

GRAPHIC COMMUNICATIONS EDUCATION: ART OR TECHNOLOGY?
A CURRICULUM MATERIALS RESOURCE GUIDE



by

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ABSTRACT

Graphic communications courses are being taught in the province of British Columbia without official recognition from the Ministry of Education. As a result development of graphic communication programs has been sporadic and independent. Although the Ministry of Education does not officially recognize Graphic Communications, they do provide funds for equipment and facilities. Graphic communications or graphic arts is traditionally accepted as a component of industrial education. Without official recognition by the Ministry of Education and the Faculties of Education, there is no teacher training in graphic communications available in this province. Thus educators involved with graphic communication courses have diverse backgrounds and have been trained in either art, industrial education or business education. Curriculum development has reflected this diversity of experience and background. This thesis project was initiated because of the following discrepancies. There are no prescribed courses of study but seventy-five programs exist throughout the province. There are no provincial teacher training programs but teachers are authorized to offer graphic communications courses. There are no provincially prepared resource materials but curriculum guides are available in Canada and the United States. The objective of this thesis is to assemble resource material for

graphic communications education and to propose a rationale for the development of a program of studies recognized by the Ministry of Education. Graphic communications is a component of visual communications that integrates concepts from both art education and industrial education. This blend of art and technology can provide a philosophical base for program development. The interface of personal expression with machine manipulation is the basis for preparing graphic materials. The review of graphic communications curriculum materials was initiated to determine the existence and availability of prepared materials. The research was conducted over a twelve month period and consisted of correspondence with every state and provincial education agency in Canada and the United States. The collection represents the present status of curriculum development and provides numerous examples of curriculum strategies. An emphasis on motor skill development was evident in the collected materials. Graphic communications is an inter-disciplinary course of studies and program development should reflect the relationship of imagery and technology. Personal expression and skill development are components needed to prepare and produce graphic material. This philosophical blend of concepts from art and industrial education can provide the impetus to promote the integration of imagery and technology inherent in graphic communications education.

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P.S.

INTRODUCTION

The Impact of Graphic Communications on our Society

Today's society is being moulded and affected by the graphic image. Whether a screen printed T-shirt or a web printed newspaper the impact of the printed image totally surrounds us. This daily influence is the impetus for developing and preparing curriculum and instructional materials for secondary students.

Graphic communications education cannot be isolated into any one particular discipline. Rather it incorporates ideas and concepts from many fields of study. The blend between what is printed and how it is printed indicates the need to develop programs of study that deal with the relationship between graphic design and industrial technology. This blend, or crossover between disciplines is a significant characteristic that must be considered in preparing instructional materials, because without recognizing this blend the overall relationship and impact of graphic communications in our society may not be fully realized.

It is important to have instructional programs to help develop awareness in our secondary students of the impact of graphic communication in today's society. Another point,

equally as significant, is that of providing the opportunity for students to learn entry level job skills.

The third largest industry in North America (Ecksten, Note 1), printing-graphic communications, is continuing to grow and expand. This expansion is due in part to a constantly changing technology - a technology that reduces the number of workers while at the same time allowing production to increase. In spite of this reduction, the projections for employment in the industry are good (Eldred, 1981).

Graphic communications, an interdisciplinary course of studies, must be directed toward providing an awareness of the social impact of imagery as well as providing technical skills to prepare students for entry into the work force. Divergent as imagery development and industrial skills may seem, curriculum design in graphic communications must encourage the unity between what is planned and how it is produced (Institute of Printing, 1981).

The 1965 art curriculum guide for British Columbia is presently under revision and a proposed guide for graphic communications has never been accepted by the Ministry of Education. Although the art guide was prepared fifteen years ago, and the proposed guide has not been ratified, student enrollment in both art and graphic communications courses has been increasing (Hodder, Note 2).

The need to prepare curriculum materials

Curriculum design results in a series of planned and prepared activities (Eisner, 1972) whether developed by a governing body such as the Ministry of Education or by an individual instructor. These activities should be linked to provide the student with the opportunity to achieve certain goals. An advantage of independent curriculum development is that it may provide the students and instructor with flexibility in determining learning outcomes. With total flexibility in curriculum planning the activities prepared will vary between programs. The variety of learning outcomes prescribed for a similar course in different areas of the province is not congruent with present Ministry trends. The Ministry during the past ten years has authorized numerous curriculum guides in various subjects that indicate a desire to establish learning outcomes for courses taught throughout the province. A curriculum guide is not intended to restrict teaching but rather to provide a base for exploration that encourages individual teaching techniques and philosophies, while continuing to provide a degree of consistency between programs in different schools and school districts. (Graphic Communications, Iowa, 1978; Art Guide K-12, Jefferson County, 1973; Killeen & Ornes, 1979)

Instruction in graphic communications expanded in the province during the mid sixties with the introduction of the

Visual Communications Education program in the Vancouver school system. Visual Communications Education (VICOED) was developed in conjunction with the Ford Foundation and Western Washington State University as a program to unify secondary school instruction in film, television, photography, and printing. The program in subsequent years has not retained the overall philosophy of unification of those areas but has disintegrated to emphasize one or two particular areas contained in the original concept.

Along with the introduction of VICOED into the Vancouver school system other districts throughout the province purchased equipment and proceeded to offer courses in printing, photography, film and television. The expansion of courses indicated support from the Ministry because they were in fact allocating the necessary capital funds to finance purchase of equipment and modifications to facilities.

The Ministry, aware of the growth of graphic communications programs, initiated a curriculum panel to establish a prescribed set of objectives to be taught in the province. That was in 1974 and the report is still pending!

The discovery of existing resource materials

This thesis was initiated because of this author's concern for the apparent lack of prescribed instructional materials

and philosophical direction in provincial graphic communications education. Through discussion with various instructors there became evident, a need for a study of the existing instructional materials in this field. Thus graphic communications education materials from outside the province were located and analysed. This investigation of curriculum guides and resource material involved correspondence with every state and provincial education authority in Canada and the United States. The investigation uncovered a vast array of prepared instructional material. The assembly of a collection not only created a wealth of material but illustrated a number of philosophical directions graphic communications education can pursue. The guides range from functional outlines to comprehensive instructional packages containing broad overall statements to specific task analyses.

The total collection represents the present state of curriculum development in many areas of both Canada and the United States. These established programs stimulate questions and answers about the curriculum and instruction in graphic communications in this province.

The integration of art and graphic communications

Art and graphic communications education cannot be separated, the overlap of materials, ideas and techniques is obvious.

The opportunity presently exists to prepare a course of studies for secondary students in this province that would encourage and stimulate the students' desire for relevant visual expression in addition to providing entry level skills into the graphic communications industry. The extent to which the union is encouraged will be the result of careful, methodical planning and involve a process that requires input from various sources to allow for maximum curriculum flexibility.

This thesis will provide a starting point based on the survey of existing curriculum materials that will perhaps stimulate continued research and planning of a comprehensive visual communications program that hopefully will unify art and industrial education programs throughout the province.

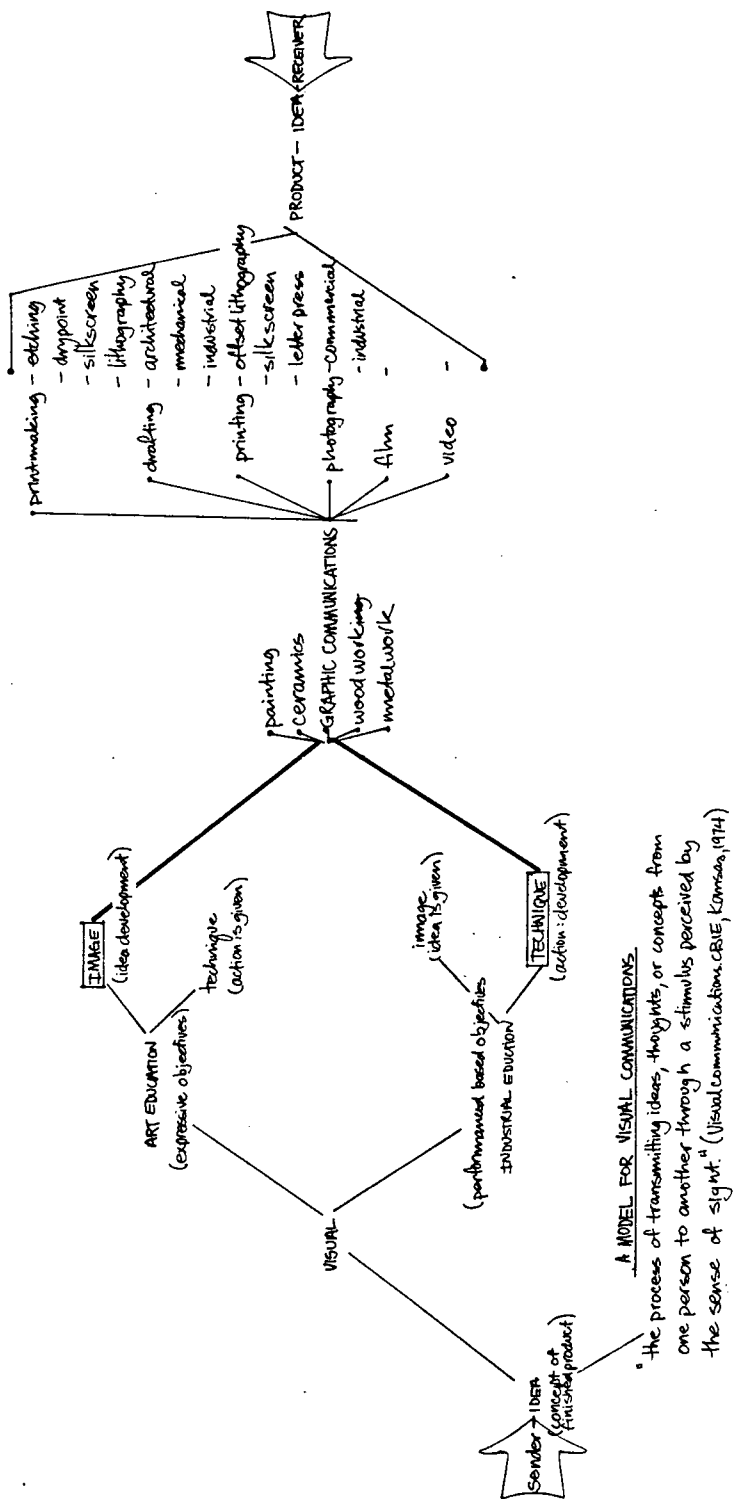
CHAPTER II

An Organizational Model - A Definition of Terms

Visual communications, graphic arts, graphic communications, and graphic design are all terms that are used so frequently that perhaps they have become too meaningful, that is they have too many different meaning (Tubbs and Moss, 1977). Agreeing on a working definition is the first step in understanding and demonstrating the intent and scope of these terms.

Deciding what should be taught and how it should be taught (Bobbitt, 1924; Tyler, 1950) is a continuing problem for curriculum designers, a problem compounded in this field by the many various terms used to describe the subject matter. The model illustrated in Figure 1 will provide a basis for a working definition. It will demonstrate the relationship between image design and technical competence in the development and completion of a two dimensional product.

Communication has been defined as "the process of creating a meaning between two or more people" (Tubbs & Moss, 1977, p. 6.), a meaning which can be manifested verbally or visually. The proposed model is not intended to be the "right model" but rather a useful model. It will emphasize, in an



attempt to clarify a working definition and perspective of the terms and concepts used in describing this field, the visual component of communication.

Art has been defined as:

All those human made things that are done purposefully, with some attempt to either enrich the message... or done with some attempt to enhance the object or structure... or done purposefully to affect a qualitative and content awareness in the viewer.... The premise is that all forms of art communicate qualities and ideas, but they differ in their functions. (Degge, 1980, p. 5)

The Vocational Education Act, 1976 cited in Vermont Guide, 1979, p. xx defined industrial education as:

Those education programs: a. Which pertain to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving such activities as experimenting, designing, constructing, evaluating and using tools, machines, materials, and processes.

Based on these definitions graphic communications programs could be established under the jurisdiction of either art or industrial education. However, it is this author's contention that graphic communications should not be rigidly attached to

either subject area, because a graphic product cannot be realized without a purpose or an understanding of technology.

The development of the model is based on the definition of visual communication as: "the process of transmitting ideas, thoughts, or concepts from one person to another through a stimulus perceived by the sense of sight." (Visual Communications, CBIE, 1974, p. 3) This encompasses both art and industrial education because the thoughts, ideas, and concepts purposely conceived to enrich a message are manifested through a stimulus produced with an understanding of technology and the use of tools, machines, materials, and processes.

The literature indicates that art programs will emphasize visual expression (British Columbia Ministry of Education, Note 3) and respect technique as an integral part of the process while industrial education programs will emphasize the psychomotor activities of technical manipulation while respecting the process of design or image development. This author's model will allow for different emphasis in the type and style of the completed project, while demonstrating the relationship of technology and image development inherent in the definition of art and industrial education.

A concept or idea of a product should be established before communication between two or more people can occur. However because of the different emphasis placed upon

activities to encourage design awareness, problem solving processes, and experimentation with materials in art and industrial education the conception and completion of a product may be different. Although the product or products may be manifested differently both areas depend on an understanding or an awareness of both image and technique to establish a stimulus which may be perceived by two or more people.

Curriculum in any subject area is a series of planned activities that stimulate a behaviour change (Eisner, 1972). As the model suggests a relationship exists between art and industrial education. Although the methods and outcomes emphasized are different, this author contends that given an understanding of the differences the union between image design and technical competencies could be developed and encouraged in graphic communications curricula.

Graphic communications may be defined as a medium that blends art and industrial education. This is supported by the Iowa Guide for Curriculum Improvement, that defines graphic communications as:

an area of study involving personnel, systems and techniques in communicating ideas, knowledge and information for the production and servicing of industrial goods.

Graphic communications encompasses all of the content of drafting, design, printing, photography and graphic arts,

as well as other graphic reproduction processes used by business and industry. (1975, p. 21)

However, the difference between these two areas is also the point where the blend occurs - the determination of instructional objective. Industrial education literature emphasizes competency based instruction.

Competency based instruction has been defined as:

Instruction which, when properly designed and applied, results in the learner's demonstration of certain abilities. The desired abilities are selected before the instruction is designed and are clearly defined as observable performance objectives... the abilities are primarily psychomotor.... This type of instruction is referred to as competency-based instruction. (Performance Objectives for Printing Occupations, 1978, p. 4)

This is in contrast with the art education literature where, for example Eisner (1972) contends "In the teaching of art relatively seldom do teachers want a specific or highly predictable performance from the student. What is often hoped for is that the student will confer his private and imaginative interpretation upon some material." (p. 155) However Eisner (1972) also indicates that his definition of expressive objectives "does not describe the behaviour or product a student is to display or construct, rather it describes an encounter the

student is to have". (p. 156) That "in the creation of art forms, there is no single correct answer, expressive objectives are used to compliment, not to replace the concept instructional objective." (Eisner, 1972, p. 155)

This author contends that the blend between performance based objectives "a statement in precise, measurable terms of a particular behaviour to be exhibited by the learner under specified conditions" (Performance Objectives for Printing Occupations, 1978, p. 4) and expressive objectives (Eisner, 1972) in the development of a graphic communications program would encourage a wider understanding of the integration of technique and imagery in the production of visual materials and the subsequent impact of these products on our society.

Imagery/technology

The majority of curriculum guides reviewed in a following chapter are based on performance objectives and are therefore competency based programs. There are indications however that instruction for specific technical competency is only a part of graphic communications education. Adams and Faux (1977) in Printing Technology - a Medium of Visual Communications state: "printing educators have realized that the industry is much larger than any particular process of production. A technology is not learned by examining only the tools or material. A

technology is mastered by understanding the concepts." (p. 13) and Armin Hoffman (1965) in Graphic Design Manual indicates that the increased use of the machines will alter the skills a person in this industry will need:

In recent years industrialization and automation have meant that a number of craftsmen who used to play an important role in the field of applied art have now been deprived of their functions of creation and design or even that the crafts have gone out of existence. There are signs that, besides the lithographer, process engraver, and engraver, not to mention the sign writer, cabinet maker, art metal worker, etc. other typical representatives of the applied arts group, such as the compositor and letter-press printer, will be overtaken by mechanization. The changes within these trades, or even their disappearance, have given rise to a new situation. The creative side of the trades mentioned has now been largely handed over to the designer and the mechanical side increasingly to the machine. This radical alteration in the structure of the applied arts means that the designer today must combine a knowledge of photography, industrial design, typography, drawing spatial representation, reproduction techniques, etc. (p. 10).

Adams & Faux (1977) and Hoffman (1965) indicate that training based solely on the mastery of specific skills may not prepare the student for the demands of industry. If competency "...infers not only the technical or mechanical aspects involved, but also the unique stylization which brings aesthetic pleasure to both the artist and the viewer." (Brough, 1979, p. 18) It is then possible that programs being developed could refute the observations of Siegel (1978) on graphic communications

Too many graduates that I see are the result of very sterile situations. They're given sterile problems to solve and of course come up with sterile solutions. Their portfolios are over edited and all the good stuff, the guts taken out. There's no spontaneity, there's no emotional contact, no content, no humour, no wit, no indepth knowledge of typography, no experimentation with colour, no warmth and richness. (p. 80)

Utilizing materials that already exist, programs in graphic communications that would recognize the spontaneity, emotion and experimentation identified by Speigel could be encouraged by blending art which Chapman (1978) defines "as a dynamic, multifaceted enterprise... it means giving form to feelings and ideas, and of enriching our vision of the world."

(p.v.) and industrial education defined in the Iowa Curriculum Guide (1975) "as a field wherein students acquire industrial-technical knowledge and competencies through creative and problem solving learning experiences involving such activities as experimenting, planning, designing constructing and evaluating." (p. 10) This would allow students to develop ideas and prepare materials that demonstrate an understanding of the visual communication process and that would be relevant to the needs of industry.

CHAPTER III

The Relationship of Facilities, Equipment and Teacher Training to Program Development

Facilities and equipment

Curriculum implementation depends on a number of factors for successful acceptance and usage within any school system. Many of the factors are intangible. They deal with the motivation of individual teachers to rearrange and reinterpret their objectives and goals, and incorporate new learning activities. However two factors affecting successful curriculum change that can have a major impact on the eventual outcomes are facilities and equipment.

The facilities and equipment for any program are important, but for a graphic communications course they can have a considerable effect. Without a reasonable variety of specialized equipment and facilities in which to house it, a graphic arts program will not be able to operate.

The impact on program development and implementation by facilities and equipment is significant. But from recent developments in this province, there appears to be little recognition of this relationship by the Ministry of Education. In respect to graphic communications programs the Ministry has

not prepared any guidelines for facilities, equipment, or curriculum, but financing is available for capital expenditure for equipment! Major funding for equipment is available through a capital sharing program between the school districts and the Ministry. Many school districts throughout the province have taken advantage of this opportunity to equip graphic communications facilities. However, without guidelines from the Ministry purchases made with that funding vary enormously, not only between districts, but between individual schools within districts. With such inconsistency and lack of guidance in purchasing, there has been a tremendous variety of equipment installed in the classrooms of a few vocal teachers.

The successful attainment of goals and objectives in a graphic communications program depends largely on the availability of equipment. Therefore prior to equipment purchases there should be a statement of goals and objectives. Numerous statements both formal and informal have been prepared in various provincial districts to substantiate the selection and purchase of equipment. These statements are based on the knowledge, background and expertise of each instructor, and they reflect the philosophy of each instructor, rather than a standardized guideline. However important flexibility is in curriculum design graphic communications programs have developed in a sporadic and divergent manner that hinder the further

development of graphics communications education in B.C. The programs reflect great variations in the blend of the technical with the artistic, so inherent in graphic communications.

Teacher training in British Columbia

Graphic communications is a subject presently being taught in the secondary schools of British Columbia. However, for the student beginning teacher training there are many roadblocks. A student cannot receive the necessary courses required to be a qualified graphic arts teacher at any post secondary institution in British Columbia. The only avenue open is to qualify for a British Columbia teaching certificate with a specialty in an allied field such as Art, Industrial Education, or Business Education. With a BC certificate, in conjunction with an interest in graphic arts, the applicant may be able to locate a teaching position.

The major teaching training institutions in the province seem to understand, and many subjects related to graphic communications are being taught. But the universities' programs are not designed to offer a major in the specific area of graphic communication education. Without a concentration of post secondary courses, the student is obligated to elect course offerings from various departments in an attempt to become a qualified graphic communications instructor.

The major university education faculties do offer photography, film, and television courses, but the emphasis is not necessarily on technique and expression but rather on the use of media as a tool for educational instruction. This objective is certainly valid, but in the context of preparing future educators to teach graphic communications courses in school, the emphasis must be different.

The Visual Communication Education (VICOED) program

Western Washington State University at Bellingham is the nearest institution offering a comprehensive program for the aspiring teacher in graphic communications. The Visual Communications Education (VICOED) program prepares the student to become qualified in graphic arts subjects. This training enables the prospective teacher to qualify for a teaching certificate in the specific field of graphic arts education. The possibility to concentrate in graphic arts in British Columbia instead of an allied field would be advantageous rather than specializing after university graduation.

During the mid sixties, when the Vancouver School Board expanded their course offerings in graphic arts, many of their instructors received upgrading at the then called Western Washington State College. The College, Vancouver School Board and the Ford Foundation cooperated to finance the training of

teachers and the implementation of the innovative VICOED program. Instructors from British Columbia, Washington, Oregon and Hawaii were involved in three summer sessions dealing with the new program. According to the director W. Schwalm, (cited in King, 1980) the training program was very successful. However the momentum started at Western Washington State College after the introduction of the new program began to wane. The lack of additional financing prevented the next step in their program from being realized - a high school curriculum. Without a formalized curriculum guide for secondary students, all the instructors involved in the program implemented different versions of their own curricular experiences at Western Washington State College. Presently many of the programs developed by the American instructors have been so modified and subsequently changed that there is little resemblance to the overall VICOED concept.

In the Vancouver system, a similar change has occurred. With the inevitable changes in staff and the restructuring of timetables many of the original Ford Foundation-VICOED instructors are no longer involved with graphic arts education. Therefore, the programs and the system have come full circle, back to the beginning with programs being taught without the benefit of trained personnel and without a set of curriculum guidelines.

Fifteen years later, some of the programs are returning to the ideas and concepts developed at Western Washington. However, without a conscientious effort by the Ministry of Education and the British Columbia Teachers' Federation (BCTF), will the instructors reflect on the nature of their courses in response to the aspirations of their students and society? Technological change, especially as it affects the graphic arts industry will make many of the processes and skills that are being taught obsolete before the student graduates from secondary school. It is essential to prepare an overall plan for review and coordination of graphic communications instruction.

CHAPTER IV

The Implications of Career Preparation on
Graphic Communications Program Development

The present trend in British Columbia is to provide students with a cluster of courses to learn generic skills - skills which can be applied to a number of different occupations. (Crieese, Note 4) The acquisition of clusters of generic skills will hopefully allow the possible direct entry into the industry or provide advanced standing in a post secondary institution. The Ministry of Education has labelled this concept of clustering as Career Preparation. However the policy governing the introduction and continuation of these programs is again under revision. Therefore it is difficult to establish precise guidelines from which to develop proposals and submissions. With this lack of a specific policy many program concepts may never be discussed or presented. Erratic policy shifts may also place many presently funded programs in a precarious position. If the Ministry is intent on providing a cluster of courses that encourages advance training in a specific field, then firm policy guidelines must be published.

Career preparation is based on a policy stated in the 1977 Industrial Education Guide that allows for the development of courses with advanced standing:

These programs may only be offered with the Ministry of Education approval. They are designed for students wishing to spend fifty percent of their time in a particular subject area, such as automotive, carpentry, machine shop, etal... The curriculum outlines to be used for programs for Particular Occupations (advanced studies) should be those used in the first stage of the appropriate specialty in a post secondary institution. (p. 17)

From these statements, the Ministry has modified its policy to become more specific as to number of courses, qualification of instructors, number of hours necessary, and number of students necessary to qualify for funding. However during the past two years the requirements have been constantly changing. This continual flexibility in requirements for program qualification, has presented difficulties not only for established career areas, but also for other areas that the Ministry has not recognized as potential Career Preparation subjects.

Advanced standing in Art/Graphic Communications

In this author's view the concept of Career Preparation is a valid and important step in the development of educational policy in this province. The intention of introducing an advanced standing in various areas, in conjunction with maintaining the concept of comprehensive secondary schools, allows the maximum number of students the opportunity to

explore career areas as well as to learn specific skills. However the philosophy of Career Preparation should not be restricted to just technical, motor skill development. Unfortunately the implications of this emphasis is already apparent by the nature of two requirements for Ministry approval: (1) the instructor must have acceptable trade experience and (2) the program must share a common curriculum that will articulate with a post secondary institution.

Upon reflection of these two requirements, a number of questions emerge:

1. If the majority of graphic communications instructors are trained art teachers, how would the Ministry of Education define "trade experience"?
2. How can graphic communications programs throughout the province be articulated with a post secondary institution without an officially recognized curriculum?
3. How will the post secondary institution influence program development in the secondary school?

The blend of art/graphics is recognized (McFee, 1974) and could be emphasized in a career preparation program but without the above questions answered, this subject area may not receive the required approval of the Ministry. It is the intention of the author to raise these questions in the hope that advanced standing in art/graphics will not be restricted.

Integration of Vocational training and comprehensive education

The British Columbia proposal for preparing students for entry into industry or advance standing at a post secondary institution is to be incorporated within the context of the present comprehensive secondary school framework. The ability to provide vocational skill training within this framework will continue to allow students the maximum flexibility in preparing programs of study. The integration of vocational technical training in a comprehensive secondary school does not force a student to make an early career choice, but rather provides the student with a maximum flexibility in course and career choice.

Many different programs of vocational technical training exist in the United States, Canada, and Britain. These programs vary between industry sponsored schools (London School Of Printing) to district vocational magnet schools. However varied the organizations of the vocational technical schools, they are linked by the common factors of specialization in one or more trade areas and provision of specific task training. Because of the specialized nature of vocational programming students must decide on a restricted course of studies at an early age.

Technical training is imperative in an increasingly technological society. Who is responsible for providing the training and how it is manifested can take many different

formats. Examples exist (Graphic Arts, Alabama, 1977; Pollock, 1979; Visual Communication-Graphic Arts, Alberta, 1974) that demonstrate a wide range of solutions. Hopefully through careful consideration of the needs of the student and of society, programs will continue to be developed and implemented to expand rather than limit students' opportunities.

Career Preparation in British Columbia can be modified and changed in relationship to the variety of vocational technical models that already exist. However any program of studies that encourages skill development must consider of the needs of industry. Hopefully with an increase in provincial funding for Career Preparation programs the Ministry is not over reacting to the apparent lack of technically trained students. The public school system is still an organization dedicated to the education of the youth of this province,

the British Columbia system of public education strives to serve society and to meet the needs of individual students. The school's primary responsibility is to educate by enabling each student to pursue excellence, to experience success, and to realize maximum potential. (Killeen & Ornes, 1979 p. 201) rather than training for specific job tasks.

CHAPTER V

The Review of Existing Graphic Communications Curriculum Material

Availability of curriculum

In the following section communications curriculum materials from various educational agencies throughout North America are outlined and reviewed. This review of curriculum materials was initiated with the desire to identify the present state of graphic communications curriculum development. To achieve this goal correspondence was conducted with every state and provincial education agency in North America. The response for information from these agencies was impressive and resulted in the assembly of a large collection of curriculum guides and resource packages. The following section reviews sixty-five examples from this collection.

Curriculum development in graphic communications as indicated by the following materials varies depending on the goals and objectives identified by specific agencies. However two main themes exist. The first theme deals with graphic communications as a segment of a broadly based industrial education program. Objectives and goals are defined in relationship to the understanding and awareness of technology in our society through motor skill development. The second theme emphasizes

specific outcomes that translate into learning job skills. This vocational aspect of many of the programs is identified by the dependence on the concept of competency based instruction and performance objectives.

Although the analysed materials represent two main themes, many different ideas, concepts and rationales have been used in the preparation of the curriculum resources. To help illustrate the similarities and differences between the various programs, a review sheet was designed and used for comparison of the programs. The review sheet identifies eleven concepts that this author considered for each review. This standardization of the review process allows easier comparison between the curriculum materials.

The curriculum review sheet - an explanation of terms

The following elements provided the design base for the graphic communications materials review sheet.

1. Reference, Source, and Cost
2. This material is:
 - a. a competency based instruction program:

Instruction which when properly designed and applied results in the learner's demonstration of certain abilities. The desired abilities are selected before the instruction is designed and are clearly defined as observable performance objectives.

b. an industrial education curriculum guide:

A reference guide that indicates general topics of study in a technological area. The topics are discussed in broad, general terms.

c. an organized instructional program:

Materials designed to provide lesson plans and a specified daily progression.

d. a resource materials package:

Materials either prepared institutionally or commercially to support graphic communications programs.

e. an art education curriculum guide:

A reference guide indicating, in general terms the topics to be covered in an art program.

3. Course outlines indicate:

a. job tasks: a unit of work activity which constitutes logical and necessary steps in the performance of a duty. A task has a definite beginning and ending point in its accomplishment and generally consists of two or more definite steps.

b. unit content: indication of the organization of the course in specific segments.

4. Objectives identified for:

a. specific job tasks: objectives sited for each step of the tasks in performance terms.

b. general learning outcomes: objectives sited for program goals rather than specific tasks.

5. Instructional materials organized to promote:

Every program reviewed refers to skill development, job training and design but this statement is designed to identify the major emphasis of the curriculum package.

a. Skill development and job training could be considered synonymous, and many programs do emphasize skill development in conjunction with job training, but others indicate motor skill development as a prime goal without specific reference to job training or vocational education. Motor skill development is considered in many programs the method for demonstrating the importance and relevance of technology in today's society. Industrial education programs are not designed purely to train students for future employment rather to demonstrate the impact of industrialization on our culture and society.

9. Number of hours per instructional module: module - a predetermined course of studies, usually one year in duration.

10. Number of modules needed to complete a program of studies: the number of specific courses needed to complete a program for graduation or articulation with a post-secondary institution.

