THE IMPLEMENTATION OF AN ART CURRICULUM MATERIAL:
RELATIONSHIP BETWEEN BELIEFS AND PRACTICES

By

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Abstract

This study addresses the need for research pertaining to the influence of teacher conception and situational factors in the implementation of art curriculum materials. The study yields insights about how three teachers' beliefs shaped their opinions of the merits and shortcomings of the teacher's guide, Surface Probe, and how specific situational factors influenced their use of the material. Data collection methodology included questionnaires, interviews, teacher logs and on-site observations in an attempt to make explicit the perceptions of the participants and the situational setting of an art program as it was implemented over an eight week period. Data was documented in three teacher profiles which were organized around the following considerations: teacher conception of art, use of the material, factors that influenced use, and interpretation of the results. Findings were discussed as strengths and concerns of the material and factors that influenced implementation. This information was interpreted into guidelines for the development of art curriculum materials. It was found that the material could be adapted by teachers of varying levels of art background and teaching experience. The material offered sufficient student experiences in the productive domain, but suggestions for imagery development to enhance the production activities became an emerging issue with two of the teachers. In the synopsis of factors that influenced implementation it was concluded that teacher conception and background experience in art were primary points that needed to be considered in curriculum development. Points to consider in the development of art curriculum materials are outlined.
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CHAPTER 1

The Study

The Problem

This study formulates guidelines for the development of art curriculum materials. The problem of factors which influence the implementation of art curriculum materials was addressed through a documentation of the use of the material, Surface Probe, by three teachers in the west area of the Vancouver School District. For the purposes of this study, "use" was defined as what the material consisted of in practice. Teachers' conceptions of art education were extracted and situational factors were considered in an attempt to determine the influences upon the participants' use of the material and their perceptions of the materials strengths and weaknesses. This information was formulated into generalizations which could be interpreted as suggestions for art curriculum development.

Assumptions

In discerning factors which influence the implementation of art curriculum materials it was assumed that the curriculum material would be personalized by the participants in the study as it was implemented. In each situation, a different program would exist as defined by a number of variables such as participants' interests, background experiences, and conceptions of art education, as well as situational factors. It was also assumed that the worth of the program would be judged on its relevance and meaningfulness to the various participants (Werner, 1977, p.9). The implied relationship between the investigator and the participants was therefore reciprocal. Each added his own expertise and knowledge to the study as the
investigator tried to interpret the program's value in terms of the participants' frames of reference.

**Definition of Terms**

*Surface Probe* was referred to as an art curriculum material, teachers' guide, and book. "Use" and "Implementation" were used interchangeably in this study.

Implementation was defined as "the actual use of an innovation or what the innovation consists of in practice" (Fullan and Pomfret, 1977, p. 366). How the material was interpreted or shaped by the participants was the focus of description.

Describe in this study referred to the documentation of the programs-in-use through teacher profiles.

Profiles included a documentation of teacher conception, use of the materials, and factors which influenced use. An interpretation of the results concluded each profile.

Conception referred to an orientation toward art education in elementary schools. It covered a teacher's priorities in answering the question, "What can and should be taught to whom, when, and how?" (Eisner & Valance, 1974, p.2).

**Limitations**

The scope of this book included a limited representation of elementary art teachers and classroom situations. However, despite diversity, many concerns are shared by art teachers and many classrooms share the same characteristics so some generalizations can be made (Parlett & Hamilton, 1977). Limitations as to the amount of visitations the investigator could make to each school were determined by the investigator's
work schedule, although arrangements were made so that at least one visit to each school could be made during school hours. One school was visited twice during lessons and one classroom was observed weekly since the teacher and investigator taught at the same school.

The time frame for the study limited teachers' use of the material in three ways. Firstly, they received the material in April which limited the amount teaching time as well as time available for teacher planning before the end of the year. Secondly, their use of the material in May and June was interfered with by end-of-year school procedures and activities. Thirdly, some of the printing techniques presented in the material had been taught by two of the teachers earlier in the year.

Observation techniques posed some disadvantages. The presence of the investigator might have influenced the behaviour of the participants in each situation. As well, the investigator had her own biases of selective observation. But these are outweighed by the advantage of first-hand recording of behaviours as they occurred. These recordings were used as starting points in interviews.

Selective observation and interpretation of the investigator were compensated by the inclusion of a second observer who visited each of the teachers for an interview and observed two of the classes during school hours. This also enabled the teachers to be more candid with their comments.
The fact that each teacher had volunteered to become part of the study may have limited the accuracy of the investigator's judgment of the quality of the implementation in that the teachers' use of the material may have varied if they had not been part of a study where they were expected to "stay with the material" for the eight week period.
CHAPTER 2

Review of the Literature

Development of Surface Probe

During the developmental phase of a teacher's guide for the study of natural design and printmaking, the literature reviewed by the author focussed on curriculum development, particularly in art education, and theory and research on the nature of art, creativity, and the student. Although the list of resources is extensive, two writers in particular influenced the formation of a rationale and the choices of objectives, content and evaluation for the book. These were Lowenfeld (1952, 1975) and Eisner (1972, 1974, 1979). While it is not within the sphere of this study to review resources used for the developmental phase, a complete list is supplied at the end of Surface Probe which is included in Appendix 1.

It should be noted that subsequent readings in art education (in particular, Efland, 1976; Chalmers, 1981; Feldman, 1970; McFee & Degge, 1977) have influenced the author's decisions for further revisions of the curriculum material before publication. These focus on the student as anthropologist and the importance of dialogue in art programs but they do not pertain to this study.

The Study

For the purposes of this study, the literature reviewed was concerned with two areas: (1) the use of teachers' classrooms for the development of art curriculum materials, and (2) studies which recognize the influence of teachers' conceptions and situational factors on the implementation of art programs.
An example of the use of classrooms for curriculum development is The Aesthetic Education Program developed by Central Midwestern Regional Laboratories, Inc. (CEMREL, Inc., 1976) located at St. Louis, Missouri. The Aesthetic Education Program began in 1967 with a group of educators who were committed to developing an aesthetic education program designed for all students, stressing an aesthetic content which encompassed all the arts and the full scope of aesthetic phenomena.

The role of the program was that of a provider of resources, especially for the non-specialist teacher on a national scale. In effect it involved the planning and implementation of a complex effort toward individual and institutional change in attitude where the inclusion of aesthetic content within general education could be justified.

The principal referent for program development was the discipline of the arts. Content was organized around the following categories: (1) Aesthetics and Arts Elements, (2) Aesthetics in the Physical World, (3) Aesthetics and the Creative Process, (4) Aesthetics and the Artist, (5) Aesthetics and the Culture, and (6) Aesthetics and the Environment. The materials focused on process where the chosen activities not only taught a concept and reached an objective but also provided experiences that could be valued in their own right. Instructional resources included an array of games, records and films.

The Aesthetic Education Program's instructional materials represented a departure from traditional curriculum development in that classrooms were used as laboratories of experimentation and development. In the early stages of development, an observational monitoring of the package's implementation was conducted in preliminary classroom trials. Activities
and materials which contained potential problems were tried out in classrooms using small groups or an entire class. An evaluator observed the amount of interest and enthusiasm generated by the materials and helped the developer analyse the children's behaviour for evidence of ability to perform tasks and understand underlying concepts. Revisions needed before full classroom trials were incorporated into the material.

In the second phase of "hothouse trials," a systematic observation and description of a teacher and a group of students as they worked through a set of materials took place. Every session during which the unit was taught was observed by an evaluator and usually the developer. Based on a version of classroom ethnography influenced by the work of Smith and Geoffrey (1968), the observational method focussed its observations, interpretations, and analyses on the educational transactions brought about by a particular set of materials in a classroom situation. Their notes were supplemented by transcripts made from tape recordings of each session. Upon completion of the unit, an in-depth interview with the teacher was conducted by the evaluator.

Data was categorized according to the following topics: initial reaction to the unit, suggested grade level, suggested teaching pattern, opinion of teacher's guide and materials, student reaction to the materials, and perceived effects on students. Information was also gathered on the neighbourhood and type of family served by the school, physical facilities, student scores on I.Q. and reading tests, and teacher's educational experience, teaching style, interest in art and attitude toward aesthetic education. Informal discussions with teachers, judgments of the developer, and an analysis of student products resulting from the unit's
activities also yielded information. Units were revised on the basis of information obtained, and instruments to assess student's progress were refined.

In the final stage, pilot trials were conducted at three sites representing diverse socio-economic levels and ethnic groupings so that evidence of bias could be uncovered and remedied. During this phase, the materials were judged for their ability to meet both process and product criteria. Process variables were examined using teacher questionnaires and checklists, structured teacher, and occasionally student, interviews, and random spot observations to uncover specific problems in implementation or anticipated effects the materials might produce. Product variables were examined using an evaluation design that focussed on the relation of student performance on outcome measures to how well the unit was implemented. In addition, it was determined how student entry characteristics and teacher characteristics affected implementation.

Another example of the use of classrooms for developing art curriculum materials is the Stanford Kettering Project (Eisner 1970, 1979). The Kettering Project at Stanford University was a two year project that was begun in 1968 under the direction of Eisner. The aim of the project was to develop an art curriculum that could be used with little or no in-service by elementary school teachers who were untrained in art or art education. Focussing on the productive, historical and critical domains, seven units were developed, one each on line, colour, composition, drawing, painting, graphics and art history. Each unit contained nine lessons and provided enough material, on the average, for a two-year program. Seven hundred instructional devices, including slides, reproductions, color boards,
transparencies and overlays to be used with the lessons in the syllabi were coded with numbers, cross-referenced in curriculum guides, and placed in two "Kettering Boxes." The program contained sequenced activities and evaluation devices or procedures for each lesson.

The Project was divided into two phases. Phase 1 extended from October 1, 1968 to August 1, 1969, and involved the curriculum design, some pilot testing by teacher-consultants or by members of the team who developed the material, and subsequent revisions based on the results of the pilot testing. The second phase extended over a twelve-month period and consisted of developing an evaluation program and expanding the tryout of the material from four teachers to twenty teachers working in five schools in two districts.

Data collection methods included the appraisal of visual products produced by students, interviews with teachers, analysis of written comments made in the curriculum syllabi by teachers, and comprehension tests. A wide variety of methods were used to secure information regarding the effects of the program on students as well as the aspects of the curriculum which needed revision. Data was collected in May and June and analyzed in July and August of 1969.

Eisner summarized the problems of curriculum development and implementation of the Project in various readings and reports (Eisner, 1970, 1979) as follows:

We erred in attempting to develop materials that need little or no in-service, that overemphasized instructional objectives, that paid too much attention to the development of technical skills and provided too little opportunity for the exercise of imagination, that were too prescriptive regarding sequence, and that underestimated the need for a syllabi to be attractively illustrated and printed. We also severely underestimated the
amount of time needed to do work on the scale we aspired to reach. (Eisner, 1979, p. 151)

The primary concerns of both projects were the effects of a program on students and the ability of the non-experienced art teacher to effectively implement a particular curriculum material. Eisner further explicated his concern for approaches to research, program development and evaluation that consider the quality of the experiences that participants might have with programs in his writings on qualitative evaluation (1979). He adapted non-statistical forms of inquiry and evaluation and descriptive and expressive language from art to general education practice in order to facilitate an awareness and understanding of the experiences of the participants. From this awareness, a judgement about the program could be made and improvements could be considered.

Eisner presents these ideas in his notions of educational connoisseurship and educational criticism. The connoisseur appreciates the experience through an awareness and understanding of it. The critic must see the subtleties of the experience and analyze its interacting parts for their effects on the "whole". He describes and interprets what he sees and then uses the information to evaluate the character of the educational practice and suggest improvements. The critic must become public and enlighten others to what he has seen whereas the connoisseur can privately appreciate the experience. Effective criticism requires the use of connoisseurship but it also works to refine it.

Even though this qualitative approach is more personal, Eisner proves its validity and objectivity through a discussion of structural corroboration and referential adequacy. Structural corroboration refers to the extent that the facts within the experience support the conclusions
drawn. Referential adequacy refers to that which the critic has illuminated that would otherwise go unseen. To judge the extent of reliability, one must look at the phenomena and be able to find what the critic has described. Eisner also claims that like scientific inquiry, a qualitative approach yields generalizations that help us to anticipate the future as well as enable us to more effectively experience a situation:

As one leans to look at educational phenomenon, as one ceases using stock responses to educational situations and develops habits of perceptual exploration, the ability to experience qualities and their relationship increases. (Eisner, 1979, p. 219)

Eisner raises questions that must be considered by program developers. Critical sense-making about how the participants in the program will experience the program must be a prime consideration or problems in implementation will arise.

Feldman (1967, 1970) developed a four-step model of artistic criticism which has been used in this study as a model for describing, analyzing, interpreting and judging participants perceptions as they used the curriculum material.

Although both the CEMREL Aesthetic Education Program and the Kettering Project used classrooms as laboratories for curriculum development to consider student and teacher characteristics, they did not specifically investigate the influence of teacher beliefs and situational factors on the implementation of a curriculum material. While few studies of this nature have been conducted the need for research in this area is addressed by Chapman (1979), Day (1972), Stuckhardt and Morris (1980), and Asch (1976).

In art education, where teachers are relatively free to decide the goals and content of their programs, the role teachers' beliefs may play in determining the curriculum and the teaching process is crucial. As Chapman
(1979) notes, instructional materials in visual arts are rarely used as primary sources of content, objectives and learning tasks. It cannot be assumed that teachers choose carefully researched materials and then serve as facilitators of student interaction with the pre-structured materials.

Working with prospective art teachers, Chapman attempted to map relationships between rationales for teaching art, the form and content of curricula, and how the expectations built into rationales and plans might shape the teaching process. Subtests that profiled teachers' beliefs in respect to four hypothetical orientations to teaching - the idealist, realist, personalist and experimentalist - were matched with hypothetical seventh grade art programs submitted by these teachers. An informal comparison suggested that orientations may influence the way teachers envision the form and content of art programs.

Day (1972) also examined rationales used by art teachers and curriculum makers for justifying art programs. He summarizes three factors that contribute to the independence, individuality and diversity of teaching styles evident among art teachers. Firstly, teachers vary in art background in the productive, historical and critical domains. Secondly, divergence and individuality of expression are valued qualities in art. Finally, the art teacher has a great deal of freedom in planning art programs. Typically there is no specific curriculum that must be followed, and the art teacher is only expected to set a program within broad guidelines.

Day defines a teacher's rationale as beliefs regarding the purposes and goals of art education (the general rationale) which in turn influence choices for particular practices in art education (the specific rationale). He concludes that a teacher's rationale has a potentially strong influence
on the nature of that art teacher's program as well as the way he or she views other art programs.

In an attempt to increase an awareness and understanding of individual teaching strategies and to initiate discussion among art educators and program developers, Day devised The Day Art Rationale Instrument (see Appendix 2). The instrument lists eight points of view on the reasons for teaching art and also provides the opportunity for one to formulate his own statement of belief. By employing the instrument, teachers may be able to clarify their own rationales or become aware of alternative concerns that may be incorporated into their existing rationales.

A third instrument that assesses attitudes held by individuals is The Attitude Towards Arts Education Scale (ATAES) developed by Stuckhardt and Morris (1980). Used in conjunction with a U.S. federally funding project to initiate an art education program in elementary grades K - 6, the scale measured attitudes held by teachers at the beginning of the project and assessed attitude changes at the end of the initial year.

The instrument lists 30 statements about art education and asks the teacher to rate his or her feelings about each statement according to a five-point scale ranging from "strongly agree" to "strongly disagree" and including "uncertain". Example statements include "Arts education is an educational frill" and "Arts education enhances knowledge of our cultural heritage".

The influence of teaching beliefs on evaluation in art education is addressed by Asch (1976). She describes three time-honoured beliefs that relate to attitudes and methodology concerning evaluation. Firstly, the belief that student art should be accepted regardless of quality is nurtured by teachers who have a concern for the therapeutic value of art and the
power of positive reinforcement. Secondly, the belief in the importance of the art process over the finished product reflects a concern for experimentation with techniques and ideas. Thirdly, the belief that evaluative discussions are detrimental to student creativity and morale is evident in teachers who feel that critical discussions remove the fun from art.

Asch concludes that these beliefs, which emphasize freedom, creativity, and individuality, result in instructional methods where the teacher gives no guidance or criticism, all student work is equally acceptable, and students do not engage in sharing, analyzing, or expressing opinions about their art products or processes. As a consequence, no evaluative criteria are used to access student growth or lead students to other possibilities of problem solving in their work. Evaluative discussions that can provide important learning opportunities and give insights to learning abilities and teacher effectiveness are overlooked.

Methods of inquiry which take into account teacher beliefs and the cultural factors in a classroom in the implementation of programs have been formulated by Smith and Pohland and Parlett and Hamilton. Smith and Pohland, in particular, were a strong influence in art education's use of classroom ethnography. Smith was also involved in the development of The Aesthetic Education Program at CEMREL. These readings influenced the formulation of a strategy for this study.

Pohland (1972) offers the notion of participant observation as a method of inquiry in art education. He describes the nature of participant observation as multi-method, multi-person, multi-situation, and multi-variable. Methods include observation, informal interviews, and the
collection of documents. The investigator interacts with a large number of people including teachers, pupils, administrators, and other personnel in multiple settings of classrooms and schools in various parts of the country. He also looks at multiple variables which appear to affect programs. These include individual variables such as motives and traits, group variables such as classroom interaction and activity, and organizational, technological and cultural variables.

In a response to Pohland's notion by Wilson (1972), the features of participant observation that make it a method of inquiry appropriate to art education are summarized as follows: (1) the method allows the researcher to attend to a number of variables and their interrelations. This corresponds to a work of art where the variables (such as media and processes) are related to the personality factors of the teacher and student as well as the cultural, institutional, and physical settings in which art is taught, (2) the method is flexible. The researcher can switch methodologies mid-stream just as art redefines itself, and (3) the method requires a close qualitative relationship between the researcher and the situation being studied. This fits the subject of art which in itself is qualitative.

Working with Smith in the school year 1968-1969, Pohland was involved in an evaluation of an innovative computer-assisted instruction (CAI) program in the Rural Highlands in Kentucky. Smith and Pohland (1972) concluded from that study that the cultural milieu is a significant factor in the functioning of innovative programs. Two cultural features were responsible in part for the breakdown of the CAI system.

One, defined as localism, included a distrust of strangers. The second, defined as politics, was the view of CAI as a political rather than
educational issue. Smith and Pohland recognize that an awareness of culturally determined actions and an ability to visualize cultural influences on the implementation of programs broadens our decision-making perspective and opens up new and unexpected aspects to consider in program development and evaluation.

Smith (1974) applied the use of participant observation to the Aspen Institute, an eight-day institute involving CEMREL staff and administrators from various school districts in the country. Administrators were of two levels, usually a superintendent and principal. The purposes of the Institute included acquainting and assisting administrators in the initiation of an aesthetic education program for their school districts. As a participant observer, Smith blended the roles of detachment and involvement through the different settings, activities, and interactions of the session. He tried to take copious notes which would supplement his experiences and become a basis for his report. The report was entitled Images and Reaction: A Personal Report on "An 8 Day Week:"

The notion of illuminative evaluation (Parlett and Hamilton, 1972) also recognizes that a program is not an independent system that can be examined in isolation. The illuminative evaluator is not concerned with codifying observations with techniques such as interaction analysis as these do not facilitate the uncovering of the underlying and meaningful features of the interaction between the participants and the program. He is concerned with the perceptions of the participants as he focusses on patterns of cause and effect.

The methodology of illuminative evaluation influenced the data gathering techniques of this study. In an attempt to explain why teachers
differ in their attitudes toward innovative materials, students and teachers were questioned about their work with the curriculum material, what they thought of it, and how it compared to previous experiences. Interviews took an open-ended and discursive form to enable the participants to freely communicate the use and value of the curriculum material in relation to their situation and concerns. Questionnaires were supplemented with interviews and logs. Checklists and guiding questions were used to stimulate thinking and probe into inner feelings and views.

An informed account of the innovation in progress was developed by building up a record of on-going events, transactions and informal remarks to which interpretive comments were added. The investigator recorded discussions with and between participants and paid close attention to the type of interactions in each situation. Interviews and diaries allowed the teachers to express their attitudes towards the material as well as the factors which influenced their use of Surface Probe. The methodology and procedure are discussed in depth in the following chapter.
CHAPTER 3

Methodology

Framework

The role of the investigator, the nature of the information secured, the technique of description applied and the basis for drawing conclusions were dictated by an underlying cultural framework through which events and information were interpreted. A "meaning-oriented" approach was applied as the study focussed on description and interpretation.

The investigator took the role of a non-participant observer who described and interpreted events and perspectives. Since the study concentrated on the curriculum material in the context of three classroom situations, there was an emphasis on both observation at the classroom level and interviews with participating teachers and students. Information was compiled into three teacher profiles. Conclusions were drawn and organized according to the revealed participant perceptions.

Borrowing from an art criticism model, this study was organized to encompass description, analysis, interpretation and judgment. (Feldman, 1967). Description focussed on the subject matter and approaches to teaching art that were evident in each situation. Analysis was concerned with how the program was organized according to the participants assumptions, values, interests, and priorities, as well as how situational factors influenced the implementation of the material. Interpretation involved an unfolding of the relevance and meaningfulness that the curriculum material held for the participants. A judgment of the strengths and weaknesses of the curriculum material based on the perceptions of the participants in the study was organized into the concluding chapter. At
this point, recommendations for curriculum development in art education were
made.

**Focus**

The task of this investigation was to make explicit the perceptions of
the participants and the situational setting of the program. Concerns of
the evaluator were illustrated in the following categories of questions:

A. How Do Teachers Use The Material?

1. How do they translate the material into experiences for students?
2. What types of experiences occur?
3. How do the teachers differ in their use of the material?
4. What common patterns emerge in the teachers' use of the material?
5. To what extent is the material modified?
6. To what extent is the material used as intended?
7. How do the teachers original plans compare to their actual use?
8. How does the material accommodate the teaching-learning style in
existence?
9. How is the material adapted to the strengths and interests of the
participants?
10. How are the following aspects effected by the material:
    - classroom organization
    - teacher planning
    - roles of students and teacher
    - assumptions of participants

B. What Factors Influence the Use of the Material?

1. What assumptions and values colour the participants
personalization of the material?
2. What backgrounds do the participants bring to the program?

3. What situational factors influence the use of the program?

4. How do the participants view the program as appropriate to their situation?

5. What aspects do the participants find relevant and meaningful? Why?

6. Do the teachers find a need for the material?

7. What are the teachers' concerns regarding the use of the material?

8. What further considerations would facilitate the use of the material?

9. How does the presentation of the material influence the teachers' acceptance or use - e.g. format, illustrations, organization of activities, sequence?

10. Does the theory presented in the Rationale conflict with or support the practical material?

Instruments

To focus on the uniqueness of each situation, data collection was organized to document three teacher profiles. Data collection instruments included the following:

1. **The Day Art Rationale Assessment Instrument** (see Appendix 2)
   
   This instrument lists 8 statements pertaining to the importance of art education and provides an opportunity for the teacher to express his own rationale. The statements are ranked according to how closely they correspond to one's beliefs.

2. **Teacher Questionnaires** (see Appendix 3)
   
   In order to obtain information on teacher background, this
questionnaire focussed on areas of art training, years of teaching experience, current teaching assignment, areas covered in personal art program, particulars of currently enrolled classes, and the extent to which printmaking has been part of personal curriculum and student experience. In designing the questionnarie, reference was made to those used by the Western Education Development Group (WEDGE) which pilot tests and publishes locally developed curriculum materials.

3. **Teacher Logs** (see Appendix 4)

   After each lesson, each teacher was to complete a log which summarized the amount of teacher time necessary for the lesson, difficulties in teaching the lesson, additional information needed, activities which the students found difficult, student participation and reactions to the lesson, and teacher opinion of the lesson (i.e. value, clarity). In designing the teacher log, reference was made to logs used by WEDGE.

4. **Guidelines For Completing Logs** (see Appendix 5)

   To motivate teachers to make detailed descriptions in their logs, 10 guiding questions were outlined. These questions tried to probe the relationship between the material and teacher conceptions of art, situational factors that influenced teacher presentation of the lesson, and ways that the lesson was modified according to teacher beliefs.

5. **Interviews**

   Interviews were conducted with each of the three teachers and a sampling of students from classrooms involved in the use of the material. Resources used as reference for designing the interview questions were the Canadian Content Unit Teacher Survey (Massey and Werner) and Evaluation: Sense-Making Of School Programs (Werner, 1977).
During the first interview with each teacher, a steady flow of questioning that focussed on teacher conceptions of art education (see Appendix 6) was lead by the evaluator while she took notes of key phrases and words. The purpose of the study, a brief description of the material and an explanation of the teacher logs concluded the interview. The investigator's notes were later transcribed into a written dialogue for future analysis (see Appendix 7). No instructions for the use of the material were given. Teachers were told that they could feel free to modify the material in anyway that would suit their purposes. They were to act as if the investigator had no expectations of their implementation of **Surface Probe**.

Subsequent interviews with the teachers were conducted in the middle of the pilot session (end of May) and at the end of the school year. These sessions, employed the technique of elite interviewing (Dexter, 1970). Rather than defining the questions and the problem, the investigator was eager to let the interviewee teach her by:

a. stressing the interviewee's definition of the situation

b. encouraging the interviewee to structure the account of the situation

c. letting the interviewee introduce to a considerable extent....his notions of what he regards as relevant, instead of relying upon the investigator's notion of relevance (Dexter, 1970, p. 5).

Rather than taking notes in these interviews, a tape recorder was used to provide for a more conversational technique. In this way, the investigator's concentrated attention was enhanced and tapes could be
analyzed at a later date to capture nuances and avoid misinterpretation. This helped further an understanding of the program-in-use and avoided building upon the investigator's notion of the situation. Questions used as starting points for discussion in the final interview are included in Appendix 8. A sample transcript of an interview is included in Appendix 9.

Interviews with students occurred at the end of the session, although a sampling from each class was not available for all situations. Usually groups of five students were interviewed to ascertain their opinions of printmaking and their experiences in the unit. Opinions of how they would change the printmaking unit were asked. Interview questions used as starting points for discussion are outlined in Appendix 10.

Only one teacher listened to the taped interview of her students. Kathy commented after listening to the tape that she was surprised that the students did not mention the historical presentations or the critical discussions. This may have resulted from the investigator's line of questioning or the lack of importance that the students placed on these experiences.

6. Classroom Visitations

An outside observer was scheduled for visitations to two teachers. One teacher refused because she was not comfortable with the control of her class, although she did consent to an interview. The observer's visitation included interviews and were conducted half way through the session. These were discussed with the investigator and were used for crossvalidation with the investigator's findings.

During class visitations the investigator took the role of a non-participant observer. Notes were taken to record interactions between
students, teacher and students, and students with art materials. The investigator engaged in conversations with students and the teacher, and photographs of displays and students at work were taken. Even the most trivial aspects (such as procedures and interactions among students and teacher) of the situation were recorded and later discussed during interviews.

7. **Collection of Student Work**

Samples of student's work were accumulated by each teacher. These were used as a starting point in the final interviews, and were analyzed by the investigator. Examples from each class are included in Appendix 11.

8. **Teacher's Comments Recorded in the Material**

Two teachers (Liz and Kathy) recorded comments directly into their copies of *Surface Probe* as they read through the material and presented lessons. The comments were compared to information yielded by the other data collection methods. The copies of the book were returned upon completion of this study.

A method of crossvalidation was made possible by this variety of data-collection methods. Written data was compared, questions were repeated in interviews, and reactions to the investigator's report were obtained from each teacher to confirm accuracy.

**Selection of Teachers**

To avoid the variable of location in the city and to facilitate visits by the investigators, teachers were chosen from the west side of Vancouver. In order to establish factors that might influence implementation, it was desirable to choose teachers of varying art backgrounds and teaching
experience, in particular with printmaking. The most expedient way to do this was to select teachers whose backgrounds were known to the investigator. Familiarity with the investigator may have been a factor in those teachers volunteering to use the material.

The characteristics of teachers chosen for the study and a summary of student characteristics follows:

Teacher 1 (Kathy)

Kathy was a first year teacher who had never taught art and had no training in printmaking. As she was not scheduled to teach art, special arrangements had to be made to change her assignment. She had substituted for two years and was working 60%, enrolling a grade 5 class.

Kathy's class had had no experience with printmaking. There were 29 students in the group and a minority Native Indian population was included. The school is situated in a middle class neighbourhood. Generally, the class had not enjoyed art this year as the students felt that their former art teacher did not like her assignment or the class.

Teacher 2 (Liz)

Liz had taught art for the 26 years of her teaching career. She had training in art from college and had taught all printmaking methods in Surface Probe except for screen printing. She enrolled six art classes from grades 5 to 7. As she had transferred schools the year before, she had not taught these students until this year.

Liz chose two classes to be involved in the study. Her split 5-6 class contained 30 students and had completed leaf and styrofoam prints as
part of a short unit on texture in the year. The grade 6 class contained 30 students and had completed glue prints in the previous year with another teacher. The school is situated in a middle class neighbourhood.

Teacher 3 (John)

John had taught art for 7 of his 12 teaching years. He had experience with teaching many aspects of printmaking, in particular screen printing. He was mostly self-taught, although he had taken some university art courses. He enrolled five art classes ranging from grades 5 to 7.

