, which the dictionary defines as 'a beginner's book', to enable confident first steps in such a study. The three R's, an explicit organiser, are meant to support the Primer metaphor, and also to clarify, in an easy to apprehend way, what I consider to be the fundamental elements of the program: receive the messages of our environment with awareness, respond with some confidence to the visions of what might be, and act with responsibility. In the end, my goal has been to encourage, starting with this beginning set of ideas, a citizenry that is aware, welcomes the opportunity to participate in the process of making positive change in our environment, and capable, with the acquisition of some relevant skills, of contributing responsibly to that ongoing action of making places.

I am cheered that my research friends have positively received this work, and I feel in my own heart and mind that this work serves the goal that I have articulated. Whenever I see students deeply engaged in this life-affirming process, moving forward with confidence and skill to make a positive imprint on the environment, however large or small, practical or whimsical, I feel that we are on a right and responsible path. I feel blessed to have the opportunity to combine an expertise in both architecture and education to make a contribution of this nature.

There is no question here of having a null agenda, wherein certain topics concerned with the built environment, but which are not considered in this work, are valued less than those aspects I have focused upon in this document. Those issues or aspects of built environmental education not addressed here are definitely not insignificant. I have simply made decisions related to the material I have explored in classrooms that seemed most fruitful and that worked together to form a varied and coherent program for a beginning initiative. I have not included questions, for example, of style and structure, both important considerations rich in interest, but dealt with extensively and capably elsewhere, by other built environment educators. Further, the study of regional aesthetics, and local typologies, and the heritage aspects of architecture, are more particular to specific regions than the content I have selected to develop at this beginning stage.
Joel observed that in the product design lesson there were perhaps 'too many alternative topics stuffed in' at that section. For me, this thickness of possibility is stimulating, and I have chosen to retain it, and other possibly 'overstuffed' sections, as laid out. I think product design is an idea which teachers often introduce in the artroom and certainly in applied skills classes, in some form. The connection to the articulated design process, the encouragement to generate alternatives, and the sharpening of critical decision making and evaluative skills, might be a new set of working concepts for the teacher. I have shown how this operating methodology could be applied in a range of topics. And I have shown a range of possibilities in many of the lessons and the thematic discussions as well, to enable teachers to find their own

ideas to claim and develop in their own ways, best suited to the unique requirements of their own classes.

6.3 Conclusions; possibilities….

I believe that built environment education has an important place in our culture. I have observed that some teachers are reluctant to teach about the designed environment, and that they might say "I don't know anything about architecture". I believe, now, that this Primer - a beginning series of lessons - can help the reticent teacher to move forward with built environment education. We all have a contribution to make.

I once made a list titled '100 essentials for the architecturally literate Vancouverite', which includes architectural styles, movements and historical considerations, building typologies and technical vocabulary, geometric and introductory structural considerations, architects and model buildings of the area, skills and tools, social/architectural issues, and the green lens through which we must learn to look. Important and relevant lessons can be shaped in each of these areas. There is enough richness in this pursuit to last many lifetimes.

In the course of this study some promising ideas have been identified and developed, and new ones continually emerge. Further to the question of scope, Joel wonders what other projects we could do in a secondary artroom to extend the range of activism that is beginning to emerge in the Primer lessons. To me it seems that any positive intervention that students can contribute acts as a seed (or perhaps a bedding plant) in the same manner as Joel's own 'seed

projects' are a way of getting at the whole of a complex situation. The confidence and skills marshalled in the smallest intervention can lead to the next step.

I begin to think of how we could, in time, begin to embellish the mostly grey walls of our new school, how the landscaping could be taken on by students as an ongoing project - perhaps a sanctuary could be developed; could we find more ways to contribute to the larger community? Certainly I am stimulated to move forward with planting and proliferating, literally as well as figuratively. These lessons are a good place to start.

I want to experiment with an idea that I discussed with Freda called 'adopt an area', which I intend to pursue next time around. I might ask students to choose a local site for study and, as a sketch book assignment, to visit that area at least once a week throughout the year, to record what is there, and to follow the changes which occur. In time, I will ask students to design something appropriate to that place, and to grapple with the decisions regarding what on the site is to be kept intact, and what might be disturbed or altered. I will help each student or group to tailor their design to suit the context, and to juggle the various considerations: aesthetic, economic, ecological, social/ethical, physical, cultural, according to their interests and abilities. Those students, particularly the ones who have some experience with the Primer exercises, might surprise us all. I look forward to the opportunity to see what they can do.