11. For implementation of this curriculum material strategies are outlined for:

a. Management:

Can all students complete the task learning and practice at the same time? How many students can be involved at the same time? What will be the source of practical work and materials used? Will the learning experiences be production or products? Will the students use their own tools or school tools?

b. Instruction:

Will you give demonstrations to the whole class at one time or to small groups? Will you use job and procedure sheets? What tasks (skills and knowledge) must be learned prior to this one? How much time will it take to teach and practice this task? How will the skills in the laboratory and the related technical content of the classroom be coordinated?

c. Evaluation:

How will student success be assessed? Will you use paper and pencil tests? Performance checklists? Will the student have to successfully complete this task before moving on? At what level will the student have to perform? (Hindes, 1981, pp. 22-23)

Canadian Guides

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Art and design teaching guide. St. John's, Newfoundland:
Newfoundland Department of Education, 1977.

Newfoundland Department of Education
Confederation Building
St. John's, Nfld.
A1C 5R9

N/C

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☒
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☐
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

Graphic communications can and does have many different definitions. Depending on the interpretation of the term, programs can be prepared that emphasize various aspects of a complex industry. The techniques of preparation and production to the impact of printed images are valid areas of study. The Newfoundland Department of Education has attempted to prepare materials that will allow the student to at least become aware of the technique as well as the social impact of printed imagery.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Newfoundland guide Art and Design outlines two units that formally deal with communication skills.

Graphics and Printmaking: "to encourage students to view graphics and printmaking as image making with the same compositional and creative demands as other areas of the arts." (1977, p. 3)

Communication Arts-Media: "This Unit deals basically with the question "Who" says "What" to "Whom". It deals with art and design as it is directly employed in the communication of various ideas, information, and feelings." (1977, p. 9)

Communication Arts: LEVEL TWO: Major Emphasis

This unit is compulsory at Level II, and should serve to broaden student understanding and involvement, as well as to provide fundamental experience for those students who have not had Level One.

The major emphasis should be:

- A. Further exploration of basic elements and forms of communicative design in
- a) advertising
 - b) illustration
- B. Introduction and Exploration of new processes, forms and elements of visual communication;

1. Actual Experimentation by Students	2. Discussion, Visual Analysis and Research
<u>Advertising</u>	
<ul style="list-style-type: none"> -work with advertising to sell products, designing ads, posters, packaging -critical assessment of available advertising resigning ads etc. -work with various media -experience in final lay-out mounting, presentation, portfolio -experience in setting up an advertising campaign (posters, ads in school paper, signs, packaging, etc.) -billboard design, display, sign and logo-design 	<ul style="list-style-type: none"> -examination of advertising which is successful -examine devices in advertising used for appeal - both visual and non-visual -look at audience - (who is it aimed at?)

1. Actual Experimentation by Students	2. Discussion, Visual Analysis and Research
<u>Illustration</u>	
<ul style="list-style-type: none"> -work with sequence, repetition, consistency etc. in illustration -tell a story, visually -explore various types of illustration, comics, books, cartoons, etc. -experiment with different media to see how they effect mood, clarity, attention etc. 	<ul style="list-style-type: none"> -examine the work of artists who illustrate to communicate information or emotion (Toulouse-Lautrec, Shahn, A. Rackham, etc.)
<u>Social Comment</u>	
<ul style="list-style-type: none"> -experiment with design for social comment - explore propaganda, political, behavioural devices -explore devices like context, contrast, intimidation, appeal to emotions in various media (posters, pamphlets etc.) -work with caricature and cartooning as social comment 	<ul style="list-style-type: none"> -look at protest and propaganda art - in posters, magazines etc. -identify devices used to influence the viewer -examine how this type of visual communication effects the public -examine elements like exaggeration, subjectivity, distortion and bids as they work visually -look at the work of artists working in the field of social comment (Daumier, Picasso's 'Guernica', Ben Shahn etc.)
<u>Television and Film</u>	
<ul style="list-style-type: none"> -evaluation and design of T.V. visuals - graphics, titles, set, etc. -exploration of commercials, photo and animation -experimentation with video (where possible) 	<ul style="list-style-type: none"> -examination of the visual devices and impact of T.V. and film -exploration of T.V. production, roles of people, script, visuals, sequence etc.

Graphics and Printmaking: LEVEL ONE: Major Emphasis

- A. Introduction to basic processes, terms and materials in the following areas:

1. Actual Experimentation by Students	2. Discussion, Visual Analysis and Research
<u>Relief Printing</u>	
<ul style="list-style-type: none"> -rubblings -gathering textures (stamp printing) -experimentation with texture transfer and embossing (clay, tin foil etc.) -exploration of design components in stamp printing pattern repetition, border design etc. -collograph with available materials (cardboard, string, scraps) -monoprints and "roller" prints (collographs on cylinders, marble prints etc.) 	<ul style="list-style-type: none"> -exploration of visual effects on different surfaces - papers, cloth etc. -examination of repeat patterns in printed objects wall and wrapping paper, cloth
<u>Block and Plate Printing</u>	
<ul style="list-style-type: none"> -carving into surfaces to print (turnips, wax, lino, wood, rubber) -exploration of compositional elements, color, line, over lap, etc. -experimentation with mirror image and reversal -exploration over-printing and printing with non-rectangular shapes 	<ul style="list-style-type: none"> -introduction of engraving and intaglio, through the work of printmakers like Durer, Blackwood, local artists where possible

Graphics and Printmaking (cont.)

1. Actual Experimentation by Students	2. Discussion, Visual Analysis and Research
<u>Graphics and Printmaking in the Community</u>	
<ul style="list-style-type: none"> -experimentation with printing machines in school (gestetner, spirit duplicator etc.) -exploration of newspaper production, printing, layout etc. 	<ul style="list-style-type: none"> -exploration of printing processes which produce newspapers, magazines, comic books etc. -graphics in contemporary poster production -introduction to offset lithography -exploration of popularity of prints vs. paintings, etc. (concept of multiples) -exploration of graphic artists in community (where possible)

- B. Introduction of Graphics and Printmaking as an integral and vital part of the Arts and the business world. Students should be encouraged to compare it to other forms of image-making and to explore its effectiveness in communication.
- C. Consideration should be given to the art-buying market in relation to the popularity of graphics, the variety of tastes and standards, cost and labour, etc.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Commercial art. Edmonton, Alberta: Alberta Department of Education, 1974.

Alberta Department of Education
Devonian Building, West Tower
11160 Jasper Avenue
Edmonton, AL
T5K 0L3

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
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 - b. Awareness to imagery and design. ☒
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
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 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☒
 - c. Evaluation ☐
12. Overview

The province of Alberta includes the following areas in its definition of Visual Communication - drafting, graphic arts, and commercial art. Each of these areas shares an introductory course at the Grade 10 level, and from there branches into six individual courses for each topic.

Alberta provides the opportunity for the student to complete a selection of courses that offer specific technical content as well as courses which cover image design.

c. Commercial Art

(i) Visual Communications 12 (1736)

Visual Communications is a course common to the three major areas in the career field. Students will learn about occupational opportunities, basic drawing, composition and design, color theory, lettering, advertising layout, photography, platemaking, printing, and finishing procedures.

(ii) Commercial Art 22A (General Illustration) (2848)

An introduction to drawing and illustration as applied to commercial assignments. The course includes constructive drawing (forms, perspective, etc.), expressive drawing, (mature studies, human form, etc.) and an introduction to various painting techniques.

(iii) Commercial Art 22B (Information Design) (2849)

An introduction to the elements and principles of design as applied to two-dimensional design such as advertising layout and lettering.

(iv) Commercial Art 22C (Design 3D) (2850)

The content of this module stresses the techniques of advertising, design, lettering and merchandising.

(v) Commercial Art 32A (Commercial Illustration) (3848)

This course is a continuation of the 22B with more advanced study of drawing and illustration in three-dimensional design using various materials to create models for display on commercial assignments.

(vi) Commercial Art 32B (Production Technology) (3849)

Students use all the experience gained through previous work to organize and operate a small advertising firm. They will learn about the problems of labor, personnel organization, marketing and the actual production operation.

(vii) Commercial Art 32C (3850)

Through this course students may increase their competencies in areas covered previously by doing additional work in the school or by engaging in actual art work for a commercial firm. Students must be under the supervision of the Commercial Art teacher and a craftsman on the job.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Industrial arts. St. John's, Newfoundland: Newfoundland
1. Department of Education, 1975.

Newfoundland Department of Education
Confederation Building
St. John's, Nfld.
A1C 5R9

N/C

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 - g. Slides ☐
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7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☒
 - b. Grade 9 ☒
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 - e. Grade 12 ☐
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☒
 - c. Evaluation. ☐
12. Overview

The Newfoundland industrial arts program for grades seven, eight and nine is a basic introduction to materials and technology. The courses are divided into three categories:

 1. Materials and Processes
(wood, plastic, metal)
 2. Power and Energy
 3. Communications

The communications module covers basic drafting skills, radio and television principles and depending on grade level, the following graphic arts topics:

- grade seven - relief printing
- grade eight - silkscreen print (basic)
- grade nine - silkscreen printin (advanced)
- intaglio printing (dry point & etching)

4
Grade 7

Objectives of the Course

1. To provide introductory experiences in working with tools and materials.
2. To introduce students to cooperating in a laboratory (shop) atmosphere in conjunction with other students.
3. To provide an introduction to the graphic arts and simple communication systems.
4. To provide an introduction to energy and its applications.

Course Content

General

1. Safety in the school shop.
2. Modern organization of industry
3. Historical development of man's use of tools.

Materials and Processes

Students should understand the use of each tool and operation in relation to the industrial materials of wood, metal, and plastic.

1. Saws
2. Squares
3. Planes
4. Hand drill
5. Brace and bit
6. Chisels
7. Knives
8. Rules (measuring)
9. Gages
10. Screwdrivers
11. Hammers
12. Mallet
13. Files
14. Snips
15. Joining (Fasteners)
16. Needle
17. Marlin spike
18. Hacksaw

Communications

1. Relief printing
2. Pictorial sketching
3. Measuring
4. Drafting equipment
5. Telephone
6. Intercom
7. Doorbell

Power & Energy

1. Energy sources
2. Energy conversion
3. Mechanical power
4. Electrical power

4
Grade 8

Objectives of the Course

1. To provide an introduction to materials and basic power tools.
2. To provide an understanding of industrial design principles and planning procedures.
3. To provide an introduction to basic electronic communication and detection methods.
4. To develop student ability to visualize the representation of three-dimensional objects in a single plane (projection).
5. To introduce students to small gasoline engines and service requirements.

Course Content

General

1. The importance of industry in our society.
2. Mass production.

Materials & Processes

Students should understand the use of each tool or operation in relation to the individual materials of wood, plastic & metal.

1. Project planning
2. Measuring & layout
3. Types and properties of materials
4. Kinds and sizes of materials
5. Finishing
6. Jig saw
7. Hand held electric saw
8. Drill press
9. Sander
10. Grinder
11. Lathe
12. Net making
13. Weight molding
14. Forming and molding
15. Laminating
16. Raising and embossing

Communications

1. Radar
2. Radio communication (Voice & CW)
3. Sonar
4. Fish detectors
5. 2 View sketching
6. 3 View Sketching
7. Isometric sketching
8. Blueprint reading
9. Silk screen (basic)

Power & Energy

1. Fluid power
2. Small engine service
3. Measuring energy & power
4. Energy control & transmission

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Stewart, A. Graphic communications, a course of instruction. Halifax, Nova Scotia: Nova Scotia Department of Education, 1970.

Nova Scotia Department of Education
Box 578
Halifax, NS
B3J 1A6

N/C

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5. Instructional material organized to promote:
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 - g. Slides ☐
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7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
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 - c. Grade 10 ☒
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 - e. Grade 12 ☐
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

The Nova Scotia program is an attempt to unify drafting and printing.

The term graphic communication is used in this course outline in place of drawing or drafting because the subject matter has been expanded. (Stewart, 1970, p. i) Although the subject matter has expanded, and includes all forms of communicating graphically, the Nova Scotia program does not emphasize the expanded nature of their own definition. The course outline still emphasizes the basic and introductory elements of drafting. The section dealing with the expanded nature of their definition is prefaced with the following disclaimer:

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The success of this section is largely dependent on the teacher's professional training or hobby interest. Without these qualifications, it is not recommended that teachers attempt to implement this section. (Stewart, 1970, p.55)

Graphic communications is an interdisciplinary course of studies and the Nova Scotia program at least recognizes this fact, but in reality their stated goal of "providing an introduction to graphic arts through a variety of exploratory experiences and activities closely allied to the printing and publishing field" (Stewart, 1970, p.i) may not be attained, if the inclusion of graphic arts is subject to the discretion of the instructor.

Program

A - Standard
R - Adjusted
C - Occupational Education

Year

1 - First Year
2 - Second Year
3 - Third Year

Basic Processes (Cont'd)

Topic	Content	A	B	C
Layout and Basic Design	A. Lettering			
	Style and usage			
	Forming			
	Spacing			
	B. Composition (Layout)			
	Proportions			
	Balance			
	Harmony (shape and tone)			
Printing papers, pigments and colors	A. Papers			
	History of papermaking			
	Processes of papermaking			
	Common sizes and types of paper			
	B. Inks			
	History of ink making			
	Types of ink			
	Compatibility of paper and ink			

Suggested Activities	References and Notes
Practice using: lettering devices Speedball pens lettering machines paste-up letters Instant lettering	
Designing and making posters, business cards, tickets, etc. using media - pg. 60	
Make a piece of paper in the lab	Reference text 'Graphic Arts' Kagy, pg. 56
Print specific jobs with selected inks.	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Technical education, division IV. Regina Saskatchewan:
Saskatchewan Department of Education, 1977.

1.

Information Bureau
Saskatchewan Department of Education
2220 College Avenue
Regina, Saskatchewan
S4D 3V7

N/C

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- a. Management. ☐
- b. Instruction. ☐
- c. Evaluation. ☐

12. Overview

The Saskatchewan Department of Education has developed a program of studies in industrial education that can be adapted to either an urban or rural school. The multi-activity approach to industrial education allows most schools to offer instruction in all the designated areas, regardless of size. The program identifies content areas for the traditional subjects in industrial education. Graphic communications areas printing, photography, drafting are listed under Communications.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The course structure, due to the multiactivity approach is organized in twenty-five hour modules. The student must complete four, twenty-five modules to achieve credit for each grade. Therefore a student could receive credit for Industrial Education 10 with modules from printing, wood-work, photography and metal work. Because of the nature of this programming, the guide recommends that instructional materials be individualized and class size be restricted to sixteen students.

The Saskatchewan program is based on the philosophy of awareness to technology and its implications on society.

Awareness of culture is an essential outcome of education. Technology, defined as ways of using knowledge to do practical tasks, is a major component of any culture.

Technical Education is an essential component of each student's general education, an imperative for successful living in today's world.

(Saskatchewan, 1977, p.iv)

Technical Education is not a vocational instruction program, but a program of studies designed to "foster the discovery of interests and aptitudes in technical fields, which may be utilized in both vocational and avocational pursuits." (Saskatchewan, 1977, p.iv)

GRAPHIC ARTS

Unit I - Printing Processes

Objectives:

The student will:-

1. Select from given specimens three different kinds of printing that could be used for a given job.
2. Arrange and print a given message, using a sign press.
3. Demonstrate and explain the principle of planographic or offset printing.
4. Demonstrate the preparation and functions of metal and paper plates in offset printing.
5. Demonstrate the use of stencils in screen printing.
6. Mimeograph an acceptable copy from a prepared stencil.
7. Make acceptable copy from a prepared stencil, using a spirit duplicator.
8. Demonstrate the principle of intaglio or gravure printing.
9. Give examples of applications in the graphics industry of any of the printing processes dealt with in this unit.
10. Compare the processes used in printing a large daily newspaper with processes used in small weekly newspaper plants.
11. Select from among several specified methods the best method of printing for a short-run job.
12. Outline the duties performed in common occupations in the printing industry and the ways in which people qualify for employment in these occupations.

Content:

- 1.1 Printing
 - ways of communicating ideas
 - printing as symbolic representation
- 1.2 Relief printing
 - principle
 - sign press
 - rubber stamp
- 1.3 Stencil printing
 - principle
 - screen-printing
 - paper stencils
- 1.4 Planographic printing
 - principle
 - spirit duplicator
 - offset press
- 1.5 Intaglio
 - principle
 - dry etching

- 1.6 Assembly
 - bindery

- 1.7 Industrial settings
 - newspaper
 - job-plant

Unit II - Relief Printing

Objectives:

The student will:

1. With a line gauge, describe in printer's terms a paragraph from a newspaper.
2. Compare printer's measurement of lines from a newspaper with metric measurement of the same lines.
3. Prepare copy for a classified advertisement.
4. Prepare written text in copy form for printing.
5. Arrange copy for printing, including pictures.
6. Arrange copy with more than one size of type, to convey a message more effectively.
7. Explain procedure to be followed prior to including copyright material in a production.
8. Define terminology used in the graphics industry.
9. Tie up, proofread and correct a type form.
10. Prepare and cut a block for relief printing a design.
11. Compare production of a given printing job on the old linotype machine with production of the same job in a modern printing plant using computerized offset equipment.
12. Compare the numbers and kinds of occupations in a modern job printing plant with those in older plants.

Content:

- 2.1 Relief printing
 - the process
 - uses
- 2.2 Message analysis
 - words as symbols for meaning
 - arrangement to convey meaning
 - the power of the press
- 2.3 Strike-on image generation
 - typewriting
 - transfer
- 2.4 Word image generation
 - cold composition typography
 - typesetting, proofing
 - press operation

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Visual communications-graphic arts. Edmonton, Alberta:
 1. Alberta Department of Education, 1974.

Alberta Education
 Devonian Building, West Tower
 11160 Jasper Avenue
 Edmonton, Alberta
 T5R 0L2

N/C

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 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. 125
10. Number of modules needed to complete a program of studies. 7
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

The Visual Communications-graphic arts curriculum guide identifies major graphic arts areas and prescribes tasks to meet the objectives of the individual courses. In the career field of Visual Communications-graphic arts the Department of education has identified seven, one hundred and twenty-five hour modules that a student may complete. The courses range from an introductory course dealing with the basic components of print education to an advanced work study program. Therefore depending on a student's own interest and career goals, a program of studies can be determined which can range from a general overview to an advanced career education.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Department also provides, through the material presented in the guide, a base for the student to articulate with the two major post secondary training institutions.

The Alberta guide although specific in particular course content, remains independent and flexible for manipulation by each instructor depending on the nature of the local situation.

This guide can provide a valuable example for curriculum planning because of the manner in which the courses have been organized and the indication of the continuity between each course.

Topic III: CONVERSION (Continued)

56

Generalization

Concept and Sub-Concepts	Approx. Time	Behavioural Objectives	Activities or Jobs	Resources
2. Film Processing		The student will: a. following instruction, choose, measure and mix the correct chemicals to achieve satisfactory development of film. b. with previously exposed film, process, by an appropriate method to suit the copy, to achieve a negative which is satisfactory for further operations. c. after study, explain the elementary chemical reaction of the chemicals used in developing.		
3. Proofing		a. given a negative, produce a satisfactory proof by a method chosen by the teacher.		
4. Stripping		a. given the materials, layout masks and produce flats involving: (1.) single or multiple negatives		

Topic I: CONVERSIONa1,
tp15

Generalization C: Symbols and design elements are converted to reproducible elements which can be assembled into a form to facilitate efficient reproduction and dissemination of visual information.

Concept and Sub-Concepts	Approx. Time	Behavioural Objectives	Activities or Jobs	Resources
1. Camera (i.) Operation (ii.) Screens (iii.) Films (iv.) Filters (v.) Negatives		The student will: a. after instruction and practice, (i.) make the necessary adjustments and exposure calculations for line and halftone work for same-size and scaled copy (ii.) choose appropriate contact screen (iii.) calibrate an exposure computer (iv.) make a correct choice of filter (v.) choose appropriate film to achieve a negative within a 10% error range b. after study, explain (i.) film structure and composition (ii.) the process of halftone photography (iii.) the camera operations and how light is controlled		

Notes:

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Visual communications 10-20-30. Edmonton, Alberta:
Alberta Department of Education, 1976.

1.

Alberta Education
Devonion Building, West Tower
11160 Jasper Avenue
Edmonton, Alberta
T5K 0L2

N/C

2. This material is:

- a. A competency based instructional program. ☐
- b. An industrial education curriculum guide. ☒
- c. An organized instructional program. ☐
- d. A resource materials package. ☐
- e. An art education curriculum guide. ☐

3. Course outlines indicate:

- a. A job tasks. ☐
- b. Unit content. ☒

4. Objectives identified for:

- a. Specific job tasks. ☐
- b. General learning outcomes. ☒

5. Instructional material organized to promote:

- a. Skill development. ☒
- b. Awareness to imagery and design. ☐
- c. Job training. ☐

6. Contents of this package include the following materials.

- a. Specific lesson plans. ☐
- b. Pre tests. ☐
- c. Post Tests. ☐
- d. Student workbook. ☐
- e. Instructor's manual. ☐
- f. Equipment list. ☐
- g. Slides. ☐
- h. Audio tapes. ☐
- i. Student learning packages. ☐
- j. ☐

7. Instructional materials are designed to encourage individual progress. ☐

8. Materials are intended to be used at:

- a. Grade 8. ☐
- b. Grade 9. ☒
- c. Grade 10. ☒
- d. Grade 11. ☒
- e. Grade 12. ☒
- f. Post secondary. ☐

9. Number of hours per instructional module. 10010. Number of modules needed to complete a program of studies. 1

11. For implementation of this curriculum material, strategies are outlined for:

- a. Management. ☐
- b. Instruction. ☐
- c. Evaluation. ☐

12. Overview

The province of Alberta makes a distinction between industrial arts and vocational training. Under the broad scope of industrial education both industrial arts and vocational training are necessary in preparing a program of studies.

Our task in the secondary school then, is to provide students not only with entry level skills for several careers but to orient the program to meet social and cultural goals. (p. 6)

In their effort to meet social, cultural and career goals the Department of Education has prepared two programs of study available to secondary students.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Industrial Education 10.20.30 program is an organization of units in the following fields. 1. Electricity 2. Materials 3. Power Technology 4. Visual Communications. Depending on the local situation, the instructor can prepare a program of studies based on these four areas. The four areas identified in the curriculum guide are designed to be implemented by the instructor to provide maximum exposure of the subject to the students. The 10.20.30 program is not a vocational training program but a course of studies prepared to encourage student awareness to technological process and concepts.

In conjunction with the 10.20.30 program the opportunity does exist, with the companion publication Visual Communications 12. 22 a,b,c 32 a,b,c for a student to meet specific career entry skill objectives.

D. VISUAL COMMUNICATIONS MODULES

1. Principles of Lithography

Content includes basic principles of the lithographic process, simple layouts, making masters and offset press operation.

2. Line Photography

Students use the process camera to do line photography and prepare orthochromatic film to make metal masters.

3. Black and White Photography

Content includes the study of cameras, light sensitive materials and enlarger work.

4. Color Photography

Students study principles of color photography, properties of color film and techniques of development.

5. Screened Photography

This is a continued study of process camera operation, stripping and platemaking. The module on line photography should precede this one.

6. Layout and Design

Students will develop skill in layout and commercial art techniques.

7. Offset Printing Production

Students plan a production run of a printed product and in the process learn about: systems analysis, quality control, offset production, deadlines, wastage and consumer acceptance.

8. Mechanical Drafting

Basic drawing concepts are introduced to produce product representations through various projection methods. Students learn to use and take care of instruments.

9. Topographical Drafting

Students draw contour maps and learn how to use various projections and how to do dimensioning.

10. Architectural Drawing

This module introduces the student to reading and drawing building plans. Housing standards are studied.

11. Relief Printing

Principles of relief printing will be studied and applied to hand setting type and the use of a small platen press, sign press and rubber stamp machine.

12. Printmaking Techniques

Students will learn how to handout prints as well as use the photographic process for making prints. They will learn how to construct and use their own equipment.



American guides

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Bailey, F. The in-plant printer. Trenton, New Jersey:

1. New Jersey Department of Education, 1977.

Vocational-Technical Curriculum Laboratory
Rutgers - The State University
Building 4103 - Kilmer Campus
New Brunswick, NJ 08903

\$4.75

2. This material is:
- a. A competency based instructional program..... ☐
 - b. An industrial education curriculum guide..... ☒
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
- a. A job tasks..... ☒
 - b. Unit content..... ☐
4. Objectives identified for:
- a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
- a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☐
 - c. Job training..... ☒
6. Contents of this package include the following materials.
- a. Specific lesson plans..... ☒
 - b. Pre tests..... ☐
 - c. Post Tests..... ☒
 - d. Student workbook..... ☒
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☒
8. Materials are intended to be used at:
- a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management..... ☐
 - b. Instruction..... ☒
 - c. Evaluation..... ☐
12. Overview..... ☐

In-Plant printing: a print shop within a larger company that manufactures or produces something other than printing, is becoming an area where a number of students could be employed. The workbook outlines the steps and procedures found within an in-plant print shop.

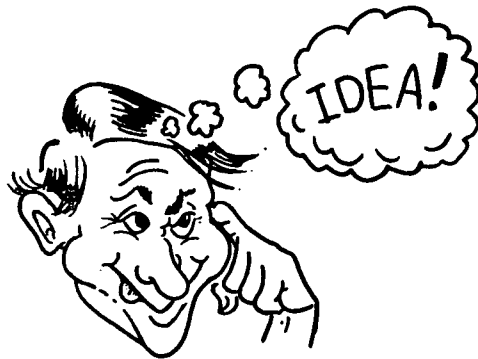
Although the work book is designed for a specific audience, (deaf students) much of the information could be integrated and adapted to a larger more diversified group.

UNIT IV
LAYOUT AND DESIGN

LESSON 1 – WHAT IS A DESIGN?

At the end of this unit you will lay out two different pages. You will measure accurately, using both the printer's point system and inches.

Every time you look at the newspaper or a magazine you are looking at a layout or design that is finished.

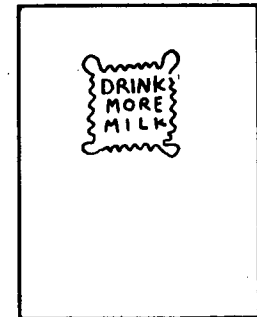


It all started with an IDEA, a thought that someone had. Before it could be printed, someone had to draw something – maybe only hand lettering. Something that would help a person reading the message to better understand the idea.

Design is the second idea – HOW to put that idea or thought on paper so people will look at it.

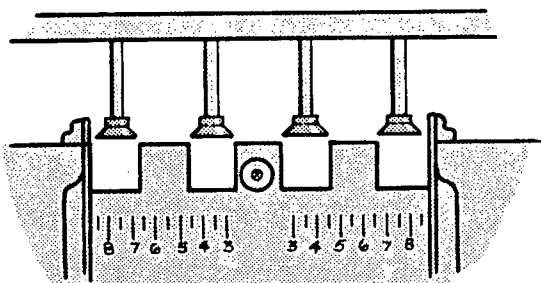


Which design would YOU look at and Read????

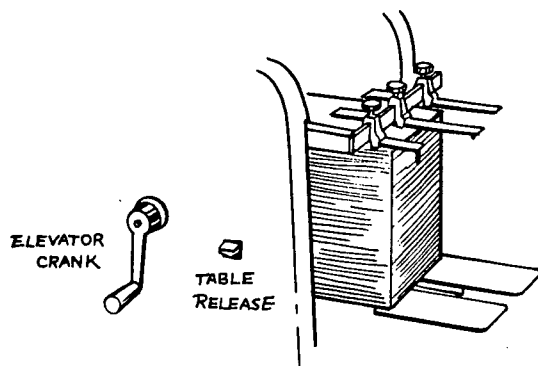


LESSON 7 – LOADING THE PAPER

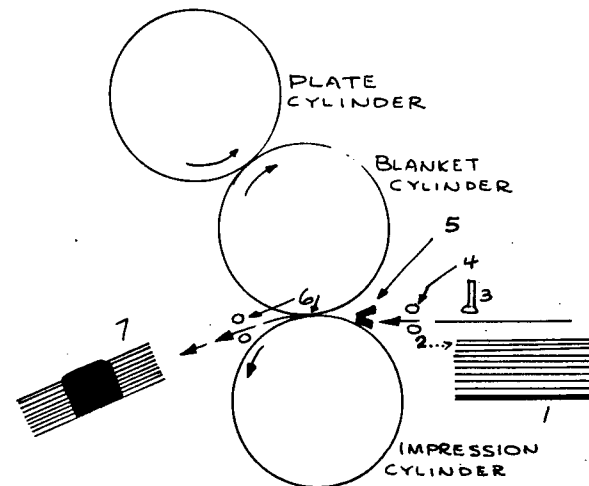
There is a small crank on each side of the FEEDER. These cranks set the PAPER GUIDES. Look at the back of the press where the paper goes. You will see a scale with numbers on each side. Turn the cranks until the INSIDES of the guides line up with 8½. Press is now ready to take a sheet 8½" wide, centered on the press.



Press table-release bars together, push in and turn PAPER ELEVATOR CRANK to lower PAPER FEED TABLE.



LESSON 6 – HOW THE FEED SYSTEM WORKS



- 1 – Paper stacked – ready to print.
- 2 – Air blows against stack. Lifts and separates top sheets.
- 3 – Suction feet lift top sheet and move toward press.
- 4 – Rubber rollers feed sheet into gripper fingers.
- 5 – Gripper fingers pull sheet through press. Sheet is now getting the IMAGE from the blanket.
- 6 – Gripper fingers release sheet. Ejector fingers and wheels guide sheet to receiving tray.
- 7 – Automatic jogger neatly stacks sheets.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Braun, R. T., Craig, G. W., & Dickson, W. S., etal.

1. Vocational printing guide. Richmond, Virginia:

Virginia State Department of Education, 1974.

Virginia State Department of Education

Division of Vocational Education

Ninth Street Office Building

Richmond, VA 23219

N/C

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. 960
10. Number of modules needed to complete a program of studies. 5
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

This guide was prepared by the State Department of Education to standardize the instruction in graphic arts throughout the state. The program, although specifically outlines course objectives, allows the instructor a great deal of flexibility in course organization.