John included each of these classes in the study. Only the grade 7's had experience with printmaking when John had taught them in grade 5. Since John had taken a year leave of absence, he had not taught the present grade 5 or 6 classes, and they had no experience in printmaking. Each class contained an average of 30 students. The school is in a middle class neighbourhood and serves a minority Greek population.

Schedule

January - April, 1981  - first draft of Surface Probe completed
September, 1981 - May, 1982  - second draft of Surface Probe completed
February, 1983  - selection of teachers for the study
                    - permission from principals obtained
                    - permission obtained from Vancouver School Board art consultant
March  - design of data collection instruments and procedure
April 13
- interview with Kathy (1 hour)
  Data instruments (Appendices 2-5) were administered and teacher interviewed focussed on questions outlined in Appendix 6.

April 14
- interview with Liz (45 minutes)
  The same procedure as Kathy's interview was followed except that the Day Art Rationale Assessment Instrument and Teacher Questionnaire were completed by Liz later in the week and were then mailed to the investigator through the school district delivery.

- observation of Kathy's class (20 minutes)
  The class was completing the Rubbings activity.

April 29
- interview with John (1 1/2 hours)
  The same procedure as Liz's interview was followed.

April 30
- documentation of notes from interviews with John (Appendix 7) and Liz into dialogue form.

May 5
- Observation of Kathy's class (10 minutes)
  The investigator viewed a display of
monoprints and discussed these with the students.

- observation of Kathy's class (30 minutes)
The class was completing glue and cardboard plates. Conversations among students and teacher were noted in dialogue form.

- observation of Liz's class (1 1/2 hours)
The class was completing lino plates. Conversations among students and the teacher were noted in dialogue form. Descriptions of the room displays and the students in process of the activity were noted.

- interview with Liz (1 hour)
Notes from the observation were used as starting points for discussion during this taped interview.

- notes from the observation were transformed into a written account.

- observation of Kathy's class (25 minutes)
The students were engaged in printing fish.
May 28

- interview with Kathy (1 1/2 hours)
  A summary of Kathy's use of the material
  became a starting point for a discussion
  of her opinion of the value of the
  material and her students' reactions to
  printmaking.

May 30

- observation of John's class (2 hours)
  The students were making cardboard
  plates. Procedures for note-taking were
  the same as with Liz's observation.

- interview with John (1 1/2 hours)
  The same procedure was followed as with
  the preceding interviews with the other
  two teachers.

June 2

- interview with Liz's students (30 minutes)
  The students' reactions to printmaking
  were taped. See Appendix 10 for starting-
  point questions.

- interview with Liz (1 hour)
  A summary of Liz's use of the material
  was obtained using samples of students'
  work as starting points. The closeness
  of the book's conception of art to Liz's
  conception was discussed using questions
  which raised specific points (see Appendix
  8). Samples of students
work were collected by the investigator.  
(See Appendix 11)

- outside observer's visitation to Liz's class (1 1/2 hours)
  A description of the room and a record of student dialogue and interaction with the teacher were recorded. A discussion with the teacher focussed on her use of the material.

- observation of Kathy's class (30 minutes)
  The students were completing styrofoam prints.

June 9

- outside observer's visitation to John's class (2 hours)
  A talk with the teacher focussed on his use of the material. A description of the students in the process of making cardboard plates and prints and interactions between the teacher and students were recorded.
  Photographs of the students at work and work areas were taken.

June 13

- observation of Kathy's class (20 minutes)
  The students were completing styrofoam prints.
prints. Photographs of the students at work were taken.

- outside observer's visitation with Kathy (1/2 hour)
  The interview focussed on Kathy's reaction to the material.

- visitation of Liz's class (20 minutes)
  Photographs of students at work and displays of students' prints were taken.

- interview with John's students (45 minutes)
  A taped discussion of their reactions to printmaking focussed on the questions outlined in Appendix 10.

- interview with John (1 1/2 hours)
  The same procedure as Liz's interview (June 2) was followed and samples of students' work were collected. (See Appendix 11)

- interview with Kathy's students (30 minutes)
  The same procedure as the interviews with students from the other schools was followed.

- Liz's copy of Surface Probe was
collected.
The same procedure as John's interview (June 23) was followed. Student work (see Appendix 10) and Kathy's copy of Surface Probe were collected. Kathy had also written comments in the material as she read the information and presented lessons. (See Appendix 9 for a transcription of this interview). Kathy also listened to the tape of the interview with her students at this time.

July 4 - 15
- tapes were transcribed

Pauses and utterances were deleted (see sample interview in Appendix 9).

July 18 - 30
- teacher profiles were compiled

All sources of data were compared and cross-referenced in order to ensure accuracy of the use each teacher made of the material and to summarize in detail their comments about the factors which influenced their use.

August 3
- Kathy's validation of her profile

Kathy read her profile and agreed with its accuracy.

August 5 - September 30
- interpretation of the results and implications for curriculum development
in art education formulated Liz's validation of her profile.

- Liz read her profile and agreed with all but one of the statements. In her copy of *Surface Probe* she had checked particular lessons in the Table of Contents. The investigator assumed these were activities that Liz planned to use next year, but in actuality they were lessons that she had wanted to complete in her use of the material for the duration of this study.

- Kathy's reading of the investigator's interpretation of the strengths and weaknesses of the material. Kathy disagreed with the investigator's view that the Rationale and information on curriculum development were not valuable to teachers. She commented that these discussions were useful in relation to her concerns.

- John's validation of his profile

  John read the profile and agreed with its accuracy.
CHAPTER 4

The Profiles

Profile 1

A. Teacher conception of art education. Kathy has a strong view about the importance of art in the school curriculum. Aside from its social benefits, she feels that art affords the students a chance "to play and work with styles and techniques", and she thinks that the students see art as an important break from academic subjects since the focus is on "doing" rather than on content. She is enthusiastic about sharing the enjoyment of art with her students and helping them discover that "skill is really a lack of fear".

Her students would work primarily as artists, occasionally as critics and rarely as historians: "Art at the elementary level implies 'hands-on'". Her program would take a breadth approach as she feels that it is important for the students to develop skills in a variety of media and techniques. Her particular personal areas of interest (watercolours and design with a variety of media) as well as the interests of the students would be incorporated into her curriculum planning. For example, she would include optional units where the students could pursue their talents and interests in their own chosen areas.

Having no previous training in art other than a methods course at university, Kathy would rely on her own expertise and interest when planning. Practical books and resource people (friends and colleagues) would supply her with background information. She would also try to secure the help of practicing artists to demonstrate techniques and processes to the students.
Her broad conception of art is reflected in her ideas about field trips. Promoting the students' awareness and sensitivities to the environment and contributing to their understanding of how art is used in everyday life and in different cultures would be priorities. For example, a tour of False Creek would focus on the criticism of art forms ranging from food displays to the integration of the man-made and natural environments.

Kathy is not sure about the appropriateness the teaching of art history to students of grade five level. She feels that it is important for a program to "grow with the students" so her planning would center on building upon the knowledge and skill level of her class. Some activities would not be attempted until she achieved a rapport with her class and established a relaxing and confident atmosphere within the group. For example, group discussions of student artwork would probably not take place until later in the year so that criticism would not be done in a demoralizing way.

Depending upon the class, she feels that discussions of student work might not even be appropriate. Therefore, although she feels that displaying student work is important, she does not anticipate that these displays would be used for group evaluation.

Kathy would organize the art room so that students could be grouped. Primarily this would be to facilitate peer-teaching. Also, she sees this as an effective way to distribute supplies and arrange clean-up. She would hope to instill in the students an awareness of the care of equipment and a responsibility for cleaning their own area. She anticipates that she would probably have a tendency to cut art lessons short to ensure that clean-up was complete, particularly because the art room is shared.
B. Use of the material. Kathy chose to integrate the four sections of the book - orientation, study, application, and criticism - into her lesson plans for each week rather than treat them as separate weekly lessons. Because she taught the unit only to her own class, she planned to organize her week so that each Wednesday some sort of orientation took place. At this time, she would try to present an historical perspective and illustrate how the concepts to be covered in the week appeared in nature. As she did not want to teach "in a vacuum" she tried to integrate the unit with some sort of Language Arts activity as well. Time permitting, Wednesdays would also be a demonstration day so that on Thursdays the class could meet in the art room to begin a "hands-on" application of the concepts. Fridays involved a critical discussion related to this "hands-on" experience.

Although she did not teach a formal criticism lesson from the book, she took the evaluation questions from the end of each lesson, supplemented them with some of her own, and placed them on the classroom blackboard on Thursdays. These stayed on the board until the next morning and became the focus for the weekly critical discussion. A sampling of the students' comments from these discussions were written on examples of their work which were kept in a folder for the investigator.

Each week's organization, therefore, revolved around a double block of art (85 min.) on Thursdays. Wednesday's introductions were completed within a 40 minute period or were set up as a spare-time activity. Friday's discussions generally lasted 40 minutes.

Kathy used the curriculum material with her class from April 27 to June 17. Although her proposed use was outlined in April, she changed her plans and covered the following lessons in that period:
ORIENTATION: ACTIVITY 1 - The Grab Bag

ACTIVITY 2 - The Blindfold Walk (optional activity)

STUDY:

ACTIVITY 1 - Rubbings

ACTIVITY 2 - Direct Print (teacher demonstration only)

ACTIVITY 3 - Fish Prints

ACTIVITY 4 - Modified Texture (optional activity)

ACTIVITY 6 - Shapes in Nature (Texture Study Chart only)

APPLICATION:

ACTIVITY 2 - Direct Prints

- Variation: Mono-prints

ACTIVITY 4 - Styrofoam Prints

ACTIVITY 5 - Cardboard Prints

ACTIVITY 8 - Screen Printing (modified into an optional activity using stencils and fabric prints)

WEEK 1: April 27, 28 and 29

The focus for the week was an introduction to textures in nature. Wednesday's introduction of the Grab Bag activity lead into Thursday's activity of Rubbings. Friday's critical discussion focussed on both lessons. The optional activity was an application of the technique of rubbing to form patterned borders on fabric using fabric crayons.

The teacher preparation involved setting up the Grab Bag station which consisted of a selection of natural objects in a brown bag and xeroxed copies of the record sheets supplied in the book (p. 94). Kathy chose to organize the activity according to the book's instructions for 'A. Class Grab Bag' rather than as 'B. Individual Grab Bags'. She noted that the alternatives given in the book for the presentation of this lesson were helpful in that they offered her a solution to the problem of limited time.
As well, she was "jolted" into thinking of time-saving alternatives for subsequent lessons.

It was also necessary for her to review the Background Information and the lesson plans presented in the book in order to understand "the background, process and techniques". She noted that the background information was most helpful. Also, the samples of rubbings in the book were "broad enough to give (her) ideas and illustrative enough to give (her) a standard". As she had never done a rubbing, she practiced the technique as outlined in the book (p. 41). She had no problems with following the book step-by-step, and thusly her samples were available for Thursday's demonstration.

In accordance with the instructions in the book (p. 30), Kathy emphasized to the class the use of descriptive words as they filled out the Grab Bag record sheets on Wednesday. With a brief discussion and sample description, she was able to conduct the lesson as a spare time activity throughout the day. She notes that the students' record sheets were "extremely useful" for increasing student awareness and that she referred to the records in subsequent lessons and discussions. Kathy also used the descriptive words generated by the activity as a starting point for poetry. The students completed a poem about one of the things that they felt in the bag.

For the specific art room activity of Rubbings on Thursday, the format of the lesson in the book "was followed and was effective". She began with a presentation of the historical information from the book. Kathy noted that the students seemed to enjoy knowing that what they were doing "was useful in some respect".
Securing materials was no problem although mulberry paper was not available so white bond paper was substituted. Both the teacher and the students brought in natural objects for the exercise. Although some of Kathy's procedural instructions - "getting things out, cleaning things up" - were not clear, she had no problems with demonstrating the procedure to the students. However, the demonstration was hampered because the area she chose was not quite big enough for all to see. Nine students who were at LEC missed the demonstration but Kathy felt that this was not a problem as peer-teaching took place when they returned to the room. She also felt that Wednesday's introduction helped clarify the lesson for these students.

As evident when I entered the room after Kathy's demonstration, the students were very enthusiastic (except, as Kathy noted, for 2 out of the 30 students). They were actively experimenting with the colours of the crayons and with combining the natural objects in their compositions. Some students combined colours while others repeated items to make patterns. Attempts were made to form pictures and compositions rather than collections of isolated rubbings of various items on one paper. The students were completing the technique with ease and were anxious to show me their results. Kathy noted only one problem with the technique when students attempted to use objects that were not flat. Some students had difficulty molding the paper around the object and obtaining a clear print. However she did note that in many cases the students used them effectively. (The book recommended using only flat objects).

Kathy was surprised at how quickly the students were able to apply the concepts to the process. They were able to practice the rubbing technique, identify "good and bad points", and then apply a corrective effort to a
large product. In their final rubbings, they concentrated on creating lines of emphasis, using a variety of textures, repeating textures and items to create patterns, and creating "complete pictures".

Kathy attributed the high level of student participation mainly to the instant success that the students had with the technique - a "direct result of them watching, listening and learning". The students obviously found the lesson interesting and enjoyed learning. Other influences were the excitement of a new teacher and the opportunity to experiment with a new technique. However, she did feel that additional information in terms of depth of learning and application would have made the lesson more effective as many students finished quickly and wondered what else they could do with the technique.

The second objective of the lesson (a discussion of dot, line and shape in the rubbings) was presented on Friday. Kathy felt that this went very well and that the concepts seemed to fascinate the students. She displayed their rubbings on a bulletin board in her classroom and focussed the discussion on questions concerning the technique of rubbing (What went right? wrong? How would you correct it?) and the textures of natural objects as revealed visually in the rubbings and tactically in the Grab Bag activity (How is pattern created? How do line and shape create texture? Which words best describe texture?) Here, Kathy modified the direction given in the evaluation section of the lesson (p. 42) to concentrate more on the quality of texture in the displayed products and less on the cause of texture in nature. However, she did include a discussion of "how nature repeats itself" and "how man-made products imitate nature."

Kathy emphasized that she gave little guidance during the discussions
and that the students did the majority of the talking. She recorded their comments on the art work so that she could later evaluate the critical skills and qualitative contributions of the students. Examples of these comments gave some insight to the concerns of the students:

Print 1: - good detail in some leaves; some smudges
- overlap (of objects) not good
- good choice of colour

Print 2: - too much?
- colourful
- fills page
- eyes jump all over page; nothing attached

Kathy felt that the students were most enthusiastic during the discussions and that they were creative in their comments. She noted that "they were learning almost despite themselves." She also felt that some of the students who did not excel in other subjects were able to achieve some success which increased their confidence and encouraged positive recognition from other students in the class.

The week's optional activity was to apply the technique to making patterned borders on pillow cases and T-shirts using natural objects and fabric crayons. Both the students and Kathy noted problems with using the crayons because the T-shirts had to be stretched by several students in order to get complete coverage. Once washed, the crayons tended to smudge. However, many students completed the activity and Kathy felt that it was effective.

In her evaluation of the students, Kathy focussed on three areas: process, product and critical skills. She did not employ the evaluation
checklist supplied in the book (p. 97) but instead developed her own evaluation framework and completed an evaluation on each student for each lesson in her unit. The report card letter grade was determined from this collection of evaluation forms.

Kathy felt it important to note how well the teaching-learning style of the lessons in the book fit her conception of art because it reflected the notion that knowledge can be applied to technique to produce "a good product". At this point, her view of the curriculum material was enhanced by the realization of the variety of media and methods of application available. She was also most enthusiastic about the fact that the students were enjoying what they were doing in art. She stated that her learning was enhanced by the readings and her teaching of the material. The definition of terms and the explanations of how concepts interconnect presented in the introduction of the book were very helpful for her understanding and her organization of the presentations of the lessons.

WEEK 2: May 4, 5 and 6

The focus for the second week was techniques that create textures found in nature. Wednesday's lesson revolved around the Texture Study Chart from the activity Shapes in Nature (p.56). Making a leaf print (p.43) was demonstrated by the teacher. Thursday's activity consisted of two types of mono-prints - direct and reverse prints (p.66). Friday's discussion involved questions concerning the techniques used in the chart and the products from the mono-prints. The optional activities included leaf prints and the Modified Texture activity (p. 49).

Kathy's teacher preparation included practicing with ink as a medium and using the technique of mono-print. She reviewed the lesson plans from
the book, in particular the vocabulary from the texture chart. During her experimentation with the techniques, she completed five prints without problem. She therefore had samples of a leaf print, an etched print and a reverse print for her demonstrations. She also xeroxed enough copies of the Texture Study Chart supplied in the book (p. 94) for her class.

Kathy noted that the presentations of the texture chart and the leaf prints in the book were very useful. She thought that the texture chart was an "invaluable teaching aid" and she modified the sequence of activities in the book to use the leaf print as an illustration of the techniques presented in the chart.

On Wednesday, she conducted a formal lesson on the texture chart. Each technique was placed on the board and discussed with the class. Kathy directed the discussion toward the use of the techniques to create natural textures, specifically how the basic shapes of triangles, circles and squares produce textures. The completed chart on the board was a duplicate of that supplied in the book and was used as a continual reference for the remainder of the lessons in her unit. In fact, it stayed on the blackboard for several weeks. Kathy assigned an individual texture chart to each student. These were started in class and completed for homework.

Wednesday's lesson concluded with her demonstration of a leaf print. This enabled her to relate the techniques used in the texture chart to a print of a natural object. She pointed out how the textural quality of the leaf was created by dot (stipple), line, and shape (circles). She also drew the students attention to "emphatic lines" - those that are dominant in the print. The demonstration gave her the opportunity to familiarize the
students with printmaking equipment (ink, glass plate, and roller) and the technique of printmaking itself (transferring an image from one surface to another).

Following the suggestion in the book (p. 66), Kathy planned to have the students apply their work on the texture chart to the creation of mono-prints on Thursday. She noted that the students "lapped up the knowledge from the chart and applied it well in sketching and drawing ideas for their prints". The only instruction she gave the students for developing images for their prints was to try to apply the techniques from the chart. They were to complete both methods of mono-print technique but they could choose the order in which they did them.

However, after the sketches were done, the students encountered problems with making their prints, in particular with controlling the ink. It was a problem that Kathy had not anticipated as she did not experience the same difficulty in her practices. She notes that had she anticipated the problem, she would have stressed more practice and "play with the medium" in the lesson.

Using the first method presented in the book (p. 67), some students inked the glass plate and etched their designs directly into the ink using pencils, compasses, and other tools. But the students either used too much ink or too little. Consequently in some prints, the image appeared faded as not enough ink was transferred to the paper while in others the lines of the image were not clear as the ink had spread when pressure was applied to the paper. Another problem occurred if the students took too long to draw their image into the ink. The ink became dry and when the paper was applied to the plate, no amount of pressure from the roller could lift a clear image. The students also found it difficult to draw onto their plates as they could
not rest their hands on the plate for support and control.

More success was achieved with the second method (a variation suggested on p. 68). The students drew their images on paper, placed the paper over an inked plate and then went over the pencil lines with a blunt tool. Pressure was applied with a roller and then the print was lifted. However, several students were unable to complete both methods because of a lack of time. This caused frustration for them as well as created problems for clean-up which Kathy felt was too rushed and incomplete. Completing the second method became an optional activity for the week.

It should be noted here that the procedural instructions give on pp. 67 and 68 were mixed up in the lay-out of this draft of the book. The second column of each page should be exchanged. However, after reading through the explanation of printmaking techniques of p. 25, Kathy was able to discern how the two methods differed and could effectively conduct the lesson.

She noted that the lesson seemed clear upon reading and it was very easy to teach, but she felt that the book should have discussed how difficult it might be for the students to deal with the ink. She felt that some suggestion should be made in the book for the students to experiment with the width of line in their images (i.e., experimenting with different sized tools to discover which are more effective) and with the thickness of the ink to get a feel for the medium. She concluded that both methods were very tough for the students and she was disappointed that the students had not achieved "instant success" as in the previous week. She suggested that the activity not be used as an introduction to printmaking methods as the students need to be very careful and their knowledge and control of the medium has to be developed.
Although the students were not generally happy with the end product of their prints, they were active and enthusiastic during their experimentations. Kathy noted that they were particularly fascinated by the use of line to produce texture and regretted that the seven students who were at LEC missed the actual printing part of the lesson.

Even though the motivation of the students was high, Kathy felt that she tried to present too much and did not anticipate well enough the knowledge and skill level of her grade 5 class. Because her class was eager, she was trying to "jam pack theory, technique, practice lessons, and options for each lesson" and concluded that part of the reason for the disappointing results was that she was trying to teach too many concepts in a limited amount of time. Signs of the students' skills progressing were evident in the practice and application of the texture-producing techniques but not so evident in printmaking technique.

When I walked into her classroom to look at the students' prints displayed on the bulletin board, I was impressed with their use of texture techniques from the texture chart, in particular their use of line. I commented to the students that they had achieved success with the printmaking technique. Kathy felt that this comment made some of the students re-evaluate their prints and change their minds about the quality of the results. She also noted that "it probably helped them on Friday" when they discussed them.

Friday's discussion centered on the printmaking technique (What went right? What went wrong? What could they have changed?) and the use of line to create texture. Comments made by the students about the three prints they chose as the best included:
Print 1 (etched mono-print): - clearer line
  - lines used well
  - ink related texture (texture created from the background ink)

Print 2 (reverse print): - came out well (clear image)
  - filled page

Print 3 (reverse print): - great colour
  - stipple effect of ink
  - lines used well; simple but not too simple

The Modified Texture activity and leaf prints were completed by several students as optional activities and many students finished their second method of mono-prints as assigned on Thursday.

WEEK 3: May 11, 12 and 13

The third week focussed on the application of the Texture Study chart to relief prints, stressing the principle of balance in design. Wednesday's lesson included a review of the texture chart and a demonstration of making glue and cardboard plates. Thursday involved printing both plates and Friday's discussion was directed to the textural quality of the students' prints from both methods.

Kathy originally had not planned to teach either method to her class but the students had seen some examples from other classes in the artroom and "begged (her) to do them".

Her teacher preparation included familiarizing herself with the two printmaking methods and practicing each in order to anticipate any problems that might arise for her students. She read through the lessons in the book
(pages 69 and 75) and noted that the instructions were very clear. As no historical perspective was provided she referred to books she had at home (art references on Medievil manuscripts and printing). She prepared a partially-completed glue plate by drawing two roses on a piece of cardboard and going over one rose with lines of glue to create a raised surface. She also cut out pieces of cardboard for assembly in her demonstration on Wednesday.

Her lesson on Wednesday was confined to a demonstration of how to make both plates. She pointed out to the class how she had applied the texture techniques from the chart to her image for the glue plate. Then she covered the remaining lines of her plate with glue, advising the class on how to control the amount of glue that comes out of the bottle. She explained to the students that the object was to build up a relief with glue or layers of cardboard so that a print could be taken from the plates. She concluded with a brief demonstration of how to assemble a cardboard plate, stressing the balance between textured or raised areas and nontextured areas and the use of space.

She assigned the glue plate for homework so that they could dry overnight and suggested that the students could also take cardboard home to work on their cardboard plates. She was surprised at how many students chose to do both for homework.

Again, she only stressed the use of texture for imagery development. She noted that she had a creative class and that coming up with images was not really a problem. She encouraged them to use nature as a reference and to develop natural designs, but she did not limit them in their choice of subjects. However, she did supply step-by-step drawing cards for those
students who had difficulty coming up with an idea. Some students took the cards home to work on their glue plates.

On Thursday, the students were at various stages and consequently, the organization of the lesson worked out "fabulously." Approximately half the class had completed their glue plates at home so they were dry and ready to print. The other students completed their glue plates in class and were able to assemble a cardboard plate while they waited for the glue plate to dry. The students seemed to have little problem with controlling the glue when making their plates. One student told me during an interview that the glue could be shaped while it was drying and that it was nice to use something other than a pencil for "drawing." Another student told me during the lesson that she had had some problem with creating grass on her plate because the ink "glubbed together" but she had solved the problem by waiting for the glue to harden slightly and then used a sharp tool to separate the glue.

Kathy began the lesson with a demonstration of how to ink a glue plate, using her plate as a working example. Her first print turned out rather faded and she explained to the class that because the plate itself absorbs ink until it is saturated, several prints would have to be taken before a clear print was obtained. She also stressed the importance of applying a sufficient amount of ink to the plate and pressure to the paper in order to transfer the ink. Since the students were familiar with the location of supplies in the art room, they organized themselves.

During this lesson, Kathy was able to work with almost a full class as some of the LEC students chose to remain so they could take part in the lesson. After this week, the LEC teacher voluntarily changed the timetable
to accommodate these students at another time in the week. The motivation and participation of the students was very high. When I entered the room, they were busily working at various stations. Some were completing their cardboard plates while others were printing. There was a lot of "work-noise" in the room as students were offering each other suggestions about how to control the printing technique. As Kathy had planned, this was a time to practice and experiment with the technique, and the students seemed enthused about their discoveries. They learned from each other's mistakes and advice about how much ink to put on the glass plate. Several students pointed out to me how they had used the texture techniques (crosshatching, stipple, etc.) in their images. Many were able to evaluate the quality of their printmaking techniques and were able to explain why their prints were "good or bad" (not enough ink on the plate, ink allowed to dry, not enough texture in their images). The students moved about the room freely and were interested in how other students' prints were turning out. Kathy took a low profile as she circulated among them to offer advice on the printmaking technique. It was a positive atmosphere as the students spent a lot of time reinforcing each other on their successes.

Once again, time became a factor and several students did not complete the cardboard plate in the allotted time. Some of them were so involved in printing their glue plates by experimenting with different colours that they completely forgot about the second assignment.

Friday's discussion questions focussed on the students' application of texture to images and the quality of their printmaking techniques. Kathy noted that the discussion went very well and that it covered what she had
planned. She felt that the students were impressed with both their application of texture and their control in printing. Enough students had learned from some mistake during the lesson that these became a good starting point for the discussion. Samples of their comments included:

Print 1 (cardboard): - good lines
  - ink even and smooth

Print 2 (cardboard): - bubbles in it are good (stipple effect created by the background ink)
  - layering good

Print 3 (glue plate): - second print; ink flowed nicely
  - clear picture
  - lines for texture

Print 4 (glue plate): - good placement of "things"
  - solid glue areas good
  - ink (background) creates "eeriness"

Kathy concluded that the lesson was valuable in two ways: (1) "It was a very easy way to illustrate texture producing techniques such as line and at the same time expose the children to relief printing", and (2) "It was easy for the students to obtain a successful product. They could easily determine the causes of poor prints and take measures to improve upon their technique."

The optional activity for the week was string plates (a variation of glue plates suggested in the book on page 71).

WEEK 4: May 26

Because of Sports Day and the May long weekend, one art lesson was missed. Because the following week was shortened, the art lesson for this
week was confined to Thursday only. Kathy planned to use the time as a catch-up lesson so that any unfinished cardboard plates could be completed. For those students who were finished, she organized a lesson on fish prints from the book (p. 46).

Kathy's preparation became an ordeal as she found it difficult to find whole fish at local fish markets. Her dad eventually went out to Steveston and obtained some trout. On Wednesday, she washed the fish as suggested in the book (p. 47) with a solution of vinegar and water. She stored them in the staffroom fridge overnight.

Considering her acquired knowledge of printmaking methods, Kathy found that the book's instructions and her teaching of the lesson were straightforward. She did have a question about whether the fish should be gutted as about half of her fish were not; this created problems when the boys tried to apply heavy pressure with the roller in order to push the guts out of the fish. (The book suggests buying gutted fish on p. 47).

The object of Thursday's lesson was experimentation with technique and colour. It was to be a fun, "kind of practice-play activity" for the students. Kathy wanted to see how much they remembered from past lessons and how experimental they could be. She gave no demonstration and instead put the fish in various locations around the room and allowed them to organize themselves.

The level of participation was high. When I entered the room, a few students were printing their cardboard plates and the majority were lifting prints from the fish. Several girls were experimenting with colours and had combined four colours of ink in vertical strips to make "rainbow trout". However, some students were wasting time by playing with the fish (i.e.
floating them in the sink, jabbing them with sharp objects). A few of the girls became squeemish, and one became ill and had to leave the room.

However, above this air of disruption in the room, most students were seriously trying to obtain "the perfect print". Some had problems with printing the head and gill areas so they tried putting their fingers inside the fish's mouth in order to lend some support when they applied ink and smoothed the printing paper over the head. They also devised a way to fan the tail to get a better print. For some it was a challenge and they worked hard to improve their printing procedure. Again, the students helped each other and offered advice about how to apply the ink in one direction so as not to remove scales as this would decrease the quality of their prints.

Kathy commented that she would probably do the activity as an optional activity next time because of its "quick and dirty nature". She would also modify her approach to use a variety of types and sizes of fish as she felt that the lesson would have been more effective if a comparison could have been made. As many finished quickly, thus giving time to "fool around", using several types of fish would lengthen the activity since the students could take prints from more than one fish. Kathy concluded that she has serious doubts about whether she would even attempt the activity again unless she had "an angelic class". Warning the class ahead of time might also allow her to control the excitability of particular students.