In any area of built environment education, ideas can be generated and developed to realise goals set by the educator for student growth. I might stop short of saying the possibilities are limitless, but I would venture to say that the limits are mostly in our reticence and lack of imagination. What happens in the artroom has the power to become a real force in the community if we dare to take the challenge. I was very gratified to note that a room full of students of very mixed economic and cultural background could connect with such depth to the issue of extreme poverty in our culture. Although student responses to the problem of homelessness as recorded in the Primer - the shelter beds and the outdoor conveniences - might enrage sophisticated housing advocates who believe that nothing less than a decent home is acceptable, these students learned an empathy with the homeless that was new for many of them. The next logical step, which some are pursuing, is to investigate the possibilities of modest social housing, and to design a range of choices - including supportive housing options - for the disadvantaged. One student has already begun to investigate allied services, such as the food bank and medical service models.

From simple acts, students can see how the processes and products of their imagination can become a positive force in the community. Once they see that connection, and begin to act upon it, perhaps it is not exaggerating to say the possibilities are indeed limitless. Perhaps we can all begin to think, again without exaggeration, that in some important ways: Architects 'R' Us!

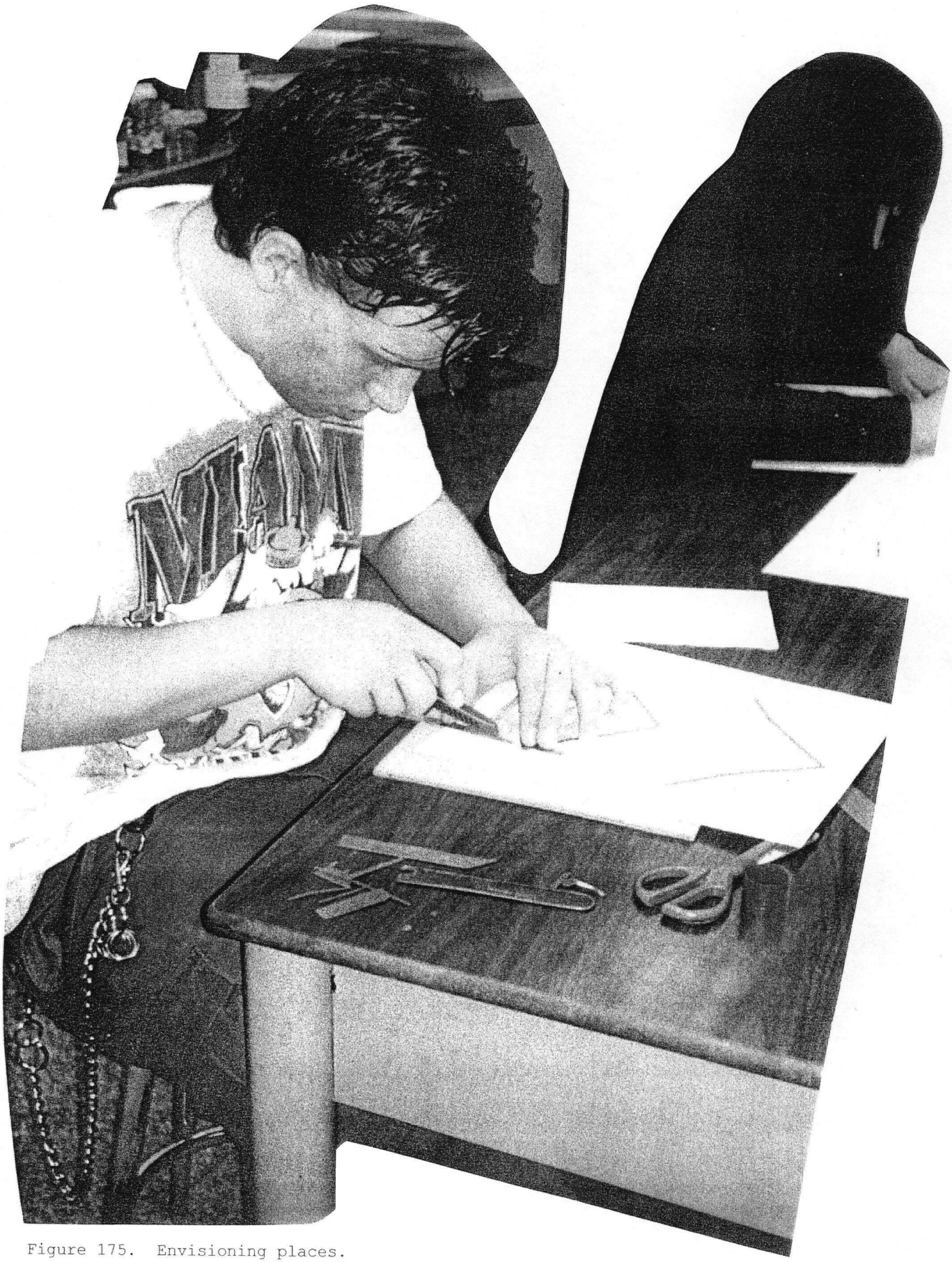


Figure 175. Envisioning places.

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