"the objectives to which we aspire must be held firm; the habits to be formed, the skill and judgement to be acquired, the technical and scientific knowledge to be learned, and the activities to be developed." (Braun, 1974, p. 1)

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The guide indicated a total of 960 hours of instruction to cover all the units, but does not indicate a particular course or grade break down. Therefore the instructors, depending on equipment and local conditions are encouraged to prepare and develop their own instructional materials in relationship to their situation.

IV. STRIPPING AND PLATEMAKING

Main Objective: The student will develop accuracy in positioning and processing image carriers

[illegible]

III. PROCESS PHOTOGRAPHY

Main Objective: The student will learn and perform all darkroom and camera procedures

CONTENT	STUDENT LEARNING ACTIVITIES	AIDS
<p>A. Introduction to darkroom equipment and materials</p> <ol style="list-style-type: none"> 1. Process camera 2. Temperature control developing sink 3. Safelight 4. Thermometer 5. Trays 6. Timers 7. Chemicals 8. Film storage 9. Film cutters 	Learn the nomenclature and purpose of each item	T-1, T-2, T-4, R-1, R-7, R-13, R-14, AV-1, AV-2, AV-5, AV-6, AV-7
<p>B. Darkroom procedure and film processing</p> <ol style="list-style-type: none"> 1. Safety <ol style="list-style-type: none"> a. Chemical b. Mechanical 2. Preparation in the darkroom <ol style="list-style-type: none"> a. Tray placement b. Sink temperature c. Mixing chemicals 3. Developing procedures for negatives <ol style="list-style-type: none"> a. Developing tray techniques b. Start times c. Stop bath tray d. Fixer tray e. Washing time f. Evaluate negative g. Drying procedure 	<p>Become aware of proper safety precautions</p> <p>Set up trays and mix chemicals</p> <p>Develop line negatives</p>	
<p>C. Line photography</p> <ol style="list-style-type: none"> 1. Theory <ol style="list-style-type: none"> a. Parts of camera and their function b. Types of film & their use 2. Shooting line copy <ol style="list-style-type: none"> a. Basic exposure b. Basic settings c. Reductions and enlargements d. Positioning copy on copy board e. Gray scale f. Film on film holder g. Use of filters 	Understand the way a camera works	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Cogoli, J. Offset duplicator operator. Washington, DC:

1. US Office of Education, Division of Vocational & Technical Education, 1966.

U.S. Government Printing Office
Washington, DC.

\$5.00

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☐
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☐
 - e. Grade 12. ☐
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☒ 175-225
10. Number of modules needed to complete a program of studies. ☒ 1
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☒
 - b. Instruction. ☒
 - c. Evaluation. ☒
12. Overview

"This course was designed to make trainees competent, capable, and employable as offset duplicating machine operators. Therefore, the entire course is devoted to press operation and practice, designed to make the trainee employable in as short a period as possible."
(Logoli, 1966, p. 1)

This is a vocational training program that reflects the intense nature of instruction for specific job skills. The author outlines the units and lesson objectives simply and directly, while allowing the instructor to manipulate the length and sequence of instruction.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

This program could be adapted to secondary school use, but the emphasis and course time would need to be altered. This program stipulates a maximum of 20 students (five students per press), as well as staggered starting times.

The staggered start (five students a week admitted until maximum class size is achieved) is designed to allow the advanced students to act as resource people in the classroom. This concept could be advantageous in a career preparation program with British Columbia Secondary Schools.

INSTALLING A NEW BLANKET**SUGGESTED TRAINING TIME**

Classroom _____ hours

Shop _____ hours

OBJECTIVE

To demonstrate the installation and preparation of a new blanket for operation.

UNIT OUTLINE

- A. Remove old blanket
- B. Install new blanket
- C. Run-in the blanket on the duplicator
- D. Check over-all impression by printing solid under too light a pressure
- E. Correct low spots in blanket by patching with paper

SUGGESTED ACTIVITIES

- A. Require trainee to install blanket. Use blankets which have one or more low spots, if available.
- B. Require satisfactory test sheets with over-all inking on plate

ELIMINATING TROUBLES DURING DUPLICATOR RUN**SUGGESTED TRAINING TIME**

Classroom _____ hours

Shop _____ hours

OBJECTIVE

To demonstrate the detection and correction of common troubles occurring during the duplicator run.

UNIT OUTLINE

- A. Discuss and demonstrate (where possible) the following common problems and remedies:

1. Gray, washed out copy – possible causes
 - a. Too much fountain solution on image
 - b. Image breakdown
 - c. Poor ink distribution
2. Scumming – possible causes
 - a. Dirty or worn dampener covers
 - b. Ink too soft or greasy
 - c. Plate not properly desensitized
 - d. Other
3. Excess of ink

NOTE: Amount of ink from side to side of sheet should be adjusted according to the amount of printed matter from side to side.

4. Uneven ink distribution – possible causes
 - a. Too much ink distributed from certain portions of fountain
 - b. Damaged or glazed ink rollers
 - c. Poor image development
5. Weak spots – possible causes
 - a. Low spots in plate or blanket
 - b. Uneven inking or dampening
6. Streaks – possible causes
 - a. Improper packing of plate or blanket
 - b. Malfunction of ink or dampening rollers
 - c. Slipping blanket
7. Image breaking down – possible causes
 - a. Poor development
 - b. Length of run (check manufacturer's specifications for estimated length of run)

SUGGESTED ACTIVITIES

- A. During duplicator operation and under the instructor's supervision, trainee should correct any troubles which occur
- B. Adjust duplicator so that the troubles listed above will occur. Trainee should make corrective adjustments.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Communication and mass media - an elective for high school english. Chicago, Illinois: Chicago Board of Education, 1976.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL 60601

N/C

2. This material is:
 - a. A competency based instructional program..... ☐
 - b. An industrial education curriculum guide..... ☐
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☒
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
 - a. A job tasks..... ☐
 - b. Unit content..... ☒
4. Objectives identified for:
 - a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
 - a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☐
 - c. Job training..... ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans..... ☐
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☐
 - b. Instruction..... ☐
 - c. Evaluation..... ☐
12. Overview

This course was designed to be an elective within the English program in the Chicago School system. Communications and Mass Media is an outline that describes the following forms of mass media: advertising, journalism, cartoons, radio & television, photography & motion pictures, popular literature and popular music.

The impact of mass media on our culture and society will continue to increase, and programs that illustrate the potential effects should be encouraged. This particular program is a positive step in preparing materials that stimulate instruction in areas that are relevant to the growth of students' cultural awareness.

STUDENT ACTIVITIES

Advertising

Do some core reading on advertising. Consult bibliography for titles.

Discuss questions such as the following concerning a particular ad:

- To what audience does the advertising appeal?
- What immediate effect does it achieve?
- To what basic human needs or desires does it appeal?
- What persuasion devices are used?
- What attitudes toward the subject and the audience are openly expressed or implied?
- What social, moral, or artistic value does the work have?

Before beginning a discussion, write a personal essay on "The Good Life." Discuss the things that are important to the students, and define the abstractions used, such as success, love, happiness. After all the papers have been evaluated, the teacher may take some provocative ideas from each paper and stencil them. Discuss these ideas. This helps develop communication, writing and thinking skills. If the teacher feels that a change in attitude might occur in student's ideas, another similar essay might be written after the semester's work has been covered. Discuss whether advertising has shaped some ideas of what constitutes "the good life" or values generally.

Bring a number of magazine and newspaper ads for a similar product or service. Discuss the different appeals and techniques used. Observe television commercials for the same kind of product or service. Write brief comparisons.

Compare the advertising in magazines intended for different types of readers; such as Good Housekeeping, Sports Illustrated, New Yorker, Seventeen. How do the products and services advertised differ to suit the image of each magazine?

Compare the television commercials broadcast at different times of the day and of the week. Discuss how the subjects and styles of the commercials indicate the different audiences for which they are intended. What does this indicate?

Create and lay out a full-page magazine ad. Use pictures and copy from magazines and newspapers, or create them. Write a paragraph explaining the techniques and appeals used.

Write and produce a one-minute television commercial on a real or imaginary product. This may be done on film, and the audio done on tape or cassette. This may be an individual

or a group project. Before presenting the film to the rest of the class, give a brief oral presentation explaining the audience planned for and the appeals used.

Tour a large supermarket, drugstore, or variety store to discover how many different persuasive techniques they are employing. Express an opinion on how effective each one is.

Conduct a debate on the premise that advertising should be eliminated in American society. This is an excellent opportunity for students to do research, use oral skills, and learn about debate techniques.

Journalism

Do some core reading on journalism. Like advertising, magazine and newspaper journalism is a composite mass medium and popular art form. It employs the media of print and photography and the arts of writing, photojournalism, and cartooning to entertain, inform, and influence its readers. In discussing journalism as communication, it is important to discover propaganda techniques rather than only journalistic writing as such.

In an article entitled "How to Detect Propaganda," Clyde R. Miller lists seven common propaganda devices. Briefly, these are--

Name Calling. A device to make us form a judgment without examining the evidence on which it should be based is name calling. The propagandist appeals to our hate and fear. He gives "bad names" to those individuals, groups, races, policies, practices, beliefs, and ideas which he would have us condemn and reject. Today's bad names include Fascist, demagogue, dictator, Red, Communist, rabblrouser, troublemaker.

Glittering Generalities. The device the propagandist uses to identify his program with virtue by use of "virtue words" which appeal to our emotions is called glittering generalities. He uses terms like truth, freedom, honor, liberty, social justice, public service, the right to work, loyalty, progress, democracy, the American way. As name calling is a device to make us form a judgment to reject and condemn, glittering generalities is a device to make us accept and approve without examining the evidence.

Transfer. A device called transfer is one by which the propagandist carries over the authority and prestige of something we respect and revere to something he

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Cook, W., Dorroh, R., et al. Photography. Montgomery, Alabama: Alabama Department of Education, Division of Vocational Education & Community Colleges, 1974.

Instructional Materials
Trade and Industrial Education
P.O. Box 2847
University, AL 35486

\$1.75 (1.25, 1.75, 1.00)

2. This material is:
 - a. A competency based instructional program..... ☒
 - b. An industrial education curriculum guide..... ☐
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
 - a. A job tasks..... ☒
 - b. Unit content..... ☐
4. Objectives identified for:
 - a. Specific job tasks..... ☒
 - b. General learning outcomes..... ☐
5. Instructional material organized to promote:
 - a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☒
 - c. Job training..... ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans..... ☐
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☒
 - j..... ☒
7. Instructional materials are designed to encourage individual progress..... ☒
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module.....
10. Number of modules needed to complete a program of studies.....
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☒
 - b. Instruction..... ☐
 - c. Evaluation..... ☒
12. Overview
This program of studies outlines the technical areas of concern which would encourage the development of entry level skills for the student photographer. However the relationship between technical competence and mastery of image development is not discussed. Without a discussion between the implications of image development and technical competence a photography student will not be able to develop the attitude necessary to motivate and change the audience behaviour.

Photography cannot stand on its own technical merits, but must address itself to the wider social and cultural implications of what it can do to stimulate and motivate people. This outline does not attempt to discuss the human ramifications of the photographic image.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Alabama course outline, however does emphasize the major technical competencies needed to enter into a technical area of photography. This program would provide a valuable source of material for developing a photography course that would blend the concepts of technique and communication theory.

In conjunction with the photography question book, the Alabama Department of Education has prepared the following support materials

1. Photography-answers
2. Photography-tests
3. Photography-tests answers

The four publications are all integrated and relate to specific job tasks.

TRADE ANALYSIS AND PROGRESS RECORD

PHOTOGRAPHY

NO.	JOBS AND INFORMATION LESSONS	JOB PROGRESS	
		Learning Status (Steps)	Date Objective Reached
1.	History and Growth of Photography	Information	
2.	Careers in Photography	Information	
3.	Use Safety in Photography		
4.	Types of Photography	Information	
5.	The Nature of Photography	Information	
6.	Recognizing Different Personalities of Photographers		
7.	Develop a Personal Approach to Photography		
8.	Look at Subjects in Photographic Terms		
9.	Practice "Seeing as a Camera Sees"		
10.	The Components of the Camera	Information	
11.	Camera Shutters	Information	
12.	Choose the Right Camera		
13.	Operate a Box Camera		
14.	Operate a Single Lens Reflex Camera		
15.	Operate a Twin-Lens Reflex Camera		
16.	Operate Polaroid, Folding, Instamatic, 35MM, Press and Studio Cameras		
17.	How a Simple Lens Works	Information	
18.	Choose Lens and Lenses		
19.	Select Film		
20.	Load and Unload Film		
21.	Use Exposure Meters		
22.	Select and Use Filters		
23.	Set Up and Use Lighting Equipment		

TRADE ANALYSIS AND PROGRESS RECORD

PHOTOGRAPHY

NO.	JOBS AND INFORMATION LESSONS	JOB PROGRESS		RELATED STUDY	
		Learning Status (Steps)	Date Objective Reached	Date Completed	Test Grade
1.	History and Growth of Photography	Information			
2.	Careers in Photography	Information			
3.	Use Safety in Photography				
4.	Types of Photography	Information			
5.	The Nature of Photography	Information			
6.	Recognizing Different Personalities of Photographers				
7.	Develop a Personal Approach to Photography				
8.	Look at Subjects in Photographic Terms				
9.	Practice "Seeing as a Camera Sees"				
10.	The Components of the Camera	Information			
11.	Camera Shutters	Information			
12.	Choose the Right Camera				
13.	Operate a Box Camera				
14.	Operate a Single Lens Reflex Camera				
15.	Operate a Twin-Lens Reflex Camera				
16.	Operate Polaroid, Folding, Instamatic, 35MM, Press and Studio Cameras				
17.	How a Simple Lens Works	Information			
18.	Choose Lens and Lenses				
19.	Select Film				
20.	Load and Unload Film				
21.	Use Exposure Meters				
22.	Select and Use Filters				
23.	Set Up and Use Lighting Equipment				

PRACTICE "SEEING AS A CAMERA SEES"

TCP: 59-66

1. What may be used in learning to see as a camera sees?
2. What are the advantages of studying a subject through a frame?
3. What are the most suitable viewfinders used to see as a camera sees?
4. Studying a subject on a groundglass camera has what advantages?
5. Explain photogenic qualities or subjects.
6. List the photogenic qualities which are considered important.
7. Explain faking.
8. Why does complexity and disorder rank high among unphotogenic subject qualities?
9. Why is "editing" of a subject before an exposure is made the most important single control in photography?
10. List the stages which make up the visualization of "total seeing" and explain each.

6. 1. Simplicity, clarity, and order
2. Contrast between light and dark
3. Forms that are large, simple, and bold
4. Outlines that are distinct
5. Detail that can be rendered sharp
6. Texture gives character and identity
7. Pattern, rhythm, and repetition
8. Motion gives a dynamical quality
9. Spontaneity
10. Close-ups
11. Backlight
7. Faking is tampering with the authenticity of a subject, scene, or event.
TCP p. 64
8. Because the camera shows everything within its field of view. TCP p. 64
9. Because many photographs are overloaded with pointless subject matter and extraneous detail which makes them confusing and therefore ineffective.
TCP p. 64
10. 1. The conceptual stage - exists only in the photographer's mind -- it is what he wishes to express.
2. Through the viewfinder - This allows the photographer to look at a subject and analyze it in photographic terms.
3. On the contact sheet - placing all the photographs on the same subject on a sheet of 8 X 10-inch paper and use these proof prints as a basis for selecting specific negatives for final printing.
4. In the darkroom - Differences in printing - in cropping, lightness, contrast, etc. - will result in prints that look so different that an untrained person could not believe they were made from the same negative. TCP p. 66

TCP p. 62-63

NO. 10 ANSWERS

THE COMPONENTS OF THE CAMERA

1. Photography is as simple or as complex as one wishes to make it. TCP p. 68
2. Any camera is basically nothing but a light-tight box or sleeve connecting two vitally important components, the lens and film. TCP p. 68
3. The two vitally important components of a camera are the lens and the film. TCP p. 68
4. The auxiliary devices that control a picture being made are the aiming devices, the focusing devices and the exposing devices. TCP p. 68
5. Without an accurate aiming device, a photographer cannot accurately compose his subjects. TCP p. 68-69
6. Focusing a camera means adjusting the lens-to-film distance in relation to the lens-to-subject distance to a point that produces a sharp image. TCP p. 69

PRACTICE "SEEING AS A CAMERA SEES"

1. For what is a cardboard frame used?
2. Studying a subject through a frame has what advantages for the future?
3. Name two aids in learning to see as a camera sees.
4. What advantages does a groundglass camera have when studying a subject?
5. Which subjects are more likely to make good photographs?
6. List six of the photogenic qualities which are considered important.
7. What is faking?
8. Why do complexity and disorder rank high among unphotogenic subject qualities?
9. Why is "editing" of a subject before an exposure the most important single control in photography?
10. List the four stages which make up the visualization of "total seeing."

TEST ANSWERS - NO. 8 CONTINUED

8. (1) The time of day; (2) The area in which the picture is taken; (3) The intensity of the light
9. So that he will become aware of color and its subtle shades and changes.
10. So that the landscape, or any large subject will not appear no larger than the paper it is printed on.

TEST ANSWERS - NO. 9

1. A cardboard frame may be used as an aid in seeing as a camera sees.
2. The perspective of future pictures can be evaluated more easily if the subject is studied through a frame.
3. Two other valuable aids in learning to see as a camera sees are viewfinders and groundglass equipped cameras.
4. Studying a subject on the groundglass of a camera has the advantage that it enables a photographer to observe directly the extension of sharpness in depth.
5. Subjects that are animate or unusual are more likely to make good photographs.
6. (1) Simplicity, clarity and order; (2) Contrast between light and dark; (3) Forms that are large, simple, and bold; (4) Outlines that are distinct; (5) Detail that can be rendered sharp; (6) Texture gives character and identity; (7) Pattern, rhythm, and repetition; (8) Motion gives a dynamical quality; (9) Spontaneity; (10) Photogenic devices and techniques; (11) Telephoto and long-focus lenses; (12) Close-ups; (13) Backlight
7. Faking is tampering with the authenticity of a subject, scene, or event.
8. Because the camera shows everything within its field of view.
9. Many photographs are overloaded with pointless subject matter and extraneous detail which makes them confusing and therefore ineffective.
10. (1) The conceptual stage; (2) Through the viewfinder; (3) On the contact sheet; (4) In the darkroom

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Craig, G. W., & Dickson, W. S., etal. Vocational printing guide, transparency master set. Blocksburg, Virginia: Virginia Polytechnical Institute, College of Education, 1974.

Virginia Department of Education
Division of Vocational Education
Ninth Street Office Building
Richmond, VA 23219

N/C

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☐
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. *transparencies* ☒
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☐
 - d. Grade 11 ☐
 - e. Grade 12 ☐
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

This resource package was prepared to be used in conjunction with the state wide curriculum guide. The seventy-five transparency masters could be adapted to most instructional programs. The set covers the following topics.

1. Safety
2. Measurement
3. Paper Handling and cutting
4. Proof reading
5. Paste-up instructions and methods
6. Legal restrictions

PROOFREADERS' MARKS NO. 1

¶	Start new paragraph	¶	fine papers. Mead grades are
no ¶	No paragraph. Run in	no ¶	fine papers. Mead grades are
⌋	Move to right	⌋	Mead grades are
⌈	Move to left	⌈	Mead grades are
⌞	Lower letter or word	⌞	Mead <u>grades</u> are
⌟	Raise letter or word	⌟	Mead <u>grades</u> are
tr.	Transpose	tr.	Mead are <u>grades</u>

PROOFREADERS' MARKS NO. 2

wf.	Wrong font	wf.	Mead grades are
lc.	Lower case letter	lc.	Fourscore and seven years ago
Cap.	Capital letter	Cap.	The <u>united</u> States
C+sc.	Caps and small caps	C+sc.	<u>The</u> <u>united</u> <u>states</u>
C+lc.	Caps and lower case	C+lc.	<u>THE</u> <u>UNITED</u> <u>STATES</u>
rom.	Put in roman type	rom.	<u>The</u> <u>United</u> <u>States</u>
ital.	Put in italic type	ital.	<u>The</u> <u>United</u> <u>States</u>

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Erzinger, L., Lawley, G., & Bradley, H., et al.
Salesmanship, advertising & display. Chicago, Illinois:

1. Chicago Board of Education, 1978.

Chicago Board of Education
 Department of Curriculum
 228 North La Salle Street
 Chicago, IL 60601

\$7.50

2. This material is:
- a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☒
 - d. A resource materials package. ☒
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
- a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☐
6. Contents of this package include the following materials.
- a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☒
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

Graphic communications is a broad area of study, ranging from the technical aspects of machine operation, to the psycholological manipulation of an audience. This curriculum guide provides instructional material for an in depth course in one area of graphic communications. Salesmanship, Advertising and Display emphasizes both the practical and theoretical considerations of media necessary to begin to understand the visual and verbal business world. Effective communication whether graphic or not, is an integral segment of the north american economy and this guide will provide the instructor with material that will hopefully be responsive to this ideal.

THE NATURE OF ADVERTISING

V. The Advertising Agency

Assign each student to bring to class articles about advertising agencies that they find in the financial sections of the daily newspapers. Discuss the content of these articles in class.

Obtain copies of Advertising Age and discuss with the class the numerous articles about advertising agencies and what they do.

Point out to the class the variety of job opportunities which are available in advertising agencies. Explain how people with creative and artistic talents combine with those who are business-oriented.

Arrange with the public relations director of an advertising agency for the class to tour the agency.

Select a student to report to the class on what is involved in market research.

Invite a representative of an advertising agency to discuss with the class the organization and role of an advertising agency.

Select a student to write to a large city newspaper inquiring about the marketing services which the newspaper provides for local businesses. Discuss with the class the information received.

Discuss with the class the reason for the existence of advertising agencies if newspapers provide similar services.

Arrange with the public relations director of a large city newspaper for the class to tour the marketing research and advertising departments.

VI. Ethics and Standards in Advertising

Assign a student to write to the American Association of Advertising Agencies, Inc., or the local Better Business Bureau to inquire about the standards or codes of ethics that have been established to protect the consumer. Discuss these codes in class.

Ask the students to bring to class examples of misleading advertisements. Discuss the reasons in class.

Select several students to write to their city and neighborhood newspapers inquiring about a code of ethics that the papers maintain regarding the advertisements they print. Discuss with the class the information received.

Obtain from the United States Post Office a copy of their regulations regarding the use of the mail services for the distribution and sale of goods and services. Discuss these regulations with the class.

Select a student to write to the United States Department of Commerce requesting information about the field of advertising. Discuss the information received with the class.

THE NATURE OF ADVERTISING

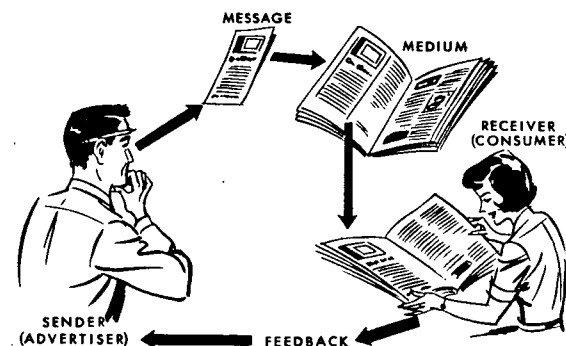
SUGGESTED ACTIVITIES

I. Elements of Advertising

Discuss with the class the difference between "paid" advertising and "free" publicity. Have each student bring to class an example of each from both a newspaper and a popular magazine.

Have each student bring to class separate examples of advertisements that present only goods, only services, and only ideas.

Discuss with the class the advantage to management of the use of advertising as compared to the use of only a salesman in selling a product.



THE FIVE ELEMENTS THAT MAKE UP THE COMMUNICATIONS VIEW OF ADVERTISING *

* Special permission has been granted to reproduce the above from Carroll A. Nolan and Roman F. Warmke, Marketing, Sales Promotion and Advertising (Cincinnati: South-Western Publishing Co., 1965).

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Garrison, C., Rogers, T., Briggins, C. TV cameraman.
 1. Montgomery, Alabama: Alabama State Department of
 Education, Division of Vocational Education & Community
 Colleges, 1975.

Instructional Materials
 Trade & Industrial Education
 P.O. Box 2847
 University, AL 35486

\$1.75 (1.25, 1.75, .75)

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☒
 - c. Post Tests. ☒
 - d. Student workbook. ☒
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

The TV Cameraman course outline prepared by the Alabama Department of Education is a very specific task orientated program. The students are directed to answer a number of questions directly related to a job task. The questions are based on research, observation and practice. This program emphasizes the concept, integral to many of the Alabama programs, that mastery is a four step process

1. observation
2. assistance to the instructor
3. instructor assists the student
4. student capable of machine operation without supervision

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

A student may progress independently of the class depending on his/her motivation, and this learning technique is encouraged throughout not only this program but others developed under the auspices of the Alabama Department of Education. The technical competencies of the students completing this course would be suitable for entry into the industry or post secondary education, however, the program does not address itself to the relationship between communication and human understanding. This relationship is paramount in the students ability to cope with and understand the intensity of the what and why of television media. Technical competency does not necessarily encourage the feeling or understanding of the power television or, for that matter, any media can have.

TRADE ANALYSIS AND PROGRESS RECORD

T.V. CAMERAMAN

NO.	JOBS AND INFORMATION LESSONS	JOB PROGRESS		RELATED STUDY	
		Learning Status (Steps)	Date Objective Reached	Date Completed	Test Grade
	I THE CAMERAMAN				
1.	Qualities of a Cameraman	INFORMATION			
2.	Responsibilities of a T.V. Cameraman	INFORMATION			
3.	Responsibilities of a T.V. Studio Crew	INFORMATION			
	II THE T.V. STUDIO CAMERA				
4.	Use the T.V. Camera Controls				
5.	Use of the Different Camera Mountings				
	III BASIC OPTICS USED IN T.V. CAMERA OPERATION				
6.	Use and Understand the Depth of Field and F-Stops on Camera				
7.	Shoot a Production Where Lens Angle Has to be Derived				
8.	Camera Work Involving Lenses with Different Angles				
9.	Camera Work Involving the Use of Normal, Wide Angle and Narrow Angle Lenses				
10.	Operation of a T.V. Camera with a Zoom Lens				
	IV PICTURE COMPOSITION				
11.	Frame a Shot				
12.	Adjust a Shot to Improve Compositional Effectiveness				
13.	Adjust a Shot to Improve Concentration				
14.	Adjust a Shot for Proper In-Depth Focus				
15.	Adjust a Camera for Recomposing the Picture				
16.	Use the Camera to Match Other Camera Shots				
17.	Shoot a Scene Involving High Shots and Low Shots				

JOB NO. 11

FRAME A SHOT

TCO: 62-63

1. What could happen if you do not take care in framing a shot of people?
2. What is meant by the rule of thirds?
3. What is the general idea of placing the subject into a frame, according to the rule of thirds?
4. What should the cameraman avoid at all costs when framing a shot?
5. What is the most obvious thing to do when composing a picture?
6. What part of the screen is generally the weakest concentrational area?
7. What results if the picture area is divided into equal parts?
8. In what type of situations are various compositional arrangements possible?
9. How can you overcome the illusion of people leaning on the frame . . . etc.?
10. What is wrong with using the rule of thirds on every shot?

NO. 10 ANSWERS CONTINUED

5. A push-button selector which enables any four present lens angles to be chosen. TCO: 46
6. Maintaining a sharp focus. TCO: 48
7. The wide angle. TCO: 48
8. When you are using the narrow angle, for example on an extremely force shot. TCO: 48
9. The narrow angle. TCO: 48
10. Wide angle lens. TCO: 48

NO. 11 ANSWERS

FRAME A SHOT

1. The border of the picture can produce strange, subjective effects. TCO: 62
2. This is when the frame is divided vertically and horizontally into thirds. TCO: 62
3. That the subject should be placed at the intersection of the lines. TCO: 62
4. Dividing the picture area into equal parts. TCO: 62
5. To centralize the main subject. TCO: 62
6. The center. TCO: 62
7. A formal balance results that is dull and monotonous. TCO: 62
8. Where two or more people appear in shot at the same time. TCO: 62
9. Shots can be arranged so that the frame cuts the subject's body off at intermediate points. TCO: 63
10. It may lead to rather routine mechanical proportions. TCO: 63

NO. 12 ANSWERS

ADJUST A SHOT TO IMPROVE COMPOSITIONAL EFFECTIVENESS

1. The director. TCO: 64
2. The cameraman. TCO: 64
3. The compositional effectiveness. TCO: 64

NO. 11 TEST

FRAME A SHOT

TRUE - FALSE

- T F 1. As the camera moves closer the sizes of foreground objects change more rapidly than more distant ones.
- T F 2. The rule of thirds is a useful beginning to attracted compositional arrangement, but should not be used habitually.
- T F 3. A slightly wider lens angle gives less space between the subject and frame.
- T F 4. A slight reduction in the lens angle causes the subject to fill the frame more fully.
- T F 5. A centralized shot of a profile or a three-quarter face can be balanced and in focus.
- T F 6. In framing people, you can accidentally imply that they are sitting, standing, or leaning on the top of the frame.
- T F 7. Alteration of the lens angle enlarges or reduces the size of the shot.
- T F 8. Even division of the frame when composing the picture, produces very mechanical results.
- T F 9. Subjects further from the camera become displaced more noticeably than others nearer the camera.
- T F 10. Higher viewpoints give more prominence to horizontal surface than lower camera position.