The students and Kathy were pleased with the results of their prints. It was evident from my conversations with several students (student interview) that they had become aware of line and shape in the textural quality of the fish. Their prints also illustrated that their skills in printmaking were substantially improved.
However, Kathy was so discouraged with the behaviour of the class in general and the messiness of the activity that she decided to cancel the discussion session on Friday. She also took several days to complete her teacher log for the lesson.

**WEEKS 5 and 6: June 9, 16 and 17**

Because of school-wide testing, another week of art was missed. Kathy's teaching resumed the following week when she planned a two-week session on styrofoam printing. The focus once again was an application of the techniques from the texture chart to form an image and experimentation with a new technique. Both sessions were conducted on Thursdays in her classroom as the art room was not available, but the students were able to use other times in the week to work on optional activities. A final discussion period was planned for the 17th.

Kathy's teacher preparation involved practicing the technique and collecting styrofoam and tools for her students to make their plates. As there was insufficient time to collect meat trays and sheets of styrofoam were not available, she purchased meat trays from the local supermarket.

During the first week, the students developed an image to print. They worked out sketches on paper and, time permitting, transferred their images to their pieces of styrofoam. Kathy notes that she did not direct or guide the students to possibilities. She simply told them to apply what they had learned about line, texture, and design, and suggested but did not limit them to animals or scenes. She gave them possible resources such as the "texture chart, classroom books, nature and architecture." (See example of student work in Appendix II)

Following the instructions in the book (p. 73) she demonstrated the use of various tools (pencils, nail file, exacto knives, lino-cutters) in
carving into the styrofoam. She instructed them in preparing the plate by cutting away the sides of their meat trays so that they could work on a flat surface. Kathy noted (in her log) that the lesson's instructions were clear but that she could not answer the students' questions about how the technique had been used historically or artistically as no information was contained in the book.

During the second session, the students completed their plates and began printing. They were required to pull two prints from each inking of the plate to make a total of six prints. From my observation, it was evident that the student participation was high as they enthusiastically experimented with colour and worked to modify their plates for subsequent prints. Because the plates were easy to wash and dry, they were able to make prints of varying colours. Kathy noted that the students were impressed with the ease of working with the medium. They could take a print and if they were not pleased with the results they could cut away more areas to modify their designs. The success level was high and the students were pleased with their results. Many framed their prints and some used them to make Father's Day cards. Kathy was pleased at how well the students displayed their knowledge of texture techniques and printmaking methods. This was evident not only in their prints but also in their discussions with each other while printing.

However, Kathy noted that the quality of the discussion generated on Friday was lower than previous weeks. Their comments did not show as much insight, and Kathy concluded that this was a result of the lack of consistency in the weekly routine which had been interrupted by other school procedures. Examples of their comments include:
Print 1: - too textured?
   - lots of pattern; some not clear
   - different; a textured rainbow

Print 2: - pattern is clear
   - fun
   - polka dots make texture
   - not enough technique (texture)

The optional activity for this session carried on for the remainder of the school year. The silkscreen activity in the book (p. 84) was modified into printing with a stencil and fabric paints. A sponge was dipped in the paint and then dabbed onto the stencil so that the image could be transferred to fabric. Many students completed this activity and the results were generally successful, although the students did say (student interview) that at times a double image occurred because the cloth slipped or because too much paint was allowed through the stencil.

One student asked to do clay prints and took some materials home. Although this activity was suggested in the book, Kathy had not mentioned it or put it on an optional activity card. Another student expressed a desire to do silkscreen and joined my class for one session to print a T-shirt. She cut out the stencils in her free class time with Kathy.

C. Factors that influenced use. Kathy's interest in being part of this study was a primary factor in her use of the material. As the staff teaching assignments had been rearranged to give her the opportunity to interact with the material and her class, the quantity of her use was expected to be high. Coupled with the fact that Kathy did not have an established art program and had never taught printmaking, the book was naturally forced into the position of a primary
resource material for the eight week session.

One of the strongest reasons for her ability to translate so much of the book into experiences for her students was the compatibility of the book to her conception of art education. She found that she could readily accommodate the lesson plans into her teaching style, and the background information was sufficient for "ideas that she could explore herself before introducing them to a class". She felt that the theory in the book supported the practical application and through her personalization of the material (changing the sequence to combine lessons that would complement or enhance each other) she met the sample unit's objectives as outlined on page 13. The illustrations were helpful in providing guidelines for her practice of techniques and evaluation of the students. She noted that she would have liked more historical information and some indication of recommended total lesson time.

The students' reactions to Kathy's translation of the book also influenced her use. Their motivation level was high and because the results of Kathy's lessons were successful, she became increasingly excited about the material. In particular, she had not anticipated how "beneficial, well-received, enthusiastic and objective the discussions would be". Even though she had been leary about including critical discussions, these in effect became one of the most successful activities. She felt that the book was especially helpful with ideas for these discussions and that she noted a real growth in the students' ability to talk about art. As well, the discussion periods were "great builders of cohesiveness in the classroom" and had "produced an enthusiasm, an awareness, and an ingenuity of thought in students".
My conversations with students revealed that primarily they thought that printmaking was fun, new, and interesting. They had obviously learned about texture and had successfully completed a variety of printmaking methods. They liked the freedom to choose their own subjects and found the texture chart useful when developing their images. They especially appreciated Kathy’s clear explanations and were impressed that she had tried the technique herself and could give them meaningful suggestions and guidelines about what to expect. They felt that this avoided a waste of their art time.

Several situational factors influenced Kathy’s use of the material, primarily the characteristics of her class. She was aware of the grade level of her students and tried to gear the program to build on their existing skills. For example, as the students had little background in colour mixing she planned opportunities for them to experiment with colour. In her initial plans, she had wanted to do silkscreen, lino prints, and photograms. However, she considered these to be complex and involved activities, requiring more attention to fewer students. She concluded that with the size and the rambunctious nature of her group that she would not be able to complete these activities successfully. Once she started teaching the unit, she again altered her plans as she felt she was trying to present too many concepts in a short amount of time. She therefore slowed down the pace to meet the capabilities of the students.

Classroom space and availability were no problem, but she noted that having the book earlier would have allowed her to make use of the school board resources listed at the back of the book (p. 99). She felt that she did not have enough time to order, preview and incorporate the resources as
aids to her teaching.

The school routines which interrupted her program also influenced her use in that it caused some activities to be presented and completed hastily. When she was forced to alter the weekly routine, she noted that this disruption had an effect on the quality of the students' input into discussions. She had wanted to do a walk with her class so that they could look at nature and architecture and relate them to what they had done in the unit, but ran out of time.

The time that Kathy spent on teacher preparation was extensive for several reasons: her strong interest, the excitement that the material generated among her students and herself, and the fact that her learning was enhanced. Her part-time teaching schedule and the enthusiasm with which Kathy approached her teaching assignments were also great influences.

Kathy has plans to use the material next year, given that she teaches art. As she will be assigned to some Learning Enrichment classes, she hopes to incorporate the material in other areas as well. How she uses the book will be determined by the characteristics of her group.

D. Interpretation of the results. In Kathy's case, the material provided ideas and background information that could be translated into activities for her students. Her concern was to expand upon the skills of her class, provide them with opportunities to experiment with techniques and media, and discover that art can be fun. The curriculum material helped her meet these ends. She felt that the students' skills did progress, particularly in their ability to talk about art. She noted that the book offered her enough information so that she could provide ample opportunities for the students to experiment and become skillful with printmaking techniques. She felt that the students gained a confidence in their
abilities to "make art", and consequently enjoyed the unit.

Kathy concluded that the material could be adapted to any of her teaching situations in the future. It could be integrated into Language Arts, Learning Enrichment or Social Studies. Because she "hates teaching in a vacuum", integration of the material is likely to occur. The material also provided her with ideas that she did not have time to try this year but that she plans to use next year. Because of her interest and willingness to spend time on preparation, she will try new ideas that can be presented to her classes. She feels that her growth will be enhanced and that she will also be more able to anticipate problems and guide the students.

Because of her limited art training, Kathy needed a primary resource material that provided sufficient information for her planning. Consequently, the sections of the book on Background Information, the Printmaking Unit, the Records and the Resource Lists were the most relevant to her. The Curriculum Framework (p. 10), the Rationale, and the Program Development sections only offered her limited information. The Curriculum Framework, in particular, did not offer her much practical help. For the most part, information within the lesson plans was clear and sufficient for her to be able to practice and present the techniques or concepts. However, historical information was sometimes lacking and further illustrations would have helped. Further advice on the organization of lessons may also be warranted as there were some activities (photograms and silkscreen) that she did not try because of the numbers in her class and their rambunctious nature. A recommended length of lesson time also would have facilitated her use of the material.
Kathy felt that the material allowed her to plan activities that were meaningful to the students. Although they did not use most of the curriculum material directly, they became enthusiastic during discussions, which created a cohesive feeling within the group. The students' skills in printmaking progressed, and they thought that the unit was fun, new, and interesting. Their concerns were that the art program should be fun, but that they should also be taught skills by a knowledgeable teacher. They appreciated Kathy's clear explanations, suggestions, and guidelines, and felt that they really understood texture and printmaking. They did not realize that Kathy was following a book and were impressed with her experiments and preparation. The Texture Chart, which the students found most useful in understanding texture and creating images, and the Grab Bag Record sheet were the only parts of the book with which the students came into direct contact.

In her interaction with the material, Kathy came to understand the skills of her students in a way that had not been previously possible. She felt that the students learned more about each other and became more accepting of those whose skills in other areas are not high. The students were also able to view Kathy with a new perspective. The material primarily changed Kathy's thinking on the value of discussion sessions used as evaluation at the end of each week's lessons.
Profile 2

A. Teacher conception of art education. Liz feels that art is important to the total development of the child in that it imposes "a real discipline" that stems from the subject rather than the teacher. She sees it as a challenging and demanding subject where skills can be improved by learning, and thinks that students often are not as serious as she would like them to be. They see art as "a fun time" and do not appreciate the fact that there is "a lot to learn". In her program, she focusses on developing skills in sensitivity and perceptual awareness. She offers a background in art appreciation and experiences with a wide variety of materials and techniques. She encourages experimentation, thinking, and hard work.

Her students work primarily as artists; she feels that the students mostly enjoy "the doing". She feels that students are interested in art history and relates samples of artists' works as examples in particular lessons. Her students act as critics as they talk about each other's work during art activities. They do not study the art of different cultures.

Many activities are conducted outdoors around the school, and field trips are arranged to Jericho Beach. During these excursions, the students engage in exercises to observe and sketch the environment rather than critically analyze it. Liz would like to take the students out of the school more often, particularly to art galleries, but organizing transportation and managing students can pose problems. Teaching six classes of art also makes this less feasible.

Having taught art for 26 years, Liz has a well-established art program. She has taken college art courses but relies mainly on learning from
colleagues. Consequently, she actively attends school board workshops and has her own collection of materials gathered from workshops and magazines. She continually searches for "anything (she) can lay (her) hands on that she sees as useful" and uses visual aids that are available from the board. Although she had taught most the printmaking methods presented in Surface Probe she expressed interest in using the material because it might "offer (her) new ideas and different approaches".

Liz does not follow a particular curriculum guide but varies the scope of her art program according to her teaching situation. Her basic program consists primarily of drawing and painting with some work in fabric arts, ceramics, sculpture, and printmaking. The activities are sequenced with a transition of media. For example, the students might develop drawings into paintings. She alters the subject or changes the media depending upon what appeals to the students. The complexity of technique also increases with grade level. For example, in printmaking, the younger grades (four and five) might do object printing while the older grades (six and seven) would do lino printing. She tries to build progressively on students' experience in these grades.

In her conception, the teacher takes a very active role by directing and guiding the students to experiment and "stick with" lengthy projects. She feels that students cannot be set to work and left on their own. "If you really want them to get something out of it", you have to circulate with encouragement to make them think.

For Liz, developing an image is more important than the process or technique so she plans developmental stages in each project to lead up to a final product. She has strong views that the media is only a vehicle for
the expression of an idea, and consequently she spends much class time
guiding the students through step-by-step stages to create images that
revolve around a theme. She feels that art can be integrated with other
subject areas, but that often it is abused and made into busywork.

Liz organizes the art room so that students sit in groups of four or
six. This is primarily to facilitate the distribution of materials and
clean-up. Monitors are not used as each student is responsible for their
own area. Although the art room is shared, Liz finds that this does not
effect her program. Students' artwork is displayed in the room and in the
hallways.

B. Use of the material. Liz planned to use the curriculum material
from April 29 to the remainder of the school year with her own class (grade
5-6 split) and with one of her other six art classes (grade 6). Each class
was scheduled for two 40 minute blocks of art per week, although she did add
in some extra periods for her own class.

Prior to volunteering to use the book, Liz had completed a few lessons
on texture with her own class. They had completed rubbings, made drawings
of the textures, and then applied them to drawings of textured lizards. Liz
concluded that printmaking, in particular lino prints, would be a good
follow-up activity.

The school had planned a Sea Festival for June where the gym would be
turned into a display of students' work from all subjects revolving around a
sea theme. Liz felt that the printmaking technique could easily be related
to that theme. She planned to use the Grab Bag and activities #3-7 in the
Study, although these plans changed. Her use of the book illustrated her
integration of the curriculum material with this school event.
Liz covered the following lessons:

ORIENTATION: ACTIVITY 1 - The Grab Bag

STUDY: ACTIVITY 2 - Fish Prints

ACTIVITY 6 - Shapes in Nature

APPLICATION: ACTIVITY 3 - Glue Prints (not completed)

ACTIVITY 4 - Styrofoam Prints

ACTIVITY 6 - Lino Plates

Since Liz had taught the lessons in the Application section at some point in her career, these lessons were not taken directly from the book, but were modified to fit her approach in teaching the techniques. She had also been exposed to Fish Prints at a school board workshop. She had used the idea of a grab bag in Language Arts but had never applied it to art. Shapes in Nature came from the book but the procedure was modified.

Because of her experience as an area art consultant during the previous year, Liz also offered many suggestions that would make the material more useful for teachers of little art background.

LESSON 1: (April 29) The Grab Bag

Liz had planned to conduct the Grab Bag activity with only one of her grade six art classes. She organized the activity according to the book's suggestion for 'B. Individual Grab Bags' (p. 32) so that the students could choose their own objects and assemble their own bags. Liz noted that this "choice of objects by individual students was most revealing of their awareness of different qualities. The kids who brought better things were more aware". Her teacher preparation involved xeroxing the student record sheets from the book (p. 94).

She planned a 35 minute period to conduct the activity: 10 minutes for
explanation and motivation, 15 minutes for the activity, and 10 minutes for a final discussion. The activity received an enthusiastic response from the class and Liz felt that "they really got something out of it". The students felt each object in the bag, recorded descriptive words, and then circled their choices of the best words. Following the book's suggestion, Liz then worked with 2 or 3 objects from one of the bags, having a number of the students list descriptive words while she wrote them on the board. She discussed with the class which words were the most descriptive. Liz noted that while some students had some problems with choice of words and described shape rather than texture, the group discussion that concluded the activity was most valuable.

Even though both she and the students found the activity enjoyable and interesting, she felt that the lesson was too rushed and noted that some indication in the book of approximate lesson time would help. She also suggested that the book place more emphasis on the follow-up discussion (p. 31).

When her grade five entered the room for the next period, they expressed to Liz that the activity looked exciting so she altered her plans and conducted the exercise with them. She used the bags from the grade six class and ran off more record charts. She noted that the repetition of the activity was more successful for three reasons: (1) the students were "keener" (2) she extended the activity to 60 minutes, doubling the time for the activity and the discussion, and (3) the class had been exposed to lessons on texture and was therefore more careful with their choice of words to describe the textures. She felt that the class was enthusiastic and could have gone on with the follow-up discussion. The students that I
interviewed stated that the objects could be recognized fairly easily but that at times "it was hard to get ideas for filling out the charts".

LESSON 2: (May 2) Fish Prints

Liz had planned the Fish Prints for only her class, but once the printing activity was set up, she decided to complete it with two grade six classes as well. One of the grade six classes had not been involved with Liz's use of the curriculum material but she felt that their prints could be used for the Sea Festival.

Liz had been exposed to fish printing using a different procedure at a workshop. She concluded that the procedure outlined in the book was more difficult because it used a roller which she felt "was too complicated and (she) wasn't sure how well the ink would go into crevices around gills". Using the alternate procedure, Liz instructed the students to "paint the fish from head to tail with India ink" and then "mold, pat and stroke mulberry paper over and around (the) fish". She noted after the lessons that her method was easy.

She noted that the activity produced "a great deal of satisfaction to students who do not always find art easy" and that she "was surprised at the students who listened to instructions carefully and carried them out successfully". The level of student participation was high and cooperative. They obviously "wanted to have a good print". In comparing the grade levels, Liz concluded that the 6's were "somewhat blase" while the 5's "were more intrigued by it all and were just that much more careful". Her volunteer helper for the lesson also noted that she was surprised to see one student in particular show patience as he was usually easily frustrated in art.
Liz concluded that she would like to try the activity again with 3 or 4 students to a fish so that they could have an opportunity to experiment. The book suggests that groups be no larger than 4 (p. 47). The completed prints were hung on banners for display in the gym.

LESSON 3: (May 6) Lino Prints (split 5/6 class)

Liz had done lino prints with art classes in previous years but had "stopped doing lino because there's such a muck and everyone was chopping their fingers". She noted that the book inspired her to try the activity again. The technique fit into her art program as a follow-up to her class's work on texture and its ability to be integrated into a project for the Sea Festival.

However, Liz developed the lesson much more extensively than the book and noted that she wondered if "some people who hadn't too much experience would be able to go by the book". The way she elaborated upon the procedure (p. 78) illustrates the importance that Liz places on developing an image rather than on the technique itself (See sample of student work in Appendix II).

Her preparation involved cutting paper for the lesson. During the first class, she took 15-20 minutes to introduce the first step in the project, a pencil drawing of a textured fish on newsprint. She pinpointed the book's use of the term "scrap paper" as leading the reader to believe that this stage is not important. In her plan, this stage is the most important. She first emphasized to the students that they create an interesting shape for their fish such as an exotic fish. Arrangements had been made for the students to use the library as reference for their images. Liz commented that she is never sure how appropriate using the library is, but she concludes that some students "don't have an image in their mind"
at all" and need some help. She then emphasized the textural quality of fish created by the fins, bones and scales. Some students wanted to try representing the colours in fish after they had seen pictures in the library, but Liz discouraged them.

**LESSON 3: (May 12) Lino Prints (continued) (split 5/6 class)**

To follow the pencil drawings of fish, Liz planned black and white paintings of the fish so that students could "visualize the image when printed". To accommodate the different speeds at which students complete work, Liz also planned to demonstrate the techniques of carving with lino tools and how to transfer their image to a piece of lino. She worked with small groups for the demonstrations.

Liz commented that she likes to do the "painting after drawing in pencil because they (the students) get everything so uptight in their drawing". She felt that many students were not convinced that this stage was necessary, although she felt that she needed to spend more time with the students' experiments in paint. If she had more time, she notes that she would have made them complete a reversed painting using white paint on black paper. The students I interviewed found it difficult to do their painting because they were working quickly and the paintbrush "was thick". However, they felt that doing the painting helped them "imagine how the fish might look". Liz notes that "some delightful fish paintings" resulted. These were mounted on banners for display at the Sea Festival.

The students then transferred their drawings to lino blocks which Liz had pre-cut. The areas that were to print black in the final product were shaded in with pencil on the block. Therefore, the students would carve away the unshaded areas only. Some students had problems with recreating
their drawings on the lino so Liz let them cut out their fish drawing and then trace them onto the lino.

Before the students were allowed to cut their blocks, they had to experiment with various types of gougers on pieces of scrap lino. Wooden blocks were used for support. Liz noted that some students became "frustrated with the lino tools" and had a "tendency to hurry", but she concluded that this could have been her fault because of "the sense of urgency that (they) had to get prints for 'Sea Festival'".

To conclude her instruction, Liz discussed with the class the carving of the block. She emphasized that the background be kept simple and discouraged them from adding seaweed because she felt it was "enough to concentrate on the fish" for texture and carving. She also pointed out that the background "was the easiest place to start" carving. She had also set up a display of 5 printmaking books that she had checked out from the library so that the students could refer to the effects achieved by artists in their carving of wood blocks.

Liz noted that the level of student participation of this lesson was good and that the students were keen to cut their lino so they could start printing.

LESSON 3: (May 12) Shapes in Nature (grade 6)

Liz planned to use Shapes in Nature from the book (p. 56) with two grade six classes. She did not do the activity with her own class because she thought "they had done enough other things with texture already". She modified the procedure for the activity by excluding the Texture Chart. She had originally planned to complete the chart but felt that she did not have enough time to develop it with her classes. If she had done it, she would
have reversed the procedure so that it followed the tracings. She noted that she "really liked the idea of the texture chart" and that she will try it next year.

Liz's teacher preparation involved bringing in objects and organizing paper, pencils, and felt pens. The students were to bring in objects for the lesson as well.

As she noted in her teacher log, the lesson was "a bad lesson". Half of the students forgot to bring objects so she had to send them outside in groups of six to collect natural items for the exercise. However, some took advantage of the situation and "began leaping around" which caused Liz to get angry. She commented: "When I'm like that, I absolutely make them do what I want", and she felt that they lost their creativity because of the situation.

The students traced their objects on paper according to the procedure in the book. Although the objective was to create areas of negative space, she noted that the students "had gotten so carried away with the shape of the thing that they weren't thinking about negative space enough". Overcrowding of objects caused insufficient negative space for the texture. She could see right away that she should have spent more time instructing the students on the selection of objects for size and shape. She suggested that the book emphasize a limit of 2 or 3 objects that could be repeated on the paper and felt that a less experienced art teacher would run into problems with the book's instructions.

Instead of using the texture techniques from the texture chart, Liz gave the students a blank piece of paper that was sectioned into 6 squares. They went around the room looking for different textures. Then they drew
the textures on the paper. Without Liz mentioning it, some students discovered the rubbing method to transfer the textures. One texture was chosen for filling in the negative space of their tracings. Liz noted that she was pleased with the results although some students started making a pattern rather than a texture in their background.

In her log, Liz noted that she didn't think the students enjoyed the lesson although not for the fault of the book's instructions. Later during an interview, Liz concluded from their finished products that they must have enjoyed doing them. The students worked during lessons for the remainder of the year to finish their tracings while they were working on other art projects.

**LESSON 4: (May 18) Styrofoam Prints (5/6 split class)**

As Liz was conducting a workshop on The Sun Theme, she "quickly rushed in" a short styrofoam printing project with her class. Although the same procedure was followed, Liz did not take this lesson from the book (p. 75). The students drew suns into the styrofoam with pencil, experimented with several colours of ink, and then made prints which Liz used as examples in her workshop.

**LESSON 3: (May 26) Lino Prints (continued) (My Observation)**

The students were at various stages in the process covered in the previous two lessons on lino printing. Liz reviewed the procedure and drew their attention to the instructions on the board (Although similar to those in the book, the instruction p. 79 were not copied):

1. Make drawing of your fish (pencil or newsprint)
2. Put drawing on lino
3. Make black painting on white paper. Try to work out which part of
your block will be black.

4. Start to cut lino away. Experiment with tools on scrap lino.

5. Cut away lino block. Keep checking with me.

She told the class that the painting did not have to be exactly as it had been drawn and encouraged them to experiment with the tools on scrap lino to see the different textures created by the tools. She emphasized the importance of showing her their work once they had started carving the block so she could make sure that they were doing it properly. Many times during the lesson, Liz reinforced proper carving technique of keeping their hands behind the blades and continually suggested that they change tools and create "a lot of texture". Experimentation and decision-making seemed a priority as she encouraged one student to "experiment on scrap. You decide. Try something out yourself and see what works out for you".

When enough were at the printing stage, she called those ready over to the printing center. This was a long table covered with newspaper. Two glass plates, printing paper, rollers and black ink were set up. Paper towels were also available. Liz demonstrated how to ink the glass plate, instructing them to ink the entire surface and listen for the ink to make a "squishing sound" to indicate that it had been suitably "worked". She inked a lino plate (a sample done by her daughter) and then applied the mulberry paper. After carefully rubbing the entire surface with a clean roller, she lifted a print and hung it on the blackboard to dry. The student response was most enthusiastic as others from the room started to gather at the center, obviously very anxious to get to that stage in their own work.

The first student to print was able to critically analyze his use of ink and with each of his three prints he made corrective measures in his
technique. When asked how he like printing lino he stated, "It's more challenging. With styrofoam it was too easy. You just use pencil. This takes more time because you have to carve."

Liz concluded that the students really enjoyed the lino printing and she was most impressed with the patience that some of them were showing. The lesson concluded with clean-up. No teacher log was written for this lesson.

LESSON 3: (June 9) Lino Prints (continued)

Lino printing was observed by another evaluator for this session. Again, no teacher log was written. The project continued for the remainder of the year and no other technique was introduced to this class.

By this time, all students had finished their fish drawings and most were at the printing stage. The lesson began with Liz reviewing what the students should have before cutting a block and stressing that the black and white painting be used as a guide to their carving. Variety of tools was stressed and care in centering the print on the paper was discussed. The procedure was reviewed using the work displayed on the walls as examples. The instructions on the blackboard were directed to printing procedure and were more detailed than those in the book (p. 78):

1. Cut lino block, use different kinds of tools.
2. Keep checking with me.
3. To print you need: newspaper (plenty)
   mulberry paper
   2 rollers
   1 glass plate
   tubes of ink (always replace caps)
4. Squeeze out plenty of ink, roll on glass plate.

5. Put plenty of pressure on roller when rolling on lino block.

Liz made many positive comments to the students about how hard they were working and how successful their results were, noting use of contrast and care with carving. She stopped them at one point to bring their attention to keeping their prints clean, stressing the use of clean newspaper and washing their hands. Generally, the students were on task for the duration of the lesson. The lesson concluded with clean-up. The prints were mounted on banners for the display.

Liz stated that those who finished their first prints would have an opportunity to either modify and reprint their plates or start a new plate, time permitting. She also wanted some to experiment with using a different colour. In this way, the project extended to the end of the school year.

**LESSON 4: Glue Prints**

Liz had planned to do glue prints or styrofoam prints with her grade 6 classes. They had done glue prints the year before but "they did not seem too enthusiastic" to repeat the activity. Liz felt that she had to do something to get them "keen" about them. She divided the project into three stages: (1) sketches of boats and things on the beach at Jericho and from the top of a hill, (2) developing the sketches into paintings to create pictures, and (3) using part of the paintings to make glue plates for printing. The first two steps were completed and the paintings were used for the gym display. However, Liz did not have enough time with the classes to complete the printing activity. The book was not used for reference.

**C. Factors that influenced use.** Because Liz is an experienced art teacher who has an established art program, the curriculum material took
the position of a supplementary resource. She uses resources for ideas and approaches that fit into her units. By glancing through the instructions, she would know what she was going to do: "I don't do what you say but it gives me a different way of thinking about something or using part of an idea...and then fitting it to what I have". She states that she would never follow someone's unit of work exactly: "I just get the idea and do it the way I want to".

Because of their focus on texture, The Grag Bag and Shapes in Nature were chosen. However, the lessons from the Application section of the book became reminders of techniques rather than lesson plans to be followed. Liz's conception of art with its strong emphasis on creating an image caused her to focus on her own plans rather than the technique as stated in the book, even though the objectives were the same. She feels that students need more guidance in creating textured images for printing. She would like "to see more emphasis (for all printmaking lessons in the book) in developing the image before the student starts to print". She notes that in her experience, she has "seen too many printing activities in which image is secondary and the elements and principles of design are ignored".

One factor in Liz's volunteering to use the material was its ability to be integrated with her art program as well as the school's activity of the Sea Festival. Texture and printmaking were related to the sea theme and even though it had not been Liz's intent, the objectives outlined in the book (p. 13) for these two areas were met. This was not a result of following the book's unit but rather a logical result of the combination of the element of design (texture) and the media (printmaking).

Liz's experiences in observing many art classes as a consultant caused
her to surmise that some of the lessons lacked sufficient information for a
beginner, particularly in printing techniques and image development.
However, she did feel that the Background Information (pp. 15-27) and the
Resource List (p. 99) would be useful to teachers of little art background.

In analyzing the book value for herself, she felt that the Rationale
"reinforced things that she already knew" and that it "made sense". She
liked the organization of the book into sections and felt that this would
"be useful if you were going to work through it". The lesson plans were
well layed out and she appreciated "not having to read...a whole lot that
you don't really need". She avoided the evaluation section at the end of
each lesson and instead administered a test on texture to her classes at the
end of the unit. The results of the test were good and Liz felt that they
"really got something out of the lessons". She did not do any lessons from
Criticism but noted that the book's suggestion of organizing a field trip or
a photo display to examine man-made structures (p. 92) was something that
she liked. She also stated that she must try the Unit Evaluation from page
96.

Liz noted that there were other things that she would like to do in the
book but that she "just did not fit (them) in". Time was a large factor.
Other constraints included the numbers in her classes and the demands of
other subjects. Some of her art classes were also interrupted by camping
trips.