TEST ANSWERS - NO. 7

- | | |
|----------|----------|
| 1. True | 5. False |
| 2. False | 6. True |
| 3. True | 7. True |
| 4. True | 8. False |

TEST ANSWERS - NO. 8

- | | |
|----------|----------|
| 1. False | 6. True |
| 2. True | 7. True |
| 3. False | 8. True |
| 4. True | 9. False |
| 5. True | 10. True |

TEST ANSWERS - NO. 9

- | | |
|----------|----------|
| 1. True | 6. False |
| 2. True | 7. True |
| 3. False | 8. True |
| 4. True | 9. False |
| 5. False | 10. True |

TEST ANSWERS - NO. 10

- | | |
|----------|----------|
| 1. True | 6. False |
| 2. True | 7. True |
| 3. False | 8. True |
| 4. True | 9. True |
| 5. False | |

TEST ANSWERS - NO. 11

- | | |
|----------|----------|
| 1. True | 6. False |
| 2. True | 7. True |
| 3. False | 8. True |
| 4. True | 9. False |
| 5. False | 10. True |

TEST ANSWERS - NO. 12

- | | |
|----------|-----------|
| 1. True | 6. True |
| 2. True | 7. False |
| 3. False | 8. True |
| 4. True | 9. True |
| 5. False | 10. False |

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Graphic arts. Montgomery, Alabama: State Department of Education, Division of Vocational Education, 1977.

Instructional Materials
Trade and Industrial Education
Box 2847
University, Alabama 35486

\$3.00

2. This material is:
- a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
- a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☒
6. Contents of this package include the following materials.
- a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

This program identifies seventy-two industrial tasks and arranges them by related units rather than by a specific teaching sequence. The State of Alabama requires each instructor to cover all outlined tasks specified in the guide, but the emphasis and sequence of instruction is the prerogative of the instructor.

The guide includes performance sheets that stipulate the objective, procedure, related knowledge and materials. The job sheets are not intended to be self instructional, but rather as a means for recording and documenting student achievement. These sheets provide a vehicle for establishing a standard for articulation between secondary and post secondary programs.

JOB NO. 21 - OPERATE THE CAMERA

OBJECTIVE: Given camera ready copy, make the necessary camera settings and positioning to reproduce the required copy according to the layout specifications.

Observed	Helped	Objective Reached

Related Knowledge	References	Procedure	Tools and Materials
1. Parts of camera 2. Lighting 3. Optical proportions	MGA: 109-127	1. Position copy. 2. Set bellows extension. 3. Set copy board extension. 4. Set angle and distance of lights. 5. Set "F" stop. 6. Set times for lengths of exposure. 7. Expose.	1. Process camera 2. Proportional wheel 3. Gray scale 4. Film

-22-

GRAPHIC ARTS

Student's Name _____

Student's Address _____

Date Entered _____

Date Completed _____

Instructor will indicate by check ☒ or date and his initials when student reaches the objective. A grade should also be given on each job.

	Objective Reached	Grade
I. HISTORY		
1. History of Lithography		
II. COMPOSITION		
2. Make Thumbnail Sketches		
3. Prepare Layout, Using Thumbnail Sketch		
4. Prepare Copy For Photographing		
5. Use and Care for Drawing Instruments		
6. Set Hot Type by Hand		
7. Compose Hot Type by Machine		
8. Compose Cold Type by Hand		
9. Compose Cold Type with Typewriter		
10. Compose Photographic Display Type		
11. Photo-Compose With Machines		
12. Prepare Line Copy		
13. Prepare Combination Layout		
14. Use Black and White Photography		
15. Scale Artwork		

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GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Graphic Arts Technical Foundation (GATF) is an organization dedicated to preserving the quality and expertise of the American printing industry. GATF is not a trade school, rather an industry sponsored research institution. They provide the printing industry and educational institutions with a variety of technical and instructional materials.

Technical education is not totally the responsibility of the public school system. The printing industry, in conjunction with GATF are prepared to improve the quality of workers with carefully planned materials and innovative instructional techniques. The materials prepared at the Pittsburgh foundation deal with specific job tasks. These outlines and concepts can be adopted to either an industrial or vocational education program. Perhaps the most significant relationship between GATF and secondary schools is the opportunity to be aware of the next step in the graphic arts students development. The advanced nature of the GATF materials indicates an awareness by the industry of the need to encourage sound educational practices to instruct students who will become journeymen in this highly specialized and technological industry.

GATF actively encourages educational membership from secondary and college instructors by reducing fees, offering summer workshops and publishing a monthly newsletter. The activities and materials sponsored by the foundation allow educators to maintain a current knowledge of the latest trends in the printing industry as well as expand their understanding of this rapidly changing industry.

Cooperation between industry and education is imperative, especially in a technological subject such as printing. Hopefully many of the GATF materials encourage this cooperation to insure the training available for students interested in a graphic arts career will be integrated and relevant.

The following course outlines prepared by GATF indicate specific units of instruction in:

1. Line Photography
2. Halftone Photography
3. Offset Lithographic Stripping
4. Web Offset Printing
5. Lithographic Offset Feeder Operation
6. Colour Separation Photography
7. Press Operating for Offset Lithography

Each course outline identifies general and specific objectives as well as providing a point form sequence of instruction. Although prepared for apprentice and journeyman training they can provide a valuable resource to the secondary instructor for post secondary awareness and vocational integration.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Halpern, G. Line photography. Pittsburgh, Pennsylvania:
 1. Graphic Arts Technical Foundation

Graphic Arts Technical Foundation
 4615 Forbes Avenue
 Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☒
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☐
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

COURSE OUTLINE

LINE PHOTOGRAPHY

Description:

This is a basic course designed to prepare the apprentice for the eventual position of lithographic photographer by providing him with a thorough background in Line Photography.

Its purpose is to give the apprentice lithographic photographer an understanding of basic photography and to introduce him to the functions, responsibilities and duties of photographic department personnel.

The course deals primarily with jobs which relate directly or indirectly with all phases of line photography, the proper performance of which will ultimately lead to consistent quality lithographic printing.

It covers basic principles of camera operation and film development, and the fundamentals of the lithographic process as they apply to the duties of the photographer.

General Objectives:

1. To develop an appreciation for, and an understanding of, the graphic arts industries, in particular the lithographic industry.
2. To have the apprentice develop basic working skills and understandings in the fundamentals of photography.
3. To have the apprentice acquire a working knowledge of the terminology used in the lithographic industry.
4. To have the apprentice develop good working habits and observe the basic rules of safety in the photography department.
5. To give the apprentice a background in the lithographic process.
6. To develop that sense of judgment and understanding of the photographic process which will result in maximum trouble-free operation.
7. To develop the ability to handle the diversified types of jobs in line photography in a smooth and efficient manner.
8. To develop the ability to anticipate, analyze and resolve all problems which might arise in handling each job so that maximum efficiency and quality can be achieved.

Specific Objectives:

1. To learn the fundamentals of darkroom operation and maintenance.

A. Methods of

1. Inspection or observation
2. Time and temperature
 - a. Time and temperature development at constant dilution
 - b. Dilution and temperature development at constant time
 - c. Importance of complete darkness
3. Factorial system
4. Combination

B. Handling the Exposed Film

1. Determining emulsion side

C. Making the Negative

1. Development
 - a. Importance of constant temperature of developing solution

Factors determining temperature of developing solution

Controlling and checking temperature
 - b. Selection of method of development
 - c. Developer exhaustion
 - d. Timing of
 - e. Effect of prolonged development
 - f. Effect of incomplete development
2. The Stop-bath
3. Fixing
 - a. Importance of agitation during
 - b. Timing of
 - c. Useful life of fixing bath
 - d. Results of excessive time in fixing bath
 - e. Effect of weak bath

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Halpern, G. Lithographic offset feeder operations.
Pittsburgh. Pittsburgh, Pennsylvania: Graphic Arts
Technical Foundation.

Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☐
 - d. Grade 11 ☐
 - e. Grade 12 ☒
 - f. Post secondary ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

COURSE OUTLINE

LITHOGRAPHIC OFFSET -- FEEDER OPERATOR

Description:

This is a basic course designed to prepare the apprentice for the position of feeder operator.

Its purpose is to give the offset apprentice operator an understanding of the lithographic process as well as to introduce him to the functions, responsibilities, and duties of pressroom personnel.

It deals with basic principles of machine mechanics, press operation, maintenance and fundamentals of the lithographic process as they apply to the duties of a feeder-operator.

General Objectives:

1. To have the apprentice develop basic working skills and understandings in the fundamentals of offset presswork.
2. To have the apprentice acquire a working knowledge of the terminology used in the lithographic industry.
3. To have the apprentice develop good working habits, and observe basic rules of pressroom safety.
4. To give the apprentice a background in the lithographic process.
5. To develop an appreciation for, and an understanding of, the graphic arts industries - in particular, the lithographic industry.

Specific Objectives:

1. To learn the fundamentals of press construction and maintenance.
2. To develop the basic skills and fundamental operations required for efficient and safe pressroom operation and maintenance, with particular reference to press cleaning and lubrication.
3. To acquire the skills and understanding necessary to the preparation of fountain solutions.
4. To acquire the skills and understanding necessary for preparing stock for press feeding, and for setting up the feeding system.

PREPARING THE FOUNTAIN SOLUTION

A. Plates for the Offset-Lithographic Process

1. Kinds of plates
2. Plate materials
3. Steps in platemaking

B. Chemistry of Lithography

1. Basic terminology
2. Chemical formula

C. Acidity of Fountain Solutions

1. The fountain solution or etch concentrate
2. pH
3. Measurement of pH
4. Factors affecting pH value of solutions

D. Fountain Solution Components

1. Water
2. Acid
3. Gum
4. Salts

E. Fountain Solutions

1. Preparation of fountain solution concentrate
2. Measurements of liquids and solids
3. Commercial preparations
4. Temperature and humidity
5. Formulary
6. Storage of fountain solutions and components
7. Care and use of rubber gloves

F. Pressroom Preparation of Fountain Solutions

1. Procedure for preparing fountain solution for press

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Halpern, G. Web offset pressmanship. Pittsburgh, Pennsylvania: Graphic Arts Technical Foundation.

Graphic Arts Technical Foundation
4615 Fobes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

2. This material is:
- a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
- a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
- a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

I. PUTTING THE PRESS IN REGISTER

A. Register and Insertion

1. Definition of register and insertion
2. Types of register systems
 - a. Simple 3-point
 - b. Pre-registered 3-point
3. Insertion systems
 - a. Direct or taking
 - b. Indirect
 - Feed-roll insertion
 - Types of feed roll and intermediate cylinders
 - Swing or transfer gripper insertion

B. Pre-registering Devices

1. Functions of pre-registering devices
2. Types of pre-registering devices
 - a. Slowing down sheet for register
 - b. Holding down sheet for register
 - c. Moving sheet for register
3. Hastening movement of tail end of sheet after insertion
4. Setting of pre-registering devices

C. Timing the Sheet for Register and Insertion

1. Importance of timing the sheet
2. Timing the feeder
 - a. Means of timing the feeder
3. Timing the sheet
 - a. Devices for timing the sheet
4. Causes of sheet being out-of-time with front guides

D. Register Table or Plate

1. Location of register table or plate
2. Function of register table or plate
3. Types of register table or plate
 - a. Fixed
 - b. Movable
4. Relationships with other registering devices
5. Centering the sheet to the register plate

E. Front Guides

1. Function of front guides
2. Importance in register
3. Other names for front guides
4. Kinds of front guides
 - a. With micrometer adjustment
 - b. With scales for setting
 - c. Adjustable flat spring guide
 - d. Pushing front guide
 - e. Multiple stop
 - f. 2-point drop guides or stops
5. Front guide assembly
6. Setting the front guides
7. Setting the stop fingers

F. Side Guides

1. Other names for side guides
2. Kinds of side guides
 - a. Push type
 - b. Pull type
3. Selection of side guide

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Reichel, L. Colour separation photography. Pittsburgh,
1. Pennsylvania: Graphic Arts Technical Foundation.

Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburgh, PA
15213

Member \$5.10

Non-member \$10.20

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☐
 - d. Grade 11 ☐
 - e. Grade 12 ☒
 - f. Post secondary ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

COLOR SEPARATION PHOTOGRAPHY
COURSE OUTLINE

Description:

This is an advanced subject designed to give the Color Camera Apprentice an understanding of process printing as utilized in lithography, and the functions, responsibilities, and duties of the personnel of the color camera department.

It deals with basic and advanced principles of color camera work plus techniques used by the color cameraman.

It prepares the apprentice for the position of color cameraman.

General Objectives:

1. To give the apprentice a background in lithographic process printing.
2. To have the apprentice acquire a working knowledge of the terminology used in lithographic process printing.
3. To have the apprentice develop working skills and understanding in the color camera crafts.
4. To have the apprentice develop good working habits and observe basic rules of safety in the color camera department.

Specific Objectives:

1. To study the fundamentals of process printing.
2. To develop an understanding of the role played by the color cameraman as one of the important steps in printing a process color job.
3. To develop a working knowledge of color separation photography and to become a skilled artisan in color camera work.
4. To become skilled in all phases of color camera photography and to develop a working knowledge of how to overcome limitations of color photography through the use of color correction photography.

- U. Protecting copy
- V. Mounting materials
- W. Copy marks

Light and the Theory of Color

- A. Light from sun
- B. The refractive index of light
- C. Direction of light
 - 1. Direct light
 - 2. Incident light
 - 3. Reflected light
 - 4. Refracted light
- D. Reflectance
- E. History of color
- F. Light as a source of color
 - 1. The visible spectrum
 - 2. Spectral wavelengths
 - 3. Newton's prism
 - 4. The millimicron scale
- G. The spectrophotometer
- H. Mixing spectral wavelengths
- I. Pigment colors
 - 1. Primary
 - 2. Secondary
 - 3. Difference between pigment and spectral primaries

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Reichel, L. Offset lithographic stripping. Pittsburgh,
1. Pennsylvania: Graphic Arts Technical Foundation.

Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

2. This material is:
 - a. A competency based instructional program..... ☐
 - b. An industrial education curriculum guide..... ☒
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
 - a. A job tasks..... ☐
 - b. Unit content..... ☒
4. Objectives identified for:
 - a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
 - a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☐
 - c. Job training..... ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans..... ☐
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☐
 - c. Grade 10..... ☐
 - d. Grade 11..... ☐
 - e. Grade 12..... ☒
 - f. Post secondary..... ☒
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☐
 - b. Instruction..... ☐
 - c. Evaluation..... ☐
12. Overview

COURSE OUTLINE

OFFSET STRIPPING (Black - White and Color)

Description:

This is a basic course designed to prepare the apprentice for the position of stripper.

Its purpose is to give the offset apprentice stripper an understanding of the lithographic process, as well as to introduce him to the functions, responsibilities, and duties of stripping department personnel.

It deals with basic principles of equipment operation, adjustments to equipment, maintenance and fundamentals of the lithographic process, as they apply to the duties of a stripper.

General Objectives:

1. To have the apprentice develop basic working skills and understandings in the fundamentals of stripping.
2. To have the apprentice acquire a working knowledge of the terminology used in the lithographic industry.
3. To have the apprentice develop good working habits and observe basic rules of safety in the stripping department.
4. To give the apprentice a background in the lithographic process.
5. To develop an appreciation for, and an understanding of the graphic arts industries — in particular, the lithographic industry.

Specific Objectives:

1. To learn the fundamentals of stripping department equipment and maintenance.
2. To develop the basic skills and fundamental operations required for efficient and safe stripping department operation and maintenance, with particular reference to general cleaning.
3. To acquire the skills and understanding necessary to the preparation of stripping department materials.

Introduction To The Lithographic Stripping Department

A. The Lithographic Industry

1. Relationship of the lithographic industry to the printing industry
2. The major printing processes
3. The development of lithography
4. The requirements for lithographic printing

B. The Lithographic Printing Plant

1. Major divisions of the plant
 - a. Front office
 - b. The shop
 - c. Maintenance department

C. The Stripping Department

1. Relation of stripping to the offset process
2. Activities
3. Personnel
4. Apparel
5. Arrangement of stripping department
6. Color scheme
7. Lighting
8. Ventilation

D. Safety in the Stripping Department

1. Importance of fire prevention
2. Location of fire exits

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Roman, C. Halftone photography. Pittsburgh, Pennsylvania:
1. Graphic Arts Technical Foundation.

Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

2. This material is:
 - a. A competency based instructional program..... ☐
 - b. An industrial education curriculum guide..... ☒
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
 - a. A job tasks..... ☐
 - b. Unit content..... ☒
4. Objectives identified for:
 - a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
 - a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☐
 - c. Job training..... ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans..... ☐
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☐
 - c. Grade 10..... ☐
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☒
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☐
 - b. Instruction..... ☐
 - c. Evaluation..... ☐
12. Overview..... ☐

COURSE OUTLINE

HALFTONE PHOTOGRAPHY

Description:

This course has been designed for the photographer who has a thorough background in Line Photography; who desires to develop those skills, understandings, techniques, and the sense of judgment which are necessary to perform the duties and assume the responsibilities of the journeyman halftone photographer.

It deals primarily with jobs which relate directly or indirectly to all phases of halftone photography, the proper performance of which ultimately will lead to consistent quality printing in the field of lithography.

This course will enable the photographer to learn about the various theories and aspects of halftone photography. It outlines procedures through which the trainee can apply this knowledge by actually working on specific production jobs.

General Objectives:

1. To acquire an appreciation of the role of the craftsman; to understand the photographer, the stripper, the plate-maker and the pressman, the inter-relationship to one another and the overall contribution to the industry.
2. To stress professional methods of handling and operating all black-and-white halftone projects which are necessary.
3. To learn how to handle, in a smooth, efficient manner, the diversified types of jobs which are expected of the quality halftone photographer.
4. To develop the ability to analyze, anticipate, and resolve all problems which might arise in handling each job so that maximum efficiency can be achieved along with maximum quality of results.

INTRODUCTION AND BASIC HALFTONE ORIENTATION

- A. Copy for Halftone Photography
 1. The meaning of tone
 2. The meaning of value
 3. Continuous-tone copy
 4. Typical continuous-tone copy encountered by cameraman
 5. The photograph as the most typical type of copy
 - a. Characteristics of an ideal photograph for reproduction
 - b. Methods of making improvements on a poor photograph
- B. Basic Principles Governing Halftone Photography
 1. Definition of halftone photography
 2. Necessity for the halftone screen
 3. Halftone screens
 - a. Glass crossline
 - b. Contact
 4. The function of the halftone screen
- C. Halftone Dots
 1. Formation of the halftone dot
 2. Shape of the halftone dot
 3. Sizes of halftone dots
 4. Dots and their relationship to negative and positive material
 5. Percentage-size of halftone dots
- D. Background and History of Halftone Photography
 1. Early methods of reproducing varying tone values
 2. Limitations of the early methods
 3. The first practical halftone screen
 4. Inventions and improvements in photolithography
 5. The contact screen
 - a. Early uses and results
 - b. Recent uses and results

Graphic communications. White Bear Lake, Minnesota:
Minnesota Curriculum Services Center, 1978.

Minnesota Instruction Materials Center
3554 White Bear Avenue
White Bear Lake, MN 55110

\$22.00

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☐
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview ☐

This guide identifies terminal performance objectives for the following units in the graphic arts industry: layout & design, composition, pasteup & copy, process photography, continuous tone photography, stripping, platemaking, sheet-fed offset press, letterpress, web press, screen printing, bindery & finishing, duplicating - copier equipment, human relations - personal development & safety.

Graphic Communications is the most comprehensive competency based analysis reviewed in this thesis. This program is not a structured instructional program, rather an outline of competencies to be attained. The guide's author intends that instructors will utilize these materials to develop a program of studies that will encourage student growth.

Program development in this province would certainly be enhanced by reference to this comprehensive outline.



TERMINAL PERFORMANCE OBJECTIVE

GRAPHIC COMMUNICATIONS

MINNESOTA CURRICULUM SERVICES CENTER
3554 White Bear Ave. White Bear Lake, MN 55110
(612) 770-3943 800-652-9024

Area of Competence D. Perform Photographic Operations - Process
Statement of Competence 01. Consult Job Ticket and Organize Work Flow
Task(s) No. 01. Sort Work to be Photographed (line, halftone or color)

Supplies:	Equipment:
Magnifying glass Pencil	Table Job ticket with dummy

Given the following: Twenty pieces of copy and job ticket with dummy.
(conditions)

You, the student, will be able to: SORT WORK TO BE PHOTOGRAPHED (LINE, HALFTONE, COLOR)
(outcome)

So well that: All pieces of copy are sorted into one of these categories:
or
According to: 1) line copy
(criteria) 2) copy to be screened - halftone
3) copy to be separated - color process
with 100% accuracy within 10 minutes.



TERMINAL PERFORMANCE OBJECTIVE

GRAPHIC COMMUNICATIONS

MINNESOTA CURRICULUM SERVICES CENTER
3554 White Bear Ave. White Bear Lake, MN 55110
(612) 770-3943 800-652-9024

Area of Competence D. Perform Photographic Operations - Process
Statement of Competence 01. Consult Job Ticket and Organize Work Flow
Task(s) No. 02. Crop and Size All Photographs

Supplies:	Equipment:
Proportional Scale Ruler Pencil Photos Marker	Job ticket with dummy layout

Given the following: Job ticket or tickets containing ten photos for cropping and
(conditions) sizing for camera

You, the student, will be able to: CROP AND SIZE ALL PHOTOGRAPHS
(outcome)

So well that: - All photos have crop marks in margin area to indicate portion to be used
or
According to: - All photos marked with a percent of size information to the cameraperson
(criteria) - All photos marked and sized as per dummy
- All markings not to interfere with camera operations
- 100% accuracy within 20 minutes

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Graphic communications (4 Vols.) curriculum, vocational education. Cottage Grove, Minnesota: South Washington

1. County Schools, 1978.

Park Senior High School
South Washington County Schools
District 833
Cottage Grove, MN 55016

N/C

2. This material is:
- a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
- a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
- a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☐
 - d. Grade 11 ☐
 - e. Grade 12 ☐
 - f. Post secondary ☐
9. Number of hours per instructional module. 90
10. Number of modules needed to complete a program of studies. 6
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

The graphic arts department at Park Senior High School in Cottage Grove, Minnesota have prepared a six course program in graphic communications. It is designed to be implemented on a semester system over three years. The content of the courses range from a basic introduction to graphic communications to advanced techniques in colour separation. The course outlines are very specific in content, time per unit, and sequence of material.

The students enrolled in this program are required to complete the sequence in order, an advantage that may not be available if a school was on a linear system.

Lecture: 4 stages of work.

1. Design
2. Image Generation
3. Preproduction and Production
4. Binding, Finishing and Packaging

-
2. Design Student Assignment: Read Section II in text. 4 hours
- Student Activity: Do unit tests in text book. Do worksheets on point system and type faces.
- Lecture-Demonstration: Line gauges, type faces, fonts, handout type sample books.
- Demonstration: Layout of job 1.

-
3. Composition Student Assignment: Read unit II, chapter 3 in textbook. Do unit tests. 10 hours
- Student Activity: Do worksheets on California Job Case, foundry type, spaces and quads. Set up and proof job 1 and 2. Do proof marks sheet, distribute type.
- Lecture-Demonstration: California Job Case, setting type, types of cases, spaces and quads, lead and

slug machines, tying a form, proofing type and distributing type.

-
4. Paper Cutting Student Assignment: Read Chapter 5 in textbook. 4 hours
- Student Activities: Compute the most economical method of cutting paper, cut paper, do unit test.
- Lecture-Demonstration: Paper weights and sizes, Computing paper cuts, operation of the paper cutter, safety when cutting paper, paper manufacture.

-
5. Relief Printing Student Assignment: Read Section 4, chapter 6 in textbook. 10 hours
- Student Activity: Do unit test, lockup form, set up platen press, print copies of job, clean press, make a rubber stamp.
- Lecture-Demonstration: Lockup of a form using two methods, kinds of platen presses, making a rubber stamp, setting up a press for printing, cleaning a press, safety when using the platen press.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Graphic communications education program. Charlotte, North Carolina: Printing Industry of the Carolinas Foundation, 1977.

PICA Foundation
301 Hawthorne Lane
P.O. Box 4487
Charlotte, NC 28204

\$2895.00

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
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 - e. Instructor's manual. ☒
 - f. Equipment list. ☒
 - g. Slides ☒
 - h. Audio tapes ☒
 - i. Student learning packages. ☒
 - j. ☒
7. Instructional materials are designed to encourage individual progress. ☒
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☒
 - b. Instruction ☒
 - c. Evaluation ☒
12. Overview

Program development in any technical field must be a cooperative effort between the industry, the university, and the public education department. The PICA materials were prepared by representatives from Clemson University, Department of Industrial Education and the South Carolina Department of Education. The Printing Industry of the Carolinas Foundation (PICA) provided the impetus to coordinate these groups and has prepared the most significant and comprehensive program reviewed in this thesis.

The PICA materials could provide the base for program development in this province. They outline all tasks and competencies needed to attain entry level skills as well as encourage an awareness of the social impact of graphic images.

These materials, in conjunction with the proposed British Columbia Art guide (1982) would stimulate development of a unique course of studies blending art and technology.

Graphic Communications Education Program

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5. Now do a rough layout of the design. This will show the exact size of each part and where it will print. Remember the card has to be 2 x 3½" which is the size of a standard card. Do Assignment No. 2.8, "Prepare a Rough Layout for a Single Color Job", if you have never made a rough layout.

6. Have your layout approved by your instructor.

7. Now you are ready to set your type. There are several methods of setting type. If you don't know how to set your type, have your instructor check one of the following assignments for you to do.

- ___ a. Assignment No. 3.2, "Handset Type"
- ___ b. Assignment No. 3.3, "Set Cold Type - Strike-On Method"
- ___ c. Assignment No. 3.4, "Set Cold Type - Preprinted Dry Transfer Lettering Method"
- ___ d. Assignment No. 3.5, "Set Cold Type - Phototypesetting Method"

8. Proofread your type and make any corrections before your instructor checks your type.

9. Paste up the type for your card. If you have never made a paste-up, do Assignment No. 3.6 "Preparing a Simple Paste-up."

10. Mark your paste-up with center lines as shown below.



11. Have your instructor check your paste-up.

12. The next step in any offset lithographic printing job is to make a line negative. If this is the first time you have made a line negative, have your instructor check one of the following assignments for you to complete.

- ___ a. Assignment No. 5.4, "Making Line Negatives on the Process Camera"
- ___ b. Assignment No. 5.12, "Making Line Negatives by the Contact Method"

13. Have your instructor check your line negative.

14. Now you will strip your negative along with other students' negatives into a "flat". Strip your card in position using the "press sheet layout" provided by your instructor. If this is the first time you have stripped a flat, do Assignment No. 6.1 "Stripping a Single Color Job". If you have done this before you should follow the LAP, "Basic Stripping," to be sure you

15. Have your part of the flat checked by your instructor.
16. When you and your classmates are done stripping you will be ready to make a plate. If this is the first time you have made a plate, have your instructor check one of the following assignments for you to do.
 - a. Assignment No. 7.8, "Making an Additive Presensitized Offset Plate."
 - b. Assignment No. 7.9, "Making a Subtractive Presensitized Offset Plate."
17. Have your instructor check your plate.
18. You are now almost ready to cut paper for your job. If you have never figured paper cuts, do Assignment No. 8.5, "Simple Paper Calculations."
19. Have your instructor check your calculations and cutting diagram.
20. Cut your paper. If this is the first time you have used the cutter, do Assignment No. 8.6, "Simple Paper Cutting." Don't forget to get permission to use the paper cutter.
21. Next you will print the business cards on the offset press. If this is the first time you have run the press, do Assignment No. 7.11, "Running an Offset Lithographic Press." Be sure your instructor checks your setup every time before you turn on the press.
22. Now you are ready to cut the sheets into ten separate stacks of cards. Be sure to mark the top sheet so you cut them in the right place. The person who runs the cutter has one of the most important jobs since a mistake can spoil all the work that went into the job from the beginning. Be sure to check with your instructor before you use the cutter.

Your business cards are now done and you have gone through every step that any job must go through in the graphic communications industry. If you did a good job, people will remember your name and be able to get in touch with you if they need to.

Make Your Own Name Card or Business Card

Introduction: A very common printed product that serves as an important communications tool for many people is the business card or name card. When people meet, it is helpful to be able to share cards so that names won't be forgotten. A card usually has the person's name, mailing address, telephone number, and business or whatever activity the name is known for. Players for the baseball team might have the name of their position on a name card. Club members would have their club names and even a slogan on the card. A person's hobby might be a good thing to put on the name card.

There are many ways to make a name card. This project assignment will take you through the steps of designing and producing cards for ten people at one time. They will be printed all at once on one sheet of paper and then cut into ten parts. As with work done in industry you will choose one of several methods to set your type. Again, as done in industry you will paste up your type and art along with the jobs of nine other students so they can be photographed and printed.

In another assignment you will be able to set type and print cards, one at a time, by the letterpress method. This is not the way to do cards when you have many different designs to do. Any time you find an assignment which you have already done, check with your instructor to see if you should go on with the next step.

PROCEDURE:

1. The first thing to do before you design your card is to write down all the things that will be on it. Be sure to include your name, address, and phone number.
2. If you want a line drawing to go along with the card, find the picture and redraw it to the size you want it to be on your card.
3. Now you are ready to design the card. Make several thumbnail sketches of possible designs. Be sure to allow a place for every part of the card that you listed in step 1. The card will be 2 x 3½. If you have never made a thumbnail sketch, do Assignment No. 2.7, "Prepare Thumbnail Sketches for a Single Color Job".
4. Select the best sketch and have your instructor check your choice.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Graphics and industrial communications (Vol. 1-3) trade preparatory training curriculum guide. Raleigh, North Carolina: North Carolina Department of Public Instruction, Division of Vocational Education, 1977.

North Carolina Department of Public Instruction
Division of Vocational Education
Education Building
Raleigh, NC 27611

N/C

2. This material is:
- a. A competency based instructional program..... ☐
 - b. An industrial education curriculum guide..... ☒
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
- a. A job tasks..... ☐
 - b. Unit content..... ☒
4. Objectives identified for:
- a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
- a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☐
 - c. Job training..... ☐
6. Contents of this package include the following materials.
- a. Specific lesson plans..... ☐
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
- a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management..... ☒
 - b. Instruction..... ☒
 - c. Evaluation..... ☐
12. Overview..... ☐

A companion publication to the North Carolina Graphics Planning Guide, designed to assist the teacher in preparing instructional materials and unit objectives. The guide represents the basic material to be covered throughout the state in graphics and industrial communications I, II, III. In conjunction with the state planning and curriculum guide, the Department of Education has endorsed the Printing Industries of the Carolinas (PICA) resource package and curriculum guide for use within their school districts. This relationship between public and private curriculum development is a significant step in preparing instructional materials. In any program, especially in vocational areas, cooperation between the school and the trade is imperative for successful articulation.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Graphics and industrial communications, trade preparatory training planning guide. Raleigh, North Carolina:
 1. Division of Vocational Education, North Carolina Department of Public Instruction, 1977.