Liz stated that she plans to use the book next year as a supplementary
resource. She would select lessons that appealed to her or that she though
would work. As well, she would like to see a silk screen activity organized
as she had never done this with students and would like to try.
D. Interpretation of the results. For Liz, the material offered new ideas which could fit into her own unit on printmaking. She did not use the lessons directly from the book but modified the procedures to fit her own teaching style. Her concern was that many students have difficulty with creating an image to portray, but that every student is able to achieve if they have some guidance from the teacher. She felt that the book did not offer her information in regards to the students' creation of images. Liz also feels that it is important for the students to come to understand the elements and principles of design. The book did give her two new approaches to exploring the element of texture which both she and the students found interesting.

Because Liz had an established art program, she was in need of only supplementary resources. She concluded that the material could be adapted to her situation in that it contains ideas that can be modified to fit her units. Information within the lessons will help her remember procedures but she doubts that teachers of little art background would find the information sufficient.

Liz's interest and experience as an area art consultant caused an interaction with the material above her own situation. She tended to analyze the book for its relevance to other teaching situations as well. She feels that there is a need for art curriculum materials that help the teacher guide the students to create images. She has strong feelings that art only occurs when a medium is used as an expression of an idea, thought, or feeling. She has observed many classes where the work of students, in her opinion, is not art. She cited examples of "crafts projects" and illustrations for stories, particularly in the primary grades. She noted
that teachers are keen, and even experienced art teachers are always searching for new ideas. She suggested that the book should meet the need for themes and imagery development, and felt that this was the material's weakness.

Even though some students in her class would like more freedom to choose their own subjects to portray, it seemed that Liz's strong emphasis on imagery development allowed them to create artwork that they were proud of. Many students could appreciate the need for a step-by-step development in imagery and in the understanding of the nature of the process of printing. They also enjoyed printmaking and had learned about texture from the activities that Liz chose.

The sections of the book that were most relevant for Liz were the sample printmaking unit, the records, and the resource list. The theory and the background information only reinforced things that Liz already knew. In her choice of the Grab Bag lesson, Liz felt that information was sufficient, although more emphasis in the book should be given to the follow-up discussion. She also felt that more information was needed in Shapes in Nature to guide the students in their selection of objects for the exercise. The organization within these lessons were helpful. The information presented for screen printing was insufficient as Liz was reluctant to try to organize this activity, even though she expressed interest in it.
Profile 3

A. Teacher conception of art education. John feels that art is important to the total development of the child in its broadening of the creative process: "seeing things in a new or unique way, accepting the new and exploring the unusual". His program focusses on promoting a wider, more diverse perspective from which students view the environment. He also tries to take the "mystery" out of art by showing the students "tricks" such as perspective. He would like the students to realize "that anyone can create at a skillful amateur level", and he hopes to build on their future understanding that "art is pure self-expression" as well as "a familiar and useful tool". An understanding of the elements and principles of design is also stressed. However, John does not focus on imagery development but instead tries to lead the students to discover the different possibilities of media through experimentation.

His students work primarily as artists: "We concentrate on making art". He feels that students most enjoy the "freedom amid restriction to make stuff themselves" and they appreciate the "lack of judgement about whether they have the right or wrong answer". They do not work as historians. John notes that "It is too soon to worry about 'masters' and there's no room to put it in". Occassionally, he uses examples of artists' works in discussions of why they were successful. But he avoids more complex art work as he feels that "the students don't have the motor skills or experience to get into complex work (themselves) and they see within their capabilities". His students work as critics of each other's work only incidentally as they analyze reasons for successes and ways to avoid failures. Judgments are avoided. A study of the art of different cultures
does not occur in formal lessons but happens incidentally as well.

The scope of his program is flexible but he generally teaches drawing and sketching in the first term and plans for a lot of printmaking, claywork, model-building with balsa and card, and fabric dying and applique. He sequences activities over several years to range from easy to complex. For example, drawing gives way to perspective and 3-dimensional shading. John feels that art is integrated constantly with other subjects "anytime you do anything visual"; most of his integration occurs with Social Studies. Activities are conducted outdoors only when necessary. This is dictated by available table space, equipment, and the particular media.

John has taught art for 7 of his 12 teaching years and has taught printmaking each year. He does not follow a specific teaching manual, and relies on interest and training when planning. Books with background information are most helpful. John describes his program as "a growing curriculum". He continually tries to do things that he has never done before in order to avoid "getting bored", and he is always "looking for new and better ideas". Usually he will try to "retrace the steps" in artists' work or get ideas from other art teachers. He states that his most successful units are those that he is "good at like drawing and cartooning".

John's interest in his personal art causes him to make experiments using the particular media that he has planned for his students. He tries new things and then discusses his successes or failures with the class. Ideally, he would like to lead the students to discovery by supplying enough materials for experimentation. However, he feels that time is short and so often he makes examples to show them the possibilities.
Displaying student work is a priority and for any unit of work, "everything goes on display walls or in showcases". Their work is not considered finished unless it is ready for display and consequently John spends time instructing them on ways to mount their work.

Care of equipment is stressed. Distribution of supplies is teacher dominated, and students are encouraged not to waste materials. Boxes for scraps are available so that materials can be recycled. Monitors are not assigned and each student is responsible for their own clean-up. Seating is flexible and students are grouped for some activities, in particular specific demonstrations.

B. Use of the material. John planned to use the curriculum material during May and June with his grade six and seven classes. However, he decided to include the grade 5's in the printmaking unit in order to accomodate his plans for continuity in his grade six art program for next year. Since he taught a split 5-6 and the grade 5's of this class were "forced into the unit" he decided to include the straight grade 5 as well.

The timetable was scheduled so that each of his classes would receive three 40 minute blocks of art a week: one for printmaking, one for model-building and one for claywork. He had wanted to promote as much as possible "an overlap of materials and an overlap of working with plastics and objects". For example, model-making could be done with clay and some of the claywork could be used for printmaking activities. He stated that the curriculum material "fit into ideas (he) had in his head - unformed but (he) had a general idea of what (he) wanted to do", and so consequently he volunteered to use it.

In translating the book into experiences for his students, John used
only two lessons: Cardboard Plates (p. 75) and the Direct Print (p. 43). He had taught both methods at some point in his career. 

**LESSON 1: Cardboard Plates (Div. 1-5)**

The lesson plan in the book was not followed exactly but was modified to fit the skill level of each grade and build upon projects that had been completed earlier in the year. With the younger grades (straight 5's and the 5-6 split) John concentrated on the textural quality of the printing plate, making the activity a follow-up from the cloth and wallpaper collages that the students had done earlier in the year. With the 6's and 7's, he focussed "a little bit more on straight artwork with the cardboard" emphasizing form and line, and drawing on a previous project of applique pillows. He contrasted the exercise for the 5's and 5-6's as a "more primitive activity" in relation to the "more sophisticated" exercise for the older grades. During the seven week session, some of the grade seven students completed silkscreens as well. John had introduced the technique to them before he started using the curriculum material and had also taught it for many years. 

For each of the classes, John's teacher preparation involved making samples of each stage of the plate-making and printmaking processes. For the plates, one example was "glued up ahead of time", one was half finished, and a third was started "from scratch" so that the students could see all of the stages. With the younger grades his samples included more cloth and wallpaper scraps to create textures but as the unit progressed he found that he was suggesting to the older ones to supplement their cardboard with a "variety of textiles, woods, string and wallpaper scraps to provide better, more interesting textures". He concluded his introduction to each
class by inking the completed and dried example and taking a few prints. He also prepared prints ahead of time to discuss effects that the printmaking technique could achieve.

During my observation, it was noted that John spent much time encouraging the students to experiment with the creation of their plates as well as the inking for a print. No suggestion was given for image formation other than using materials available in the room or natural objects that the students could collect outside. John had set up a supply area which contained cloth scraps, textured wallpaper pieces, leaves, seeds, and corrugated cardboard as well as basic printmaking equipment. The suggestions in the book were not referred to but were similar.

The only restriction placed on the students was that they had to make one print on cloth and one on paper. John was open to any of their experiments, even if he knew that the students might run into problems. He wanted them to pursue ideas and discover problems for themselves. These discoveries were used as a basis for spontaneous small group and class discussions. The students also offered advice and warnings to each other while they were working. John continually made suggestions such as applying colours over the top of each other and using different colours of printing paper.

John noted in his teacher logs that the level of student participation was high as they were "intrigued...(by) something new (that was) not too complex". They were also "keen to see results (and) show each other how 'neat' the 'lift-offs' were". Some were "motivated by (the) successes of some of the more artistically adventuresome students". The students that I
interviewed felt that printmaking was fun and that most of what they learned came from experimentation and self-discovery. They felt that the objective of the activity was to experiment with texture, use detail, and learn how to "use materials right". Several of the grade 5's said that if they could do the activity again, they would try something harder and would make a picture "instead of just experimenting". They all felt that they had run out of time.

John analyzed the successes and failures of the lessons with each class in his teacher logs. With some of the grade fives, he found that they were unable to conceptualize the printing process and had tried to form coloured pictures instead of plates. "They kept looking for the 'right' coloured wallpaper or cloth to form a collage" as they had done earlier in the year. He noted that "some never caught on - even after lifting one or two prints", although some that "had experienced the results of this 'mistake' (became) much more aware of the nature of the process". He concluded that this was "very valuable".

With one of the grade six classes, the concept of mirror image arose. Some students tried to use letters in their plates and "had difficulty" as the letters printed backwards because of the nature of the printing process. He suggested that some illustration of "the 'mirror image' nature of the process with pre-made plates" would have helped the lesson. For the next class (grade 7) he tried to demonstrate this concept using block letters. Although the students understood the concept, John "found that a number of the students were making 'signs' using words - for example, block capitals spelling out their names". Even though "they were into the process" they were "not using it to depict or project images". He stated that he had
mixed feelings about the results of the lessons. "They didn't come up with anything that...is particularly artistic. There wasn't a lot of adventurous new frontiers broken". However, it did lead into "a nice little lesson with some of the kids on symmetry and...reflections" although this was not what he had intended.

The same problem occurred with the students who were doing silkscreening. John felt that his use of the word "stencil" caused the students to associate lettering stencils to their work and most of them made name plates for T-shirts. Although he did not discourage them, he noted that "the technique is the same (but) the level of artistic endeavour is much less" than developing an image. He felt that there was "not a whole lot of designing going on". The grade 7's that I interviewed said that they liked having the freedom to choose their own image but one commented: "I wouldn't do stencilling (again) because (it's) too easy. I would try to create a more complicated picture".

John concluded that the next time he does printmaking, he would start with a theme. He mentioned two possibilities. Because of his own interest and personal resources, an Old Sailing Ships theme would begin with showing the students samples of seascapes done in the 1800's or 1900's using printmaking as a medium. He would choose "samples where the work is very simplistic or primitive in block printing" so as not to "intimidate the students and make them feel that there was no way they could do something on a parallel". By limiting the students' choice of subject to a theme, John feels that he would avoid them opting for "an easy way out" such as doing their name, and he would "stretch them a little bit further" in their artistic endeavours (see student work in Appendix II). John also mentioned
the idea of doing logos and using Vancouver's harbour as a theme. He would arrange a field trip where the students could make sketches around the harbour and do rubbings of objects typically found around the dock. "When you get to printmaking, they are trying to portray a particular scene, feeling, (or) idea. They're looking for the kinds of textures and shapes that will do that". He concludes that the results would be more interesting.

He suggested that the curriculum material pay more attention to imagery but noted that themes was "not really within the sphere of the book...other to mention that (they are) a good possibility".

Other problems arose during the printing process. Some students took too long to apply ink to their plates, in particular when they were experimenting with putting several colours of ink on different portions of a plate at the same time. Consequently the ink was drying too quickly. Ink also dried on the glass plates when they waited too long between prints. Some students had not glued their plate together with enough glue which caused pieces to lift off and become stuck to the inked roller. Colour mixing on the glass plates became muddy as the classes had "insufficient colour mixing background". John concluded that more work had to be done with the classes in this area. However, the students did achieve "some interesting colour mixes and outlining when a plate done in one colour was used with a second colour before completely drying the first colour". "Printing twice on the same paper to form a 'shadow' image also intrigued the children". Some students did not understand the concept of "lifting-off the print from the plate" and instead turned the plate upside down onto the paper. John concluded that he should "have had them attach the plate to a
Because of interruptions to his scheduled art classes, the month of June became work periods for the students to complete their cardboard plates and silkscreens. "I just let them go, experimenting with things", although this was not his intent. He was unable to conduct formal lessons as there were times when he would "get five kids showing up for a class when you think you're going to have thirty". There were some students who only attended one printmaking lesson during the seven week session, and "there were whole classes that he never saw" for the last part of the unit. Consequently, John could not finish the unit. He was only able to achieve his desired results with a few students where he could "show them how they could get an effect that they wanted". In general, he was pleased with the results of the lessons, however.

LESSON 2: Leaf Prints (Div. 2 Grade 7 at camp)

John took the printmaking equipment to camp "thinking that (he would) do some but (they) were so busy doing other things (they) only had time one evening to do a bit". John prepared a few examples of leaf prints ahead of time. "It was really a group of kids hanging around one evening with nothing better to do", but the level of student participation was high as they lifted prints for an hour. John notes that the students found the lesson interesting as they "inked everthing imaginable...experimenting to find 'neat textures'". Although the procedure in the book (p. 44) is similar, the lesson plan from the book was not followed.

C. Factors that influenced use. Because John continually changes his curriculum and looks for new ideas, the curriculum material became a valuable resource of "ideas that he would like to try next year". Although
he was unable to translate many of the activities into lessons for his current classes, he used the material in other ways. He experimented with clay prints (p. 74) and included his examples in a display board of print-making techniques. He plans to use this with classes next year. He was inspired by the lesson on photograms (p. 51) into thinking of other ways that reflected light could be used for "long-term printmaking". He took the idea of fish prints (p. 46) and helped two grade three teachers with different possibilities. (He changed the procedure to use India ink.) He also showed the sample in the book (p. 48) to one class to illustrate that prints could be taken from almost any surface. The students expressed interest in doing them but John felt that there was not enough time. John also expressed interest in doing styrofoam prints next year. He had planned to use "contour lines to build up textures" as in Modified Texture (p. 49) and during a four day absence he instructed the substitute to assign an activity in this area. She did not take the activity from the book, however.

John noted that he would "pick and choose units from the book and use them as ... they are... as guidelines... that will tell (him) what (he has) forgotten to do". He would look in the book to make sure that he had "remembered to set everything up". The evaluation sections of the lessons would not be used, and he would concentrate on the Study and Application sections in the book. The only thing he would add would be the theme for the unit, and he would "write that in the book (himself)". He would not try to complete the book in one year but would sequence the activities over three years. He would also do the unit earlier in the year to avoid the confusion created by year-end school procedures.
The importance that John places on experimentation was evident in his use of the material but he concluded that "he focussed too much on process so that some of the images were trite". He would do it differently next time to center around themes to develop imagery. He noted that next year he would "probably go through using most of the lessons in the book", although he would not go by the sequencing of activities. He questioned the book's logic of determining easy-to-complex techniques because he feels that silkscreen is a very simple process as compared to carving on lino which is "a more sophisticated or highly-developed skill". He would choose to ignore the Rationale. He has doubts about whether there really is a sequence with the other activities.

The two factors that prevented John from using the material as planned were time and interruptions from school events. Many of his lessons were interfered by band practices for the school concert in June, Sports Day, school-wide testing that froze the timetable, special presentations, track meets, and camping trips. Formal lessons could not be conducted with partial classes and many art periods were missed.

In offering suggestions that might enhance the curriculum material, John mentioned the addition stencil-spraying on fabric, a section on "helpful hints and warnings", and a resource list specifically for Vancouver of where supplies that are unavailable from the board can be obtained. Included here would be waterbased screen printing inks.

D. Interpretation of the results. John's concern was to lead the students to self-discovery through experimenting with media. He focussed on process, hoping that knowledge of the different possibilities of
techniques could broaden the students' creativity. The book's presentation of a variety of printmaking activities was useful in this regard, if not this year, in John's plans to incorporate the book into his program in subsequent years. However, during his use of the material, John became concerned about his lack of emphasis on imagery and concluded that much of the students' work was trite. The book gave him no information on imagery development, and he suggested that this was a weakness. Although he was not sure if themes is within the sphere of the book, he concluded that he has an interest in using themes for his printmaking units in the future. He would write these into the book himself. He also has a need for information on water-based screenprinting inks so that students can control printing themselves.

Some of the students seemed to come to the same conclusion. Even though they had enjoyed printmaking and had achieved an understanding of the process as well as the design element of texture, some felt that in repeating the unit they would try to create something more complex like a picture. The students had no direct contact with the book and completed only one activity.

The relevant sections of the book for John were the activities of the Study and the Application sections. These lessons would not be followed exactly but would be used as reminders of materials and procedures. The value of the book came from new ideas that inspired John to create variations of technique. Basically the ideas made him invent other possibilities that he could experiment with and then translate into activities for his students. His interest in printmaking was a strong factor in his desire to keep the book, and he notes that he will probably
teach most of the lessons in the book over the next three years. "It is a reminder of all the neat things you can do with printmaking" as well as a guide for checking equipment and procedures.

During this study, John was unable to translate much of the book into activities for his students because of situational factors. Its relevancy must be derived from John's statements of future planning and his personal experiments during the session.
CHAPTER 5

Discussion of Findings

This study yielded information that may be useful in the development of art curriculum materials. The curriculum material Surface Probe was used in the three classrooms for an eight-week session, and information on the participants' use and perspectives of the material was gathered. Information and observations were interpreted and grouped as strengths and weaknesses of the material. Suggestions that might be considered in art curriculum development were made on the basis of these.

A second focus of the study was to document the factors which influenced the teachers' use of the material. Some tentative conclusions have been formed and interpreted as further implications for curriculum development.

Strengths of the Material

Based on the information in the teacher profiles, it was concluded that the material held some meaning and relevance to teachers and students of varying experience. A discussion of specific strengths illustrates this point.

The first strength was the book's presentation of a variety of ideas that could be integrated into a teacher's planning of a printmaking-texture unit. Liz had exposed one of her classes to some lessons on texture earlier in the year, but she was able to incorporate the Grab Bag into an additional lesson. Although she had used this in Language Arts in the past, the book gave her the idea of integrating it into art. She also used Shapes in Nature with a second class. Although she had been exposed to many of the
printing techniques in the book, she was inspired to try fish prints and lino cutting after reviewing the book.

John experimented with printing techniques in the book. Even though he had been exposed to the techniques that he translated as experiences for the students, he was inspired to invent other techniques that could be used in planning for subsequent years. The lesson on photograms caused John to think about including the natural fading of bulletin board paper into a lesson on long-term printmaking with natural light for next year. He also tried clay prints and noted that clay and styrofoam prints would be ideas for future planning. His own examples of clay prints were mounted onto a display of printmaking techniques that he plans to use as a teaching aid in the future.

Kathy was able to incorporate the lessons in the book into her own organization of a printmaking-texture-natural design unit. She followed the book very closely, although she changed the sequence and supplemented the unit with her own ideas for optional activities. Kathy was eager to present as many lessons to her students as time permitted, so many of the book's lessons became optional spare-time activities.

Each of the three teachers expressed a desire to try more ideas than the time frame of the study allowed. Kathy wanted to complete photograms, lino, and silkscreening, in particular. Liz noted that the curriculum material contained many ideas that she would try next year. She particularly would like to try silkscreening. John felt the pressure of time and found himself trying to rush through a few more techniques before the session was over. He was particularly interested in photograms. Each teacher asked to keep their copy of Surface Probe. John did not return his
copy. Liz and Kathy had written comments in their copies, but they requested that the books be returned to them on completion of this study.

A second strength that can be derived from this primary conclusion was that particular lessons in the book could be integrated to other subjects. Kathy was able to integrate The Grab Bag activity with poetry writing in Language Arts. Liz noted that the lesson on photograms could be easily integrated with a Science lesson. John's emerging concern for themes and imagery development caused him to note that the book could be integrated into a study of old sailing ships and the Vancouver Harbour. Liz was able to integrate her lessons with a special school presentation around the theme of the Sea Festival, in particular with the use of fish and lino prints.

Specific features within the book were noted as strengths by the teachers. Primarily, Liz noted that the organization of the book into sections would facilitate a teacher's use of the material if it was going to be worked through in its entirety. Kathy's use of the material illustrated this strength. She was able to incorporate the four sections of the unit—orientation, study, application, and criticism—into her own sequencing of the lessons presented in the book. From the book's sequence, she derived the importance of a clear, developmental organization of concepts and skills.

A fourth strength relates to the background information supplied in the book. This includes the sections on the elements and principles of design and printing techniques. Liz noted that these sections would be very useful to teachers with little art background. Kathy noted that the information on the design elements and principles helped her understand and present concepts. She found that the information on printing techniques facilitated
her teaching by allowing her to instruct the students in the proper names for methods she presented in lessons. This was an important factor in the students' viewing of her as knowledgeable on the subject. The students' respect for their teacher became an issue since they had found their former teacher lacking in expertise.

Included in the informational section of the book are the Rationale, Program Development and Curriculum Framework. Although the investigator had some concerns about these sections, it must be noted that Kathy found these sections useful to her situation. The Rationale presented enough theory for her to understand the developmental level of her students and provided reasons for the choices of student experiences in the material. Program Development and Curriculum Framework reinforced the reasons for the unit's organization into four sections and caused Kathy to repeat the same organization with her lessons.

In the first draft of this study, the use of these sections was questioned and was therefore organized under concerns of the investigator. However, when Kathy reviewed the draft, she was quite adamant that these sections provided her with an understanding that determined her use of the material. She felt that this information was a strength of the book.

Particular strengths were also evident within the Sample Printmaking Unit. The variety of texture and printmaking activities provided enough information for teachers to plan for depth of a media. The illustrations were helpful. Kathy also noted that the samples of student work offered her assistance when she was practicing techniques. She was also able to use the samples as a standard when evaluating her class's work. John also used the samples in demonstrations with his students. In particular, the samples
of fish prints were shown to the class to reinforce the idea that a print could be taken from almost any surface.

All three teachers felt that the lay-out of the lessons was useful and relevant to their concerns. Liz appreciated not having to read through an abundance of information to arrive at the materials lists and procedures. The book was easy to skim for information. John felt that the primary value of the material for him would be the clear outline of lesson plans that could remind him of materials and procedures. Kathy felt that the instructions in lessons provided her with enough information on materials and procedure that she could practice printing techniques with which she was unfamiliar before presenting them to her class. She concluded that the instructions were easy to follow, and that the information on teacher preparation helped her organization of lessons.

The other categories within the lessons—objectives, vocabulary, history, evaluation, and follow-up—were most useful to Kathy. This determined the seventh strength of the material. The evaluation questions at the end of each lesson were valuable starting points for critical discussions. Each week, Kathy would place these questions on the board, supplemented with questions of her own, and the students would talk about the art that they produced during the week. Kathy noted that the students' abilities to talk about art as critics progressed over the eight-week session. In fact, the critical discussions produced a cohesive spirit within the class. It should be noted that Kathy had not originally planned to include the discussions in her unit, but that after seeing the students' reactions, she felt that the discussions were the most beneficial aspect of their learning. Liz also found the suggestions for critical discussion.
included in the Grab Bag activity most useful in increasing the students' sensitivities to texture.

The vocabulary provided in the book facilitated both Kathy's and the class's abilities to talk about art. The historical information was noted as useful, and Kathy felt that the students appreciated knowing the relevance of the concepts that were presented in class. The follow-up activities are also useful for extending the book's activities. Kathy incorporated these into job-cards that could be completed by the students in their spare time.

Related to this strength is the fourth section of the book's unit, Criticism. Although the teachers did not translate this section into experiences for the students, all three teachers expressed a desire to use the ideas presented in the lessons. Kathy wanted to complete a walking tour of the neighbourhood that would center on a discussion of texture as it appears in man-made forms. Liz also noted that she liked the ideas of Activity 2 where a field trip or photo display concerning man-made structures was arranged to compare the elements of design in nature to those in structures made by man. John felt that an exploration of the textures of things typically found in Vancouver's harbour would be part of his future planning.

An eighth strength was noted by both Liz and Kathy in the records and resource lists supplied in the book. Liz used the records for The Grab Bag and expressed a desire to incorporate the Texture Study Chart into her unit for next year. Kathy used both of those records, and found that the texture chart was most beneficial. She centered the majority of her lessons around the techniques presented in the chart. The students commented on how useful
the chart was in helping them produce textures in their own images.

The students' reactions and skill development leads to the ninth strength. Firstly, the content presented in the book was appealing to upper elementary students. Interviews with students from each school illustrated that they found the activities fun, and each of the teachers noted that their students enjoyed the lessons. The students were also able to conclude that their understanding of printmaking and texture had increased during the session, and they were eager to try different or more complex techniques.

The teachers also noted that the skills of the students had increased. Kathy noted that a sensitivity to design elements occurred in her class as students began noticing texture in their neighbourhood. During critical discussions, the students were able to analyze successes and failures and give reasons or ideas on how technique could be improved. John's class was also able to make suggestions for improvement of their work. Each of the three classes illustrated an increase in understanding of technique by the peer teaching that occurred. Students were able to advise each other on the use of ink and printmaking tools, as well as offer suggestions that would improve the textural quality of their images and the clearness of their prints.

The final strength, and possibly the most important, was exhibited in Kathy's use of the curriculum material. Because she needed no further assistance from the developer aside from minor clarifications, it can be concluded that a teacher with little art background or teaching experience would be able to modify and adapt the curriculum material to suit the planning of a printmaking unit. This was a result of the features of the material that have just been discussed, and the fact that Kathy intends
to use the material next year regardless of her teaching assignment. Through the evaluation of her students' work and the observations made by the investigator during their class time, it is evident that a less experienced teacher can use the curriculum material to promote the technical skill and perceptual abilities of students.

Concerns of the Material

During the study, particular issues and concerns of the teachers arose. Primarily, John and Liz expressed a concern for the lack of instruction in imagery development within the lessons. Imagery development was a primary focus in Liz's orientation to art education, and she was unable to secure ideas from the book in this regard. She felt that a less experienced teacher would have a need for this information, and without it, she doubted whether the students' products could be classified as "art". John's growing concern for imagery development also became evident. However, he concluded that it was doubtful whether it was within the sphere of the book to present information on imagery development other than to suggest the use of themes. Kathy was not concerned about imagery development and so this did not become an issue. She felt that the students were creative enough to develop their own ideas, and her concern was for their use of texture only.

The students of John's class also expressed a concern for imagery development. Those interviewed felt that they would like to try to make more complex pictures rather than just textural experiments. Although some of Liz's students wanted more freedom in choosing subjects for images, many of them understood the value of Liz's steps in imagery development. The majority of them were pleased with their work. Kathy's students enjoyed the
freedom to choose their own subjects and felt that ideas could be obtained from friends, from nature, or from step-by-step drawing cards.

An analysis of the students' work from each of the classes by the investigator reinforces the need to address image development in the book. The products of both Kathy and John's classes seem undeveloped compared to those produced by Liz's students. John described his students' work as trite. The guidance that Liz's students received for composition and texture development is evident in the quality of their images. The evaluator's bias is acknowledged but is reinforced in John and Liz's concern.

A second concern of the investigator focuses on the teachers' use of the historical perspective in the book. Kathy was the only teacher to attempt to use this information in planned lessons. Through her use of the historical information, she found that for some lessons, information was lacking. This forced her to consult additional resources. It can be concluded that historical information is superficially treated in the book.

Related to this concern was the critical perspective presented in the book. Although Liz felt that the suggestions for criticism in The Grab Bag activity were useful, she felt that more emphasis should be placed on the follow-up as she considered this to be the most valuable part of the lesson. Even though the three teachers expressed interest in the Criticism section of the unit, none of them executed them as formal lessons. This may have been a result of a lack of development and detail within the lesson plans themselves. Cross-referencing with lessons in the other three sections may have encouraged the teachers to use the suggestions.

A fourth concern is the lack of information for teacher preparation and lesson presentation for particular printmaking techniques. Liz commented
that many of the lessons did not seem to provide enough instruction for teachers who were not familiar with printmaking. She cited lino prints as the most obvious example. In her own use of the material, she also noted the lack of guidance for organizing a silkscreening activity with a class, and requested that the investigator demonstrate how this could be planned. Kathy wanted to try photograms and silkscreen but felt that these were too complex to accomplish with a large class. Perhaps additional information on organization would have enabled her to complete these lessons.

Both Kathy and John suggested that further information about possible problems with particular printing techniques was also needed. Kathy had problems with monoprints and felt that a list of anticipated problems and ways to avoid them would have been beneficial. She noted that the students were very frustrated with the technique. John noted that because printmaking is a messy medium that involves unique equipment, a section on "hints and warnings" would be helpful. Added illustrations for more complex techniques such as developmental lino prints and step-by-step illustrations of lifting a print were also suggested by John. All three teachers were concerned about the lack of information for adapting techniques to students of varying art experience and skill level.

The fifth concern relates to the value of the information on theory and curriculum development. Liz skimmed the material but felt that it only reinforced things she already knew. John seemed bothered by the theory and noted that he would sequence activities according to logic rather than "that developmental stuff". All three teachers noted that they would use the printmaking unit in future planning, but none of them mentioned the curriculum framework as being useful for planning. Kathy felt that it
helped her understand the development of the unit, but its use for planning activities using different media is questionable. It can be concluded that the curriculum framework is not sufficiently developed to be a suitable aid, and that the teachers' primary concern is for the practical suggestions that the book can offer.