North Carolina Department of Public Instruction
 Division of Vocational Education
 Education Building
 Raleigh, NC 27611

N/C

2. This material is:
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 9. Number of hours per instructional module. ☐
 10. Number of modules needed to complete a program of studies. ☐
 11. For implementation of this curriculum material, strategies are outlined for:
 a. Management ☐
 b. Instruction ☐
 c. Evaluation ☐
 12. Overview

The guide was prepared by the North Carolina Department Public Instruction to aid administrators in planning facilities for graphic arts instruction. This program was designed by a team of educators and industry specialists and outlines a vocational course of studies with specific training in job tasks. The planning guide also outlines basic requirements of the programme: facilities, equipment and materials.

Course: Graphics & Industrial Communications

Page 2

Content	Information and Skills To Be Taught	Methods of Teaching Information and Skills	Sources of Information
COPYREADING AND PROOFREADING	7. Photographic strip type 8. Photographic page (composed) 1. Kinds 2. Proofreaders' Marks 3. Reading and marking	Explanation and demonstrations Text assignment Student practice Discussion Tests	
THE CAMERA (Vertical or Horizontal)	1. Preparing the copy a) Kinds b) Reductions c) Enlargements d) Specifying e) Line Copy f) Halftone copy g) Combinations (line and halftone) 2. Line Photography a) As to kinds of cameras <u>Technical Information</u> b) Theory c) Parts of camera Copyholder Back Lights Bellows	Explanation and demonstrations Text assignment Student practice Discussion Tests Explanation Demonstrations Text assignment Student practice Discussion	

Course: Graphics & Industrial Communications

Content	Information and Skills To Be Taught	Methods of Teaching Information and Skills	Sources of Information
	3. Basic Setting a) Angle and distance of lights b) Exposure (how arrived) c) F/Stop (how arrived) d) Bellows (extension) e) Copyboard (extension) 4. Procedure in Shooting a) Prepare the camera (how) b) Make necessary calculations c) Checking on all points d) Loading film e) Making exposure 5. Halftone Photography <u>Technical Information</u> a) Theory b) Screens and their uses c) Shooting single color d) Making the negative e) Using exposure computer f) Making multi-colored negatives (register work)	Explanation Demonstrations Text assignment Student practice Discussion Tests Explanation Demonstrations Text assignment Student practice Discussion Tests Explanation Demonstrations Text assignment Student Practice Discussion Tests	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Hambrick, G., Jones, G., & Losee, R., et al. Graphic arts occupations I. Chicago, Illinois: Chicago Board of

1. Education, 1968.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL 60601

\$3.75

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
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 - d. Grade 11 ☐
 - e. Grade 12 ☐
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☒
 - c. Evaluation ☐
12. Overview

This is the introductory level cluster program in graphic arts education. This course outline is intended to provide a basic outline for beginning courses in the following areas.

1. Commercial Art
2. Offset Pre-Press
3. Offset Press
4. Drafting

This industrial education guide indicates related job activities, but does not emphasize the trade application, rather the student is provided activities that will encourage an awareness to the significance of the printed image via hands on experience.

GRAPHIC ARTS OCCUPATIONS I

OFFSET PRESS WORK

UNIT TWO: INTRODUCTION TO OFFSET PRESS WORK
(Classroom time - 4 hours)

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Inking system	Give students a general overview of the press
1. Fountain	Demonstrate each of the five divisions of the press and their functions.
2. Fountain roller	
3. Ductor roller	Explain the importance of each division and its commonality on all offset presses.
4. Distribution roller	Explain in detail the parts of each unit.
5. Form roller	
B. Water system	Stress the importance of safety in each area, personal safety as well as safe use of equipment.
1. Dampener fountain	
2. Fountain roller	Show the film <u>Offset and You</u> .
3. Ductor roller	
4. Vibrator roller	
5. Form roller	
C. Printing cylinders	Go over nomenclature of the press and its parts and the points of lubrication in each of these divisions. Require students to copy information in notebooks and to demonstrate their retention.
1. Plate cylinder	
2. Blanket cylinder	
3. Impression cylinder	
4. Variations	
a. Two cylinder (Davidson)	
b. Three cylinder	
D. Feeding	
1. Platform	
2. Suction and blowers	

GRAPHIC ARTS OCCUPATIONS I

OFFSET PRESS WORK

UNIT THREE: OFFSET DUPLICATOR OPERATION
(Shop time - 65 hours)

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Assignment to press	Divide the class and assign an equal number of students to each offset duplicator for theory and study. Divide each group and assign one or more members the responsibility of a single section of the press (inking system, dampening system, printing unit, feeding unit, delivery) depending upon the number of members in each group. Rotate the sections of each group periodically so that all students gain full experience on the press. The following offset duplicating presses are available at Westinghouse Area Vocational School: A. B. Dick 360 Multilith 1250W Multilith 1250W MGD 22 Davidson 500
B. Preparation of press	Emphasize the special care necessary to see that equipment will operate and reproduce at its best for a long period of time. Demonstrate the use of the hand wheel. Present a step-by-step procedure of learning a habit to eliminate accidentally overlooking or bypassing a step in preparing the press. Show film, <u>I. S. Berlin</u> (story of letterpress printer going offset).
1. Prepare fountain unit	
2. Prepare the ink unit	
3. Install printed master	
4. Adjust register board	
5. Adjust feeder	
6. Adjust delivery	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Hambrick, G., Jones, G., Losee, K.

1. Graphic arts occupations II. Chicago, Illinois: Chicago Board of Education, 1968.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL. 60601

\$2.75

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12. Overview

The graphic arts occupation cluster contains the following units of study

- 1. Advanced Composition
- 2. Advanced Commercial Art
- 3. Advanced Offset Pre-press
- 4. Advanced Offset Press
- 5. Occupational Drafting
- 6. Schematics and Blueprint Reading

This program of studies developed in 1968 indicates a relationship between image development and production. The authors have prepared unit outlines that encourage student awareness to the implications of commercial design and printing production.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

"An attempt is being made through this curriculum program to form a positive bridge between education and employment. Embodied in this approach is the zero-reject concept -- the idea that the school can adapt this program and learning environment of every boy and girl to help make their education successful and to help provide motivation which will enable them to succeed in a career" (Jones, 1968, p. v).

GRAPHIC ARTS OCCUPATIONS II

ADVANCED OFFSET PRE-PRESS

UNIT FOUR: OFFSET PLATEMAKING

(Classroom time - 5 hours)

(Shop time - 5 hours)

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Metals used for plates	Display and explain the basic physical construction of the zinc and aluminum surface plate used on the offset press.
1. Surface plates	
a. Zinc	
b. Aluminum	Explain the graining process and the size and kind of abrasive used to grain surface plate metals.
c. Copper	
d. Steel	
2. Deep-etch plates	Explain, using visual aids, the basic construction of deep-etch plates. Have the students draw, mechanically, the illustrations presented as aids during the lecture.
a. Copper-chromium bi-metal plate	
b. Zinc, steel, and chromium tri-metal plate	
c. Stainless steel-copper, bi-metal plate	
d. Aluminum-copper, bi-metal plate	
B. Chemicals and steps used for offset plates	Demonstrate the complete processing of the surface plate. For the purpose of the demonstration, you will require some type of whirling and drying system to coat the surface plate. If such equipment is not available, a movie or visual aid on the subject will meet the objective at this level of the curriculum.
1. Flusing with pre-etch-cronak	Use a sensitivity guide when exposing the plate. Point out the density range desirable when exposing the plate.
2. Coating the surface plate with bi-chromated protein film	Develop the exposed plate by applying ink and soaking the surface plate in water until the ink and unexposed area begin to break up.
3. Exposing the plate with arc light illumination	
4. Developing and washing the image	

GRAPHIC ARTS OCCUPATIONS II

ADVANCED OFFSET PRESS WORK

SKILLS AND JOB LEVELS

Skills

Clean, lubricate, and care for tools and materials
 Troubleshoot for ink-water balance, ink distribution on rollers, register, scumming, image failure or fuzzy or washer-out images.
 Lubricate the power paper cutter
 Set up adjustments on the power paper cutter
 Figure paper stock (simple problems)
 Lubricate the folding machine
 Operate the folder
 Lubricate the stitcher
 Adjust and operate the stitcher
 Lubricate and maintain the paper drill
 Adjust and operate the paper drill
 Know the various binding operations, such as laminating, plastic binding, padding, collating, and bookbinding

Jobs

Duplicator operator with troubleshooting experience on the following machines:

A. B. Dick 360
 Multilith 1250W
 MDD 22
 Davidson 500
 Multilith 1850

Offset press feeder (beginner)
 Power paper feeder (learner)
 Folding machine operator (trainee)
 Paper jigger
 Perforating machine operator (beginner)
 Bookbinder (beginner)
 Inspector trainee for envelope press, check imprinter, and litho proof-press

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Hawkinson, B. Graphic arts, a curriculum manual. Santa Fe, New Mexico: New Mexico State Department of Education, Vocational-Technical Division, 1974.

Mid America Vocational Curriculum Consortium
1515 W. 6th Avenue
Stillwater, Oklahoma 74074

\$13.00

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12. Overview ☐

The Graphic Arts Curriculum guide is a very comprehensive instructional package. The program is outlined in very specific terms, and could be utilized in the classroom without further research and design. This package if implemented, would not allow instructor flexibility in manipulating course content or objectives.

However, if the intent of the program is to cover and monitor specific content, this package includes all the instructional material necessary to meet that objective.

UNIT TEST:

I. Match:

- | | |
|-------------------------------------|--|
| _____ a. Glass screen | (1) A number which indicates the spread between highlight and shadow which a camera and processing system is capable of reproducing. |
| _____ b. Contact screen | (2) Produces halftone dots by exposing film through vignetted dots on a transparent base. |
| _____ c. Autoscreen | (3) Determines density without using operator's visual judgment. |
| _____ d. Highlights | (4) Produces halftone dots by exposing film through tiny squares etched into glass. |
| _____ e. Shadows | (5) The type of dots which produce an optical illusion. |
| _____ f. Gray tones | (6) Produces halftone dots with a screen built into the film. |
| _____ g. Reflection density guide | (7) Uses lenses to determine density. |
| _____ h. Basic density range | (8) One of the gray scales used in determining density of copy. |
| _____ i. Excess density range | (9) The lightest shades of a positive. |
| _____ j. Rescreening | (10) Any of a number of simple densitometers. |
| _____ k. Densitometer | (11) The darkest shades of a positive. |
| _____ l. Calibrated gray scale | (12) Density range of original copy minus basic density range. |
| _____ m. Visual densitometer | (13) A device which measures the degree of blackness of a film negative or positive. |
| _____ n. Photoelectric densitometer | (14) Shades between highlights and shadows. |
| _____ o. Halftone | (15) Exposing a halftone through a screen. |

2. Check the item(s) true of continuous-tone copy:

- _____ a. Consists of an infinite number of shades of gray.
- _____ b. Can be reproduced directly on most printing presses.
- _____ c. Includes drawings and paintings as well as photographs.
- _____ d. Is really a series of tiny dots.

3. Write "G" for glass screen, "C" for contact screen, "A" for autoscreen, "All" for all in the appropriate blanks:

- _____ a. Opaque material fills the lines etched in the screen.
- _____ b. Creates a series of tiny dots on a negative.
- _____ c. Screen is built into the film.

VIII. Making the Main Exposure.

A. Again, duplicate the conditions under which the main exposure for the test negative was made.

1. The contact screen (use magenta unless otherwise instructed) should overlap the film at least 1 inch on all sides.
2. The screen is placed carefully against the emulsion side of the film.
 - a. Handle the screen by its edges so no fingerprints end up on the screen.
 - b. Smooth it against the film with a roller, and hold it in place with the vacuum.
3. Make the main exposure for the time determined from the computer.

B. When an original photograph is not available, an already printed halftone reproduction may have to be used as original copy.

1. Since a halftone has already been screened, it can often be treated as original line copy (See Block VI, Unit 3).
2. Rescreening a halftone is necessary if:
 - a. The screen pattern is indistinct.
 - b. The screen pattern is too fine.
 - c. A large reduction in size is necessary (a reduction which results in a screen pattern finer than about 150 lines per inch tends to result in the disappearance of fine dots).
3. For best results, choose a screen which is either 50 lines finer or 50 lines coarser than the original.
4. Or angle copy or screen so the result is 30° rotated from the original angle.

IX. Making Flash Exposure.

A. Many halftone negatives will not require a flash exposure.

B. If the copy density range is greater than the basic density range, flash exposure is necessary.

1. Use the flashing lamp set-up described above.
2. Use the exposure time from the chart on the computer.

X. Developing and Evaluating the Negative.

A. Standardize the development process as much as possible. The process should be exactly the same as for the test negative.

B. Use the same general procedure as for line negatives described in Block VI, Units 2 and 3.

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12. Overview

The companion volume for the New Mexico Curriculum manual is exactly the same as the instructor's manual except all the answers have been removed.

The student work book enables the student to progress independently of the instructor. Although reference texts are indicated, the student would be able to complete the indicated assignments with material included in the work book.

This package would provide a valuable source of instructional material for students enrolled in a graphic arts course as well as provide a future reference guide.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Hertz, A. Copy preparation and image assembly. Trenton, New Jersey: New Jersey Department of Education, 1978.

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"The emergence of lithography as the major method of reproduction has produced a need for instruction in the procedures for using a combination of type and illustrative matter to create the art work needed as the first step in printing a particular job." (Hertz, 1978, p. 1)

There is a blend between art, commercial art and graphic arts preparation and this program attempts to develop the material necessary to illustrate to the student, this relationship. Image design for graphic arts reflect certain technical skills which are similar to the commercial artist but the final application is different.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Copy preparation and Image Assembly defines the significant technical steps necessary in preparing a pasteup and mechanical. The student work book presents the objectives, notes and activities for each unity, while the teacher's guide identifies specific points to emphasize and demonstrate.

These two booklets would definitely provide a valuable source for the instructor in either graphic arts or commercial design.

Unit 4 – The Simple Pasteup

Objective: Prepare a simple pasteup, working from a layout.

Information: The pasteup (or mechanical) is the first *mechanical* step in the step-by-step procedure of going from idea to finished printed piece. In that first step the accuracy of the pasteup artist is paramount, for if an error occurs at that point, it is extremely difficult to correct at a later stage of the printing process.

Procedure: The pasteup artist should always work from a layout, either one drawn up in the shop or one supplied by the client. The following tools will be required for the simple pasteup.

1. A light table equipped with a T-square
2. Masking tape
3. An 18" or 24" ruler
4. A non-reproducing pencil
5. Kneaded eraser
6. A triangle
7. Text matter produced by a photo-typesetter
8. Display matter produced by a display typesetter
9. An illustration or illustrations
10. A rigid bristol board or index board measuring 10" X 14"
11. Rubber cement and a pickup

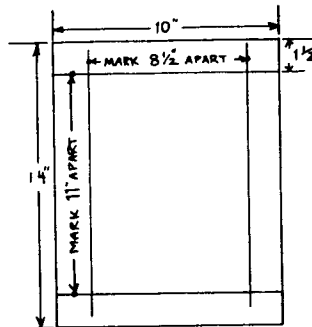
A paste-up mechanical is to be prepared, working from the layout on page 18. The size of the finished piece is to be 8½ X 11 inches.

Step 1 – Tape the layout to the wall above the light table for continual reference. Have each of the elements – text matter, display matter, and illustration – close at hand.

Step 2 – Aline the 10" X 14" board by squaring the sheet with the T-square firmly held against the straight edge of the light table. Aline along the 10" width.

Step 3 – Holding the board firmly, move the T-square out of the way and tape down each corner of the board with approximately 1½" of masking tape. *Only the upper corners need be taped.*

Step 4 – Using the T-square and the non-reproducing pen or pencil, rule a light horizontal line about 1½" from the top of the bristol board.



Step 5 – Measure 11" from the horizontal rule and draw a parallel rule.

Step 6 – In the margin above the top horizontal rule mark two points 8½" apart. Holding the T-square firmly against the straight edge, place the triangle against the T-square and draw parallel vertical rules down from the marked-off points. You now have a rectangle. *Check all rules for squareness.*

Step 7 – Find the centers of the two marked-off distances and place center marks in the margins. Draw the vertical centerline in non-reproducing pencil.

Step 8 – Referring to the layout on page 18, place the various elements (reproduced on page 18E) in their proper positions on the new prepared mechanical. Study the positioning.

Step 9 – Using the non-reproducing pencil, mark in the margin the position of each element of copy. Remove the elements and place to the side.

Step 10 – Apply a light application of rubber cement to the back of one element of copy.

Step 11 – Using the T-square as a guide, aline the element of copy with the appropriate mark made in step 9. *Making sure the copy is squared,* press the element to the board. *Check again to make sure copy is squared.*

Step 12 – Repeat steps 10 and 11 for each element of copy.

Step 13 – Using the pickup, remove excess rubber cement by *working away* from the copy elements.

Step 14 – Using a ball-point (black) pen and the T-square, draw crop marks about 3/8" long, starting about 1/8" outside each of the corners of the mechanical.

Step 15 – Place a strip of double-faced masking tape along the *top* of the mechanical board; remove the crepe backing from the tape, apply a sheet of tissue to the tape, and press to cover the mechanical.

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A companion volume to Typography and Modern Typesetting that provides guidance for the instructor on the implementation of the program. Specific suggestions are made that encourage the instructor to maximize the effect of the student work book.

UNIT 5 – TYPOGRAPHY

D. Copy Markup

Objective: Be able to mark up a client's copy.

Information: The typesetter usually has the responsibility for selecting type style, type size, and arrangement for the completed piece. In many instances, however, a client (particularly advertising art departments) will specify the style and size of type to be used. In the first instance, the markup person has the responsibility for selecting a type style appropriate for the piece to be reproduced. In the second situation, the markup person must be sure that the client's instructions are followed as completely as possible. When substitutions are necessary, the client must be advised.

The markup person studies the manuscript and the client's layout, checks the availability of specified type styles, and marks up the copy to indicate to the typesetter:

1. The type style
2. The type size
3. The leading
4. The width to be set
5. Bold or italic copy
6. Upper or lower case characters where the manuscript is not clear.
7. Certain obvious errors in typing.

On the following page is a sample of manuscript copy that was marked up by the markup person. Following that is a sample for the student's own markup.

Student Activity

Mark up the following copy, using 12-point Helvetica with Bold, with 1-point leading set to a width of 3 inches. Show an indent of 1 em for the paragraph. The heading, which is to be centered, is to be set in bold type. Correct any obvious errors with appropriate proofreader's marks.

ADDRESS DELIVERED AT THE DEDICATION OF THE
CEMETERY AT GETTYSBURG, NOVEMBER 19, 1863

Four score and seven years ago our fathers brought
forth on this continent, a new nation, conceived in
Liberty, and dedicated to the proposition that all
men are created equal.

Now we are engaged IN a great civil war, testing
whether that nation, or any nation so conceived and
so dedicated, can long endure. we are met on a great
battlefield of that war. We have come to dedicate
a portion of that field, as a final place resting
fro those who here here gave their lives that that
nation might live. It is altogether fitting and
proper that we should do this.

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Typography and Modern Typesetting is a workbook designed to assist the student in developing technical skills in the preparatory area of graphic arts. The program includes specific references to:

1. typography
 2. copy fitting
- as well as technical instruction in the operation of the following machines
1. Compu Writer I typesetter
 2. IBM selectric composer
 3. A & M Compset - typesetter

The student, on completion of the program would be able to operate the typesetter in the school graphic arts shop.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

This program, although very specific could be a valuable resource manual for a comprehensive graphic arts program.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Hullin, L. Exploring drafting-printing. Trenton, New Jersey: New Jersey Department of Education, 1971.

Vocational-Technical Curriculum Laboratory
Rutgers-The State University
Building 4103 - Kilmer Campus
New Brunswick, NJ 03903

\$3.75

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☒
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☒
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☒
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☒
 - c. Evaluation ☐
12. Overview

A design must be considered when preparing any printed material, and this program is intended to introduce students to the basic fundamentals of drafting and design. The program outlines the basic steps of drafting which could be integrated into any introductory graphic communications course.

STEP 4:

Make a finished drawing or sketch of the best one selected and letter in any necessary words as shown in Figure 8.

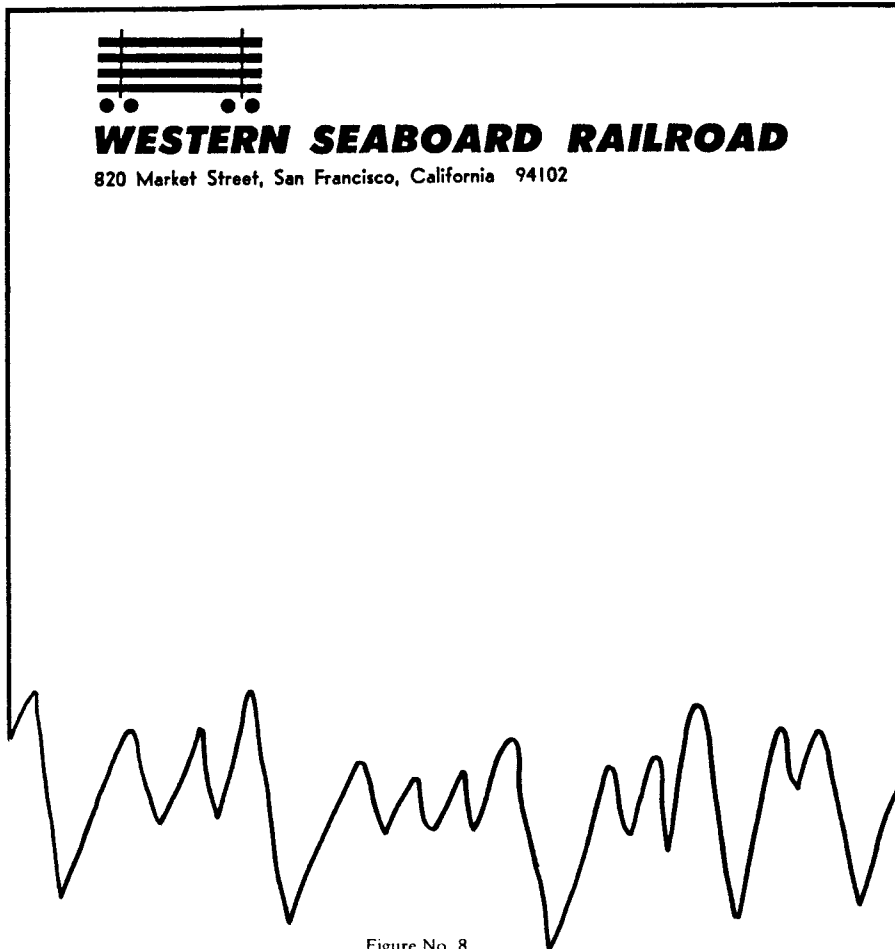


Figure No. 8

Remember that your final design will be small when it is printed at the top of the letter paper so keep it neat and simple.

UNIT III – DRAFTING FOR THE PRINT SHOP STUDENT

Letterhead Design

Lesson 3

OBJECTIVE:

To learn how to draw a letterhead design.

RELATED INFORMATION:

A letterhead design is a sketch or drawing of some object which is printed at the top of writing paper or across an envelope. It is used as a code or trade mark of a company and usually tells something about the company or the product they make. Examples such as an airplane for the Airlines, an automobile for Automobile manufacturer, or a shoe for a Shoe manufacturer. These are exact pictures because they represent the exact object being manufactured and sold. However, most customers are looking for something original – something different. See if you can follow these few simple steps and learn how to draw letterhead designs.

STEP 1:

Check the name of the company and the kind of product they manufacture. This will give you some idea of the kind of object to draw for a letterhead. Here is how you should list your information:

Company Name	Product	Design
--------------	---------	--------

Remember, your design must tell a story. It can be a freehand sketch or an exact scale drawing. Words may be added to the design to bring out a special point or ideas.

STEP 2:

Make several rough sketches of your design. Use a separate sheet of paper for each new idea and change positions of your objects to create a new feeling.

STEP 3:

Check each sketch you have drawn and select the one you feel does the best job of telling something about the company and their product.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Instructional Materials Laboratory
Trade and Industrial Education
Ohio State University
1885 Neil Avenue
Columbus, OH 43210

Curriculum design in vocational education can make very specific demands on the student as well as the instructor. Many programs identify certain marketable skills that must be obtained and be demonstrated by the student. By demanding specific entry level skill development, the opportunity in any program exists for an emphasis on psychomotor activities. Although this emphasis is not entirely negative, the occupations within the graphic communications industry demand more than psychomotor development.

The Instructional Materials Laboratory, Trade and Industrial Education at the Ohio State University, has prepared a series of booklets identifying eight occupations in the graphics industry. These occupational analyses are not course outlines, or curriculum guides, but documents that are necessary for instructors or development teams to comprehend before undertaking the task of preparing course outlines and units of instruction. The eight programs:

- Bindery
- Cold Type Composition
- Commercial Artist
- Offset Cameraperson
- Offset Layout and Design
- Offset Platemaking
- Offset Press Operator
- Offset Stripping

are dissected, to demonstrate the component tasks that comprise the particular job. The component parts include not just the skill but the decisions the operator (incumbent) must make before the task is completed. The occupational analysis, are an expansion of many similar programs, but by including the decision making process, the instructor will be able to include other related topics (mathematics, science, and communications theory in his instruction.)

These eight programs, would benefit any instructor, by demonstrating the encompassing nature of the job, rather than the isolation of parts of a job. The Ohio occupational analysis allows the relationship of the cognitive and the affective domain to interact, while demonstrating the importance of skill manipulation for vocational students.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Blaylock, R., Nesnadayn, J., Hansen, V., Koch, M. An analysis of the offset press operator. Columbus, Ohio: Ohio State University, 1976.

Instructional Materials Laboratory
Trade & Industrial Education
Ohio State University
1885 Neil Avenue
Columbus, OH 43210

\$3.50

2. This material is:
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 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
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- a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
- a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☒
6. Contents of this package include the following materials.
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 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

(TASK STATEMENT) LUBRICATE A PRESS

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY - HAZARD
Press lubrication chart Press Rags Washing containers or pans Rag container Misc. supplies	1. Locate lubrication points 2. Lubricate press	Cuts Slips Falls Burns Fires Caught hair or clothing Crushed hands Electric shock
DECISIONS	QUES	ERRORS
1. Locate lube points & use appropriate lubricants	1. Press lubrication chart	1. Press damage, loss of time

(TASK STATEMENT) LUBRICATE A PRESS

SCIENCE	MATH - NUMBER SYSTEMS
Machines: Used to gain mechanical advantage (levers, gears, pulleys, vacuum) Work: Input, output, friction and efficiency in machines Atoms: Static electricity Force: Resistance, distortion, inertia, momentum, friction	Addition, subtraction Rounding off decimals & whole numbers Measure of speed, vacuum & R.P.M.
COMMUNICATIONS	
PERFORMANCE MODES	EXAMPLES
1. Reading 2. Writing 3. Observation 4. Listening	1. Charts, manuals, press manual 2. Daily time sheet 3. Press operation 4. Foreign sounds
SKILLS/CONCEPTS	
1. Terminology 2. Accuracy, descriptions, spelling 3. Making judgements 4. Performance/auditory analysis	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Bonanno, et al. An analysis of platemaking in the lithographic offset printing careers. Columbus, Ohio:

1. Ohio State University, 1975.

Instructional Materials Laboratory
Trade & Industrial Education
Ohio State University
1885 Neil Ave.
Columbus, OH 43210

\$3.00

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 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
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 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
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 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

B9 (TASK STATEMENT) Determine exposure time for photo-direct plates

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY - HAZARD
Job ticket Plate manufacturer's specifications Plate burner specifications Offset press	<ol style="list-style-type: none"> 1. Read job specifications 2. Place copy on subject holder in proper position 3. Set plate length 4. Set f stop 5. Set exposure time 6. Expose plate 7. Remove plate from machine 	Cuts Eye injuries (lights) Burns (lights)
DECISIONS	CUES	ERRORS
<ol style="list-style-type: none"> 1. Plate length 2. Exposure time 3. F stops 	<ol style="list-style-type: none"> 1. Job ticket 2. Manufacturer's specifications 3. Manufacturer's specifications <p>30</p>	<ol style="list-style-type: none"> 1. Loss of time, material waste, poor work flow, idle time for other departments, missed deadlines, cost overrun, loss of customer confidence 2. Loss of time, material waste, poor work flow, idle time for other departments, missed deadlines, cost overrun, loss of customer confidence 3. Loss of time, material waste, poor work flow, idle time for other departments, missed deadlines, cost overrun, loss of customer confidence

B9 (TASK STATEMENT) Determine exposure time for photo-direct plates

DECISIONS	CUES	ERRORS
<ol style="list-style-type: none"> 4. Proper placement of copy 	<ol style="list-style-type: none"> 4. Visual examination of materials <p>31</p>	<ol style="list-style-type: none"> 4. Loss of time, material waste, poor work flow, idle time for other departments, missed deadlines, cost overrun, loss of customer confidence

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Bonanno, J., & Innis, G. An analysis of bindery in the lithographic offset printing careers. Columbus, Ohio:

1. Ohio State University, Instructional Materials Laboratory, 1976.

Instructional Materials Laboratory
Trade and Industrial Education
Ohio State University
1885 Neil Avenue
Columbus, OH 43210

\$2.75

2. This material is:
- a. A competency based instructional program. ☒
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 - f. Equipment list. ☐
 - g. Slides. ☐
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 - i. Student learning packages. ☐
 - j. ☐
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8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☐
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

B5 (TASK STATEMENT) Set-up stitcher for side and saddle stitches

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY – HAZARD
Job ticket Sample (if available) Stock Measuring tools Hand tools Stitcher machine	1. Set-up stitcher table (side or saddle) 2. Set-up stitch length 3. Set-up stitch position 4. Stitch sample	Cuts Smashed fingers Stitched fingers
DECISIONS	CUES	ERRORS
1. Side or saddle stitch 2. Right length of stitch 3. Proper position of stitch 4. Is sample stitch correct	Job ticket, sample Visual Visual Job ticket, visual	Incorrect type of stitch Book falls apart Loss of customer confidence Loss of customer confidence

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(TASK STATEMENT) Set-up stitcher for side and saddle stitcher

(TASK STATEMENT) Set-up stitcher for side and saddle stitcher		
SCIENCE		MATH – NUMBER SYSTEMS
Mechanical functions of simple & complex machine Force friction Resistance Functions of gears levers cams screws belts Electrical power		Use of fractions and percentages Ratio & proportions
COMMUNICATIONS		
<u>PERFORMANCE MODES</u>	<u>EXAMPLES</u>	<u>SKILLS/CONCEPTS</u>
1. Speaking 2. Reading 3. Writing 4. Listening 5. Viewing	1. Oral explanation, conversation between individuals 2. Job ticket, sample 3. Work instructions 4. Understanding special instructions, comprehension 5. Settings, references, making sure staples are correct	1. Terminology, general vocabulary, logic 2. Comprehension, instructions 3. Description, terminology, general vocabulary 4. Concentration 5. Visual analysis, recognizing problems
19		

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GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Hanson, V. et al. An analysis of the cameraperson in the lithographic offset printing industries occupation.
 1. Columbus, Ohio: Ohio State University, 1974.

Instructional Materials Laboratory
 Trade & Industrial Education
 Ohio State University
 1885 Neil Avenue
 Columbus, OH 43210

\$3.00

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 b. Unit content. ☐
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 a. Specific job tasks. ☒
 b. General learning outcomes. ☐
 5. Instructional material organized to promote:
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 b. Awareness to imagery and design. ☐
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 a. Specific lesson plans. ☐
 b. Pre tests. ☐
 c. Post Tests. ☐
 d. Student workbook. ☐
 e. Instructor's manual. ☐
 f. Equipment list. ☐
 g. Slides. ☐
 h. Audio tapes. ☐
 i. Student learning packages. ☐
 j. ☐
 7. Instructional materials are designed to encourage individual progress. ☐
 8. Materials are intended to be used at:
 a. Grade 8. ☐
 b. Grade 9. ☐
 c. Grade 10. ☐
 d. Grade 11. ☒
 e. Grade 12. ☒
 f. Post secondary. ☒
 9. Number of hours per instructional module. ☐
 10. Number of modules needed to complete a program of studies. ☐
 11. For implementation of this curriculum material, strategies are outlined for:
 a. Management. ☐
 b. Instruction. ☐
 c. Evaluation. ☐
 12. Overview

(TASK STATEMENT) MAKE BASIC EXPOSURE TEST FOR LINE REPRODUCTION

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY - HAZARD
Black and white line copy Process camera Linen tester Temperature control sink Darkroom chemistry Film Gray scale Water supply Safety goggles Apron Camera manual	1-Locate dense, black line copy 2-Position copy and cameraman's gray scale on copy board 3-Set camera tapes at 50% 4-Select and set appropriate f-stop at 50" 5-Set camera timer at proper exposure 6-Load and expose film 7-Develop film to a solid step three on cameraman's gray scale 8-Pix and rinse film 9-Inspect film for image resolution, focus and density 10-Record data received from test	Burns Eye injury Toxic vapors Slips and falls Cuts Electrical shock Skin disorders
DECISIONS	CUES	ERRORS
Select appropriate copy and supplies for test Determine quality of negative	Visual observation Supply manufacturer's specifications Read camera manual	Poor quality reproductions Loss of time and materials

(TASK STATEMENT) MAKE BASIC EXPOSURE TEST FOR LINE REPRODUCTION

TASK STATEMENT) MAKE BASIC EXPOSURE TEST FOR LINE REPRODUCTION		
SCIENCE		MATH - NUMBER SYSTEMS
<p>Physics of light: nature of light reflection and absorption; effects of illumination of color; nature of mixing additive and subtractive primary and complimentary colors; theory of light; and law of inverse square proportion</p> <p>Optics: focal lengths, reflection, refraction, aberrations, element composition</p> <p>Mechanics: use of machines to gain mechanical advantage</p> <p>Chemistry: effected molecular change due to illumination; nature of chemical changes and reaction</p>		<p>Addition, subtraction, multiplication, division of whole numbers, fractions and decimals</p> <p>Finding a percent of one number and what percent one number is of another</p> <p>Measures of length in inches, picas, points, and converting between each</p> <p>Measurement of time</p> <p>Sequential ordering</p> <p>Mathematical short cuts</p>
COMMUNICATIONS		
PERFORMANCE MODES	EXAMPLES	SKILLS/CONCEPTS
<p>Seeing/observing</p> <p>Reading</p> <p>Writing</p> <p>Speaking/listening</p> <p>Touching</p>	<p>Copy - film or print processing</p> <p>Charts, tables and/or graphs, instructions</p> <p>Calibrations</p> <p>Among personnel, supervisors, customers</p> <p>Equipment settings</p>	<p>Making judgments</p> <p>Interpretation, locating data</p> <p>Making instructions</p> <p>Giving, receiving instructions, trade vocabulary</p> <p>Movement, accuracy, safety</p>

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Hanson, V., Koch, M., & Bull, W., etal. An analysis of the cold type compositor in the lithographic offset printing industries occupation. Columbus, Ohio: Ohio State University, 1976.

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Ohio State University
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Columbus, Ohio 43210

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9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

(TASK STATEMENT) Process Copy		
TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY – HAZARD
Method of processing Film Chemicals Cutting tools	1. Process film through developing chemicals 2. Make visual inspection of film	Cuts Eye damage Toxic odor
DECISIONS	CUES	ERRORS
1. Determine strength of chemicals 2. Determine if film is acceptable to camera	1. Developing time length Quality of face copy 2. Poor face quality	1. Improper development Loss of time and materials 2. Loss of time and materials

(TASK STATEMENT) Process Copy		
SCIENCE	MATH - NUMBER SYSTEMS	
Darkroom procedures Optical system - basic	Printer's measuring system Interpret graphs and charts	
COMMUNICATIONS		
<u>PERFORMANCE MODES</u>	<u>EXAMPLES</u>	<u>SKILLS/CONCEPTS</u>
Speaking Reading Listening Touching	Oral explanation, instructions between people Copy instructions Machine malfunctions Keyboard operation and settings	Terminology/general vocabulary, logic Comprehension, instructions, speed Auditory discrimination Pressure, motion, movement, safety

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Mowen, K., Hartman, C., & Cotner, M. An analysis of the
Commerical art occupation. Columbus, Ohio: Ohio State

1. University, 1974.

Instructional Materials Laboratory
Trades Industrial Education
Ohio State University
1885 Neil Ave.
Columbus, Ohio 43210

\$1.25

2. This material is:
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 - a. Management..... ☐
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12. Overview..... ☐

(TASK STATEMENT) MAKE AN ILLUSTRATION

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	PERFORMANCE KNOWLEDGE		SAFETY - HAZARD	
	DECISIONS	CUES	ERRORS	
Basic tools plus Brushes Mallet stick Palette and palette knife Basic equipment plus Visualizer (Lucy-Lucil) Basic materials plus Charcoal Pen, oil, acrylic and watercolor Pencil, charcoal Plywood/Masonite	Analyze client's needs Application of concepts, principles and rules of design and color Comprehension or intended purpose Analysis of client's needs Application of media	Instructions, mathematics, facts, time and cost considerations, intended use	Pigments & solvents - skin and lung irritants, clogging damage See appendix	
	Selection of media Determination of size Judgment in color selection and use		Failure to read client's needs, dead lines, or due dates Ineffective illustration Failure to check color key from printing house	
SCIENCE	MATH - NUMBER SYSTEMS		COMMUNICATIONS	
	Ratio and proportion		Appropriate diction Directness Descriptive words Clarity of expression Vocabulary Usage Spelling Grammar Logic and inference Emotional appeal (propaganda device) Technical terminology Trade information between client and artist for use in the creation of a piece of art Repeat and repeat until you obtain instructions Understand technical vocabulary	

(TASK STATEMENT) MAKE A LAYOUT

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	PERFORMANCE KNOWLEDGE		SAFETY - HAZARD	
	DECISIONS	CUES	ERRORS	
Basic tools plus Ball pens Pencil, chisel lead Basic equipment plus Block, type specimen Projector, opaque Visualizer (Lucy-Lucil) Basic materials plus Paper, layout	Analyze layout (design) elements and equipment Analyze and understand the client's needs Size and arrangements of elements Prepare full sized layout to further test the suitability of the selected thumbnail Develop layout from rough to comprehensive form Evaluation of layout by artist, art director and client Revise, if required	Intended use, instructions, aesthetics Intended use, cost & time considerations Availability of materials, cost & time consideration	Ineffective layout Poor readability Mechanical errors	
	Selection of most suitable thumbnail How comprehensive the layout is to be What materials should be used		Appropriate diction Clarity of expression Vocabulary Usage Spelling Details and inference Logic Definition - written Trade information between client and artist for use in the creation of a piece of art	
SCIENCE	MATH - NUMBER SYSTEMS		COMMUNICATIONS	
	Determination of facts involving sectors of a circle Determination of facts involving lines tangent to circles Ratio and proportion Geometric constructions Determination of facts comparing two complementary sets of figures		Appropriate diction Clarity of expression Vocabulary Usage Spelling Details and inference Logic Definition - written Trade information between client and artist for use in the creation of a piece of art	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Noelker, J., Myers, P., Miller, M. An analysis of layout and design in the lithographic offset printing careers.

1. Columbus Ohio: Ohio State Univeristy

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Trade & Industrial Education
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1985 Neil Avenue
Columbus, Ohio 43210

\$2.75

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 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☐
 - c. Grade 10 ☐
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

B3 (TASK STATEMENT) Prepare a thumbnail sketch

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY - HAZARD
Job ticket Drawing tools Art board Drawing table Conv Customer specifications	1. Draw a quick, small drawing utilizing the design principles and elements selected 2. Draw numerous other sketches illustrating and exploring other ideas	Paper cuts
DECISIONS	CUES	ERRORS
1. Determine customer desires	Job ticket Customer specifications	Poorly designed job Loss of time and materials

3 (TASK STATEMENT) Prepare a thumbnail sketch

SCIENCE		MATH - NUMBER SYSTEMS	
Nature of light reflection, absorption Color - mixing and effect of illumination Color theory		Ratio and proportion	
COMMUNICATIONS			
PERFORMANCE MODES	EXAMPLES	SKILLS/CONCEPTS	
Reading Writing Seeing/Observing	Customer specifications Job ticket Sketches	Interpretation - decision making Giving instructions Proportion - balance of elements	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Noelker, J. et al. An analysis of stripping in the lithographic offset printing careers. Columbus, Ohio: Ohio State University, 1975.

Instructional Materials Laboratory
Trade & Industrial Education
Ohio State University
1885 Neil Avenue
Columbus, Ohio 43210

\$3.50

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview ☐

CS (TASK STATEMENT) STRIP A FLAT WITH A SCREEN TINT

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	STEPS	SAFETY - HAZARD
Dummy Masking paper Line up table T square Triangles French curves Compasses Ruling pens Dividers Scribes Straight edge Pencil Pens Rulers Grids Cutting tools Protractors Sensitivity Percentage scales Opaque Scissors Tape machines Tape, clear and red Masking paper tape Exposed film black High and low power glasses Color charts Ink books Block out material Photo prints Repro prints Light table Artwork Furnished copy Register systems Negatives Opaque brushes Razor blade Paper wipes Instructions (job ticket)	1. Select tools, equipment and supplies. 2. Prepare masking sheets. 3. Examine negatives. 4. Indicate margins. 5. Impose negatives. 6. Tape negatives. 7. Position and attach tabs or prepare for step and repeat machine. 8. Align asymmetrical forms. 9. Check layout.	Cuts
DECISIONS	CUES	ERRORS
1. Determine reference lines: center line, gripper line, multi-burn windows, vertical center line 2. Determine position of tabs	1. Copy, customer instruction, size of plate, dummy 2. Copy, customer instructions, size of plate, dummy	1. Wasted materials, lost time, inefficiency of production 2. Wasted materials, lost time, inefficiency of production

CS (TASK STATEMENT) STRIP A FLAT WITH A SCREEN TINT

SCIENCE	MATH - NUMBER SYSTEMS
Opacity of materials Simple machines Optics - magnification Nature of light Color theory	Addition, subtraction, multiplication and division of whole numbers, fractions and decimals Rounding off decimals and whole numbers Changing percents to fractions and fractions to percents Finding a percent of a number and what percent one number is of another Measures of length in inches, picas, points and converting between each Measurement of time in tenths of an hour Ratio and proportions Reading and interpreting charts, tables and/or graphs Sequential ordering
COMMUNICATIONS	
PERFORMANCE MODES	EXAMPLES
Reading Writing Speaking Touching Seeing	Job ticket - customers' orders Specifications Customer - supervisor Flat screens Examine negatives
SKILLS/CONCEPTS	
Interpretation - trade jargon Giving instruction Receiving instruction Manual dexterity Visual acuity	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Iowa industrial arts handbook for introductory level, graphic communications. Des Moines, Iowa: Iowa Department of Public Instruction, 1978.

Iowa Department of Public Instruction
Grimmes Building
Des Moines, IA 50319

N/C

2. This material is:
- a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
- a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
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 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☒
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

The Iowa guide for graphic communications outlines the component areas of study in this field. The areas of

- 1. image generation
- 2. image reproduction
- 3. image processing
- 4. image management

are discussed in a broad conceptual context. The authors of this guide emphasize the diversity of graphic communications and indicate that implementation of the material depends on the nature of the facilities, materials, and students.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Iowa guide is a valuable resource for graphic communications program development because of the integration of broad conceptual outlines with specific performance objectives. This guide can provide the relationship between an introductory industrial program and an advanced vocational training program.

NUMBER: 4

TITLE: Design of a Logo

RATIONALE: A logo is the graphic design that helps you recognize a product or industry. The examples are all around you all the time. Think about the corner gas station or the telephone company, or the TV stations. They all have a design that you recognize them by. In this activity you are going to use your previous experiences to make a logo of your own.

PERFORMANCE OBJECTIVES:

Upon completion of this activity you will be able to:

1. Describe the term 'logo.'
2. Identify two uses of a logo.
3. Develop a logo for personal use.

PRE-ASSESSMENT:

A pre-test is available from your instructor.

LEARNING ACTIVITIES:

Materials: drawing surface, paper and pencils.

Enabling Information: You will need many skills for this activity. Design and layout are necessary and cold composition is helpful.

Application:

- a. Divide a sheet of 8"x12" paper into four equal parts.
- b. You are going to design a logo of your own. One that you can use in different graphic image reproduction processes. The sheet of paper is for your thumbnail sketches. For ideas consider a simple family crest, your nickname, or geometric design using your initials. With these ideas use the sheet of paper for four thumbnail sketches of your logo.
- c. Show your thumbnail sketches to your instructor for help in choosing which to develop as a rough layout on a single 8 1/2"x11" sheet of paper.
- d. Do rough layout and again check with your instructor for comments.
- e. Do your final comprehensive layout on a single 8 1/2"x11" sheet.

EVALUATION:

The logo and preparation work will be turned in to the teacher for assessment. The teacher will evaluate your materials based upon the following factors:

- a. correct sequence of steps;
- b. correctness of layout procedures;
- c. originality of design.

NUMBER: 4

TITLE: Design of a Logo

RATIONALE: Logos or trademarks are a very important factor in the world of advertising and marketing. Essentially a logo is the basic identification symbol of a business or its product. This activity is designed to be used following the design and layout activities. The final product is a workable logo that can be used for many different reproduction methods.

PERFORMANCE OBJECTIVES:

Upon completion of this activity the student will be able to:

1. Describe the term 'logo.'
2. Identify two uses of a logo.
3. Develop a logo for personal use.

PRE-ASSESSMENT:

The pre-test consists of having a student develop a logo using appropriate techniques and tools.

LEARNING ACTIVITIES:

Materials: drawing surface, paper and pencils.

Enabling Information: This activity essentially ties all the design and copy preparation areas together and should be used as the final activity before the reproduction activities are started. Design and layout activities are necessary prerequisites and cold composition is helpful.

Application: At this point before the students start working on their designs it may be helpful to show several examples of well known logos (see student sheet).

While the students are working through the steps of this activity keep several points in mind:

- a. Is cold composition available for use?
- b. As each design progresses is the student's work at his or her level of ability?
- c. Is the logo going to be reproducible by several different methods? You may need to preview some graphic image reproduction activities to determine this.

EVALUATION:

Student work should be evaluated on several different points:

- a. correct sequence of steps;
- b. correctness of layout procedures;
- c. originality of design.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Isaacson, A. You've got it, Danny. Trenton, New Jersey:
New Jersey Department of Education, Division of Vocational
Education, 1976.

Vocational/Technical Curriculum Laboratory
Rutgers - The State University
Building 4103 - Kilmer Campus
New Brunswick, NJ 08903

\$4.50

2. This material is:
 - a. A competency based instructional program..... ☐
 - b. An industrial education curriculum guide..... ☒
 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
 - a. A job tasks..... ☐
 - b. Unit content..... ☒
4. Objectives identified for:
 - a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
 - a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☐
 - c. Job training..... ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans..... ☐
 - b. Pre tests..... ☒
 - c. Post Tests..... ☒
 - d. Student workbook..... ☒
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☒
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☐
 - b. Instruction..... ☒
 - c. Evaluation..... ☐
12. Overview
Any program set within our school system should be encouraging development of language skills, You've Got It Danny, is a prepared program designed to improve language skills with a graphic arts content. This is a work book intended to be integrated with technical instruction in a graphic arts program. The work book includes many standard language arts instructional techniques i.e. definitions, work endings, splitting words, alphabetizing, and matching. This package would certainly be advantageous if only as a guide for preparing local language art instructional material.

This program would encourage the relationship between subject areas and increase the student's awareness of the need to communicate verbally - an important aspect of any vocational technical course.

SPELLING STAIRWAYS

Directions: Spell out the words in the squares. Choose from the words below. Two of the words under each puzzle will not fit.

l				t	
c					a
s					r
o					g

1. arrive light opaquing
stapler camera negative

t				e	
o				e	
o					e
s					r

2. crew stripper operate
table presswork opaque

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

- | | |
|--------------------|-----------------------|
| 1. VariTyper _____ | 7. table _____ |
| 2. folding _____ | 8. stripping _____ |
| 3. stapler _____ | 9. opaquing _____ |
| 4. bindery _____ | 10. negative _____ |
| 5. operating _____ | 11. presswork _____ |
| 6. cameraman _____ | 12. interesting _____ |

Arrange the above words in **ALPHABETICAL ORDER**

Write in the spaces below.

- | | |
|----------|-----------|
| 1. _____ | 7. _____ |
| 2. _____ | 8. _____ |
| 3. _____ | 9. _____ |
| 4. _____ | 10. _____ |
| 5. _____ | 11. _____ |
| 6. _____ | 12. _____ |

FIND IT IN THE GLOSSARY

Look up the words **hole puncher** in the glossary. Write the meaning in the space below.

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3. Laying out the negatives on goldenrod paper according to the way it is to be printed (4) _____

light table cameraman stripping

4. A machine on a stand which staples when pressing a foot pedal. (2) _____

foot stapler folding machine VariTyper

5. A group of people working together. (3) _____

crew opaquing operating

6. Painting out unwanted spots on a negative. (4) _____

presswork opaquing stripping

7. A machine for folding paper. (2) _____

light table foot stapler folding machine

8. Light and dark reversed on film. (4) _____

negative presswork crew

9. A layout table with a glass top under which a light is placed. (4) _____

operating light table cameraman

10. A place where printed material is put together with adhesive, staples, thread, etc. (2) _____

bindery room opaquing VariTyper

11. Work produced on a printing press. (4) _____

stripping presswork negative

12. Running a machine. (2) _____

operating crew stripping

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GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Johnson, T. A Catalogue of performance objectives, criterion referenced measures and performance guides for printing occupations. Detroit, Michigan: Wayne State University, 1978.

Wayne State University
College of Education - Division of Teacher Education
Institute for the Research & Development of Competency
Based Teacher Education Programs
Detroit, MI 48909

N/C

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☒
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

The preparation of instructional materials, job analysis and course outlines is a very time consuming process. Although an expensive task, many programs and outlines have been prepared. The V-Tecs organization (Vocational-Technical Education Consortium of States, 1973) has attempted, through group cooperation and organization to eliminate duplication of materials and effort.

This catalogue of performance objectives is a result of their multi-state cooperation. The catalog is not a course of study, but "is designed to provide performance objectives associated with current occupational information related to the job content - PRINTING." (Johnson, 1978, p.ii)

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The following list indicates some of the uses for their catalog.

1. Objectives may be compared to existing programs for possible inclusion.
2. Measures may be used to determine entering students competencies, thus allowing for such things as advanced placement and individualization of instruction.
3. Performance guides may be used as a blue print for designing curriculum which will support selected performance objectives.

This catalogue will provide the instructor or curriculum design team with a set of performance based tasks that will indicate the specific needs of the industry. Technical training is an important aspect of graphic arts education, and the instruction must utilize relevant research to base education goals and outcomes. However, competency based education usually refers to psychomotor activity, and graphics communication is not entirely a "hands on" psychomotor activity. Without instruction in the reasons for printed material in our society, the graphic education student is not fully aware of the complexity of the industry.

Vocational education programs based on this material and similar documents will provide a solid technical background, but the instructor and administrator of the program must conscientiously encourage the blend of objectives from not only the cognitive domain but the affective as well.

Duty: Processing Film and Printed Material

Task: Develop film to proper density by time and temperature method

33. PERFORMANCE OBJECTIVE:

Given exposed negative, tray #1, and timer, develop film to proper density by time and temperature method so that if it is a linetone, the white background will be solid black, no light passes through. Type, which is black on copy, will be sharp and clear. On gray scale, the 4th step will be solid black, and the 5th step, will be half black. (13, 11)

CRITERION-REFERENCED MEASURE:

Select an exposed negative and develop the film to proper density by time and temperature method.

PERFORMANCE GUIDE:

1. Set-up chemistry at 68° F (20° C).
2. Set timer for 3 minutes and start.
3. When timer reaches 2-3/4 minutes, drag film, emulsion down, into developer.
4. Flip the film over and start agitation.
5. At 5 seconds lift film by corner and drain excess.
6. Submerge into acid stop bath for 15 seconds (approximately) and agitate.
7. Lift film and drain.
8. Place in fix. Agitate for 10 seconds and leave in 4 to 5 minutes.
9. Lift and drain.
10. Place in water wash for 5-10 minutes.
11. Remove and squeegee base side only.
12. Dry.

Duty: Exposing With A Camera

Task: Use duplicating film for line work

31. PERFORMANCE OBJECTIVE:

Given high speed duplicating film vacuum frame with #3 light source and a film negative, make a duplicate negative. The duplicate should appear exactly as the original negative with the clear areas equally transparent. (15, 18)

CRITERION-REFERENCED MEASURE:

Make a duplicate negative using film and a film negative supplied by your instructor.

PERFORMANCE GUIDE:

1. In darkroom vacuum frame, lay a sheet of duplicating film emulsion side up.
2. On top of duplicating film, lay the original negative emulsion side up.
3. Close top and turn on vacuum.
4. Expose film for approximately 7 seconds with a #3 light source.

CAUTION: Time will vary due to the intensity of light and distance from film. Check film specifications.

5. Develop in standard developing chemicals. Quality of the duplicate negative can also be controlled by the development process.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Kempton, R. F., Teaching guide for still photographic technician aide occupations. Amherst, Massachusetts:

1. Illinois Office of Education, Springfield, Illinois.

Instructional Materials
Trade and Industrial Education
P.O. Box 2847
University, AL 35486

\$5.00

2. This material is:
- a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
- a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
- a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☒
6. Contents of this package include the following materials.
- a. Specific lesson plans. ☒
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☒
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☒
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

Vocational education must be specific in respect to job tasks. This guide identifies those particular tasks necessary for entry into the photographic technician trade. Although technical training is only one aspect of a comprehensive education, this guide would be advantageous for program development in art, industrial or graphic communications education.

TASK ANALYSIS

Job:	<u>Still Photographic Technician Aide</u>
Task:	<u>Utilize safety precautions for common electrical, mechanical, and chemical photographic laboratory hazards.</u>
Learning Conditions:	<u>Simulation of actual safety precautions.</u>
Outcome:	<u>The student will utilize safety precautions at all times.</u>

Learning Activity: Observe safety precautions related to fire hazards.

- Steps:
1. Maintain clean working areas.
 2. Avoid concentrations of flammable or explosive gases and vapors.
 3. Determine location of extinguishers.
 4. Know the type of extinguisher needed for different types of fires.
 5. Know how to use various types of extinguishers.

Supporting Knowledge Required: Understand the four general classes of fire and their related extinguishing agents.

Learning Activity: Observe safety precautions related to chemical hazards.

- Steps:
1. Adhere to manufacturer's recommendations for mixing and using chemicals.
 2. Insure that laboratory has adequate ventilation.
 3. Never sniff a container to determine its contents.
 4. Use proper protective equipment and clothing when necessary.
 5. Use a respirator when mixing chemicals in powder form.
 6. Always add acid to water, never the reverse.
 7. Always use cold water when diluting sodium hydroxide.
 8. Store solutions in properly labeled containers.

Supporting Knowledge Required: Knowledge of basic properties and reactions of chemicals used in photography.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Losee, R. Graphic arts occupations, basic and advanced typing. Chicago, Illinois: Chicago Board of Education, 1971.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL 60601

\$2.75

2. This material is:
- a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
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 - h. Audio tapes. ☐
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 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☐
 - e. Grade 12. ☐
 - f. Post secondary. ☐
9. Number of hours per instructional module. 120
10. Number of modules needed to complete a program of studies. 2
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

When a student is preparing a program of studies in a secondary school, a grouping or clustering of related subjects would be advantageous. The Chicago Board of Education, Graphic Arts/Typing is a part of the course structure that groups subjects under major headings.

Although this course is an introductory course in typing its focus is the graphic arts industry.

Units of instruction are designed to familiarize the student with mechanical photo type composition.

**UNIT THREE: ERROR CORRECTIONS ON THE JUSTOWRITER
COMPOSING MACHINE**

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Review of the basic skills developed in Unit Two	Have students retype lesson from Unit Two with corrections. Demonstrate the technique of making desired corrections on copy. Use the code deletion method to correct a single word. To correct a complete line, touch the "J-Car Ret" and the "Line Delete" keys simultaneously; allow the carriage to return to starting position and retype the line.
B. Corrections in punctuation	To insure good composition on the Justowriter typing machine, demonstrate and explain how to activate proper keys on the keyboard as follows:
1. Use of periods	When periods, commas, colon, semi-colons, exclamation points, interrogation points are used, touch the space bar only once.
2. Use of question marks	If indentation is required, touch the key marked "three units" twice.
3. Setting up indented paragraphs	If additional line spacing is desired, touch the "J-Car Ret" key after the line has been completed.
4. Obtaining line spacing	
C. Running the perforated tape through the reproducer machine	Have students proofread copy using standard copyreading symbols, and if necessary, retype until it is without errors.
1. Checking copy reproduced	
2. Proofreading copy using standard copyreading symbols	

UNIT ONE: ORIENTATION

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Review of basic typing skills	Note that the content of the advanced course is based on in-depth skill development and covers broad aspects of the field.
B. The production typist	Point out the employment opportunities and the diversity of job requirements.
1. Skill development	Guide students in developing special skills such as correction and word divisions.
2. Production review	Refer to the recommended texts for lesson plans. Develop lesson plans that include-- controlled spacing inserting blank lines centering material adjusting paper guides setting margins indenting paragraphs comparing pica and elite type.
C. Proofreading type-written copy	Discuss revisions on rough draft, and use of copyreading symbols to indicate corrections. Assign a research paper on the subject of copyreading symbols. Point out the diversity of the standard symbols.
D. Operation of the Justowriter	Have student review basic skills to provide transfer of training skills to the Justowriter machine. Instruct students in the typing of a justified column for copy reproduction.
1. Recorder	
2. Reproducer	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Losee, R. Graphic arts occupations III & IV. Chicago, Illinois: Chicago Department of Education, 1970.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL 60601

\$2.75

2. This material is:
- a. A competency based instructional program. ☐
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 - e. An art education curriculum guide. ☐
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 - b. General learning outcomes. ☒
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 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
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 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

100
2

This guide, although intended for senior trade and vocational courses in graphic arts, is not specific in relation to particular job tasks. The guide is flexible, allowing individual instructors to determine unit and lesson content.

When concerned with a trade or vocational course rather than an industrial education course, the intent changes radically. Vocational education must emphasize specific job tasks that relate to the particular industry the student is preparing for. Too general a course will perhaps, omit units that are inherent to industrial processes.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

This program can be an introduction for the instructor to persue further instructional materials for trade and vocational education, but as a document to support a program, it is too general.

GRAPHIC ARTS OCCUPATIONS IV

PRE-PRESS

UNIT FIVE: PLATEMAKING FOR OFFSET PRESSES

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Plateroom organization	Review the importance of good plateroom organization. Number and catalogue a plate file for possible future reprinting.
1. Storage	
2. Salvage	Keep a running inventory of all chemicals used and required. Advise the students that certain chemicals are dangerous.
3. Safety	Explain safety precautions which must be followed in the shop in handling chemicals.
4. Materials and supplies	
B. Measurements used in plate-making	Instill the need for accurate measurement and control at every step in the production of plates.
1. Weight	
2. Volume	Provide an opportunity for students to measure dry chemicals, liquid volume, temperature of liquids, and specific gravity or density of liquids. Explain that relative humidity measures the degree of dampness.
3. Temperature	
4. Density	
5. P.H. (Acidity and Alkalinity)	
6. Relative Humidity	
C. Chemistry of platemaking	Have the students list all formulas for solutions they will need and use in the production of plates.
1. Formulas	
2. Storage of solutions	Demonstrate how to prepare, test, and store solutions, including counter-etch, coating, developing, lacquers, and asphaltum.
D. Metals used in surface plates	Show students samples of basic metals used for surface plates. Demonstrate the use of some of these metals. The majority of your surface plates will be pre-sensitized by a factory processor.
1. Aluminum	
2. Zinc	
3. Stainless steel	

4. Pre-sensitized

E. Coated offset plate exposure

1. Exposing guides

2. Vacuum frames

3. Illumination

Demonstrate coated offset plate exposure by exposing a metal plate and placing an L.T.F. sensitivity guide on the lower edge of the gripper section.