The final concern is illustrated in Kathy's use of the material. It is evident that in order for a teacher of little art experience to use the material, a large amount of teacher preparation time is necessary. Kathy practiced each of the techniques before she presented them to her class. She also spent many hours reading the book and developing an organization suitable to her concerns. Many problems that could have occurred with the students were discovered in her own experimentation. However, a teacher who is unable to spend as much time preparing might avoid many of the lessons in the book. It is also possible that if a teacher has not practiced a technique, she may confront many problems when she presents the material to a class.

Synopsis of Factors That Influence Implementation

It would seem that in all three cases, teacher conceptions of and backgrounds in art were substantial factors in the quality of implementation. The two teachers who had an established program, with experience in teaching printmaking, were less prone to use the material as a primary source for planning than the less experienced teacher. These teachers had a need for new ideas and approaches, but their concerns were mostly in guidance for imagery development with students rather than exercises in elements of design or media techniques with which they already had experience. This was not just a function of experience. The two
experienced teachers also showed parallels in their thinking about art education which determined their needs. For Liz, however, the need for image development was much stronger than for John who seemed to stress both image and experimentation with multiple techniques in his conception of art education.

In Kathy's case, image development was not a priority. Her conception focussed on experimentation with a variety of media and techniques. However, as she gained more experience with teaching art, she concluded that students cannot be bombarded with concepts or techniques. She began to understand the limits of the students' capabilities and consequently slowed down the pace. She also felt that her students "were creative enough" to be able to create images and was pleased with the textural qualities of their results. It cannot be determined whether she would find a need for image development as she gained more experience with teaching art.

The worth of the material was derived, in part, by the closeness of the book's conception of art to that of the teachers involved in the study. Kathy's focus on natural textures and printmaking made her view the material as relevant and meaningful. John's focus on expanding the possibilities allowed him to view the book as useful for planning printmaking techniques. However, his growing concern for imagery caused him to conclude that the material would not be relevant to his entire printmaking unit. Liz's strong concern for imagery would cause her to see the material as meaningful and relevant only as a supplementary resource of some ideas that could fit into her planned units. She does not see it as extremely useful to teachers with little art background. The follow-up discussions at the end of each lesson were used regularly only by Kathy who found the book's lists of
evaluation questions most helpful and the group discussions invaluable. Both Liz and John conducted spontaneous discussions based on situations that occurred during lessons. They both avoided the evaluation sections in the lessons.

Despite the diversity of the characteristics of each situation, there were similar situational factors which influenced implementation. The most prominent of these were time of year and interruptions from school activities. All three teachers felt that they did not have enough time to fit in everything that they would like to have tried in the book. Also, many art lessons were cancelled due to school events such as testing and Sports Day. This reduced the amount of time available for each teacher to complete activities with the students. It can be surmised that May and June are not the most opportune times for studies of this nature.

Each teacher was also concerned about the feasibility of particular activities because of numbers of students in their classes. Both Liz and Kathy avoided screenprinting as they were not sure how to organize the activity around so many students. Kathy had also wanted to do photograms, where equipment was available in the school, but chose not to for the same reason. John had the same concerns with screenprinting and choose to direct the technique with small groups in a center in the room, with himself controlling the printing process. Part of this was a result of using oil-based inks which are messy and hazardous. He would like to organize it so that each student could do their own printing which would free him to work with others who may need help in other areas.

Even though the activities in the book were chosen for their suitability to students of the intermediate grades, each teacher avoided
presentations and activities which they felt were too complex for the students. John planned two varieties of relief prints with the students where the 5's completed a simpler exercise in creating textured plates and the 7's completed a more sophisticated version of cardboard plates. Kathy felt that monoprints should not be done until students' printing skills were developed and questioned its position in the sequencing of activities. John also had doubts about the sequencing, viewing screen printing as a rather simple technique. Liz felt that each activity had to be carefully presented to the students or they would not be able to achieve. Here she questioned the book's lack of information and developmental stages within lessons.

The teachers differed in their concerns about preparation time. Preparation time was not a factor for Kathy as she taught part-time and was interested enough to spend a great deal of time trying techniques for herself, although she would have liked the book earlier to enhance her planning. John spent extra time trying and thinking about lessons in the book and did not feel that preparation time was a problem. Liz spent a lot of time thinking of ways to develop imagery in each lesson. She tried to relate activities to themes and plan for a transition of media within a unit. She felt that her preparation time was limited, in particular because the school Sea Festival event took up much of it.

Suggestions for Curriculum Development

The strengths and concerns of the curriculum material as determined by the three teachers in this study gave some insight into teachers' needs and interests for an art curriculum material. Generalizing from this information, it seems that consideration of the following points might enhance curriculum development in art education:
A clear outline of the conception of art education and the notions of the role of the teacher and student underlying a curriculum material may allow the teachers to determine the usefulness of the material in relation to their priorities and beliefs. This information could be included in a preface.

As teachers seem to be concerned about learning new ideas or approaches to presenting concepts, a curriculum material which provides a depth approach to the study of a medium or element of design might give teachers a variety of lessons from which to choose. Lessons could be adapted to their established programs, and by choosing different lessons each year teachers could personalize a curriculum material into long-term planning. Follow-up activities provided for each lesson may also serve this end.

As some teachers like to integrate art with other subject areas, suggestions for ways to expand upon or relate particular lessons to areas such as Science and Language Arts may be useful.

It seems that a curriculum material should hold some relevance to teachers of various art backgrounds. The simple techniques of a medium could be presented for use by non-experienced teachers while more complex techniques could be included for more experienced teachers. Lessons could be organized in a sequence from simple to complex. This might also allow teachers to accommodate for the varying skill and experience levels of students.

For the non-experienced teacher, background information on the
elements and principles of design and techniques of a medium may be helpful in practicing techniques and presenting lessons to students.

- Step-by-step illustrations of procedures for techniques of a medium might further assist the non-experienced teacher in practising and presenting lessons.

- Samples of student's work included in the curriculum material may give teachers a standard for evaluation of student results and may also motivate teachers to use particular lessons.

- A clear, concise, and organized lay-out of lesson plans which include a list of materials, objectives, steps of teacher preparation, vocabulary, an outline of procedure, and suggestions for evaluation and follow-up activities may assist the teacher's use of the curriculum material. Sufficient information in each of these categories could be supplied to assist non-experienced teachers in particular.

- A discussion of "helpful hints" and "possible problems that students may encounter" included in particular lessons may assist teachers in their choices of lessons for particular skill levels of students and their sequencing of activities. This may also allow teachers to avoid failure in lesson presentation.

- A suggestion of possible questions that might be used as starting points in critical discussions of students' work may assist teachers in their planning and evaluation of students working as critics. A suggestion for activities which focus on art forms in the man-made environment (i.e., a walking tour of the
neighbourhood) may also further this end.

- Historical examples with particular lessons may assist teachers in their planning for students to work as historians. Works of art could be accompanied with biographical information on the artist and the time in which each work was completed. Information as to the significance of the subject matter, theme, and medium of each work could also be included. Other samples of works of art and artists could be referred to in a resource list supplied in the curriculum material.

- Checklists for student use, where applicable, might be included in an appendix to assist teachers' presentations of particular lessons. These could be in a format that allows for xeroxing directly from the appendix.

- A list of resource materials (i.e. films, picture sets, etc.) may assist teachers in their selections of visual aids to supplement lesson presentation.

- It seems that content presented in a curriculum material should be aligned to the developmental level of the intended student participants. Suggestions for ways to adapt lessons to various experience and skill levels might contribute to this end. A discussion of developmental levels might be included in a section that deals with the assumptions and rationale underlying the choices of objectives, content, and evaluation criteria for the curriculum material. Suggestions for student involvement in planning (i.e. choice of themes or subject matter) might ensure content that is interesting and relevant to students of different
age levels.

- For those teachers who emphasize the productive domain, ideas for image development seem to be a concern. Suggestions for step-by-step development of images or the use of themes may accommodate these teachers. For example, in creating an image of a fish, a lesson on shape might be followed by a lesson on texture. Background information and lessons which emphasize the elements and principles of design may further this end.

- Cross-referencing lessons may assist teachers in their sequencing and relating of activities. A curriculum material in binder format might allow teachers to rearrange sequencing and add lessons from other sources that relate to particular activities.

- A teacher's preference in grouping students might be considered in lesson plans. Some teachers group students for particular activities while others provide only individual assignments. A curriculum material could provide suggestions for both approaches. Within individual assignments, the speed at which students work may vary. Lesson plans could accommodate students who work faster than others by suggesting ways to extend activities.

- Suggested methods of evaluation may assist teachers in assessing student progress in various skills. These could be in the form of evaluative questions for each lesson or record sheets and tests supplied in an appendix.

- It seems that limits of time need to be considered in a curriculum material. Because of the demands of other subjects, teacher preparation time for lessons could be clearly outlined and kept to
a minimum. A suggested time allotment for each lesson might assist teachers in their presentation of lessons. Time with students is usually limited to 80 minutes per week, and often a teacher's timetable forces two 40-minute blocks of art. This may restrict the type of activities that a teacher chooses for an art program and also raises a concern about the feasibility of field trips and outdoor art activities. A curriculum material might accommodate these restrictions with the inclusion of some short art activities or with suggestions of how activities can be divided among several sessions.

In developing activities, it seems that the average size of elementary art classes needs to be considered. Generally, classes range from 25 to 33 students. More complicated activities could include suggestions for organization of materials and procedures so that each student is engaged in the activity and supplies are efficiently distributed. The amount of teacher assistance required by each student could be estimated when choices for activities are made. A clear example is the inclusion of screen-printing in an elementary school art program. Availability of equipment for more complex techniques such as this might also be considered in curriculum development.

**Summary**

The meaning a participant extrapolates from a curriculum material is related to his stance in the world or his perspective. Values, beliefs, learned assumptions, knowledge and expectations form the participant's
perspective and determine how he will implement a curriculum material. Meanings in programs are therefore multiple.

Perspectivism is an important issue in education. The developer of a program interprets the world from a particular stance because of his background experiences. His perspective influences his decisions about what is educationally significant and desirable, enables him to determine a need, and allows him to define a program that meets that need. The means, ends and methods of evaluation that he chooses will reflect his world view.

Because of the multiplicity of perspectives in education, however, users of programs may not perceive that there is a need, and so they might disagree with the purposes of the developer's program. If they do perceive the need, they may not view his program as offering the best way to meet that need. If they do not perceive the program as being relevant to the needs of the students and the constraints of the classroom, and if the program is incongruous with their established practices and perspectives, the program will not be implemented. If, on the other hand, a program is accepted, the user will adapt and alter it to fit his own perspective, and therefore, the user may be implementing a program quite different from what the developer intended. In turn, the students may be experiencing a different program than the teacher thinks they are experiencing.

Developers of art curriculum materials need to keep in mind that the original program fragments and multiplies into numerous programs. By establishing reciprocity between his program and the user, the developer legitimizes the user as a developer and increases the chances of implementation. Studying the use of a curriculum material in classrooms can give the developer some insights into how a program may be put into practice.
according to the various conceptions of elementary art teachers. An understanding of the meaningfulness of a program can be heightened by shifting perspectives and asking new questions. Using a cultural perspective, an investigator is afforded the opportunity to consider emerging issues and various viewpoints of a program's merits and shortcomings.
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Appendix 1

Surface Probe
Surface Probe
A Study of Natural Design and Printmaking

Sonia Hutson

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# Surface Probe

## An Investigation of Natural Textures and Printmaking

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Surface Probe is designed as a supplementary resource material to aid upper elementary teachers in the planning of a cohesive and developmental art curriculum. It offers a practical curriculum framework and illustrates how a unit in natural design and printmaking can be developed using specific guidelines. The guide provides the necessary background information for planning and presenting learning experiences that are aligned to the developmental levels of students from grades four to seven. The activities are sequenced to guide the students through inquiry, self-discovery and qualitative problem solving. An in-depth exploration of design in nature and techniques of printmaking is used as a means to stimulate the students' growth in perceptual skills and aesthetic sensitivity. Enriching the students' senses is emphasized.

Although the unit can be used directly, teachers should be aware of the theory and assumptions that underly the program. As in other subject areas, teachers of art must clarify their own beliefs in order to understand the effect their programs have on students and to make appropriate choices of content and activities. Because of its inherent logic, the program is intended for presentation in four stages: orientation, study, application and criticism. Flexibility within these sections is encouraged in order to provide relevance to the teacher and his/her particular group of students. The extent to which the sample unit is modified will also depend upon available resources and environmental conditions.

Preface
Rationale

*Surface Probe* is based on the premise that art education is deserving of a prominent position within the broad educational context because of its unique qualities which can promote the total development of the child. By developing the students' perceptual skills, art experiences can help students become more aware of their environment. This is an important factor in today's world where the environment demands redefinition and is under constant change. By developing the students' aesthetic sensitivities, art experiences can perhaps enable students to make appropriate choices in this time of change.

Conceptions of art education and the value of art have changed throughout history. Because of social and economic demands, the focus of art instruction has shifted among student-centered, subject-centered and society-centered approaches. *Surface Probe* takes into account each of these approaches, focusing on the child primarily, but also channeling specific activities to consider the knowledge of the subject and the condition of society. Art contains subject-specific skills and knowledge which must be part of an art program in order to give it validity in an educational context. Society has its own social and economic characteristics which must be considered in program development in order to achieve validity within the social context of the time. The list of suggested reference books will be useful to teachers who would like further reading on approaches to art education.

Studies have been done to try to discern the extent of influence that heredity and the environment have on the growth of perceptual and artistic abilities. Basically, the existing research parallels the dichotomy of the nature-nurture approaches in art education. On the one hand, the development of the child is seen as stemming from within, that it occurs with maturation, regardless of the environment. On the other hand, the environment is seen as an influential factor that can enrich or retard development.

*Surface Probe* is based on the research of Viktor Lowenfeld and Elliot Eisner. Viktor Lowenfeld viewed art as a vehicle for achieving the creative and mental growth of the child. His work crystallized much of the teaching about art education that had developed from John Dewey's ideas. It became the psychological foundation in which teachers of art were trained during the 1950's in Europe and the United States.

Lowenfeld describes specific stages of development in art; viewing the environment as a strong factor in promoting and enriching these stages. In his book, *Creative and Mental Growth*, he states that children pass through developmental stages sequentially and usually at determined age levels, although not all children move from one stage to another at the same time.

The first of these stages is the Scribbling Stage which usually lasts from two to four years of age. It is a time when the child develops from the use of random scribbles to more controlled scribbles. But it is not until the Preschematic Stage, which lasts from four to seven years of age, that the child makes his first representational attempts. At this level, the child is eager to show his work to others, especially adults. The next stage is the Schematic Stage, where the child’s drawings symbolize parts of his environment and a base line is used.

The next two stages are of particular interest to teachers of upper elementary school children. By nine years of age, the child enters the Stage of Dawning Realism, sometimes referred to as the Gang Age. The child is more conscious of himself and this is reflected in his artwork, as well as in his reluctance to show his work to others. An awareness of the characteristics of this stage should help the developer choose content that is appropriate to children of grades four to seven:

- increasing awareness of his real world and greater visual awareness
- pleasure in doing group work
- moves to a form of expression more closely related to nature
- concern for proper detail
- beginning to deal with abstract concepts: a move from base line to the use of plane
- developing an awareness of pattern and decoration
- discovering the meaningfulness of his environment and beginning to relate this to himself
- becoming increasingly critical of himself and others
Around the age of eleven or twelve, the child enters the Pseudo-naturalistic Stage or the Stage of Reasoning. He becomes more aware of his natural surroundings and is concerned with proportion in his work. His visual representations also show sexual characteristics and an awareness of differences in colour. Teachers of grade seven students should be aware of the characteristics of this stage as they engage in program development:

- the end of art as a spontaneous activity
- a priority for attempts at naturalism
- recognition of the final product, rather than the process, for value.
- increased visual awareness of the human figure and detail
- awareness of creating perspective in drawing
- awareness of colour and design

For some students, this stage is the last experience that they will have with art. As they enter the Period of Decision, which usually occurs from ages fourteen to seventeen when art is an elective in high school, they may choose to continue their artistic development or abandon it entirely.

Lowenfeld's thesis is that one must start with the child and broaden his experiences in order to enrich his developmental growth in art. By offering rich and varied experiences that seize the child through all of his senses, the development of his perceptual sensitivity will occur. As his knowledge of the environment increases, so does the creativity of his expressions. For Lowenfeld, the product is subordinate to the process. He also emphasizes a depth approach rather than a breadth approach within the process.

Broadening the child's experience with the environment works to develop not only perceptual ability, but also concept formation. Activities can be provided in a program to guide the student towards an awareness of details and differences in size, shape, texture, colour and form in the environment. This awareness enriches the student's representations of objects as he encounters them directly. More importantly, awareness of the environment becomes part of the student's memory and contributes to the clearness and efficiency of his visual concepts. Visual concepts permit the student to represent objects from memory, rather than from direct experience. A child who is deprived of perceptual experiences will be unable to form efficient concepts which will result in his inability to produce completely realistic works of art.
Elliot Eisner suggests that the stages children pass through in their visual expression need not be seen as limits but rather as starting points. Through instruction in technique, the child can expand the range of expressive options from which to choose to work and thereby enhance his artistic development:

To externalize what one feels, thinks or imagines requires the creation of forms (in the visual arts) that will carry those feelings, thoughts and images forward into the public world. To do this requires the transformation of a material—clay, paint, crayon, pencil, paper—into a medium, something through which those ideas, images and feelings are embodied. To achieve this transformation of material to medium requires the use of technique, the tools and devices one employs to articulate form.

John Dewey also stated that "only where material is employed as media is there expression and art." It would seem then that an art program must provide instruction in technical skills with materials, but not as an end in itself but rather as an aid for creative expression. A child can develop in his creative expression if he has a variety of materials in which to give his expressions form as long as he does not become frustrated with the materials because of a lack of technical skill.


Program Development

The components of a program include intents, activities, resource materials and evaluation. The intents are the goals of the program, which represent the purposes of the developer. The activities are the means through which the intents will be achieved. These include the teaching methodology, learning strategies and classroom organization. The resource materials represent the display with which the participants interact in order to achieve the ends. Display includes tools, equipment, media, art materials, books, films, slide sets and objects. Evaluation methods are formulated to determine whether the ends have been attained. In developing programs, the teacher chooses intents and means, establishes a relationship between ends and means, and engages in evaluation.

Evaluation in program development includes not only the methods devised to determine if the ends are attained, but also the teacher's own critical evaluation of his/her program. From a technical perspective, the teacher needs to consider if the means and methods of evaluation are appropriate to the ends. Are the experiences sequenced? Does the program establish a rhythm between depth and breadth in its activities? Are both qualitative and quantitative methods of evaluation used? More importantly, the teacher needs to evaluate the educational and social implications of the program. Whose interests are being served by the program? What values are reflected? What is actually experienced by the students? How is their thinking being shaped?

*Adapted from W. Werner and T. Aoki, Programs for People (Vancouver: Centre for the Study of Curriculum and Instruction, University of British Columbia), 1979.*
Program development does not proceed in a linear fashion; means and ends grow together and are determined by each other. Because they are mutually important, the developer must build flexibility into his program. At times, means will dominate, or ends may spring from means. In art programs, flexibility is especially important as the artistic development and expressions of students are unique and personal. The list of suggested reference books includes texts that will be useful for further reading on program development.

Statements of objectives in behavioral terms are useful for the formulation of art activities and they force the teacher to move away from the vagueness that typifies some art programs. However, there are many instances where the teacher does not want predictability, and will be more concerned with expressive outcomes rather than instructional objectives. Instructional objectives are used where skills are developed through practice; they describe a form of student behavior that can be described and recognized. Expressive outcomes are used where skills are used in some personally expressive way; they describe an encounter the student is to have. The consequences of that encounter are what the teacher attempts to discover and appraise. For the teacher's benefit, the lessons in the sample unit in this guide are presented with instructional objectives.
The Role of the Teacher

Before developing a program, it is important for the teacher to examine his own assumptions and beliefs about art since these will be transmitted through the program and will affect the students' attitudes about art and its nature. The emphasis that a teacher places on art will also determine the students' growth in the area. The presentation of lessons has to be carefully planned in order to motivate and guide the students. In this way, art lessons compare with those of other subject areas, especially language arts. A teacher does not expect a child to write a story without readiness activities such as brainstorming. In the same way, a child cannot be expected to perceive the environment or translate his ideas and feelings into art forms without sufficient guidance, knowledge or skills. The teacher must take an active role.

It is valuable for the teacher to have some experience with art, even if this is achieved only through a community center. Not only will the background enhance his program development and teaching, but it will also enhance his own personal growth. The teacher will also be more able to guide the students and to anticipate problems that they may encounter if he has experienced techniques first hand.
The focus of an art program is the students. Content and experiences are provided to promote the students' growth. The developmental level and the interests of the students must therefore be considered when planning a program. If the materials and experiences offered in the program are beyond the capabilities or interests of the students, they will become frustrated or bored. The students must also be challenged in the program or their growth will not be significant. It is important to remember that school programs have a long range effect on the way a child perceives art and its nature.

This unit is designed for use with upper elementary school children, ages nine to twelve. A summary of the characteristics of the developmental levels of students of these ages is included in The Rationale. Considering these characteristics will help the teacher choose content that is appropriate to his particular group of students as well as bring meaning to those students who will experience the program.
Curriculum Framework

Art, like other subjects, has its own body of knowledge and skills that can be mastered by the students. It also has its own terminology. Instruction can focus on the learning of art through the eyes of the artist, the art historian or the art critic. It can also focus on the subject that is studied, the media used, the products made, the style that is executed or a dominant element or principle of design. These features may be means or ends in particular lessons, but they also relate to the goal of the growth of the students in a particular direction.

A more detailed breakdown of the content of art programs will help the teacher in program development. Some features will be dominant in specific lessons while others will be related features. It will become apparent during planning that the features are not easily separated, but this dependency is valuable when considering sequence and breadth in programs. A program can use any of the features as its starting point.

Features

1. Subject: natural environment, man-made environment, imaginary environment, circus, sports, architecture, machines, animals, etc.


3. Products: prints, sculptures, pottery, drawings, paintings, weavings, batiks

4. Style: realistic, abstract

5. Elements of Design: texture, line, shape, form, colour, space

6. Principles of Design: movement, repetition, balance, contrast, emphasis, unity
Sample Unit: A Study in Natural Design and Printmaking

The following unit contains activities which allow students to study texture and the elements of design that form texture as they appear in natural objects. Their discoveries are applied to an exploration of printmaking, a technique whose qualities are especially appropriate to the impression and expression of textures.

Suggested activities for the criticism of the man-made environment culminate the unit.

Teachers are encouraged to modify and adapt the activities within the four stages of this unit in order to suit their particular situation and group of students. However, they should always keep in mind what their purposes are, what their students are doing and why they are doing it.
The Intents

In broad terms, this unit is concerned with developing the child's growth in:

1. his perceptual abilities
2. his technical skill

Perceptual growth will allow the student to more critically examine his work and the work of others, as well as increase his awareness of sources in the environment that can be used as ideas in works of art. Skillful manipulation of tools and media will give the student an understanding of the qualities of different media and will allow him to make appropriate selections of media and technique that can give his expressions form. Experiences with various media can also increase the complexity and visual appeal of the student's work.

To achieve these goals, the content of the unit focuses on three features:

1. the subject of the natural environment
2. the media of printmaking
3. the design element of texture

These features were chosen for their appeal to students of the Gang Age. The quality of printmaking is especially appropriate to the expression of textures. The fact that more than one copy of a print can be made also encourages the student to experiment rather than cherish a final product.
Each of these features creates its own objectives:

A. Natural Environment:

- the student is able to identify the elements of design — line, shape, space, colour, texture — as they occur in the natural environment.
- the student is able to identify ways in which physical changes create design in nature.
- the student is able to identify designs in nature that are a result of biological function.
- the student recognizes ways in which natural design is incorporated into man-made forms.
- the student is able to use design elements from nature as a source for his own art forms.

B. Printmaking

- the student is able to state that printmaking is the process of transferring an image from one surface to another
- the student is able to use printmaking methods and tools in order to produce a print
- the student is able to use a variety of printmaking techniques

C. Texture

- the student is able to describe the tactile and visual qualities of a surface
- the student is able to use line, shape, space, and colour in order to produce textures
- the student is able to develop textures for use in compositions
Depth
In the unit, depth is accomplished through the detailed exploration of texture.

Breadth
Breadth is accomplished in a unit when one subject or medium is compared to another. We are comparing natural textures as they appear in different aspects of our environment. The use of texture in student work is also compared. To avoid copying, students are encouraged to compare their use of texture to that of artists only after they have completed their work.

Sequence
The lessons in this unit are sequenced in several ways. The activities are arranged in four sections:

1. orientation to the unit
2. study of texture in the natural environment
3. application of the study to the students' creation of their own work
4. students' criticism of the man-made environment

Each lesson builds upon the knowledge and discoveries of the preceding lessons. Complexity also increases with each activity as the number of related features increase. The unit starts with the most elementary forms of printmaking and progresses to the more complicated methods.

Activities
The activities in the unit are designed for use in an outdoor education experience although with minor modifications, they can easily be conducted in a school setting. If activities occur at a camp, there must be an available building where supplies can be set up for the students to engage in printmaking.

Some activities are adaptable to local field trips. Many study activities can take place during a field trip and the application of the study can be carried out on return to the classroom.

This unit also sets a rhythm between individual and group activities.
Background Information

A discussion of the elements of design — line, shape, space and colour as related to texture — and the techniques of printmaking
Texture

Texture is the surface characteristic of an object. In nature, texture is a result of growth, action or movement. For example, textures can function as protection, as in porcupines, or textures can be created by the actions of weathering and erosion.

Textural distinctions become visually pronounced as light reflects in varying degrees on a surface. Differences in texture can also be perceived tactically or through the sense of touch.

In two-dimensional art forms, the illusion of texture can be created with dots, lines, shapes, space and colour. Repetition of texture creates pattern.
Line is an element of design which plays an important role in the creation of texture. Repeated lines create pattern, texture and movement. Continuous lines that enclose shapes also create textures.

A line is an extension of a dot, and can move in a horizontal, vertical, diagonal or random direction. Lines can be straight, jagged, curved, wavy, bent or broken. Lines are also formed when shapes or planes meet. Contour lines follow the edges of objects and define their shape.

In nature, lines mark the growth of an object, the course of movement of an object or creature, or the changes caused by the action of external forces. Rings on a tree, animal tracks and the results of erosion illustrate the varying causes of natural lines. Lines also mark the interface between structures in nature.

In art forms, the use of line can create rhythm and movement. Line can also be used to create effects. For example, horizontal lines create a calming effect while vertical lines express rigidity and strength and diagonal lines are active and dynamic. Lines can vary in length, width, degree of curvature or direction.
Shape

In two-dimensional form, shape is delineated by contour lines. Lines set boundaries of width and height to form geometric or organic shapes.

Geometric shapes are based on the circle, square or triangle. For example, the diamond shape is formed by placing two triangles together. Other geometric shapes include the rectangle, oval, trapezium, pentagon, hexagon, octagon and parallelogram. Starfish and wasps’ nests are good examples of natural geometric shapes.

Organic shapes are enclosed by randomly flowing contour lines. Trees form an example of natural organic shapes.

In art forms, shapes are created by the use of contour lines, colour placement in specific areas or by shading.
Space

Space is an element of design that is mutually dependent on shape. Shapes appear in space, and within certain shapes, space is formed.

The shape of an object is considered a positive shape or image. The area surrounding the object is considered negative shape or space. The quality of negative space, therefore, is determined by the positive shape of an object. For example, the shapes within a wasp's nest form hexagonal negative spaces. In a more organic shape such as a tree, the shape of the tree forms organic negative spaces between branches and leaves.

Considering the space around an object, or the negative spaces, is an important factor in the composition of works of art.
Colour

Pure light contains the spectrum of colours: red, orange, yellow, green, blue, and violet. When light is broken with a prism, the spectrum can be seen. In nature, raindrops act as prisms, creating rainbows.

Objects absorb and reflect colours according to their molecular make-up. For example, when a surface absorbs the spectrum but reflects blue, the object appears blue. The total absorption of the spectrum makes an object appear black. The total reflection of the spectrum makes an object appear white.

Colour in nature is the result of many causes. Exposure to the sun, forces of weathering and seasonal changes can alter the colour of objects. Colour changes in nature can be also result from biological functions, for example, camouflage and photosynthesis.

A mottled texture is created when dots of colour appear on a surface. A slippery texture is created when a colour is of a high intensity. Colours can also create shapes, as in peacock feathers.
In art forms, colours or hues can be divided into primary, secondary, tertiary, or complementary colours. Red, blue and yellow are primary colours and cannot be made by mixing other colours. Green, orange and violet are secondary colours and are created by mixing primary colours: blue and yellow create green, yellow and red create orange and red and blue create violet. Complementary colours are those that are opposite on the colour wheel, as illustrated below. Analogous colours are colours of the same colour family or hue. They appear beside each other on the colour wheel.