Point out the methods of illumination and why some systems are more efficient than others.

Demonstrate a safe method of trimming carbons.

RESOURCE MATERIALS

BOOKS

Cogoli. Photo-Offset Fundamentals. Chap. 13.

Halpern. Offset Stripping, Black and White. Chap. 12.

Latimer. Survey of Lithography. Chap. 4.

Reed. Offset Platemaking. Chaps. 1-19.

Sayre. Photography and Platemaking for Photo-Lithography. Part 1.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Losee, R., Ptacek, M. Vocational graphic arts, offset press. Chicago, Illinois: Chicago Board of Education, 1973.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL. 60601

2. This material is:
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6. Contents of this package include the following materials.
- a. Specific lesson plans. ☐
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 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐

12. Overview

This program specifically relates to the operation and maintenance of the offset press. The course outline is extended over the Grade 11 and Grade 12 years. In the Grade 11 program, units cover the following areas:

1. Orientation and Safety factors
2. Basic Functions of Offset Presses
3. Offset Inks and Papers
4. Offset Press Work
5. Bindery Practice

and in continuing to Grade 12, the program emphasizes the following units:

1. Orientation for Job Opportunities
2. Advanced Chemistry of Offset Film
3. Paper and Paper Making
4. Offset Estimating

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Chicago Board of Education, through the authorized curriculum materials encourages the instructors to be as flexible as necessary in the interpretation of the curriculum guides. This allows maximum local control and promotes the individual desire of each student. At any point throughout the course of studies, the student should have attained skills that would be marketable.

UNIT FOUR: OFFSET PRESSWORK

OUTLINE OF CONTENT	SUGGESTED ACTIVITIES
A. Introduction to the offset press	Review the offset process. Describe and point out functions of the offset press. Demonstrate the operation of the offset press by running blank or waste paper. Discuss and test students on their comprehension of the offset process.
1. Review, description, and demonstration	
2. Rules and safety	
3. Maintenance	Discuss the operating rules and safety precautions of the offset press, press chemicals, and specific safety hazards. Examine the various switches, levers, and prevention devices.
a. Oiling	
b. Greasing	
c. Checking press	
	Discuss and illustrate the various aspects of maintenance—oiling and greasing the press and checking of the press for loose, damaged, missing, and malfunctioning parts. Stress the necessity and advantages of cleanliness and order.
B. Pre-makeready	Point out tools and chemicals commonly used in the pressroom. Stress the order and differentiation of chemicals.
1. Tools and chemicals	
2. Readyng dampening unit	Discuss selection of fountain solution. Illustrate the mixing of fountain solution. Demonstrate pH and alcohol tests of fountain solutions.
a. Mixing fountain solution	
b. Adjusting dampening unit	Establish a routine for checking job ticket, job sample, ink, paper, and plate or plates.
3. Job essentials	
a. Job ticket	
b. Ink	
c. Paper	
d. Plates	

Makeready (Setting up the press)

- Loading the feeder
 - Checking the job tickets
 - Checking stock
 - Putting stock into feeder
 - Setting feeder
- Setting press for thickness of stock
 - Double sheet
 - Headstops
 - Side guide
 - Impression cylinder
- Setting feeder, delivery

Have the student read the job ticket for paper and ink requirements.

Have the student check stock for quantity, color, watermark, felt and wire side, weight, grain, and size.

Determine proper side guide. Wind stock and place into feeder. Demonstrate leveling and curling of stock where necessary.

Set back gauges, blowers, pickup suckers, forwarding suckers.

Have the student set the double sheet caliper or choke, headstops for squareness and height, and side guides.

Demonstrate setting impression cylinder for thickness of sheet.

Ascertain that students check pickup suckers, forward suckers, pile height, pull in wheels, leaders, etc. Inch sheet to headstops, checking blast, vacuum, side guide, timing, wheels, etc. Inch sheet to delivery. Set delivery, skelton wheels, vacuum, wedges.

Demonstrate rechecks of press set up by running blank stock through press. Check spray unit and flame, if necessary.

Have student inspect plate for errors, omissions, marks, scratches, proper development, and dirt on back side.

Set front and rear clamps.

Tell student to "mike" plate and packing. Mount on press. Check for tension, and irregularities.

Have student remove skin from ink. Make tap out and check with sample.

Put ink in fountain. Add drier and compounds, if desirable. Mix well.

Makeready (pulling first sheet)

- Plate onto press
 - Inspect plate
 - Set clamps
 - Mount onto press
- Inking up
 - Check ink
 - Ink into fountain
 - Ink up press

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Lowery, A., King, D., Harght, B., Meeker, C. Television.
Topeka, Kansas: Kansas State Department of Education,
1. 1975.

Kansas Vocational Curriculum & Research Center
Room 115, Willard Hall
Pittsburg State University
Pittsburg, KS 66762

\$5.00

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 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☒
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
- a. Grade 8 ☐
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. 90
10. Number of modules needed to complete a program of studies. 1
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management ☒
 - b. Instruction ☒
 - c. Evaluation ☒
12. Overview

This program of studies is intended to provide an overview of how and why television works. The emphasis in this program is to promote a greater awareness to the impact of television on our daily lives. For students to develop techniques to increase their awareness of this impact the program blends production with an indepth study of television communication theory.

Although the course promotes the how and why of television, a student will become acquainted with the career opportunities available in the television industry.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

This program is an integral part of the statewide Industrial Education system that encourages a unity of courses and topics, but allows flexibility in determining many of the specific learning outcomes.

The philosophical statements of the Kansas program:

1. to examine the society/industry interface and identify the components of industry, both detrimental and beneficial that affect people.
2. to provide exploratory problem solving experiences by which the student will gain an understanding of how tools are utilized, as an extension of man's physical capabilities, increasing his efficiency and earning productivity.
3. to provide occupational information concerning the vast array of opportunities provided in the work world.
4. to provide subsequent occupational exploration, opportunity for development of realistic employable skills and ultimate realization of employment goals.

(Toth, 1975 p.1)

will be satisfied by this program.

UNIT 8 - THE INFLUENCE OF TELEVISION

Student Handout Sheet #3

LESSON I - "How Does Television Influence Our Lives?"

Learner's Objectives:

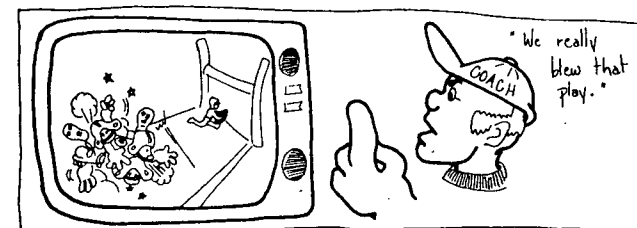
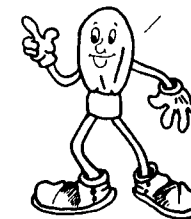
After completing Lesson I, the student will be able to:

1. discuss the various ways in which television is presently being used in business organizations, industry, and education.
2. analyze the way television has affected man's personal life and the occupations available to him.

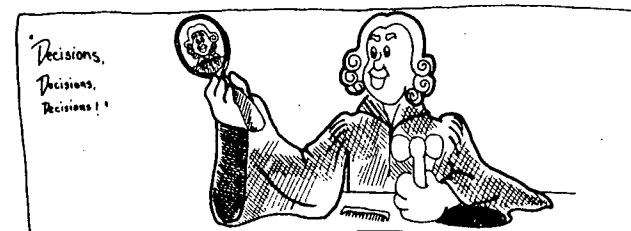
Lesson Outline:

- I. Sports replays
- II. Court cases
- III. Store security
- IV. Education teaching techniques
- V. Preschool education at home
- VI. Television drama
- VII. Witnessing of scientific events
- VIII. Classroom teaching tool
- IX. Assembly line monitoring
- X. Recording of medical cases
- XI. Picture phone

Let's take a look at some of
the ways Television
influences our lives!



In the area of sports, replays of the action can show the players and coaches weaknesses and strengths for improvement.



Because court cases consume so much time and money, testimonies from witnesses are taped in advance for court hearings.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

National apprenticeship and training standards for the graphic arts international union. Washington, D.C.: U.S.

1. Department of Labour Manpower Administration, 1975.

Washington Apprenticeship Council
Department of Labour & Industries
318 E. 4th Avenue
Olympia, WA 98504

N/C

2. This material is:
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 - e. Instructor's manual. ☒
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 - h. Audio tapes ☐
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8. Materials are intended to be used at:
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 - c. Grade 10 ☐
 - d. Grade 11 ☐
 - e. Grade 12 ☐
 - f. Post secondary ☒
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management ☒
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview

This booklet outlines the apprenticeship program for various trades within the Graphic Arts International Union (GAU) It was prepared in conjunction with the US Department of Labour to encourage standard education practices in the training of GAU members.

The apprenticeship program is one method for students to become qualified in the graphic arts trades. This booklet suggests possible programs and course outlines employers could follow.

Dot Etcher [Litho] (Continued)

Light, color theory, and color reaction
 Halftone tints
 Use of trade tools and chemicals
 Masking, staging, etc.
 Color correction continuous tone films
 Color correction screened halftones
 Intensification and blackening
 Chemistry and application of reduction of dot structure
 Prepress proofing
 Familiarization of platemaking
 Familiarization of press work

Retouchers [Gravure]

(Trade)

5 years

(Term)

Basics of all rotogravure branches
 Judgment of negatives
 Set up monotone and line negatives
 Set up color negatives and flash line work
 Application of dye on negatives for reducing tone values
 Cyaniding negatives for increasing tone values
 Opaquing and outlining of all white paper
 Air brushing and vignetting with dye and India ink
 Staging of negatives for color separation and tone value
 The use of film overlays
 The use and action of chemicals
 The use of densitometer for photographic range
 Checking screen and tone positives for exact reproduction
 and dot value
 Local dyeing
 Elimination of all spots and bad edges with spotting brush
 and etching tools
 Grinding of negatives and positives
 Study of tone value by scale
 Thorough study of color and its application
 Basic study of art and composition

Proofer [Photoengraving]

(Trade)

5 Years

(Term)

Major printing processes
 Operation and maintenance of presses

Proofer [Photoengraving] (Continued)

Care of rollers
 Manufacture and characteristics of paper
 Manufacture and characteristics of ink
 Use of overlays and underlays
 Checking proofs with copy
 Single color proofing
 Color proofing and ink sequences
 Registering plates on and off the block
 Ink matching
 Proofing of process color plates—mounted and unmounted
 with bearers
 Making and using friskets and masks
 Basics of etching, finishing, and final printing

Stripper - Printers [Photoengraving]

(Trade)

5 Years

(Term)

Major printing processes
 Fundamental knowledge of all branches of photoengraving
 Knowledge and use of trade equipment and tools
 Copy evaluation
 Negative assembly
 Color stripping
 Pin register systems
 Mixing solutions
 Preparation of plate metals
 Coating and whirling of metals
 Prints on metals
 Developments of exposed metal plates
 Drying and burning of coating
 Photography, copper etching, and zinc etching basics

Stripper and Opaquer [Litho]

(Trade)

5 Years

(Term)

Major printing processes
 Basic mathematics
 Drafting and art practices
 Tools of trade
 Copy preparation and evaluation
 Layouts
 Imposition and major bindery methods

Project 2 (Continued)

PHASE C - LENS AND IMAGE SIZE

- A. The Lens
- B. Optical Problems of Simple Lenses
- C. Lens Correction for Optical Problems
- D. Optical or Lens Flare
- E. The Scaling and Focusing of the Image
- F. Movement of the Camera Parts

Project 3 - Camera Area and Darkroom

PHASE A - CAMERA AREA - CAMERA BACK, ENLARGER, AND CONTACT DARKROOMS

- A. Camera Area (Light Room)
- B. Camera Back Darkroom
- C. Lights
- D. Contact Frame Darkroom
- E. Enlarger Darkroom

PHASE B - CHEMISTRY AND DEVELOPMENT AREA

- A. Processing Sink
- B. Trays
- C. Chemistry Preparation Area
- D. Drying
- E. Storage

Project 4 - Cleaning and Maintenance of the Camera and Darkroom

- A. Cleaning and Maintenance of the Lens Board
- B. Cleaning and Maintenance of the Backboard
- C. Cleaning and Maintenance of Bellows
- D. Cleaning of Camera Bed and Tapes
- E. Care and Cleaning of Light Source
- F. Care and Cleaning of the Copyboard
- G. Care and Cleaning of Darkroom and Equipment
- H. Caring for Camera Equipment
- I. Cameraman's Safety Rules

Project 5 - Photographic Films - Structure and Color Sensitivity

- A. Structure of Photographic Film
- B. Dimensional Stability
- C. Color Sensitivity
- D. Film Speed
- E. Latitude
- F. Grain

Project 6 - Development of the Image

- A. Introduction
- B. The Development Process
- C. Automatic Film Processors
- D. Maintenance Program
- E. Problems Incurred During the Developing Process
- F. Chemistry of Development

Project 7 - Copy Evaluation and Preparation

- A. Evaluating Copy
- B. Scaling Copy to Size
- C. Copy Identification
- D. Grouping Together by Type and Size
- E. Setting up Copyboard
- F. Care of Copy

Project 8 - Shooting Line Copy

PHASE A - SCALING AND FOCUSING

- A. Relationship of Copy Plane to Center of Lens to Focal Plane for Size Determination
- B. f Number Setting for Reduction or Enlargement
- C. Covering Power of Lens
- D. Use of Tapes and Scales
- E. Focusing on Ground Glass

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Nebraska guide for curriculum improvement in industrial arts K-12. Lincoln, Nebraska: Nebraska State Department of Education, 1975.

Nebraska Department of Education
301 Centennial Mall, South
Lincoln, NE 68509

N/C

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12. Overview

The Nebraska Guide for Curriculum Improvement in Industrial Arts, does not outline specific course content, rather it establishes the philosophical base for program development. Course content is the responsibility of each school district. This flexibility may lead to discrepancies in programs within the state, however this guide provides a unified rationale that would integrate various course structures and program offerings.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The guide identifies the major components of industrial education and specific general learning outcomes at three levels. Competencies and learning activities are suggested for:

1. Knowledge level - COGNITIVE DOMAIN
2. Skill level - PSYCHOMOTOR DOMAIN
3. Attitudinal level - AFFECTIVE DOMAIN

Within the outlined frame of reference, instructors could develop programs, depending on student and local needs, that achieve these competencies.

- D. Demonstrate methods of separating, forming, machining, assembling of materials and products.
E. Demonstrate techniques for securing a job.

Simulate job interviews in the classroom.
Write letters of job applications.
Take psychomotor tests.

ATTITUDINAL LEVEL-AFFECTIVE DOMAIN

Selected Student Competencies	Sample Learning Activities
Experiences and activities at the Junior High Level will enable the student to: A. Discuss the safety measures necessary in a manufacturing plant. B. Relate the necessity of selling, distributing, and servicing a manufactured product. C. Plan wisely before producing goods and services. D. Describe the advantages of different finishes. E. See the necessity for a variety of jobs in manufacturing fields.	View industrial safety films. Practice good safety habits and attitudes. Sell and distribute the student company's mass produced product. Tour an industry to see how they plan for production. Test and evaluate various types of finishes. Construct a flow chart depicting how jobs inter-relate and depend on one another.

KNOWLEDGE LEVEL-COGNITIVE DOMAIN (Graphic Communications)

Selected Student Competencies	Sample Learning Activities
Experiences and activities at the Junior High Level will enable the student to: A. Compare the merits and weaknesses of numerous types of composition. B. Recognize basic reproduction processes used in industrial applications of technical graphics.	Collect examples of composition from different types of composition machines and critique their weaknesses and values. Identify reproductions produced by various processes.

35

- C. Use properly the nomenclature associated with Graphic Communications.

Use properly the terminology associated with graphic communications in daily conversation within the laboratory.

- D. Interpret standardized drafting symbols when they are presented in the form of a drawing.

Produce a cardboard or styrofoam model from a dimensioned drawing.

Answer questions pertaining to a drawing when presented with a print.

- E. Compare the occupational requirements and benefits for at least four jobs in each of the following areas of Graphic Communications: research and development, design, drafting, graphic reproduction and packaging.

Have each member of the class interview two employees in one of the areas of graphic communications, the similarities and differences in job requirements and benefits.

- F. Identify at least fifteen industrial occupations in the Graphic Communications cluster.

Play "Twenty Questions" with some students picking an occupation and the other members of the class asking questions, attempting to identify the occupation.

SKILL LEVEL-PSYCHOMOTOR DOMAIN

Selected Student Competencies	Sample Learning Activities
Experiences and activities at the Junior High Level will enable the student to: A. Compare and contrast the industrial applications of the basic printing processes. B. Demonstrate the interrelationship of photography with drafting and graphic arts as used in industry. C. Produce copies using image reproduction processes generally found in business and offices. D. Discuss the primary responsibilities of those necessary to the production of a printed document in industry. E. Interpret the responsibilities of those necessary to the design and production of an industrial product.	Prepare a display using examples of the basic printing processes. Produce a photodrawing. Produce a film positive half-tone for photo silk screening. Produce notes and flow charts from the management of a class "corporation" using a spirit duplicator. Produce presentation materials using a thermofax machine. Hold a small group discussion regarding the production of a printed document in industry resulting in the making of a flow chart showing a document's route. Divide the class into small groups and establish a corporate structure. Design a product, assigning individual responsibilities according to the design phase of the predetermined corporate structure.

36

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Nieminen, J., & Barrett, M, etal. A guide for teaching graphic arts in Indiana. Indianapolis, Indiana: Indiana

1. Department of Education, 1970.

Vocational Instructional Materials Laboratory
Department of Vocational Technical Education
Indiana State University
Terre Haute, IN 47809

N/C

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☒
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☒
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

This booklet is a guide, not a program of studies. The curriculum guide was prepared "to assist the teacher in his attempt to acquaint his students with the graphic arts industry, inform them of the principles involved in graphic reproduction, and furnish them with an understanding and appreciation of the type of work performed by craftsmen in the graphic arts." With this intent, the developers have prepared a document that allows the maximum flexibility for teacher designed units but also allowing for a basic core of material to be covered.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

This guide also attempts to distinguish the place graphic arts occupies in our everchanging technological society. The chairman of the revision committee outlined the history and the present trends in the introduction.

"... The problems of graphic communications with which future generations will be faced cannot be answered through purely mechanical process and technique-oriented instruction. What is needed is a broader understanding based on concepts of how we communicate. Understandings of the problems of mass communications, a realization that one of the most powerful forces affecting our industrial economy, and the greatest danger to our very existence, is a comprehensive understanding and the use of effective communications and communications technology (Nieminen, 1970, p. 1).

The thirteen units of instruction outlined in this guide cover the major areas of graphic arts education, but the intent is not specific training, but an overall awareness to the graphic industry and allied fields. Depending on the nature of the school and local community, this guide allows the instructor to orientate the program in one of four ways

1. Printing
2. Graphic Arts (industrial arts)
3. Graphic Communications (expanded industrial arts)
4. Visual Communications Education (independent field of study)

TECHNICAL CONTENT OUTLINE	TEXTS REFERENCE	AUDIO- VISUAL
<ul style="list-style-type: none"> d. print finishing <ul style="list-style-type: none"> (1) preparation of print (2) mounting 6. Basic elements of design <ul style="list-style-type: none"> a. texture b. lines c. shapes d. forms e. patterns f. rhythm g. movement h. color i. balance j. proportion k. emphasis (center of interest) l. harmony m. perspective <p>IX. Process Photography</p> <ul style="list-style-type: none"> A. History of Process Camera B. Theory of Process Photography C. Process Camera <ul style="list-style-type: none"> 1. Types <ul style="list-style-type: none"> a. vertical b. horizontal 2. Construction <ul style="list-style-type: none"> a. lens b. camera back c. copyboard d. bellows e. lights f. frame 3. Operation of the camera for line copy <ul style="list-style-type: none"> a. copy <ul style="list-style-type: none"> (1) scaling (2) arranging (3) types of copy b. adjustments <ul style="list-style-type: none"> (1) lens (2) lights (3) ground glass c. focusing copy d. placing film e. making exposure 	<p>F35 F70 F77</p>	

TECHNICAL CONTENT OUTLINE	TEXTS REFERENCE	AUDIO- VISUAL
<ul style="list-style-type: none"> 4. Determining standards <ul style="list-style-type: none"> a. lights <ul style="list-style-type: none"> (1) angle (2) intensity (3) distance b. F-stop c. emulsion speeds of film d. development <ul style="list-style-type: none"> (1) agitation (2) time and temperature (3) developer types 5. Films <ul style="list-style-type: none"> a. film characteristics <ul style="list-style-type: none"> (1) base (2) chemical composition emulsions (3) anti-halation dies b. types <ul style="list-style-type: none"> (1) orthochromatic film (2) panchromatic film (3) transparent stripping film (4) self-screening film (5) mechanical negatives (6) auto-positive (7) Polaroid (self-developing) c. handling film d. processing film <ul style="list-style-type: none"> (1) developer (2) stop bath (3) fixer and hardener (4) wash (5) dry D. Theory of Halftone Photography <ul style="list-style-type: none"> 1. Graduations of tone 2. Types of copy 3. Halftone screens <ul style="list-style-type: none"> a. what the halftone screen does b. classifications of screens <ul style="list-style-type: none"> (1) angle (2) lines per inch c. types of screens <ul style="list-style-type: none"> (1) glass crossline screen <ul style="list-style-type: none"> (a) advantages (b) disadvantages (2) plastic contact screen <ul style="list-style-type: none"> (a) advantages 		<p>S2</p> <p>GAFT AV #19</p> <p>GAFT AV #18</p>

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

O'Dean, J. Vocational architectural drafting. Chicago, Illinois: Chicago Board of Education, 1968.

1.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL 60601

\$3.75

2. This material is:

- a. A competency based instructional program. ☒
- b. An industrial education curriculum guide. ☐
- c. An organized instructional program. ☐
- d. A resource materials package. ☐
- e. An art education curriculum guide. ☐

3. Course outlines indicate:

- a. A job tasks. ☐
- b. Unit content. ☒

4. Objectives identified for:

- a. Specific job tasks. ☐
- b. General learning outcomes. ☒

5. Instructional material organized to promote:

- a. Skill development. ☒
- b. Awareness to imagery and design. ☒
- c. Job training. ☒

6. Contents of this package include the following materials.

- a. Specific lesson plans. ☐
- b. Pre tests. ☐
- c. Post Tests. ☐
- d. Student workbook. ☐
- e. Instructor's manual. ☒
- f. Equipment list. ☐
- g. Slides. ☐
- h. Audio tapes. ☐
- i. Student learning packages. ☐
- j. ☐

7. Instructional materials are designed to encourage individual progress. ☐

8. Materials are intended to be used at:

- a. Grade 8. ☐
- b. Grade 9. ☐
- c. Grade 10. ☒
- d. Grade 11. ☒
- e. Grade 12. ☒
- f. Post secondary. ☐

9. Number of hours per instructional module. 12010. Number of modules needed to complete a program of studies. 2

11. For implementation of this curriculum material, strategies are outlined for:

- a. Management. ☒
- b. Instruction. ☒
- c. Evaluation. ☒

12. Overview

The Chicago Board of Education, includes drafting as a segment in a cluster of course work for graphic arts occupations. Although this program is specifically related to Architecture, its design and scope is significant to the relationship between drafting and graphic design.

THE NATURE AND SCOPE OF VOCATIONAL ARCHITECTURAL DRAFTING

Help students to become aware that methods and materials used in construction vary greatly depending upon geographic location and are continually changing. (See Hepler and Wallach, pp. 249-61.)

Explain to students that most basic engineering principles, upon which modern framing methods are based, have been known for centuries, but it has not been until recent years that the development of materials and construction methods has allowed the utilization of these principles. Point out new and improved methods of erecting structural steel, of laminating and processing preformed wood structural members, and of developing and refining in the use of concrete and masonry, including prestressed concrete slabs. These provide the architect with flexibility of design and conservation of materials and time. (See Hepler and Wallach, pp. 262-337; Hornung, pp. 7-16, 34-41.)

C. Characteristics of Architectural Working Drawings

Explain and discuss the use of the architect's scale, emphasizing its main function.

Have students discuss and develop a knowledge of various building materials and the field assembly of parts.

Illustrate the symbols and conventions that appear on plans, elevations, sections, and details.

Explain the purpose, use, and content of specifications and schedules, developing the thought that specifications guarantee the purchaser that the contractor will deliver the building exactly as specified. They are control documents and legal contracts. (See Waffle, p. 463; Hepler and Wallach, pp. 338-46.)

Discuss plumbing, heating, air-conditioning, and electrical outlets.

Illustrate plot plans and landscape layouts.

D. Elements of Residential Design

Discuss the elements of residential design, pointing out that industrial automation methods have enabled manufacturers to produce high quality and low priced products that can be incorporated into a modular system of design. Revolutionary advances in our technology provide a great stimulus for architectural design; constant changes in our culture must be reflected in our architecture.

THE NATURE AND SCOPE OF VOCATIONAL ARCHITECTURAL DRAFTING

E. Land Planning

Explain the procedures that may be followed in selecting a suitable site. Discuss compass orientation. Show the primary function of the landscape plan and the types and locations of vegetation. Explain that the architect often proposes changes in the existing contour of the land to enhance the function of the site. (See Hepler and Wallach, pp. 218-33; Waffle, pp. 239-47.)

F. Mechanical

Illustrate the principal systems of heating that are in general use, citing the achievement of ideal comfort through the use of air-conditioning and regulation of proper humidity.

Explain that the average home has approximately 30 different electrical appliances. The electrical power is brought to the home by service entrance wires. Understanding the electrical system of the home begins with the basic terms used in home wiring: voltage, ampere, watt, kilowatt, circuit, conduit, electric current, resistance, and short circuit.

Discuss plumbing systems, supply lines carrying fresh water and pressure, and lines carrying waste to the disposal system by gravity drainage.

G. Design Factors

Discuss the design process. Explain that the major design activity occurs during the preparation of sketches and detail drawings. Point out that until the students become familiar with standard building material sizes and furniture requirements, a template may be used.

Display a complete set of residential drawings depicting the design process. The set should include sketches, working drawings, and the final presentation drawing. Point out that first sketches rarely produce the finished product.

Discuss the structural engineering required for a residence. Point out the implications for an intermediate building. Explain the importance of designing a structurally sound building.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Offset printing. Montgomery, Alabama: State Department of Education, Division of Vocational Education, 1977.

1.

Instructional Materials
Trade and Industrial Education
P.O. Box 2847
University, AL 35486

\$2.50

2. This material is:

- a. A competency based instructional program..... ☐
- b. An industrial education curriculum guide..... ☐
- c. An organized instructional program..... ☐
- d. A resource materials package..... ☒
- e. An art education curriculum guide..... ☐

3. Course outlines indicate:

- a. A job tasks..... ☐
- b. Unit content..... ☐

4. Objectives identified for:

- a. Specific job tasks..... ☐
- b. General learning outcomes..... ☐

5. Instructional material organized to promote:

- a. Skill development..... ☒
- b. Awareness to imagery and design..... ☐
- c. Job training..... ☒

6. Contents of this package include the following materials.

- a. Specific lesson plans..... ☐
- b. Pre tests..... ☐
- c. Post Tests..... ☒
- d. Student workbook..... ☒
- e. Instructor's manual..... ☒
- f. Equipment list..... ☐
- g. Slides..... ☐
- h. Audio tapes..... ☐
- i. Student learning packages..... ☐
- j..... ☐

7. Instructional materials are designed to encourage individual progress..... ☒

8. Materials are intended to be used at:

- a. Grade 8..... ☐
- b. Grade 9..... ☒
- c. Grade 10..... ☒
- d. Grade 11..... ☒
- e. Grade 12..... ☒
- f. Post secondary..... ☐

9. Number of hours per instructional module.....

10. Number of modules needed to complete a program of studies.....

11. For implementation of this curriculum material, strategies are outlined for:

- a. Management..... ☒
- b. Instruction..... ☒
- c. Evaluation..... ☒

12. Overview

Offset Printing is a study guide prepared to assist the student in developing independent study skills by progressing through a series of specific job sheets that include questions and references.

The study guide also contains a Daily Performance Chart which encourages the student to manage and coordinate their study routine. The performance chart indicates a four step process for completion of any task.

- 1. Observation
- 2. Helping to perform the job under supervision
- 3. Doing the job under supervision
- 4. Performing the job alone, without direct supervision

8. "Ideal photographic copy" normally should have a full range of tones which blend together smoothly. The photo should not appear "flat" and grayish, nor overly "contrasty"-with strong shadows and expanses of pure white. POF: 153

NO. 18 ANSWERS

SHOOT LINE COPY

1. Line photography is the copying on film of original camera copy which is composed entirely of dots, lines, and areas of a single color or tone--no continuous tones. POF: 123
2. Line photography is sometimes called simple "black-and-white photography" or "single-copy photography." POF: 123
3. The copy usually is positioned upside-down on the camera copyboard. POF: 123
4. The list is located on page 140 of POF.
5. Kodalith Ortho Type 3 Film (both .007" regular base and .0032" thin base). POF: 125
6. Process cameras used for offset photography are designed and equipped to render true images (at reductions, same size, and enlargements) of a flat surface, from corner to corner, over the entire copyboard. POF: 125
7. The most modest of these cameras costs from several thousands of dollars and upwards and since these cameras "must be marvels of precision", utmost care is essential. POF: 125
8. Most large process cameras are horizontally built. That is, the sliding copyboard is near one end on horizontal rails, the film holder is at the other end, and the lens can be adjusted between the two ends on the rails. The horizontal process camera is much like a very large view camera used to take portraits. POF: 125
9. Vertical process cameras are popular in the intermediate size ranges. This type stands the traditional horizontal camera on end, that is, the rails are vertical, the copyboard is low near the floor, and the film holder is mounted firmly so the operator can look down at the ground glass image. POF: 126
10. The advantage of vertical cameras is that they take very little floor area and are convenient to use, as walking and waste motions are minimized. POF: 126

SHOOT LINE COPY

POF: 123-127,
140-141

1. Define line photography.
2. What is another name for line photography?
3. In what manner is the copy positioned on the camera copyboard?
4. List the procedural steps in shooting line copy.
5. Give the trade name of an example of film which would be suitable for most line photography.
6. For what are process cameras used for offset photography designed?
7. Why is the utmost care essential in the operation and handling of the process camera?
8. Describe the horizontal process camera.
9. Describe the vertical process camera.
10. What is the greatest advantage of the vertical process camera?