![Colour Wheel](image)

The lightness or darkness of an object is its value. These are expressed in art forms as tints and shades. The brightness or dullness of a colour is its intensity which relates to the amount of light that is absorbed or reflected by an object.

To reduce the intensity of a colour, it is mixed with its complement, thus forming a tertiary colour.

Tints are made by adding white to a colour to lighten it. Shades are made by adding black to a colour to darken it.

**Transparent** colours transmit rays of light and illuminate an object. They create a sheer, gauzy texture. **Translucent** colours admit the passage of light but diffuse it so that objects cannot be clearly distinguished. They create fuzzy textures. **Opaque** colours are impervious to light and do not show the object beyond the surface. They create a variety of textures such as dull, matte and glossy.
Principles of Design

The elements of design are organized in art forms according to specific principles. Principles of design are also apparent in nature. The six principles of design include:

Movement

In nature, evidence of movement of creatures, natural forces or growth create textures.

In art forms, an artist composes the elements of design in such a way that the eye moves to all parts of his/her expression. The movement of line also creates areas of textures in art forms.

Repetition

In nature, the repetition of lines and shapes create textures and patterns, such as lines in wood grain and shapes in crystals.

In art forms, an artist repeats the elements of design to achieve not only pattern, but also unity and balance within his/her compositions. Repetition also plays a role in movement.

Contrast

In nature, surfaces with different textures contrast, such as smooth rocks and rough bark.

Contrasting elements of design are used by artists to create emphasis in art forms.
Emphasis

Emphasis occurs when the eye is drawn to one part of an object or composition. Emphasis can be created when a textural area appears in relation to non-textured areas, such as barnacles on a smooth shell. Emphasis directly relates to balance in that a textural area which creates a heavy effect would be used less frequently than a solid area of light colour. However, if the solid area is dark, more of the textural area would be used in order to create balance.

Artists use emphasis to create an area of special interest or focus.

Balance

Balance as a state of equality can be formal or informal. Formal balance occurs when equal objects are arranged symmetrically, such as the radial balance of a mushroom or the repeated shapes of a starfish. Informal balance occurs when unequal objects are arranged asymmetrically to create an equilibrium, such as the random placement of leaves on a plant.

In art forms, areas of texture balance with solid areas in order to produce harmony and unity in compositions.

Unity or Harmony

Harmony is created when the elements and principles of design work together to produce a cohesive whole. Unity is found in nature, the man-made environment and art forms. An example of the harmony between nature and the man-made environment is Japanese gardens.
Printmaking

Printmaking is the process of transferring the image from one surface to another. There are two basic methods to making prints:

1. **Relief printing**, which involves making a plate, applying colour to its surface, and impressing it on paper. A relief plate is made by adding or subtracting to a surface.

2. **Screen printing** (silk-screen or serigraphy) which involves making a stencil and forcing colour through its openings by using a screen stretched with silk or other porous material such as organdy.
Printmaking Methods Illustrated in the Unit

monoprints: the making of a single impression from a plate. Paper can be placed over an inked glass plate and drawn on with a pencil. When a print is lifted, the drawn image is transferred to the opposite side of the paper.

etching: etching or scratching into a surface to produce fine lines. Direct prints from an inked plate demonstrate this process.

relief prints: printing a raised surface created by an additive or subtractive method. Glue prints, string prints and lino prints are examples of relief printing.

collographs: (a combination of collage and graph) a plate is formed by layering shapes of cardboard to a surface to form a collage.

screen printing: a screen is stretched with organdy and stencils of paper are made. The ink is forced through the screen and passes through holes in the stencil to material below.
Organizing a Printing Area

Organizing a room for a unit in printmaking involves setting up areas for supplies, printing, drying prints, cleaning up and displaying prints. All inks should be water-based for safety and ease of clean up. Small printing plates for rolling ink are easier for students to handle than larger ones. These plates can be made of glass or scrap pieces of arborite, depending on the age levels of the students and their abilities to adequately handle the plates when they are washing them.

Leaving all supplies in one corner of the room will allow students to become independent and responsible for organizing their own printing areas. However, depending upon class size, the teacher may prefer to organize four or five areas in the room where groups of students can share supplies and experiment with various colours. All printing areas should be covered with newspaper and should have an adequate supply of printing paper readily available. Damp paper towels should be placed at each printing area so that the students can keep their hands clean and avoid smudging their prints.

Prints can be placed on the floor or counters side by side in order to dry. It is more convenient, however if a print drying rack is available so that many prints can be layered to dry at one time. A line of string placed across an area like a clothesline is also a convenient method to dry numerous prints as the prints can be placed back to back and attached to the string with pegs.

Printmaking supplies:
- glass plates
- brayers
- lino guards
- linoleum gougers
- battleship linoleum
- Xacto knives
- scissors
- silkscreens
- organdy
- gummed tape
- masking tape
- staple gun and staples
- squeegees
- hydro amber film
- fabric printing dye
- extender
- fixative
A clean up area must have a sink and an adequate supply of paper towels. After washing, the glass plates can be carefully dried and stored in the supply area between layers of newspaper so that they do not stick together. Plates can also be stored on their sides in special racks. Rollers can be washed, dried and stored in plastic tubs. Ink should never be left on a roller to dry.

A specific display area for mounted prints will enable students to not only see the results of their work, but will also afford an area where the class can convene to discuss the qualities of the printmaking methods and the success of the class’s prints. An easy way to mount prints is to glue them onto a piece of construction paper that is slightly larger than the prints. For the purpose of mounting, the amount of construction paper that is visible behind the print should be equal on the top and sides but slightly larger on the bottom.
Orientation:

Readiness Activities to Begin Thinking About Visual and Tactile Textures.
Activity 1 The Grab Bag: Tactile Textures

This activity restricts the students' senses, focusing on tactile, rather than visual sensations.

Objective

Given a bag containing six natural objects and restricted to the sense of touch, the student is able to differentiate the texture of each object and record a description of each object. The student is also able to relate his descriptions in a group discussion.

This activity can be organized in two ways depending upon available resources and teacher preference.

A. A Class Grab Bag:

Materials:
- one large paper bag
- six natural objects (i.e. bark, cones, shells, etc.)
- two large sheets of chart paper
- thick felt pen
Teacher Preparation

- Set up a 'texture center' by placing the bag of objects on a table and pinning the chart paper to a nearby bulletin board. On one piece of chart paper, outline the procedure for the lesson. On the other piece, print the heading 'TYPES OF TEXTURES', leaving enough room for each student to record their descriptions of the objects in the bag.

- Before the students use the center, it will be necessary to discuss the difference between descriptive words and words that are overused and meaningless (nice, pretty, etc.). Stimulate the students' imagination by brainstorming descriptive words for an object that is not in the bag. For example, pick a holly leaf, pass it to each member of the class and have them describe how it feels. List each description on the board. Sample words might include sharp, hard, prickly, and jagged. Once the list is complete, discuss the effectiveness of each word and have the class judge which words have the best describing power - i.e. prickly. A sample of discussion questions might include: Which words describe the uniqueness of the leaf? Which words also describe other objects and do not really account for the difference between a holly leaf and a cone, for example? Which words really give you no information about the special qualities of the leaf?

- Encourage the students to select the best possible words that describe the uniqueness of each object in the bag.

Procedure

- At no time should you look into the bag during this activity.
- Place your hand in the bag and pick up an object.
- Feel the object and think of all the words that describe its uniqueness. Choose the best word.
- Continue for all objects in the bag.
- Record your six descriptions on the chart with the felt pen.
Follow-up

Once each student has recorded his description, repeat the analysis of words as outlined in Teacher Preparation, circling the best descriptive words as you proceed. Remove the objects from the bag and discuss the students’ choices of descriptive words. The group discussion is an indicator of each student’s sensitivity to tactile qualities and verbal communication. The discussion might include the following questions: Which words could describe a pine cone, for example? Could those words also describe other objects in the bag? Which words account for the uniqueness of the cone and do not accurately describe the other objects in the bag?
B. Individual Grab Bags:

It is more effective for the students to collect objects for grab bags as it gives them the opportunity to analyze textural differences in two ways: to choose a variety of textures and to describe a group of different textures. In this activity, students work in partners, recording their descriptions on record sheets (supplied at the back of this guide). This gives the teacher a permanent record of the students' sensitivity to tactile qualities.

Materials

- record sheet (one per student)
- pencils (one per partner set)
- a large paper bag for each student
- six natural objects (collected by each student)

Teacher Preparation

Each student should be encouraged to choose a variety of objects that have unique qualities and different textures, for example, cones, rocks and shells. They should feel the objects as they choose them for variety. The motivation for this activity can follow the same discussions as outlined in the Class Grab Bag.
Procedure

- Assemble a bag of six natural objects that have different textural qualities.
- Choose a partner and exchange bags.
- Place your hand in the bag and pick an object. Do not look at it.
- Feel the object and think of all the descriptive words that account for its unique texture. Choose the best word.
- List your word on the record sheet.
- Remove the object from the bag and identify it on your record sheet.
- Continue the procedure with the remaining five objects.

Follow-up

The class rejoins as a group with their grab bags and record sheets. Choose one object, for example a shell, and have the students that described shells offer their descriptions. Analyze the describing powers of their words as in Activity A.

Evaluation

Record sheets can be stored in individual student folders for examination by the teacher. The group discussions will also be an indicator of each student's sensitivity to tactile qualities. At this stage, it may become apparent to some students that words cannot at times account for the uniqueness of textures and that another form of communication becomes necessary-visual representation.
Activity 2: The Blindfold Walk: Tactile Textures

Objective

Restricted to the sense of touch by being blindfolded, the student is able to describe the textural qualities of objects that he touches as he walks in an enclosed outdoor area. The student should be able to recall at least three types of textures at the end of the walk.

Materials

- blindfolds
Teacher Preparation

Often when the use of one of the senses is taken away from a person, the sensitivities of the other senses increase. In this activity, the students rely on their sense of touch as well as their ability to trust a partner. A discussion of safety and the responsibilities of the visual partner should be discussed at the beginning of the lesson. Boundaries for the activity should be set by the teacher in a safe outdoor area.

Procedure

- The students work in pairs. One is blindfolded; the other acts as a visual guide. The guide’s job is to protect the other student from harm, such as tripping over objects. He also leads the blindfolded student to various natural objects and should be encouraged to hand objects to his partner. After several minutes, the blindfold is removed and the students reverse roles. An unfamiliar section and different objects should be chosen for the second student.

- A more controlled procedure it to blindfold one student and have the partner give him objects for examination while he is seated.

Evaluation

The class rejoins and the students share their discoveries about the senses and texture as it relates to touch. Add new adjectives to the list. Discussion questions may include: How did it feel to be blindfolded? How did the sense of touch help you cope with the loss of sight? Does touch give you the same information about the surface of an object that sight gives you? Does it give you more or less? Did you learn anything about natural objects that you were not aware of before? that you take for granted?
Activity 3 The Viewfinder: Visual Textures

Objective

Using a viewfinder, the student is able to identify dots, lines and shapes in a section of a natural surface. He is able to record these by drawing the visible texture from the viewfinder onto paper. He is able to identify the cause of the texture during group discussion.

Materials

- purchased slide frames or prepared viewfinders made of construction paper (see Teacher Preparation)
- thin felt pens
- drawing paper 75 cm by 75 cm or in proportion to the viewfinders
- coloured construction paper 15 cm by 15 cm for mounting

- drawing boards (or drawing tables)
- glue
- tape

Teacher Preparation

Instructions For the Drawing Activity:

This activity focuses on drawing the dots, lines and shapes visible on the surface of an object. Some preparatory work on drawing skills at the beginning of the lesson will increase the success of the activity.

Firstly, the students start with drawing only the dominant lines or their drawings will take too long to finish. Shapes will then take form and then the patterns within those shapes can be filled in. Every dot or line does not have to be registered as long as the effect of the texture is portrayed.

Students need to be reminded to draw what they see, not what they think they see. Dividing the opening of the viewfinder and the drawing paper into imaginary grids will help the students achieve accurate proportions. If they can judge where the dots, shapes and lines meet the borders of the opening they can draw them to correspond with the borders of their paper.

*Adapted from Betty Edwards, Drawing on the Right Side of the Brain (Los Angeles: J.P. Tarcher, Inc.), 1979, pp. 100-103.
To Make a Viewfinder

*To prepare a viewfinder for each student, cut enough pieces of thin cardboard into squares 10 cm by 10 cm. Find the center of the paper by drawing two intersecting lines from the corners:

• Slide a ruler down the paper until it intersects with two lines at a distance of 3 cm:

• Draw a horizontal line to connect the two diagonal lines. Repeat the procedure for the other three sides in order to complete a square:

• Using an exacto knife or scissors, cut out the 3 cm square to leave an opening. **Note:** The opening should be in the same proportions as the students' drawing papers. If the opening is square, the drawing paper should also be square.

Procedure

- Choose an object for study, trying to find one that contains an interesting surface of dots, lines or shapes.
- Place the viewfinder over the most interesting part of the surface.
- Examine the placement of dots, lines and shapes. Which lines are dominant? Which areas are without texture? Are the dots random or uniform? Are the lines parallel? Do they intersect? Where do the lines enter the opening of the viewfinder and where do they exit?

- Draw the dominant dots, lines and shapes onto your paper, being careful that their placement duplicates what you actually see through the viewfinder. Random dots can be filled in with less accuracy.
- When your drawing is complete, mount it on construction paper and place it on the display wall.
Evaluation

Students rejoin in front of the display wall and discuss the effects of dot, line and shape in texture. (For example, dots can give a grainy texture, lines a ripply texture and shapes a bumpy texture.) They try to postulate as to whether the texture is a result of biological function (i.e. cones) or the action of external forces (weathering).

Questioning: Can you identify which natural object each texture was taken from? What makes it easy or difficult to identify the object? What textural effects do dots, lines and shapes produce? What caused the texture? Why are dots random in some surfaces and uniform in others? Why are lines parallel in some areas and not in others?

Vocabulary

- grainy, ripply, bumpy, textures
- dominant, subordinate lines
Study

A critical examination of texture, pattern, space, line and shape in the natural environment through drawing, design and elementary printmaking methods
Activity 1: Rubbing
(Texture in Natural Surfaces)

Objective

Given a crayon and paper the student is able to produce a rubbing of a natural surface. The student is able to identify dots, lines and shapes that are found in his rubbing.

Materials

• mulberry paper (or soft paper) 10 cm by 10 cm
• wax crayons

Teacher Preparation

At the beginning of the activity, define printmaking as the process of transferring an image from one surface to another. 'Rubbings' are an elementary form of printmaking. By making rubbings of natural objects, their surface textures become pronounced.

Demonstrate the process of making a rubbing using a flat natural object such as bark.

Procedure

• Find a dry surface that is textured. A surface that is fairly flat will be easier to mold the paper around.

• Place the paper on the object.

• Using the side of the crayon, rub the crayon over the paper. Rub in one direction only, using long strokes that carry the crayon from one end of the paper to the other. You may have to go over the surface twice to obtain a clear impression, but make sure that the paper does not slip or a blurred image will result.
History

Rubbings have been made for many centuries, notably by the Chinese. Stone engravings were made in China to provide a permanent record of famous paintings, and rubbings were taken from the engravings (627-643 A.D.). A number of modern artists use rubbings, particularly Max Ernst. Travellers to England also make brass rubbings in the cathedrals.

Evaluation

The class rejoins to examine the rubbings and the effects of dot, line and shape. They postulate as to the cause of the surface texture — growth, movement or action. Discussion questions may include: Was the textural effect created by dots? lines? shapes? Are some areas more textured than others? Are some areas smooth? What do you think caused the texture — growth of the object, weathering, action or movement of water?

Again, the class can brainstorm adjectives to describe the textural qualities of their rubbings and they can compare the differences between visual and tactile textures. Which gives you more information about the object's uniqueness — visual or tactile examination? Which enables you to identify the object more accurately? Are visual descriptions clear — that is, can one visual representation be confused for another? What effect do dots produce (i.e. grainy)? What effects do lines create (i.e. ripply)? What effects do shapes produce (i.e. bumpy)?

*Historical information in the unit is taken from: Harvey Daniels, Printmaking (New York: The Viking Press). 1971.
Activity 2  The Direct Print: Line in Texture

Objective
Using printing materials and leaves, the student is able to produce a direct print of a leaf. He is able to relate how line creates texture through group discussion.

Materials

- brayers (rollers)
- printing ink (water base)
- glass plates
- newspaper
- mulberry or other printing paper
- an area for cleaning plates and rollers
- an area for drying prints
- leaves of various types

Teacher Preparation
Areas for cleaning equipment, printing and displaying prints need to be set up as explained on p. Demonstrate the process of making a direct print of a leaf.
Procedure

- Collect a variety of fallen leaves of different shapes.
- Set up a work area consisting of a glass plate, some ink, a roller, newspaper and printing paper.
- Place newspaper on the table
- Place the glass plate, roller and ink to one side, leaving a clean area for printing.
- Place a small amount of ink on the plate and work it with the roller by rolling the roller back and forth. Do not spread the ink over the entire surface of the glass. Keeping the ink in the center of the plate will insure that the roller picks up an adequate amount of ink.
- Place the leaf on the newspaper, underside facing up. Transfer the ink to the leaf by rolling the loaded brayer over it. The leaf will have to be held in place or it will stick to the roller and may tear if removed. Run the roller in one direction, away from you. Too much ink will produce a thick, blurry image. Too little ink will produce an unclear print.
- Place the inked leaf on a clean surface, inked side up, and cover it with printing paper.
- Rub the paper carefully, applying pressure with the side of your hand, to all parts of the paper. You may have to rub the paper several times in order to lift a sufficient amount of ink onto the paper.
- Carefully lift the paper from the leaf by holding the leaf down at its stem. If it sticks to the paper, turn the paper over and carefully lift the leaf up at one corner. An exacto knife may help you get under the leaf. Slowly remove it by holding the corner and pulling the leaf up and to one side.
- Hang the print to dry.
History

The printing of found objects is similar to the making of collages, an arrangement of two-dimensional found surfaces stuck to a background paper or other flat surface. Picasso and Braque made many collages, especially during their Cubist periods. Another artist, Kurt Schwitters, used scraps such as bus tickets, coins and buttons in his collages. He stated that "the waste of the world becomes my art."

Evaluation

Exhibit the prints and have students describe the textural qualities of the leaves. Discuss the use of line to create texture and the students' discoveries about achieving successful prints.

Questioning: How are the lines positioned in the leaves? Are some parallel? symmetrical? random? How does the position of lines produce the texture of the leaf? Are some lines more dominant? Why? Why are the lines positioned the way they are? Why are lines in leaves different? What do the lines of leaves have in common? Why are there similarities and differences?

What problems arose during printing? How could these problems be avoided? What causes a blurry print? What causes a weak print? How would you go about achieving a successful print if you repeated the activity? How can you avoid smudges on the printing paper?

Follow-up

• Experiment with combining several leaves in one print.
• Combine objects with different textures to make a collage.
Activity 3: Fish Prints

Objective

Using printing materials and a fish, the student is able to produce a fish print. He is able to describe the textural quality of the surface of the fish and account for the cause of the texture during group discussion. He is able to compare the visual and tactile textural differences of the surface of the fish.

Materials

- purchased fish 12 cm - 30 cm (one per 5 students)
- vinegar
- water
- water-based printing ink
- rollers
- glass plates
- printing paper
- newspaper
- paper towels
Teacher Preparation

Buy enough gutted fish for the groups in the class. Each group should be no larger than four students. It is interesting to compare the textures of different varieties of fish (i.e. trout, cod) but the lesson is just as effective if only one type is purchased. The fish need to be washed in a solution of three parts water to one part vinegar in order to remove their slimy film. Take care so that the scales are not removed when you wash the fish. Dry the fish carefully with paper towels and place them throughout the room at different printing centers.

Procedure

- Place ink on the glass plate and work it with the roller.

- Transfer the ink to the fish, rolling in one direction towards the grain of the scales. Rolling against the scales will cause them to loosen and fall off, decreasing the success of the prints.

- When the fish is sufficiently covered with ink, mold the printing paper around the fish, rubbing the paper gently as you curve it over the body. If too much ink is used, the print will be blurry. Flat areas of the body can be rubbed more than once, but in the areas that the paper is molded around the body, care must be taken to rub the paper only once or a double image will occur.

- Carefully lift the paper and hang the print to dry.

- Repeat the process for further prints. If you wish to change colour, wash and dry the fish carefully. It should last through several washings and at least a dozen prints before the scales fall off completely.
Evaluation

The success of the students’ prints will be determined by the amount of ink they use as well as their ability to carefully mold the paper around the body of the fish. A discussion of the more successful prints during the activity should benefit the students. What causes thick, blurry prints? What causes the double image? How can the double image be avoided, especially around the fish’s head? How can you avoid smudging?

After the prints are displayed, textural qualities can be discussed. How would you describe the texture of a fish tactically rather than visually? How would you describe its visual texture? Why is there a difference? What causes the textures of a fish?
Activity 4 Modified Texture: A study of line

Objective

Using a felt pen and paper, the student is able to draw parallel lines in such a way as to achieve the appearance of a textured surface.

Materials

• felt pens
• drawing paper 20 cm by 30 cm
• drawing boards or tables
• wood (driftwood, etc.)

Teacher Preparation

Collect or have the students collect pieces of driftwood or other pieces or wood or branches that have knot holes. Remind them to find dead wood and not to damage living trees in their search. Discuss the movement of line around knots and the textural effects created by the lines of the wood grain. Are the lines parallel? How do lines flow around knots? What types of textures are created by lines?

Vocabulary

• parallel lines, wavy lines, broken lines, areas of tension, horizontal lines, vertical lines, curvature.

Procedure

• Draw six small circles randomly on the paper. They should be no closer than three cm apart and should be 3 – 5 cm in diameter. Do not place any circles within 3 cm of the edge of the paper.

• Starting at the top of the paper and working to the bottom of the paper, draw a straight line from one edge to another.

• Draw a line parallel to the first line, working from top to bottom. It should be approximately 1 cm apart from the first line.

• Continue drawing lines across the paper until you are close to a circle.

• When a line approaches a circle, it must move around and parallel to it. All subsequent lines must reproduce the curve created by the movement around the circle, since the lines must be as close to parallel with each other as possible (see illustration).

• Continue to the side edge of the paper.

Evaluation

The class rejoins to discuss how lines create “tension points” when they are close together and the different effects created by horizontal lines, vertical lines, and the degree of curvature in lines.

Have the students make guesses as to how the lines in wood were formed. Are they a cause of biological function or were they formed by external forces such as weathering? How are growth patterns recorded in these lines? Where do you find parallel lines? Why? What causes broken lines?
ACTIVITY 5 Photograms: Shapes in Nature

OBJECTIVE

Given a sheet of Kodak studio proof paper, the student is able to collect natural organic and geometric objects and produce a photogram. He is able to differentiate between geometric and organic shapes in class photograms during groups discussion.

Materials

- natural flat objects
- Kodak studio proof paper (1 sheet per student)
- sheets of large black construction paper folded in half (1 per student)
- powdered photographic fixture for studio proof paper
- water
- two developing trays (at least as large as the photograms)
- two pairs of photographic tongs
- an opaque plastic jug
- tacks
- corkboard
- stiff mounting paper
- glue
- glass plates (optional)
- drawing paper 20 cm by 30 cm
Teacher Preparation

Discuss organic and geometric shapes and encourage the students to choose objects of varying sizes and shapes. They will need enough objects to fill their studio proof paper. Large empty areas in the photogram make the objects appear as if they are floating and should be avoided. The more successful photograms are created by overlapping objects and by using the full surface of the paper, extending beyond the edges.

Paper exposed to bright sunlight produces the best results. If possible, conduct this activity at noon. Because the paper exposes quickly, time must not be wasted. Once the paper is removed from its protective box, the objects must be placed on top of it as soon as possible. If a dark room is available, each sheet of paper can be placed inside an opaque envelope. Large sheets of black construction paper can also be folded in half to make folders to hold the paper. Since light cannot pass through the construction paper, the folders can be taken outside by the students and once they decide on their arrangement of objects, the photographic paper can be slipped out of its folder. In the same way, once the photogram is exposed, the objects can be quickly removed and the photographic paper can be quickly returned to its folder until it can be removed for “fixing”.

If the photograms are not “fixed”, the images will last only a short time and eventually the whole paper will expose.

Fixing the paper is a simple process which can be done by the students once their photograms are completed. Fixative for studio proof paper can be purchased at any photographic supply store. It should be stored in an opaque plastic jug until it is needed.

Set up a “fixing area” by mixing the packaged fixative with water according to the directions. Pour the mixed solution into a developing tray. Pour room temperature water into a second developing tray. Supply plastic tongs at each tray for the handling of the photograms.
Procedure

- Collect a variety of natural objects — some that are organic-shaped (i.e. leaves) and others that are geometric-shaped (i.e. mushroom caps).
- On the drawing paper, arrange the objects to form a unique design. Have some objects overlap the edges of the paper and others touch each other. Experiment with arranging the objects until you have found a pleasing arrangement.
- Remove the studio paper from its protective black folder place it on a flat surface and quickly reproduce the arrangement of your objects onto it. Since the paper exposes in light, it helps to shade the paper with your body or another piece of paper while you arrange the objects.
- Place a clean glass plate over the objects to hold them in place. If there is no breeze, this will not be necessary.
- Expose the arrangement to the light. Within minutes the paper will begin to turn dark, purple. The longer it is exposed, the darker it will become.
- Remove the glass plate and the objects after approximately five minutes and quickly place your photogram in the black folder.
- When you are ready for the fixative, quickly remove the photogram from the black folder and place it in the tray marked FIXATIVE.
- Leave it in the tray for two minutes, agitating it by gently moving it back and forth with the end of the plastic tongs.
- After two minutes, pick up the photogram with the tongs. Grasp the corner of the paper, lift it out of the tray and let most of the fixative drain from your paper back into the tray.
- Place the photogram in the tray marked WATER and agitate it gently for two minutes.
- Grasp the corner of the photogram with the tongs and drain most of the water back into the tray.
- Tack the photogram to the corkboard in each corner and leave to dry.
- When dry, glue the photogram onto stiff mounting cardboard. As the edges of the photogram tend to curl it may be necessary to place a weight on top of the mounted photogram once it is glued in order to obtain a flat mount.
- Tack the photograms to a display board.
Evaluation

The class convenes in front of the displayed photograms. Which shapes are most interesting? Why? Which organic shapes contain the three basic geometric shapes — square, circle, triangle? How can shapes be effectively combined to form unique shapes? What shapes are created in the background? How are these “negative” shapes made interesting?
Activity 6 Shapes in Nature: Tracings

Objective
By arranging objects of different shapes on paper the student is able to create areas of negative space. By using a pattern of smaller shapes, he is able to create texture in the negative spaces on the paper.

Materials
- Texture Study Charts: one per student (supplied in the guide)
- flat, natural objects
- paper 20 cm by 30 cm (depending on size of objects; larger paper may be necessary)
- pencils
- thin felt pens

Teacher Preparation
Review shape as it is used to create texture, and organic and geometric shapes. Encourage the students to be selective in their choice of objects by trying to find unique and varying shapes. Discuss ways that dots, shapes and lines can be arranged to form shapes that create texture as you go over the Texture Study Chart (see chart).

Procedure
- Complete a Texture Study Chart.
- Select an assortment of objects with different shapes (i.e. shells, dried starfish, rocks, mushroom caps, wood). Choose enough objects to fill your paper.
- Place the objects on your paper, allowing some to touch or overlap each other and some to overlap the edges of the paper.
- Trace the outline of each object, removing each from the paper as you finish. Where objects overlap, do not trace the part of the object that is contained within another object (see example).
- Choose one of the patterns from your Texture Study Chart and fill in all the negative space or background with the pattern.
Texture Study Chart

**Stipple:**
- The use of dots placed randomly within a space. A grainy texture results.

**Circles:**
- The use of circles placed randomly, overlapping to create a bumpy texture. Dots can be placed inside each circle.

**Scales:**
- The overlapping of circles to show only half of each circle. Placed in a definite pattern to produce a scaly texture.

**Lines:**
- The placement of lines parallel to each other to produce a ripply or stringy texture. Lines can be bent, curved, wavy or straight.

**Cross-hatching:**
- The deliberate intersection of parallel lines of right angles to create a diamond shape mesh. Makes areas appear tones of grey.

**Solid areas:**
- The filling in or deliberate neglect of any area to create solid areas of black or white, used to contrast or emphasize textures nearby.

**My texture:**
- Do not copy original line nature to help you with random or deliberate styles.
Evaluation

Students rejoin to share discoveries on how dots, lines and shapes create texture and how negative space is important in composition in art forms.

How is line used to form shapes? How does shape create texture? Describe the kinds of textures that circles create. How about triangles or rectangles? How does shape create space? What is negative space? How do overlapping objects and boundaries of the paper help to create interesting compositions? How is negative space important in producing balance within a composition?
ACTIVITY 7 Repeat Shapes: Pattern

Objective

Using positive and negative space, the student is able to create a unique shape. By repeating the shape, he is able to create a pattern.

Materials

- black construction paper cut into twelve pieces 8 cm by 10 cm
- white paper (22 cm by 30 cm)
- scissors
- glue
- pencils
- scrap paper 22 cm by 30 cm
- mounting paper

Teacher Preparation

Review organic and geometric shapes and positive and negative space to motivate the students' imaginations in their creation of shapes.

Procedure

- Divide a piece of 22 cm by 30 cm paper into a grid containing twelve 8 cm by 10 cm segments. Using a ruler, measure across the top of the page and place dots on the paper that are 8 cm apart (see diagram)

- Repeat the procedure at the bottom of the page.

- Join the dots with a ruler to form three parallel lines.
• Turn the paper and repeat the process in order to form a grid.

• In each square of the grid, experiment by drawing shapes, applying what you learned from the previous lesson. Your shape should fill the square, touching the edges of the square once on each side. Choose the most interesting shape.

• Cut out the chosen shape to use as a tracer.

• Trace and cut out twelve duplicate shapes out of black construction paper.

• Draw a grid on white paper using the method outlined above.

• Arrange the twelve black shapes onto the grid using one of the sequences shown on the opposite page.

• Glue the shapes into place, making sure that the edges of the shapes meet the grid lines.

• Mount your pattern and pin it to the display board.
Evaluation

Examine the students' use of positive and negative space in their creation of unique shapes for their repeat patterns.

Questioning: Which shapes produce effective patterns? Do the patterns remind you of any natural patterns? How is the principle of movement important in pattern? Give examples of pattern in nature. What causes pattern in nature?

Examine the student's use of shape space in his creation of a symmetrical design.

Questioning: What is negative space? What is symmetry? What is balance? Give examples of negative space in nature. How is negative space created in nature? How does negative space become important in composition?
Application

To apply the discovering from the study to various printmaking techniques.
ACTIVITY 1 Stamp Prints: Imaginary Shapes

OBJECTIVE

The student is able to invent an organic shape by combining geometric shapes. He is able to cut the shape into the surface of a potato and print its image onto paper to form a pattern.

MATERIALS

- large potatoes split in half (1/2-1 per student)
- paring knives
- water-based paint thickly mixed (like cream) or ink
- printing paper (white)
- scrap paper
- sponges or make-shift printing pads

Teacher Preparation

Review organic and geometric shape and relate repeating shapes and textures to pattern as in the study. Discuss patterns in nature, having students brainstorm the causes of pattern in nature (in bees' nests, for example, the repetition of a hexagon creates pattern).

Prepare printing pads by brushing paint onto thin pieces of felt or sponges. Make sure that the paint is not too thin or the print will become fuzzy.
PROCEDURE

• On scrap paper experiment with creating new shapes by combining geometric and/or organic shapes. Choose the most interesting shape and draw it onto the surface of a cut potato.

• Using a knife, carve away all the negative space. Cutting the potato surface into a square before beginning will make aligning the stamps when printing much easier.

• Dip the potato into the printing pad and then onto the paper. Controlled patterns can be created by first drawing a grid with pencil onto the paper. Patterns can be created by placing repeated shapes on a horizontal, diagonal or vertical line. The potato shape can also be turned for each print to make patterns within patterns. Colours can be changed for each grid.

EVALUATION

Discuss the roles of shape and repetition in the creation of pattern as in the previous lessons.

How does repetition create movement? Which shapes are effective in forming patterns?

What causes blurry prints from the potato? How can this be avoided? How can problems of aligning each print be solved?
FOLLOW—UP

A variation of this activity is to make two different stamps and alternate them in one pattern. Diagonal patterns are also effective (see illustrations).
ACTIVITY 2 Direct Prints: Line

OBJECTIVE

By applying his use of line from the Texture Study Chart the student is able to etch a design onto an inked glass plate. At least half of the surface of the design must be textured.

MATERIALS

- glass plate
- ink
- brayers
- tools for etching or scratching (blunt pencils, pens, needles).

- Texture Study Charts

Teacher Preparation

As described on page 26, set up areas for printing, clean-up and displaying prints.
All activities in the Application encourage the students to apply their knowledge from the Study activities.
Explain that etching is the process of scratching an image into a plate and then taking a print to transfer the image onto paper.

Vocabulary

- etching, negative prints
PROCEDURE

- Completely cover a glass plate by rolling ink onto its surface.
- Using blunt tools, scratch or etch a design onto the inked glass plate. Apply your discoveries of lines to create textured areas by using cross-hatching, parallel lines, wavy lines, etc. If you are not satisfied with the design, simply reroll the surface with more ink.
- Carefully lift the paper once you have finished and hang the print to dry.
- A negative print of the same image can be obtained by placing a new sheet of thin paper over the glass plate and applying pressure with a roller in order to transfer the image. Depending upon how much ink was originally used, a second negative print may be possible (see example).
VARIATION Mono-Prints: Line
This procedure produces a reverse print.

PROCEDURE

- Ink the glass plate and carefully place a sheet of paper over its surface. Do not apply pressure to the paper while you are working and avoid touching it with your hands.
- Using a sharp tool (pen or pencil), carefully draw your design onto the paper.
- Carefully place paper over top of the plate being careful not to smudge the etching.
- Using a clean roller, apply equal but light pressure onto the back of the paper in order to transfer the image.
- Carefully lift the print and hang it to dry.

EVALUATION

Display the students' work on a bulletin board.
Examine the application of the use of line to create texture from the study exercise.

Questioning: How is line combined to form texture? Why is it effective to divide a composition into textured and non-textured areas? Give examples of objects in nature that have contrasting textures. Why do you think this is so?
ACTIVITY 3 Glue Prints: Line to Create Texture

OBJECTIVE

Using repeated lines or shapes, the student is able to create the illusion of texture in an image. The student is able to make a plate of the image by drawing the image onto a cardboard plate and building a relief of glue on top of the lines of the drawing.

MATERIALS

- glass plates
- water-based printing ink
- brayers
- mulberry paper
- newspaper
- Lepage's glue in nozzle squeeze bottles
- heavy cardboard or pulpboard (22 cm by 30 cm)
TEACHER PREPARATION

Review the discoveries about texture and printmaking made by the students in previous lessons. Focus on the use of line to produce textures in the Study activities, especially their Texture Study Chart.

PROCEDURE

• Draw an image onto a sheet of cardboard, paying special attention to your use of line to create texture.

• Along the lines of the pencilled image, squeeze out a line of glue.

• Set aside the plate to dry, preferably overnight.

• Ink the glass plate and roll the loaded brayer over the surface of the cardboard image.

• Place a sheet of paper over the image and rub it with your hand.

• Lift the print and hang it to dry. It will be noted that some ink will be retained by the background sections of the image. This will produce interesting textured areas that contrast to the more highly defined glue line.
EVALUATION

Examine the use of glue lines to create texture.

What type of quality is produced by the glue lines? Why are they more highly defined than the background area? What textural effect is created by the background areas? Why does this happen? What causes some areas to have no ink? How is the medium of printmaking effective in producing textures?

VOCABULARY

• relief prints, printing plate

VARIATION

Raised lines can be formed on a plate by gluing string to cardboard.
ACTIVITY 4 Styrofoam Prints:
Line (relief prints)

OBJECTIVE

By using line, the student is able to impress a textural image for printing into a piece of styrofoam. He is able to obtain at least two successful prints from the plate.

MATERIALS

- styrofoam sheets or meat trays
- brayers
- tools for scratching and incising (pins, pencils, knives and other sharp tools)
- glass plates
- water-based printing ink
- mulberry paper.
TEACHER PREPARATION

Sheets of styrofoam can be purchased from most local art supply stores. However, untextured styrofoam meat trays work just as well. Cut the raised edges from the meat trays so that a flat surface remains. Use the side that is untextured.

Give the students advance notice of the activity so that they can have a few weeks to collect meat trays from home. Remind them to wash and dry them carefully, making sure that they do not scratch the surface of the tray.

When printing with styrofoam, the first few prints will contain little ink as the styrofoam must absorb a small quantity of ink before it acts as a good plate. Students should therefore make at least six prints in order to obtain sharp images.

PROCEDURE

- Using various tools, experiment with creating a line drawing by pushing tools into the styrofoam or by carving pieces of the styrofoam away.
- Ink the surface of the styrofoam in the same way as the glue plate.
- Apply a piece of mulberry paper to the plate and rub.
- Lift the print and hang it to dry.
- Once it is dry, mount the print and pin it to the display wall.
EVALUATION

Examine the use of line to create texture and the skillful use of tools in this printing technique.

Questioning: What are the limits of styrofoam? Are lines easy to incise into the surface? What about shapes? How can line be used to create texture? How effective is the contrast between solid and textured areas in prints? What causes prints with little ink? How do you obtain a clear print?

VARIATION: Clay Prints

Printing plates can be made from clay. Roll out a slab of clay and let it stand until it is semi-hard.

Using cutting tools, incise a design into the clay and then print the plate. The plate must not be allowed to harden or it will crack or break and be unsuitable for printing. Plates can be kept moist by applying damp paper towels over them and then placing them in plastic bags.
OBJECTIVE

Using shapes of cardboard, the student is able to create a textured image for a printing plate. He is able to make at least two successful prints from the plate.

MATERIALS

- pulp board
- thin cardboard
- scissors
- glue

PROCEDURE

- Using scrap paper, experiment with combining shapes to form a composition. You may choose to create a design or an image.

- Once you have decided on your composition, cut the shapes out of cardboard. Several layers of cardboard on top of each other make an effective texture. For example, if you create a fish, cut its basic shape out of cardboard. Cut its scales out of additional cardboard and glue them to the basic shape.

- Glue all the cardboard pieces onto a sheet of pulp-board to form a plate. Do not make more than three layers of cardboard in any area.

- Lift a print and hang it to dry.

- When dry, mount the print and pin it to the display board.
EVALUATION

Examine the students' use of shape in creating texture in their compositions.

Questioning: How do the textural effects of line and shape differ? How does the quality of printmaking itself enhance textural effect? What type of texture is best created by large shapes? small shapes? lines?
ACTIVITY 6 Lino Prints

OBJECTIVE

By using line and shape to create texture, the student is able to draw a textural image onto a piece of linoleum. He is able to use lino tools to carve away areas of the lino in order to form a printing plate. He is able to produce at least two successful prints from the plate.

MATERIALS

- lino pieces
- gougers
- benches
- pencils
- scrap paper
TEACHER PREPARATION

Discuss the effects of leaving areas without texture as in the Study activities. Areas that are untouched will print the colour of the ink. Carved areas will produce a textured surface because of the nature of the material. Deliberate textured areas should be strived for.

A demonstration of the use of lino tools is necessary (see illustrations).

PROCEDURE

- Make a sketch on scrap paper of an image that achieves a balance between textured and non-textured areas and positive and negative space.
- Experiment with scrap pieces of lino to become accustomed to the effects of the tools and materials.
- Transfer the drawing to the lino by covering the back of the drawing with a thick coating of pencil. Place the drawing on top of the piece of linoleum right side up and trace over the original lines.
- Carve out those areas which are to be textured. Do not touch the areas that are to remain a solid colour.
- Ink the lino plate and lift a print.

EVALUATION

Examine the student's use of solid and textured areas and his attempts to create deliberate textures.

Questioning: How does linoleum lend itself to the creation of textural areas? How can the tools be used to create texture? How does the contrast of solid and textured areas make the composition more interesting? How does the amount of ink on the printing plate affect the results of the print? Can certain effects be achieved by using a small amount of ink?
ACTIVITY 7 DEVELOPMENTAL LINO PRINTS:
Subtractive Method: colour in printing

OBJECTIVE

By alternating between carving and printing a piece of linoleum, the student is able to produce a developmental print containing at least three colours.

MATERIALS

• as lino activity 6
• facilities to wash the lino plate to print different colours.

TEACHER PREPARATION

Discuss colour mixing and the colour wheel as explained on p. 21.

The procedure for registering the plate several times on one paper will have to be discussed. The easiest method for registering the plate and the prints is to cut each exactly the same size. For each print the corners of the paper would align perfectly on top of the corners of the lino plate. Registration blocks can also be used (see illustration).
PROCEDURE

• Three stages are recommended for this procedure, although, with patience, more steps can be added. As in the preceding lesson, carve a lino plate but leave most of the block intact.

• Take the required number of prints from the plate. Once it has been re-cut, no more prints of the stage can be taken. For experimentation, the same colour should not be used for all prints. Working with several analogous colour schemes will allow for comparison at the end of the lesson.

• Once the plate has been washed and dried, further cutting can be done for the second stage. Note that any areas that are cut away from the block will remain the colour as printed in stage one, and that the parts left uncut will become a second colour.

• Overprint the lino plate onto the original prints, being careful to follow register marks, and using a second colour. It is easier to place the plate onto the paper to align it to register marks and then carefully flip it in order to rub the surface of the paper.

• Repeat the process for the third overlap.

EVALUATION

Examine the students' use of colour and application of colour theory from the study.

Questioning: How does the use of colour add to the interest of an image? Which colour combinations are effective? Do colour combinations create a mood? effect? Do certain textures look better in specific colours?
ACTIVITY 8 Screen Printing: Colour and Shape

OBJECTIVE

Using shapes the student is able to make one to five stencils for screen printing. He is able to choose colour combinations for his design and produce one successful screen print.

MATERIALS

- screen stretched with organdy
- fabric dye
- white paper (bond)
- scissors
- exacto knives

TEACHER PREPARATION

MAKING A SCREEN

Simple screens can be made by stretching organdy over any frame made of cardboard or wood. To make a frame that can be used repeatedly the following steps can be followed:

1. Cut four lengths of wood 45 cm. Cut each end at a 45 degree angle.

2. Assemble the lengths to form a frame and nail together.

3. Cut a piece of organdy 45 cm square.

4. Staple the organdy to the top of the frame, working from side to side, stretching the material before it is stapled (see illustration). When completely stapled, the material should be taut enough that a coin could bounce on its surface, like a trampoline.

5. When using water-based ink, it is not necessary to cover the edges of the frame with tape. However, a strip of masking tape placed over the staples will protect the hands from any staples that may be slightly raised. The tape will most likely have to be replaced after each time the screen is washed.
PROCEDURE

• Geometric Designs — Experiment with overlapping geometric shapes to form a design. Choose one and draw the composition on white bond paper. For each colour used, trace one complete design. This will help with aligning the shapes on the fabric.

• Creatures — Draw an animal or bird using contour, dominant lines. Experiment with dividing the creature into shapes. Draw a master and trace one copy for each colour.

• Place the fabric on newspaper. If a T-shirt is used, place two sheets of newspaper inside. Make sure the material is flat.

• Cut holes in the stencils where the ink should pass.

• Place the stencil in its designated position on the material. Protect the rest of the fabric by covering all showing material with single sheets of newspaper. These should overlap the stencil by about 1.5 cm.

• Place the screen over the stencil.

• Apply a small amount of ink across the top of the organdy.

• Using a squeegee, pull the ink to the bottom of the screen. The more pressure applied to the squeegee, the less ink will move through the silk.
• Turn the squeegee to pull the ink back to the top of the screen. Repeat if necessary.

• Carefully lift the screen. One student should hold the fabric down so that the stencil stays adhered to the screen.

• Hang the material to dry before doing the next colour. Remove the stencil from the screen and wash the screen.

• Repeat the process for the next colour.
EVALUATION

Examine the students' use of shape and colour, as well as their handling of the materials and the method of screen printing.

Questioning: What designs are the most effective? What problems arise from overlapping shapes? What colour combinations are effective? Why? What causes the ink to come out too thick? How can you control the amount of ink that passes through the screen?

VOCABULARY

- pulling the ink, stencil, squeegee, screen
Criticism
A critical examination of works of art and the man-made environment.
ACTIVITY 1  Criticism: Elements of Design in Art Forms

OBJECTIVES

- The student knows ways in which artists draw ideas from nature for their visual statements.
- The student knows how artists use printmaking techniques to create the illusion of texture.
- The students can compare their use of texture with other student and artist work.

MATERIALS

- students' prints
- examples and reproductions of artists' works

TEACHER PREPARATION

Set up a display of student and artist work in the class. Examples should be available from local school boards or magazines. Student work should include examples from each printing technique conducted in the unit.

ACTIVITIES

1. Comparison of student prints:

   - Students view the display of prints.
   - The teacher leads a discussion of the works. Example: What qualities of natural textures have been brought out in the prints? How was the illusion of texture created?

2. Comparison with artists' works:

   - Students critically examine artists' works and try to determine the source of their visual statements. Works other than prints can be examined, for example paintings.
   - The teacher leads a discussion of the qualities of printmaking techniques that create the illusion of texture.
   - The students compare their own use of texture and printmaking with that of artists.
EVALUATION

The teacher will have to judge the quality of the statements that the students make. The sample record sheets in this unit include a method for judging and recording statements.

Examples: Is the student willing to take part in discussions?
Is the student confident and eager to express his ideas and discoveries?
Is the student inventive in his thinking?
Has the student shown an increased awareness of texture throughout the unit?
Is the student able to describe the quality of textures in works?
ACTIVITY 2 Criticism: Elements of Design in Man-Made Structures

OBJECTIVE

Using the knowledge of elements of design in nature, the student is able to make a comparison of elements of design in man-made structures to those found in nature and share these in group discussions. The students can critically discuss the use of line, shape, space, texture and colour to achieve unity in buildings.
MATERIALS

- photos of man-made structures

TEACHER PREPARATION

- Arrange a field trip or create a display of photos of various types of man-made structures.

ACTIVITIES

Lead a discussion of the elements of design as seen in buildings. Brainstorm how the design of a building blends or interferes with its surroundings. Discuss the use of line, shape, colour, space and texture in the building. A discussion of the principles of design will help the students criticize the architectural design of the building as well as the harmony created between the building and its surroundings.

EVALUATION

Judge the qualities of the students' statements. Give examples of local buildings that have unique shapes.

Questioning: What is the most common shape used in architectural design? Why? What is the purpose or function of shape in architecture? How are lines created in buildings? How do apartments compare to natural dwellings (i.e. bees' nests)? What do igloos compare to in nature? How is glass used in architecture? Fountains? How is nature incorporated with man-made structures? What limits does an architect have when he plans a building or environment? What should he consider?

FOLLOW-UP

As a culmination to the unit the students can design their own environment - park, school, recreation center, etc., - or building. Rough drafts can be drawn onto scrap paper in preparation for making a plate using any of the printing method studied in the unit. They should incorporate each element and principle of design into their compositions, paying particular emphasis to texture.
Records

Records of students' progress in the unit are an essential part of evaluation. Types of evaluation records include open-ended questionnaires, checklists and anecdotal records. Some records are for students' use while other records are used by the teacher. Before drafting a method of evaluating and recording the teacher must decide the purpose of the evaluation and the point of reference for judging the students' progress. Will the work of the student be the point of reference or will the teacher observe the student in action? Discussions and interviews should also be recorded. The students and the teacher should also engage in an evaluation of the unit upon its completion and during its execution so that strengths and weaknesses can be established and modifications can be made.
Student recording sheet for the orientation

<table>
<thead>
<tr>
<th>Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>List all the words you can think of that describe the quality of the objects that you felt in the &quot;grab bag&quot; and on the &quot;blindfold walk&quot;.</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
<tr>
<td>6.</td>
</tr>
<tr>
<td>7.</td>
</tr>
</tbody>
</table>

Name:  
Date:

Teacher's observation checklist

<table>
<thead>
<tr>
<th>Student's Name:</th>
<th>Dates of Unit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student</td>
<td>exceptional</td>
</tr>
<tr>
<td></td>
<td>average</td>
</tr>
<tr>
<td></td>
<td>below average</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student's Name</th>
<th>Dates of Unit:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texture Study Chart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stipple:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The use of dots placed randomly within a space. A grainy texture results.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Circles:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The use of circles placed randomly, overlapping to create a bumpy texture. Dots can be placed inside each circle.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scales:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The overlapping of circles to show only half of each circle. Placed in a definite pattern to produce a scaly texture.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lines:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The placement of lines parallel to each other to produce a ripply or stringy texture. Lines can be bent, curved, wavy or straight.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cross-hatching:</strong></td>
<td>The deliberate intersection of parallel lines at right angles to create a diamond-shaped mesh. Makes areas appear tones of grey.</td>
<td></td>
</tr>
<tr>
<td><strong>Solid Areas:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The blackening in or deliberate neglect of any area to create solid areas of black or white. Used to contrast or emphasize textures nearby.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>My Texture:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Be daring and original. Use nature to help you. Choose random or deliberate styles.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Students' unit evaluation

<table>
<thead>
<tr>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

- What did you like about the unit?
- What did you dislike?
- Did you find anything difficult or confusing? (Give examples.)
- Did you find anything too easy? (Give examples.)
- What activities did you learn the most from? Why?
- What would you have changed? Why?
Teacher's Summary Report

<table>
<thead>
<tr>
<th>Name of student:</th>
<th>Unit:</th>
<th>Dates:</th>
</tr>
</thead>
</table>

1. As an Artist:
- can describe textures
- can produce textures
- can do a rubbing
- can do a direct print
- can do a monoprint
- can do a relief print
- handles tools with skill
- experiments
- etc.

2. As a Critic
- shares ideas
- shares discoveries
- can describe textural qualities in objects and works of art
- can determine sources of texture in works of art
- is aware of the quality of printmaking in producing texture
- is eager to express ideas
- is inventive in his thinking

3. As an Historian:
- is aware of artists throughout history who have used natural textures as inspiration
- is somewhat aware of the history of printmaking.
<table>
<thead>
<tr>
<th>Unit Dates: Grade(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning:</strong> Details:</td>
</tr>
<tr>
<td>Purpose of Unit:</td>
</tr>
<tr>
<td>Objective:</td>
</tr>
<tr>
<td>Outcomes:</td>
</tr>
<tr>
<td>Students' developmental level:</td>
</tr>
<tr>
<td>Students' interests considered:</td>
</tr>
<tr>
<td>Students' needs considered:</td>
</tr>
<tr>
<td>Subject:</td>
</tr>
<tr>
<td>Media:</td>
</tr>
<tr>
<td>Products:</td>
</tr>
<tr>
<td>Style:</td>
</tr>
<tr>
<td>Design elements:</td>
</tr>
<tr>
<td>Design principles:</td>
</tr>
<tr>
<td>Depth:</td>
</tr>
<tr>
<td>Breadth:</td>
</tr>
<tr>
<td>Sequence:</td>
</tr>
</tbody>
</table>

The student working as:

1. artist
2. critic
3. historian

**Unit Evaluation:**

1. values reflected
2. educational implications
3. social implications
4. flexibility, etc.
5. strengths
6. weaknesses.
RESOURCES:

Visual resource, particularly reproductions of artists' works, available from the V.S.B. are limited. It is often difficult to obtain resources when they are needed, unless they are booked months in advance. Reliance on these resources also reduces the opportunity for new activities spontaneously to evolve from planned activities. It is recommended that teachers accumulate their own file of resources. Magazines are a good source.

Included here is a list of available resources from the V.S.B. that pertain to this unit and its possible follow-up activities:

Slide Sets:
- VG 1-7.4 Perception
- VG 1-7.3 Texture in Man-Made Articles
- VG 1-2.16 Texture Forms in Nature

Art Reference Slides:
- ARS 130 Texture and Pattern
- ARS 144 Prints
- ARS 135 Trees
- ARS 148 Landscape
- ARS 149 Water Forms
- ARS 151 Flowers

Picture Sets:
- VP 1-4.1 Linoleum Block Printing
- VP 1-7.7 Perception
- VP 1-7.4 Surface
- VP 1-12.1 Artistry in Nature

Charts:
- VC 1-4.2 Lithograph and Engraving
- VC 1-4.4 Bookbinding and Printing

Filmstrips:
- VF 1-4.15 Advancing with Collage
- VF 1-4.17 Potato Printing
- VF 1-4.18 Cardboard Printing
- VF 1-4.21 Blocks that Print
- VF 1-4.22 Textile Art Through the Ages
- VF 1-4.26 Linoleum & Woodcut
- VF 1-4.37 Cardboard & Collagraph Printing
- VF 1-4.38 Leaf & Clay Printing
- VF 1-4.39 Linoleum & Woodcut Printing
- VF 1-4.40 Silk Screen Printing
- VF 1-4.41 String & Glue Printing
- VF 1-4.42 Vegetable & Gadget Printing

Films:
- VT 1-2.11 Monotype Prints
- VT 1-2.4 Picture Making at the Gang Age
- VT 1-4.9 Surface Decoration
- VT 1-4.34 Art from Found Materials
- VT 1-7.18 Discovering Texture
- VT 1-7.17 Discovering Creative Pattern
- VT 1-7.19 Discovering Ideas for Art
- VT 1-7.22 Art Elements: An Introduction
- VT 4-15.58 Colour in Nature
- VT 1-2.34 Discovering Composition in Art
- VT 2-2.12 The Colour of Life
- VT 4-1.189 Animal Camouflage
- VT 4-1.176 Nature's Camouflage
- VT 4-7.28 Light and Color
- VT 4-7.16 Color and Light: An Introduction
- VT 4-7.32 Learning about Light
- VT 4-8.7 Seasons of the Year

It is recommended that the teacher preview the resources. Some may not be applicable to specific grade levels. The untrained teacher should find the films and filmstrips especially beneficial in planning lessons.
Bibliography:

Curriculum Development:


The book is grounded on the principles of the psychological thinking and the experiments derived from gestalt theory. The chapters include balance, shape, form, growth, space, light, colour, movement dynamics and expression as they relate to perceptual mechanisms. Of particular interest to developers is the chapter on growth which investigates why children draw the way they do. Arnheim claims that they draw what they see rather than what they conceive.


Boyle presents a brief but useful discussion of curriculum considerations in art. It is presented in a "recipe" format and is adequate as a supplementary resource for developers.


Chapman offers theory summaries on the nature of artistic process and child development, and discusses the role of art in society. She suggests activities in drawing, painting, printmaking and graphic design, photography, film and television, sculpture, crafts, and architectural and environmental design. Each topic is channeled into personal expression, the artistic heritage and art in society as a curriculum framework. It is an excellent book for clarification of conception, program planning, evaluation and resources.


Built around the concept of process, the text provides a detailed analysis, using theory and research, of four questions:

1. Why is art important in elementary school education?
2. What is art education?
3. How do we recognize the process of art education in the work of children?
4. How do we use art as a means to contribute to the education of elementary school children?

It is an excellent resource material.


Although a rather technical book, its studies on experience, expression and perception are of value to conception clarification.

Through a selection of readings, the book focuses on two themes:
1. The social and political conditions that give direction and establish priorities for school programs.
2. The understanding of development.
It is an excellent guide to curriculum decision-making.


Through selections of essays, Eisner presents five conceptions of curriculum: development of cognitive processes, technology, self-actualization, social reconstruction-relevance, and academic rationalism. The book's value comes when it is used as a means to developing a conception of education curriculum.


Eisner focuses on two concerns about art education in schools today:
1. The peripheral position that it has with regard to general education.
2. The emphasis on productivity within art programs.
He attempts to justify the importance of art education, and bridge the gap between art and the academic subjects by showing that art is a product of intelligence and by advocating the instruction of skills in art.


The book represents an expansion of approaches to educational inquiry. Eisner presents the notions of educational criticism and connoisseurship as a move towards qualitative evaluation, rather than quantitative. Although it addresses general education, it is of value to those in the art field.


Through a selection of readings, the book involves the reader in decision-making as to his own values and beliefs about art and art education. Through a discussion of various theories and research on creativity and factors that influence human development in art, the text helps the reader identify effective teaching strategies.

The book deals with the theoretical basis of art education and the practical methods for teaching art. As an excellent guide to program planning, it presents a thorough examination of all aspects of curriculum design in art. It provides suggestions for activities, materials and evaluation.


The text is an excellent source of activities that give students the competence to make informed judgments about the aesthetic merits of works of art. It provides definitions, history, and suggested resources, activities, units and programs.

*Journal of Aesthetic Education*. Urbana, Illinois: The Board of Trustees of the University of Illinois.

The journals offer essays and book reviews that are helpful to developers of art education curriculum.

*Journal of Curriculum Studies*.

The journals offer essays and book reviews that are helpful to curriculum developers in any educational area.


Influenced by Viktor Lowenfeld, Lansing offers assistance to teachers in the development and application of a philosophy of education. The book itself as a philosophical foundation as well as a practical orientation. The topics include the nature and value of art, artistic growth, formulating objectives and building a curriculum.


The underlying premise in the text is that early stimulation of the child's sensory mechanisms is essential to free his creative power. The text emphasizes the importance of grounding a program in a clear conception of art education, and presents theories on the nature of art and creative thinking, as well as child art development. Suggestions for motivation, materials and ways to develop awareness for aesthetic judgment and art heritage are provided.

The text addresses the importance of art education as well as the importance of developmental stages in program planning. It offers suggested activities which develop the creative potential and aesthetic awareness of children. The developmental stages are explained in depth and materials and activities suitable to each stage are presented.


Lowenfeld's study of drawings, paintings and sculptures of weak-sighted children concludes in the presentation of two creative types: optically-inclined and haptically-Inclined. His findings can be adapted to children with normal vision, and should be considered in program development in art.


An excellent resource book for program planning and evaluation. Suggestions for program content demonstrate the use of depth and breadth as well as goals for personal fulfillment, improving the social order and transmitting the cultural heritage. The book emphasizes the considerations of local needs and goals as a part of the development process.


As a summary of goals in art programs, the text is useful in aiding developers establish the program goals for their curricula.


The draft offers goals, objectives, resources, definitions and suggested activities to advise the local developer in program planning. Attempts to present unit plans have been made.

Werner, W. and Aoki, T. *Programs for People*. Vancouver: Centre for the Study of Curriculum and Instruction, University of B.C., 199.

The text offers an excellent discussion of the components of program development: intents, activities, materials and evaluation. Werner comments on the importance of underlying conceptions in curriculum development as well as the process of development.


Focusing on the development of perceptual and creative skills, the text deals with the significance of art education. From an analysis of paintings of children of all ages, Yochim suggests methods and experiences that cultivate image-forming skills and foster depth in sensory perception. Recommendations for teacher responsibility and classroom organizations are presented.
Specific Topics in Art:

1. Printmaking

Excellent resource books on the history and techniques of printmaking include:


Using the theme of fish, Capon presents seventy-eight lessons in the graphic arts. He presents printing techniques as well as lessons using painting, drawing and paper work.


Harvey presents a comprehensive guide to printing technique.


The text explores relatively simple methods of printmaking, but is adequate as a supplementary resource book.


A comprehensive survey of printmaking in history and printing techniques is presented. The text is well suited as a primary resource material.

2. Drawing:


Designed for people who cannot draw at all, the book presents a series of exercises that concentrate on the right side of the brain. Supported by research, Edwards concludes that drawing is teachable. Her exercises can be adapted to other media.


The text takes the approach of “creative play”, and presents numerous examples of children's art using line to create texture and enclose shapes. It is an excellent resource book of drawing exercises.
Appendix 2

The Day Art Rationale Assessment Instrument (Day, 1972)
WHY TEACH ART?
(The Day Art Rationale Assessment Instrument)

Rank each of these statements according to how closely they correspond with your own beliefs.

I 2 3 4 5 6 7 8 9

very close  not close

A. The primary purpose of art in the curriculum is to foster creativity through studio art activities. Art class is the only place many of the students have to behave creatively.

B. As the work load continues to shrink, we must provide students with competencies and encourage attitudes that will promote art as a leisure time activity in adult years.

C. Art classes should have an integrating effect on the student's personality and should provide him with opportunities to release tensions and express inner feelings using art materials.

D. We must attempt to increase students' knowledge of great art of the past and present so that they will have the necessary understandings to appreciate the art of the future.

E. We must provide visual education with emphasis on the effects of mass media, urban sprawl and advertising on our present and future environments. Our art students will be tomorrow's voters, taxpayers and consumers.

F. Art is the major means of transmitting our cultural heritage. We should attempt to acquaint students with arts of the world's cultures as well as with art that is unique to the culture of this country.

G. In a world which is becoming increasingly mechanized, automated, and dispersal, we should attempt to cultivate respect for intuitive and subjective thinking. Much of what is good in life will be forsaken by those who try to be completely objective.

H. Art has a unique contribution to make to the growth of the learner. No other school subject can provide the training of visual aesthetic sensibilities so vital for an aware public. Art objects need to be exposed as vital sources of knowledge.

I. Provide your own rationale if none of the above approximate yours.
Why Teach Art?
(The Day Art Rationale Assessment Instrument)

Rank each of these statements according to how closely they correspond with your own beliefs.

Very close: 1 2 3
Not close: 4 5 6 7 8 9 10

A. The primary purpose of art in the curriculum is to foster creativity through studio art activities. Art class is the only place many of the students have to behave creatively.

B. As the work week continues to shrink, we must provide students with competencies and encourage attitudes that will promote art as a leisure time activity in adult years.

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I. Provide your own rationale if none of the above approximate yours.

I found myself agreeing with part of a statement but disagreeing with another part of the same statement!
WHY TEACH ART?
(The Day Art Rationale Assessment Instrument)

Rank each of these statements according to how closely they correspond with your own beliefs.

A. The primary purpose of art in the curriculum is to foster creativity through studio art activities. Art class is the only place many of the students have to behave creatively.

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H. Art has a unique contribution to make to the growth of the learner. No other school subject can provide the training of visual aesthetic sensibilities so vital for an aware public. Art objects need to be exposed as vital sources of knowledge.

I. Provide your own rationale if none of the above approximate yours.
Appendix 3

Teacher Questionnaire
Teacher Questionnaire
(completed by each teacher)

TEACHER QUESTIONNAIRE

1. Summarize your training in art (diplomas or degrees, special courses) and give particulars as to the areas of concentration.

2. Which areas of art are you most interested in?

3. How many years have you taught? __________

4. How many years have you taught art? __________

5. Which of the following are you?
   _____ regular classroom teacher; subjects_______
   _____ special subject teacher; specify ______

6. Currently, how many art classes do you enroll? (give particulars of grade level and class size)

7. In planning your art curriculum, which instructional resource materials do you use?

8. Which areas are covered in your curriculum? (Do you concentrate on some areas more than others? Do you vary your concentrations from grade to grade?)

9. Have you taught printmaking before? _________

10. If yes, which aspects of printmaking have you taught?

11. Have the classes involved in this study received instruction in printmaking this year? (If yes, please specify techniques covered.)

12. Are printmaking supplies available in your school? (Specify)

13. If you have not taught printmaking before, explain the factors that have prevented this from becoming part of your curriculum.

14. If you have taught printmaking before, explain the factors that might have limited the range of techniques that the students have been offered.

Adapted from WEDGE Teacher Questionnaire
Appendix 4

Teacher Logs
Teacher 1 (Kathy)
(One sample from a total of five logs)

<table>
<thead>
<tr>
<th>ID#</th>
<th></th>
</tr>
</thead>
</table>

**TEACHER LOGS**

**TOPIC** Natural Rubbings = Paint = Pattern

**LESSON NO.** 1

**DATE** April 26, 1985

<table>
<thead>
<tr>
<th>How many minutes did you spend on each part of the lesson?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 10:00 a.m. Wednesday</td>
</tr>
<tr>
<td>D. 20:40 min.</td>
</tr>
</tbody>
</table>

What type of teacher preparation was necessary in order to conduct the lesson?
- I’ve never done this before.
- I had to practice the technique, make samples.
- Collection of natural materials, then of appropriate paper, getting out paints, etc.
- Understanding of background, process, and techniques via book.

Identify any instructions that were not clear in your lesson?
- I had procedural instructions, getting things right, cleaning things up, etc.
- I had no problems following the book on a step by step.

Identify any parts of the lesson that you found difficult to teach and describe what the difficulty was. Did you use any different ways of teaching?
- Discussions about teaching, no problems in that respect.
- Demonstrations often helped a lot in areas I chose to demonstrate in wasn’t quite big enough for all to see.
- Because the introduction combined parts from several of the books where the getting of information took time.

Describe any additional information that you feel students should have in order to do the activities more effectively. Additional information would have to be in terms of the depth of learning and application. Time was the restricting factor here, as most students wanted to know “what else could you do?” “What more?” How could this be used?

Identify activities with which the students found difficulty and describe what the difficulty was. Some chose non-flat objects. In many cases they used them very effectively, others had difficulty with them.

Describe anything exceptional (good or bad) that happened during the lesson. Reasons?
- I was surprised at how quickly students were able to apply concepts to process – product jet. How quickly they were able to use “practice” rubbing to identify good & bad spots and apply corrective/adaptive effort to large product re: likes of emphasis.

What was the level of student participation? What influenced their participation?
- Very enthusiastic.
- Influences: excitement about new teacher, new techniques, interest in working directly with materials and teachers/leaders.

How do you think the students found this lesson? (Interesting, boring, useful)?
- Interesting - I was surprised. Students picked up the learning something three pleased that when I said something was good/bad, right/wrong they could tell me who did it in fact's instructionfully. Did not use good/bad right/wrong. Even teacher suggested using to very change.

State your version of the lesson: its value, clarity, need for modification, etc.

Adapted from WEDGE Teacher Logs
Teacher 2 (Liz)

(One sample from a total of six logs)

TEACHER LOGS

TOPIC The Grab Bag (Individual)  

DATE April 29

How many minutes did you spend on each part of the lesson
Motivation 10min Final discussion 10min Activity: 15min

What type of teacher preparation was necessary in order to conduct the lesson?
Run off record sheets

Identify any instructions that we not clear.

Identify any parts of the lesson that you found difficult to teach and describe what the difficulty was.

Describe any additional information that you feel students should have in order to do the activities more effectively.

Identify activities with which the students found difficulty and describe what the difficulty was.

Describe anything exceptional (good or bad) that happened during the lesson. Reasons?

Very enthusiastic response from class.
Great selection of textured objects

What was the level of student participation? What influenced their participation?

How do you think the students found this lesson? (interesting, boring, useful) Why?

Enjoyable, interesting. Something different.

State your opinion of the lesson: its value, clarity, need for modification, etc.

Timing? Would some indication of approximate time help? Found I was too rushed.

Adapted from WEDGE Teacher Logs
Teacher 3 (John)

(One sample from a total of ten logs)

TEACHER LOGS

TOPIC Card prints (with other textures added)

LESSON NO. 3 for some, 4 for others.

DATE May 30, 93 (mixed group of 91, 6's and 7's)

How many minutes did you spend on each part of the lesson?

1 hour various stages of print making.

What type of teacher preparation was necessary in order to conduct the lesson?

Supply out and 'psyching up' to the fact that the leaf

Identify any instructions that we not clear.

3 weeks of print making have been totally disrupted by preparing for a

performing school concert.

Identify any parts of the lesson that you found difficult to teach and describe what

the difficulty was.

Some kids are finished the print unit and some haven’t

Started yet. Time line is not the time to run lessons requiring teacher

Describe any additional information that you feel students should have in order to

do the activities more effectively.

Identify activities with which the students found difficulty and describe what the

difficulty was.

The concept of "lifting off" the print from the plate. I should

have had them attach the plate to a T-bar top or board.

Describe anything exceptional (good or bad) that happened during the lesson. Reasons?

Some interesting colour mixes and outlining when

a plate done in one colour was used with a 2nd colour

before completely drying from 1st colour.

What was the level of student participation? What influenced their participation?

High level. Motivated by success of some of the more

artistically adventurous students.

How do you think the students found this lesson? (interesting, boring, useful) Why?

State your opinion of the lesson: its value, clarity, need for modification, etc.

Adapted from WEDGE Teacher Logs
Appendix 5

Guidelines for Completing Logs
GUIDING QUESTIONS FOR TEACHER LOGS:

As you complete the teacher log for each lesson, please consider the following questions:

1. How did the presentation of the material (i.e. illustrations, format, samples, type) affect your use of the material?

2. What situational factors influenced your lesson and your use of the material? Consider the following:
   - class size
   - grade level of students
   - classroom space
   - arrangement of classroom furniture
   - availability of art materials
   - availability of other resources
   - limits of time
   - motivation of the students

3. Does the theory in the book support the practical material in the lesson?

4. Does the lesson accommodate or force a change in the teaching-learning style in existence in your classroom?

5. How does the lesson align with your conception of art education?

6. Are there signs of the students' skills progressing with each lesson? In what way?

7. Do you modify the lesson? In what ways and why?

8. Is there any change in the students' attitudes towards art as your use of the material continues? In what ways?

9. Does your view of the use and value of the material change as you use the material? How?

10. Are there lessons that you find more worthwhile than others? more clear than others? In what ways?

Please identify the times and days that you will be using the program in your class so that visitations can be arranged. Indicate the preferred days of the week that you will be available for after-school interviews.
Appendix 6

Initial Teacher Interview Questions
Initial Teacher Interview Questions
(format for the initial interview with each teacher)

1. What resources do you use in planning your art curriculum?
2. How much do you rely on your experience, training or interest in art when you plan?
3. Have you attended art workshops or sought the help of the art consultant(s)? If yes, how helpful are these resources?
4. What resources would help you improve your program planning?
5. Do you follow the V.S.B. Art Curriculum guide? To what extent do you modify or adhere to the guide? Give reasons.
6. What is the scope of your art curriculum?
7. How do you sequence units and activities within units?
8. What areas of art do you concentrate on most? Give reasons.
9. What importance does the school (principal, staff, students) place on art?
10. Do you ever give the students extra art periods? Are art classes ever cancelled for other activities?
11. Do you conduct some activities outdoors? Do you arrange field trips? Give particulars.
12. How are the students grouped in your classes? In what ways do you see this grouping as effective?
13. How do you organize and distribute materials in your classroom? Is the art room shared with other teachers? How does this affect your program?
14. What skills do you feel the students acquire in your program?
15. How do you see art as "fitting in" to other areas of the school curriculum?

16. How do you feel that art is important to the total development of the student? What can art do that other subjects cannot?

17. What do you think the students enjoy most about art? What do parents want?

18. What kinds of activities do you think students should engage in (working as artists, critics, historians)?

19. Do you use examples of artists' work in your class? If yes, how are they used?

20. Do the students study the art of different cultures? How is this organized?

21. Do the students share and discuss their work with other students? How?

22. How much importance do you put on displaying students' work? Where are these displayed?

23. What constraints prevent you from teaching art the way you would like?

24. How would you like to change your art program or are you satisfied with it?

25. What value and use do you think this curriculum material will have in relation to your established program?

Reference made to the "Canadian Content Unit Teacher Survey" (Massey and Werner, 1977) and "Evaluation: Sense-Making of School Programs" (Werner, 1977).
Appendix 7

Transcript of Teacher Interview
Transcript of Teacher Interview

Initial Interview With Liz (Teacher 2)
(One sample from a total of 12 teacher interviews)

S: What resources do you use in planning your art curriculum?

L: Books, pictures, slides, photographs, visual aids, hand-outs.

S: How do you rely on your experience, training or interest in art when you plan?

L: I'm self-taught and highly interested. I have learned from other teachers, colleagues. I was also trained at a teacher's college in England and took night courses at art school there.

S: Have you attended workshops?

L: Yes, and I find the hand-outs from these useful.

S: What resources would help you improve your program planning?

L: More visual aids. For example, I wish I could have the V.S.B. resources when and as long as I want them.

S: Do you follow the V.S.B. Art Curriculum guide?

L: No.

S: What is the scope of your art program?

L: It basically includes drawing, painting, fabric arts, ceramics, and some sculpture. I like to offer a variety of media.

S: How do you sequence activities?

L: It's sort of a transition of media. For example, the students might use their drawings for a painting. The grade fours and fives have more success with painting than the older ones. For the fours to sixes I alter the subject or change the media depending on what appeals to them. Printmaking, for example, would become more difficult with each grade level. The younger ones might do object printing while the older ones would do lino.

S: What importance does the school place on art?

L: The principal has an awareness of the need for art. The staff, in particular the primaries, are keen and appreciative. The students are not as serious as I would like them to be. They see it as a fun time and don't appreciate the learning and effort they need to do.

S: Do you ever give extra art periods?
L: Yes, in particular with my class.

S: Are art classes ever cancelled for other activities?

L: Yes...like LEC and computer.

S: Do you conduct activities outdoors?

L: Yes, for example rubbings and sketching. I also take the students down to Jericho Beach.

S: How are students grouped in your classes?

L: They choose their own groups for group activities such as murals. But I don't do many communal activities.

S: How do you organize and distribute materials in your classroom?

L: I don't use monitors. They sit in groups of four or six and each student is responsible for getting supplies and cleaning up. They do this group by group when they are ready and quiet.

S: Is the art room shared with other teachers?

L: Yes, but I find that doesn't affect me.

S: What skills do you feel the students acquire in your program?

L: Skills in looking, drawing - sensitivity and awareness. A background in art appreciation, experience with different materials and working. I guess the emphasis is that there's a lot to learn. It isn't something that just happens. It can be improved by learning.

S: How do you see art as fitting in with other subjects?

L: I feel that it can be integrated but often it's abused and made into busywork.

S: How do you feel that art is important to the total development of the child?

L: It imposes a real discipline. The subject is the discipline, not the teacher. It's a challenge to some students who might find other subjects too easy, although it can frustrate some.

S: What do you think the students enjoy most about art?

L: The doing.

S: What do parents want?
L: I don't know.

S: What kinds of activities, like artists, historians and critics, do you think the students should engage in?

L: Primarily as artists. The students are interested in art history. I would use examples of still lifes here. They act as critics in their own little groups when they talk about what they like in each other's work.

S: How do you use samples of artist's work?

L: They are examples of a particular lesson. Related - not separate.

S: Do the students study the art of different cultures?

L: No.

S: Do the students share and discuss their work with other students?

L: Yes, in smaller groups.

S: How much importance do you place on displaying students work?

L: That's very important. I use the room and the hallways although I find there is limited room in the display cases.

S: What constraints prevent you from teaching art the way you would like?

L: The demands of other subject areas. Mainly the amount of time I have with the students and the numbers in each class. I'd rather work with twenty-four rather than thirty-two.

S: How would you like to change your art program?

L: I'd like to spend more time on fabric arts. I find that very time consuming. I'd also like to take the students out of the school more, like to galleries. But managing them and organizing transportation is a hassle.

S: What value or use do you think Surface Probe will have in relation to your established program?

L: I think it will offer me new ideas and different approaches.
Appendix 8

Final Teacher Interview Questions
Final Teacher Interview Questions
(Used as guidelines and starting points for the final interviews)

1. What do you feel is missing from the book?
2. How much did you use the book in planning?
3. Exactly how did you use it?
4. How does the Rationale align with your philosophy?
5. Did you use the evaluation questions at the end of each lesson?
6. What else would you have liked to use from the book?
7. Will you use the book next year? How?
8. Summarize the book's strengths and weaknesses.
Appendix 9

Transcript of Taped Teacher Interview
Transcript of Taped Teacher Interview

Final Taped Interview With Kathy (Teacher 1)
(One sample from a total of 12 teacher interviews)

S: The presentation of the material in the book, like the format...

K: Very straightforward.

S: How about the instructions?

K: It was easy to follow. Very straightforward. Much appreciated in some cases, especially with the historical aspect. Some of those lessons were more detailed than others but it was easy after looking at the more detailed ones where you had given the background and the historical applications of that particular thing and suggestions, it was easy to modify that lesson or pick up parts of that for another lesson. Which is what I did for most of the book actually. I don't think I ever did an isolated lesson from the book.

S: So you basically read through the lesson and ...

K: then looked for other things in the book that would complement or enhance or help explain...or took something that you had explained - for example, how you had extracted a technique from nature - in one aspect and had explained this in one lesson - it was always easy after having seen it in one lesson to say 'Oh yeah, that applies to ...'

S: Did the illustrations help?

K: Yup.

S: Did you ever show them to the kids?

K: Yes and no. I never did in a full art block but in the Wednesday periods before, yes. I did all my demonstrations in my room, I'd say, 'This is how it can be used and did you know that these people...!' That kind of thing.

S: So you referred to the book to give the kids examples.

K: Yes.

S: Was the book left out on the table?

K: Not often. But I didn't have any hesitancy in leaving it there if I had something that I wanted to show them.

S: Specifically, how did the illustrations and examples in the book help you?
K: They helped me first of all when I was practising those techniques. I had an idea of how one successful print did look. I don't think there was a time when I didn't practice one before I did it [with the kids]. But if that had of happened I certainly would have used the book to say 'Look what people can do with it.'

S: How did the organization of the activities affect your use or acceptance of the activities.

K: I imposed my own organization on it. But within that imposition I used your four organizational categories. Within a single lesson I picked something that would be a hands-on application, something that would be historical. So within the four category organization I would for every lesson either refer to - "do you remember when we did the Grab Bag and those of you who did rubbings can you remember how that Grab Bag felt and how it applied to the rubbing and then you can see it in your glue print." Then always that criticism. That criticism category was not difficult but I never did a formal criticism lesson. I did that one kind of post hands-on thing after each lesson. My Friday discussions - they were tremendously successful but I really wanted to - if I'd had more time with this, what I really wanted to do was first of all a walk - some sort of outside look at the nature, look at the architecture activity and can you relate it to what you are doing. And second, get something historical or even something that they hadn't done themselves so that there could have been some sort of objective criticism. Which isn't to say that the criticism they did - I was impressed with how objective they were with their criticism.

S: So, instead of doing a specific lesson on criticism of the environment or an artist's piece of work like in this section of the book, yours were critical evaluations and discussions with the kids on Friday and was related to their hands-on experience.

K: Yes.

S: Did class size influence what you did?

K: Yes. I would have been much less reluctant to do - in fact, I would have done a lot more - what I consider complex things and what I consider to be more involved things that required more attention by fewer people. Like the optional activities with T-shirts. I would have loved to have done silkscreens. My class was so active and so rambunctious that I don't think I could have done photograms with them very successfully. Which is too bad because I really wanted to do photograms.

S: Were you limited or influenced by the grade level at all?

K: I guess influenced is the word. Yes, I was aware of the grade level - not the grade level as much as the skill level. I geared the program to build on what they already had.

S: And classroom space?
K: In my classroom it was a minimal problem. People had to stand on desks and chairs to see sometimes, but I don't particularly care about that. In your classroom (the art room) until I got used to it, until I knew what space could be used effectively - minimal. No your classroom was very well organized in that respect.

S: Availability of art materials?

K: No problem.

S: Availability of other resources?

K: I would like to have had the book earlier than I did only because I would have used the school board resources listed at the back. You had some prints listed in here that I really wanted - picture sets - a lot of things in here that I didn't feel I had time to order and get, preview and show.

S: Any limits because it was May and June?

K: The testing. It's funny; my kids were so rowdy anyway, but they never got uncontrolled. I was really surprised but I was aware that that was going to happen at some point. I would have liked more time to play with the unit. There were times when I thought things were done hastily when they shouldn't have been.

S: How about motivation of the students?

K: Superb. They were really good.

S: Did the book accommodate or force a change in your teaching style?

K: I suppose it accommodated but only because I made it accommodate I suppose - No, not only because... but because it was presented in a way that I could take it and accommodate it to me. Maybe because you and I have similar teaching styles.

S: How did the lessons align with your conception of art education? How do you think the book fits in with your conception?

K: Well, it matches very closely. I think I would like to have seen this book in the context of the whole curriculum and then answer that question. But, from the use I made of the book and from the theoretical point of view, it matches it very closely. I don't really see any need to change that. What I did do - which I assumed I was at liberty to do - was stress different things in different lessons and choose - for example - let's see, was it glue prints that I used the leaf print? I don't remember. Anyway what I did do was figure out what I wanted my stress in that lesson to be and then built up to that stress by using the four categories.

S: So in that lesson - for example, if you were doing glue prints, then in
that one lesson, you tried to do a bit or orientation, a bit of study and a bit of application...

K: and then the criticism. Yeah.

S: Were there signs of the student's skills progressing with each lesson?

K: Yes. No question.

S: Skills in what area?

K: Skills in all kinds of areas. In colour - they were wild and really enthusiastic about playing with the colours to the point of mixing and matching and matching and adding things to their ink to make the colour softer or harsher, lighter, darker or change it in some way. Experimentation with technique. They wanted to combine techniques. They wanted to go further with the techniques they had learned. They were keen to try different things and they learned from it. The thing that really hit home was the last one I did were several of them did their first print - the styrofoam - and then saw ways that they could take that - add or subtract from that styrofoam plate to make it better or worse according to what I had taught them about line and shape and texture - how to create texture.

S: From the texture study chart?

K: You bet. It was really neat to see. They had done that chart about midway through the unit but I always referred to it - I always in my demonstration said, "How do you think I could change this to make it better?"

S: So there were skills in technique as far as applying textures.

K: And skills in awareness. You wouldn't have believed - really it was really nice. I honestly didn't know that it would work quite as well as it did. By the end of this unit, kids were coming up to me and saying, "Come and see this tree". It was really funny. I mean, it wasn't quite that blatant but you could tell that they had been walking home and had seen something that actually related to the art lesson - or a house that had used some of these texture techniques. There was one of those red-tiled roofs that was all scaled and the kids were talking about it.

S: Was there any change in the students' attitudes towards art as your use of the material continued?

K: I don't know because once I saw the kind of results that were coming out of it and what kind of learning was going on, I got really excited about it and that may have changed their attitudes a little bit.

S: Did you view of the use and value of the material change as you used it?
K: Well, I don't think I ever thought it was valueless. I know I never thought that but I didn't expect the drastic results I got - the successful results I got. So...yeah.

S: Were there lessons that you found more worthwhile than others?

K: I'm tempted to say no, but I'm going to say yes. The rationale behind that is how much effort did I put into actually sitting down and preparing the lesson. No, that's not true...

S: I guess in some ways the ones that you could do in that amount of time, you did...

K: Yes, time was definitely the constraint. What I was going to say was the ones that I actually sat down and went 'Yes, I can relate this to this to this and here's how it will work best.' But the fact is I did that with most of the lessons - all of them. But I think the book stands on its own.

S: What do you think is missing from the book?

K: Specifically, I can think of some of these lessons don't contain a historical perspective. For the sake of ease from a teacher's point of view maybe you might have included a few more physical examples of work.

S: When you went through the lessons, did you find that there was enough information in the lessons that you could carry on?

K: Oh definitely. For example. I had wanted to do lino prints and I had looked at that lesson quite carefully and I was all set to go until the time ran out.

S: Did you use the evaluation questions at the end of each lesson?

K: Yes.

S: On Fridays?

K: Yes, but you have to remember that I rarely said anything on Fridays. I just let them go. What I did was, after the lesson on Thursdays I would either put all of these or the ones I had chosen (the evaluation questions) on the board plus whatever questions I had come up with that I wanted them to talk about. Any they stayed on the board until the next morning and those were the questions that the kids were supposed to think about.

S: Can you tell me specifically how you organized your week?
Wednesday was the introduction to the lesson and that was usually some sort of orientation activity. Sometimes there was a carry over from the week before because I was integrating it with Social Studies and Language. But there was always an introduction to whatever they were going to on Thursdays - some sort of orientation, some sort of historical perspective, some sort of 'Of what value is this?' and 'Do you see it anywhere - does it come from nature? does it come from architecture? Why is it a valid activity beyond just play?' Sometimes, time permitting, that was the demonstration period so that on Thursday we could walk into the art room and just go.

S: Can you recount a specific work?

K: Okay, one Wednesday, I introduced the texture technique.

S: From the Texture Study Chart?

K: Yeah, and then how the techniques had come from the Grab Bag Activity which had been done weeks before - how they related to that, how they could be used. A little bit about space and how it could be used appropriately - how they could use line appropriately - how to use the techniques that were in the book. I did those on the board and then assigned the Texture Study Chart. They didn't actually do the chart right away. After I handed it out and illustrated the techniques - these charts at the back of the book were invaluable, let me tell you - and then I did a leaf print to demonstrate how they showed up in nature - now just printing a leaf could illustrate most if not all of them. That worked really well. And then Thursday morning - no, Then I did, half of a glue print because I wanted it to dry before I printed it Thursday morning. My demonstration of a glue print involved getting my design down on paper and actually going over it and using whatever the Texture Chart had done and what I had thought about space and all that in a print. It dried overnight and then the next morning I demonstrated how to print it. They finished their texture charts in class and they actually designed their glue prints and either had the glue down on the print or were to take the glue home that Wednesday so they could print Thursday. Also on Wednesday I had demonstrated very briefly a cardboard plate. Those kids who wanted to took enough cardboard home to one overnight. Zillions of them did. It was really nice. It turned out that they almost organized themselves.

S: Did you get the optional activities from the book?

K: Some of them and some of them I got from other sources or made them up or whatever. They were related to whatever was the stress of the lesson that week - that was the only criteria I put on them. It didn't even have to do with printmaking or ink - Well, it had to do with printmaking but didn't have to do necessarily with ink or anything else. Like the T-shirts as an optional activity partly had to do with colour mixing and actually that was nice because there were so few colours that they had to mix them. Partly there was a stress on
rubbing. A lot of them did pillow cases, making borders out of the rubbings using bark or whatever. That was an optional activity with fabric crayons the week we did rubbings. Later on, when I found the fabric paints, they could actually make stencils. Kind of as a guilt feeling for not doing silkscreening and because they were so enthusiastic about having done their pillow case and because the fabric crayons didn't work well on T-shirts because they had to be stretched so much and because I had played with the paints at home and they had worked so much better, I did that as the last option. The fabric crayons had run a little after they were washed so a lot of kids actually bought their own sets of fabric paints when they saw the results.

S: If you teach art next year, will you use this book?

K: Yes.

S: How do you think you'll use it?

K: It'll depend on the class and the time - all kinds of things.

S: How much did you think your background training or interest helped?

K: Interest - not training. The interest, I think, helped.
Appendix 10

Student Interview Questions
Student Interview Questions

(Used as starting points for discussion.

A total of three student interviews were conducted.)

1. Describe the types of activities that you did in printmaking.
2. What did you enjoy the most? Why?
3. What did you find difficult? Why?
4. How did you come up with images to print?
5. What did you learn from the unit?
6. What would you have changed? How? Why?
7. How did you solve problems or find answers to your questions?
Appendix 11

Student Artwork
This sample illustrates Kathy's concern for experimentation with texture and her use of the Texture Study Chart. The student applied the techniques from the chart into image development.
Lino Print

Sample of student work from Liz's class (Teacher #2)

This sample illustrates Liz's concern for image development. The lino print was the third stage in the development of an image of a fish.
This sample illustrates John's emerging concern for image development. He described the image as trite as compared to images that might be developed around a theme.