NO. 18 TEST

SHOOT LINE COPY

FILL IN THE BLANK

1. Usually, line copy is prepared with black ink on white paper. For this reason it is called _____ and _____ photography or _____ photography.
2. An invisible image which will become visible during the developing of the film negative is a _____ image.
3. Most graphic arts film for line work is a relatively thin sheet of flexible-base _____.
4. The two basic ways of building process cameras is _____ and _____.
5. The lens, bellows, camera back, copyboard, and lights are the basic parts of a _____ camera.
6. The most delicate, critical, and expensive part of a camera is the _____.

TRUE - FALSE

- T F 7. Most large process cameras are the horizontal type.
- T F 8. Gelatin film and gelatin cemented between sheets of optical glass is used for filters.
- T F 9. The gallery camera is located inside the darkroom.
- T F 10. When filters are used exposure time must be lengthened.

TEST ANSWERS - NO. 18

- | | |
|------------------------------------|------------|
| 1. black and white or single color | 5. process |
| 2. latent | 6. lens |
| 3. plastic | 7. True |
| 4. horizontally and vertically | 8. True |
| | 9. False |
| | 10. True |

TEST ANSWERS - NO. 19

- | | |
|--------------|------------|
| 1. optical | 6. white |
| 2. reflected | 7. chamois |
| 3. light | 8. False |
| 4. highlight | 9. True |
| 5. shadow | 10. True |

TEST ANSWERS - NO. 20

- | | |
|-----------------|-----------|
| 1. filter | 6. shadow |
| 2. lens | 7. 30, 40 |
| 3. densitometer | 8. True |
| 4. 90 | 9. False |
| 5. increase | 10. True |

TEST ANSWERS - NO. 21

- | | |
|------------|-----------|
| 1. tone | 5. black |
| 2. moire | 6. drying |
| 3. duotone | 7. True |
| 4. 133 | 8. False |

TEST ANSWERS - NO. 22

- | | |
|--------------------|-----------------------|
| 1. one-thousandth | 6. hue, value, chroma |
| 2. flat, process | 7. white, black |
| 3. electromagnetic | 8. Kelvin |
| 4. beam | 9. True |
| 5. 39.4 | 10. True |

TEST ANSWERS - NO. 23

- | | |
|----------------------------|--------------|
| 1. yellow, magenta, cyan | 5. short run |
| 2. direct, indirect | 6. False |
| 3. reflection, transparent | 7. True |
| 4. photographic masking | 8. True |

TEST ANSWERS - NO. 24

- | | |
|------------|-------------|
| 1. colored | 6. duotones |
| 2. black | 7. black |
| 3. green | 8. True |
| 4. blue | 9. True |
| 5. lacquer | 10. False |

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Pauls, V., Sullivan, V., & Blough, A. Photography.
 Topeka, Kansas: Kansas State Department of Education,
 1972.

Kansas Vocational Curriculum and Research Center
 Room 115 Willard Hall
 Pittsburg State University
 Pittsburg, KS 66762

\$6.00

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☒
 - b. Pre tests. ☐
 - c. Post Tests. ☒
 - d. Student workbook ☐
 - e. Instructor's manual. ☒
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☒
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☒
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. 120
10. Number of modules needed to complete a program of studies. 1
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☒
 - b. Instruction ☒
 - c. Evaluation ☒
12. Overview

A well organized introduction to the techniques of photography. The package includes unit outlines and lesson plans that indicate the content to be covered in each section. Although reference is made to image development in the preface, the concept is not dealt with in a formal method within the body of the guide. Hopefully, through instruction in the technical aspects, the instructor will encourage discussion on the impact of photography on our communication needs. This program would provide a valuable source of material for any instructor engaged in photographic instruction.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Photography curriculum, vocational education. Cottage Grove, Minnesota: South Washington County Schools, 1978.

1. Park Senior High School
South Washington County Schools
District 833
Cottage Grove, MN 55016

2. This material is:
- a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
- a. A job tasks. ☐
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- a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
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 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

This program is open to any student in grades ten through twelve and is designed as an introduction to the theory and practice of photography. A general course prepared to assist students in becoming aware of the potential of the photographic image as well as provide an insight into the career potential of photography. The outline covers the basic photographic principles of history, camera types, lens, exposure control, etc.

3. Principles of light	<u>Student Assignment:</u> Read Chapter 3 in textbook. <u>Student Activity:</u> Complete assignment 2 in workbook.	2 hours	holding camera positions, viewfinders, light readings, focusing, rewinding film.
4. Lenses	<u>Student Assignment:</u> Read Chapter 4 in textbook. <u>Student Activity:</u> Complete assignment 3 in workbook. <u>Demonstration:</u> Types of lenses	2 hours	
5. Exposure Controls	<u>Student Assignment:</u> Read Chapter 5 in textbook. <u>Student Activity:</u> Complete assignment 4 in workbook. <u>Lecture:</u> F stop system, speeds, depth of field, parts of a camera. <u>Demonstration:</u> Observing speeds and f stops. <u>Slide Series:</u> "Photography-How It Works".	4 hours	
6. Camera Handling	<u>Student Assignment:</u> Read Chapter 6 in textbook. <u>Student Activity:</u> Complete assignment 5 in workbook, take sample pictures. <u>Demonstration:</u> Loading film,	5 hours	
7. Film Processing	<u>Student Assignment:</u> Read Chapter 8 in textbook. <u>Student Activity:</u> Develop a roll of film, complete assignment 7 in workbook. <u>Demonstration:</u> Loading film in a tank, processing a roll of film. <u>Lecture:</u> Steps in processing film, theory of development, chemical structure, characteristics of a good negative.	4 hours	
8. Film	<u>Student Assignment:</u> Read Chapter 10 in textbook. <u>Student Activity:</u> Complete assignment 6 in workbook. <u>Lecture:</u> ASA, grain, contrast <u>Film:</u> "The Story Behind Film"	3 hours	
9. Contact and Projection Printing	<u>Student Assignment:</u> Read Chapter 10 in textbook. <u>Student Activity:</u> Complete assignment 9 in workbook, make contact	15 hours	

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Pollock, S. A curriculum guide for production orientated photo offset. Springfield, Illinois: Illinois Office of Education, 1979.

Steve Pollock
Johnsburg High School
2002 West Kingwood Road
McHenry, IL 60050

N/C

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
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 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
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 - a. Grade 8 ☐
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. 120
10. Number of modules needed to complete a program of studies. 2
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☒
 - b. Instruction ☒
 - c. Evaluation ☒
12. Overview

A very specific task orientated curriculum guide. Pollock has conducted research within the industry that indicated the tasks necessary for a student to learn, which would provide definite entry level skills. Although this program is well researched and documented, there is no reference to the impact of graphic communications on our society. The package is primarily concerned with identification of specific tasks and their subsequent mastery. This package would provide valuable information for any graphic arts research project, in the vocational-technical area.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Printing an instructor's manual. Columbus, Ohio: Ohio State Department of Education, Trade and Industrial Education Service, Vocational Education Division, 1974.

Instructional Materials Laboratory
Trade and Industrial Education
Ohio State University
1885 Neil Avenue
Columbus, Ohio

\$3.25

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☒
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☒
 - e. Instructor's manual. ☒
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☒
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

The instructor's manual is exactly the same as the student manual, except answers have been provided for the questions.

COPY CAMERA WORK

NAME _____

DATE _____

2. Nomenclature of the Process Camera.

Purpose of Assignment: To identify the parts of the process camera.

References: Cogoli, John E., "Photo-Offset Fundamentals", Line Photography.

Related Information: A typical process camera consists of:

1. Frame and Bed
 - a. Copyboard
 - (1) Glass
 - (2) Copyholder (opaque or transparent)
 - b. Lights
 - c. Lensboard
 - (1) Lenses
 - (2) Iris Diaphragm
 - (3) Shutter
 - d. Cameraback
 - (1) Filmholder
 - (2) Ground Glass
 - (3) Halftone Screen Device
2. Controls
 - a. Timer
 - b. Aperture Setting for Diaphragm
 - c. Copyboard Extension
 - d. Bellows Extension
 - e. Vacuum Pump

Questions: (Answer the following as briefly as possible.)

1. Locate each of the parts of your process camera.

Answers:

1. Check with instructor.

2. What is the largest piece of film your camera will hold?
2. Check with instructor.

3. Does your camera have a shutter?

3. Check with instructor.

4. Does the illumination come from photoflood bulbs or arcs?

4. Check with instructor.

5. What is the purpose of the bellows?

5. To form a light-tight tunnel from the lens to the film regardless of the movement of the lens.

COPY CAMERA WORK

NAME _____

DATE _____

3. Principles of the Process Camera.

a. Light.

Purpose of Assignment: To present some basic terms concerning light.

References: Jaffe, Edwin, "The Science of Physics in Lithography", GATF.
World Book Encyclopedia, Vol. II.

Related Information: The camera uses controlled light to record a reflected image upon film. The image must be reproduced upon the film in a precise, definite size which may or may not be the same size as the original on the copy.

To successfully understand the control of light, we must understand a few basic terms:

1. The amount of light that strikes a surface is called the "illumination".
2. The brightness of the light source is measured in "candlepower".
3. The intensity of the light on an illuminated surface is measured in "foot-candles".
4. The amount of light that falls on an object depends upon the candlepower of the original source and the distance of that object from the source of light.
5. The amount of light of a given source falling on an object varies inversely as the square of the distance from the source. This is the Law of Inverse Squares and allows us to calculate the reduced intensity of the illumination as the distance from the source to the object, e.g., copyboard to film, changes.

$$\text{Amt. of Illumination (in Ft. Candles)} = \frac{\text{Candlepower of Source}}{\text{Sq. of Distance from Object to Source}}$$

6. Light is reflected from a smooth surface at an angle equal to that at which it arrived at that surface. This is called the "angle of reflection". The "angle of incidence" is the angle between the ray of light and a line drawn perpendicular to the surface.

Incident Ray Normal Reflected Ray

Angle of Incidence

Angle of Reflection

Surface

7. By using the principle of refraction, lenses can be ground which will "bend" light rays so that they will make objects appear to be larger or smaller.

Questions: (Answer the following as briefly as possible.)

1. Would the photoflood bulbs or arcs on the camera be considered the light source for the copyboard?

Answers:

1. Yes.

2. Would the copyboard be considered the light source for the film?

2. Yes.

3. Would the intensity of the light reaching the film be reduced by moving the copyboard away from the lens?

3. Yes.

4. Would the intensity of the light reaching the film be decreased by moving the lens away from the cameraback?

4. Yes.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Printing, a learner's manual. Columbus, Ohio: Ohio State Department of Education, Trade and Industrial Education Service, Vocational Education Division, 1974.

Instructional Materials Laboratory
Trade and Industrial Education
Ohio State University
1885 Neil Avenue
Columbus, Ohio 43210

\$3.75

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☒
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook ☒
 - e. Instructor's manual. ☒
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☐
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☐
 - b. Instruction ☐
 - c. Evaluation ☐
12. Overview ☐

Printing is a study manual, or work book designed to assist the student progress through specific tasks outlined by the instructor. Each page of the work book identifies a particular subject, and provides the purpose, references, related information (background material) and a list of questions.

This study manual provides an adjunct to traditional instructional techniques and could be adapted for use in many different graphic arts programs. The organization and presentation of units is dependent on the instructor, not the curriculum guide.

COPY CAMERA WORK

NAME _____

DATE _____

2. Nomenclature of the Process Camera.

Purpose of Assignment: To identify the parts of the process camera.

References: Cogoli, John E., "Photo-Offset Fundamentals", Line Photography.

Related Information: A typical process camera consists of:

1. Frame and Bed
 - a. Copyboard
 - (1) Glass
 - (2) Copyholder (opaque or transparent)
 - b. Lights
 - c. Lensboard
 - (1) Lenses
 - (2) Iris Diaphragm
 - (3) Shutter
 - d. Cameraback
 - (1) Filmholder
 - (2) Ground Glass
 - (3) Halftone Screen Device
2. Controls
 - a. Timer
 - b. Aperture Setting for Diaphragm
 - c. Copyboard Extension
 - d. Bellows Extension
 - e. Vacuum Pump

Questions: (Answer the following as briefly as possible.)

1. Locate each of the parts of your process camera.
2. What is the largest piece of film your camera will hold?
3. Does your camera have a shutter?
4. Does the illumination come from photoflood bulbs or arcs?
5. What is the purpose of the bellows?

COPY CAMERA WORK

NAME _____

DATE _____

3. Principles of the Process Camera.

a. Light.

Purpose of Assignment: To present some basic terms concerning light.

References: Jaffe, Edwin, "The Science of Physics in Lithography", GATF. World Book Encyclopedia, Vol. II.

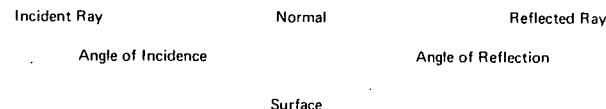
Related Information: The camera uses controlled light to record a reflected image upon film. The image must be reproduced upon the film in a precise, definite size which may or may not be the same size as the original on the copy.

To successfully understand the control of light, we must understand a few basic terms:

1. The amount of light that strikes a surface is called the "illumination".
2. The brightness of the light source is measured in "candlepower".
3. The intensity of the light on an illuminated surface is measured in "foot-candles".
4. The amount of light that falls on an object depends upon the candlepower of the original source and the distance of that object from the source of light.
5. The amount of light of a given source falling on an object varies inversely as the square of the distance from the source. This is the Law of Inverse Squares and allows us to calculate the reduced intensity of the illumination as the distance from the source to the object, e.g., copyboard to film, changes.

$$\text{Amt. of Illumination (in Ft. Candles)} = \frac{\text{Candlepower of Source}}{\text{Sq. of Distance from Object to Source}}$$

6. Light is reflected from a smooth surface at an angle equal to that at which it arrived at that surface. This is called the "angle of reflection". The "angle of incidence" is the angle between the ray of light and a line drawn perpendicular to the surface.



7. By using the principle of refraction, lenses can be ground which will "bend" light rays so that they will make objects appear to be larger or smaller.

Questions: (Answer the following as briefly as possible.)

1. Would the photoflood bulbs or arcs on the camera be considered the light source for the copyboard?
2. Would the copyboard be considered the light source for the film?
3. Would the intensity of the light reaching the film be reduced by moving the copyboard away from the lens?
4. Would the intensity of the light reaching the film be decreased by moving the lens away from the cameraback?

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

1. Reynolds, M. Graphic and communications media cluster guide. Lansing, Michigan: Michigan Department of Education, 1974.

Michigan Department of Education
520 Michigan National Tower
Lansing, MI 48909

N/C

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☒
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☒
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☐
 - e. Grade 12. ☐
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☒
 - c. Evaluation. ☐
12. Overview

Many of the graphic arts curriculum guides are designed to be integrated into a program with average and above average students. The Michigan Department of Education-Graphics and Communications Cluster Guide was prepared to help and "to serve students with unique educational problems" (Reynolds, 1974, p. 2). The author, in conjunction with the U.S. Department of Labour's job task inventory has identified six job areas for analysis. They are: Book-binding, Screen Printing, Offset Lithography, Letterpress, Commercial Photography, Drafting.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

These six areas all have overlapping skills and techniques. The commonality of the job tasks are identified and materials were prepared to introduce the students to this relationship.

This program, although primarily designed as a cooperative tool for instructing vocational/special education students, has certain ramifications that are appropriate to curriculum design at any level. The relationship of specific skills to subject areas overlap in many technical areas, however present curriculum design, as evident in this province tend to negate this interdependency. The Michigan guide emphasizes the importance of related skills and builds a program that can be designed to take advantage of this crossover. Hopefully curriculum designers as well as individual instructors will accept the subject to subject interdependency and coordinate programs that allow the student to become fully aware of the significance of this interrelationship.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Schofield, J. Commercial art. East Brunswick, New Jersey: Middlesex County School Board, 1975.

Vocational-Technical Curriculum Laboratory
Rutgers - The State University
Building 4103 - Kilmer Campus
New Brunswick, NJ 08903

\$5.00

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☐
 - c. An organized instructional program. ☒
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☒
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4. Objectives identified for:
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 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☒
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☐
 - c. Grade 10. ☐
 - d. Grade 11. ☐
 - e. Grade 12. ☐
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☐
 - b. Instruction. ☐
 - c. Evaluation. ☐
12. Overview

This package describes a comprehensive four year high school program in Commercial Art. The student enrolled in this program will complete,

"four years of instruction with a minimum of 180 school days per year. Three clock hours per day are devoted to shop instruction and three clock hours to academic and related subject instruction."

The Middlesex Vocational Commercial Art program is designed to prepare a student with specific technical skills which would allow the student to immediately enter the job market.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

This program is not intended to be a part of a comprehensive high school program, rather a highly specialized vocational course of studies. However, many of the topics and units covered could be integrated into a graphic communications program without any difficulty.

In relation to the developing nature of vocational training in the province of British Columbia, programs similar to this could provide technical as well as philosophical background on the direction and eventual success of intensive vocational programming.

COURSE OF STUDY OUTLINE

Commercial Art

Shop Practice

Exploratory 9th Year

Objectives:

Upon completion of the Exploratory Cycle Program in the Commercial Art shop and given the necessary tools, materials, facilities and time, the student will be able to:

1. Verbally name the Four Basic Shapes; state that they are "forms" and that form has three dimensions: height, width and depth.
2. State why the Four Basic Shapes are the "foundation" of drawing.
3. Give the reason for having a "Morgue" - or Clip File.
4. Use a T-square for aligning paper on the drawing board and, with a triangle, draw horizontal and vertical lines.
5. Sharpen either a flat-lead sketching pencil or a round-lead drawing pencil; the first to be used for sketching and the second for drawing thin accurate lines.
6. Make and use a Transfer Sheet.
7. Make and use a Pickup.
8. Use rubber cement for a simple pasteup.

UNIT I. FOUNDATION OF DRAWING

- A. Four Basic Shapes
- B. Modified Basic Shapes
- C. Combined and Modified Basic Shapes

UNIT II RUBBER CEMENT AND RUBBER CEMENT THINNER

- A. Making and Using a Pickup
- B. Making and Using a Transfer Sheet
- C. Dry-Mounting Method Pasteup
- D. Wet-Mounting Method Pasteup

UNIT III INTRODUCTION TO TOOLS AND EQUIPMENT

- A. T Square and Triangle
- B. Scales

1. English and Metric

COURSE OF STUDY OUTLINE

Commercial Art

Shop Practice

9th Grade

Objectives:

Upon completion of the second half of the 9th grade Commercial Art Course the student will be able to:

1. Demonstrate his awareness of the need for safe practices in an art studio or art department by listing, at least eight potential accident-producing situations on the paper provided.
2. Safely use a single-edge razor blade and metal ruler to cut artpaper, having been supplied with paper and tools.
3. Discriminate good-from-poor quality of ruled lines by encircling any evidence of poor quality that appears in any of the lines drawn on the sheet supplied him.
4. Lay out requested size of working area and shapes in pencil and then ink in the outlines of the shapes, having been provided with written instructions, a T-square, triangle, drawing pencil, sanding pad, rule pen, India ink and a 12" scale.
5. Demonstrate how to use compass with lead and with pen attachment by drawing a circle, the line width of which is 3/16" and the diameter of which is 3-1/2". He will also demonstrate how to use a red sable handbrush and India ink to fill in the space between the outer and inner edges of the 3/16" line width.
6. Demonstrate his ability to use French curves by drawing a compound curve, first in pencil, and then by going over the same curve using ink or temperas in a rule pen. Aforementioned tools, ink or temperas and paper will have been supplied him.
7. Use the red sable handbrush, water jar, well/slant, temperas and artboard given him to demonstrate his knowledge of the following scales: gray, tint, shade or tone by producing a 9-step version of any one of the four.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Schofield, J. H. Commercial art, study and teaching guide
(Vol. #1). Trenton, New Jersey: State of New Jersey
1. Department of Education, Division of Vocational Education,
1976.

Vocational-Technical Curriculum Laboratory
Rutgers - The State University
Building 4103, Kilmer Campus
New Brunswick, NJ 08903

\$5.00

2. This material is:
- a. A competency based instructional program..... ☒
 - b. An industrial education curriculum guide..... ☒
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 - d. A resource materials package..... ☐
 - e. An art education curriculum guide..... ☐
3. Course outlines indicate:
- a. A job tasks..... ☒
 - b. Unit content..... ☐
4. Objectives identified for:
- a. Specific job tasks..... ☒
 - b. General learning outcomes..... ☐
5. Instructional material organized to promote:
- a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☒
 - c. Job training..... ☒
6. Contents of this package include the following materials:
- a. Specific lesson plans..... ☒
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☒
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☒
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
- a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module..... 170
10. Number of modules needed to complete a program of studies..... 4
11. For implementation of this curriculum material, strategies are outlined for:
- a. Management..... ☒
 - b. Instruction..... ☒
 - c. Evaluation..... ☒
12. Overview

This is a course of studies intended to be implemented over a period of four years. The guide is just that - a guide. It can be easily expanded, rearranged or changed at any point. It is designed not only to teach the 'scales' i.e. commercial art skills, but it also provides for 'playing some music', working out complete jobs which require not only the application of principles, but also require some imagination. The blend between technical competence and visual expression, is important in the construction of any program in visual education, and this course of studies attempts to unify these concepts. The study guide is designed to be flexible enough to allow the instructor to manipulate and interpret specific units that will enhance the students' ability to blend skill and vision.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The study guide provides instructional materials, overheads, lesson plans and student assignment sheets that can be used depending on the intent of the particular program or instructor.

However the overall emphasis of the package is to provide the student with technical skills which can be applied to enter into the field or to articulate with a post secondary institution.

UNIT I – FOUNDATION OF DRAWING

LESSON 1 – Four Basic Shapes

OBJECTIVES:

Students will be able to –

1. Name the 4 Basic Shapes.
2. State that they are 3-dimensional forms.
3. Tell why drawing is an illusion.
4. Produce one 2-point perspective sketch each of a cube and a cylinder.
- * 5. Safely sharpen a sketching pencil using a single-edge razor blade.

* *Suggestion:* Instruct 2 or 3 students at a time in the safe use of razor blade for sharpening sketching pencil. Show them how, watch them do it, and advise them to report any accident to instructor immediately.

INTRODUCTION:

1. Project overhead transparencies of Cube, Cylinder, Cone, and Sphere.

PROCEDURE:

1. Show and compare actual shapes with transparencies.
2. Draw conclusions:
 - a. drawings are 2-dimensional
 - b. actual shapes are 3-dimensional forms
 - c. drawings are "illusions"
3. Drawings (or illusions) are created through use of perspective.
4. Demonstrate 2-point perspective by pointing out a storage cabinet in shop where student can see the front and one side, but not the top – talk about VP's, eye-level, etc.
5. Have students hold a small wooden cube at arm's length; first, at eye-level, then above and below eye-level.

APPLICATION:

1. Students will make one pencil sketch each of cube and cylinder supplied them. This drawing is to meet Criteria standards.
2. Label (write) appropriate drawing:
Cube – one of four basic shapes – or forms
Cylinder – one of four basic shapes – or forms

CRITERIA:

1. Cube drawing must show top and two sides, vertical edges must not "lean" excessively, and must show evidence of perspective.

UNIT I – FOUNDATION OF DRAWING

LESSON 3 – Combined and Modified Basic Shapes

OBJECTIVES:

Students will be able to –

1. Produce one drawing each of front and side view of human head as examples of combined/modified basic shapes (sphere and cylinder).
2. Show evidence of his knowledge of the location features of human head by dividing front and side views properly and locating these features at proper points of division.
3. State the result of unsafe handling of razor blades.

INTRODUCTION:

1. Review Lesson 2–Q – Define "Modify".
2. Using styrofoam wig manikin (or window display head-neck-shoulders manikin) show combined/modified basic shapes. Head = modified sphere; Neck = modified cylinder.

PRESENTATION:

(See illustration of Suggested Teaching Aid on next page.)

1. Using blank sheet on easel flip chart, show how front view of human head can be divided for features of face: vertical center-line, location of eyes, nose, lips, and ear.
2. Turning head to side view simply means carrying divisions of facial features around head to side for location.
3. Summary:
 - a. the 4 Basic Shapes are forms
 - b. forms have 3 dimensions – they occupy space
 - c. ANYTHING drawn is based on these shapes

APPLICATION:

1. Students make one pencil sketch each of the front and side views of human head (man or woman).
2. Label each drawing: "Modified and Combined Basic Shapes – (Human head) Sphere and Cylinder."

CRITERIA:

1. Construction lines should be light and evident on both front and side views.
2. Locations of facial features should be in reasonably correct locations of both drawings.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Talbot, W., & Ballam, O. et al. An integrated secondary-post secondary curriculum guide for graphic arts. Salt Lake City, Utah: Utah State Board of Education, 1977.

Utah State Board of Education
250 E. 5th South Street
Salt Lake City, UT 84111

N/C

2. This material is:
 - a. A competency based instructional program..... ☒
 - b. An industrial education curriculum guide..... ☐
 - c. An organized instructional program..... ☐
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 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☐
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☒
9. Number of hours per instructional module..... ☐
10. Number of modules needed to complete a program of studies..... ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☐
 - b. Instruction..... ☒
 - c. Evaluation..... ☐
12. Overview

This package is a guide for graphic arts education that outlines areas of study in behavioural terms. The intent of the program is to provide a basic core of material that will be covered throughout the state at both secondary and post secondary levels. The program is very flexible, allowing each instructor to develop and expand his program depending on equipment and local instructional needs. However the core material provides a base for integration with post secondary institutions which will allow "the student to begin and/or complete the course in high school or may begin or continue the program in a post-secondary institution without repeating those skill tasks successfully mastered" (Talbot, 1977, p.i).

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

The Utah program would provide valuable resource material for educators preparing articulated materials for this province. Post secondary articulation can, in many subject areas, be accomplished. But for a program to be successfully articulated the schools, industry and post secondary institutions must be willing to cooperate and share reasonable expectations. The Integrated Secondary Post-Secondary Graphic Arts Guide from Utah, is an example where the three areas of concern have been able to cooperate, and produce a document that can provide the continuity necessary to encourage interschool articulation.

UNIT 5
REPRODUCTION PHOTOGRAPHY

Purpose or Unit Objective:

To teach a student how to use process darkroom facilities, equipment and procedures properly to prepare photographic materials ready for reproduction.

Topical Outline:

I. Process Darkroom

Behavioral Objective: Each student will be able to identify and explain the uses of the process darkroom facilities and areas to the satisfaction of the instructor.

- A. Safety
- B. Wet and dry areas
- C. Chemicals
- D. Equipment
- E. Contact area
- F. Film drying area
- G. Lighting
- H. Layout of darkroom
- I. Temperature control
- J. Troubleshooting
- K. Housekeeping

II. Process Camera

Behavioral Objective: Each student will be able to describe different types of process cameras, identify different parts and functions of process cameras, and demonstrate care and operation of process cameras to the satisfaction of the instructor.

- A. Types of process cameras
- B. Parts and functions
- C. Care and operation
- D. Lens

III. Films and Papers

Behavioral Objective: Each student will be able to identify and describe the uses of various films and papers used in reproduction photography to the satisfaction of the instructor.

- A. Parts in cross section
- B. Types and uses
- C. Handling, storage and care
- D. History of development
- E. Manufacturing

IV. Line Photography

Behavioral Objective: Each student will be able to properly prepare line photography to the satisfaction of the instructor.

- A. Types of copy
- B. Handling of film
- C. Developing of film
- D. Line photography exposure calibration
- E. Treating of problem copy
- F. Troubleshooting

V. Contact Printing

Behavioral Objective: Each student will be able to properly prepare contact printing to the satisfaction of the instructor.

- A. Preparation of contact area
- B. Exposure calibration

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Troth, C. I know - a vocabulary game for the printing trade. Trenton, New Jersey: New Jersey Department of Education, Division of Vocational Education, 1976.

Vocational-Technical Curriculum Laboratory
Rutgers - The State University
Building 4103, Kilmer Campus
New Brunswick, NJ 08903

\$11.50

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☐
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☐
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☐
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☐
 - b. Pre tests. ☐
 - c. Post Tests. ☐
 - d. Student workbook. ☒
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☒
 - b. Instruction. ☒
 - c. Evaluation. ☒
12. Overview

In any area of instruction, materials that help motivate students are important adjuncts to the instructional process. This game developed by Rutgers University Vocational/ Technical Curriculum Laboratory is no exception.

The learning tool follows the general form of a bingo game. Thirty-three different word sheets are furnished; there are seventy-five definition cards for the instructor to use and a master sheet. (Troth, 1976, p.1)

This particular learning device would be appropriate for encouraging the development of correct usage of terms commonly used in the printing trade.

PRINTING

QUAD	COPYRIGHT	PLATEN	TRIPPLICATE	BULK
MATRIX	ETCH	SERIF	REAM	SETOFF
MAKEUP	MEASURE	I KNOW	CYLINDER	SCUMMING
FOUNTAIN	COPY	LEADING	LITHOGRAPHY	BLOW UP
HALFTONE	COMPOSING STICK	PROOF	OFFSET	SWATCH

BLANKET — Rubber or synthetic-coated paper used in offset printing; it transfers the image from the plate to the paper.

CALIPERS — A measuring instrument with two legs or jaws that can be adjusted to measure thicknesses, diameters, and the distance between surfaces.

Print

BLOW UP — To enlarge an illustration or a photograph.

Print

CAPTION — A brief description or explanation below a pictorial illustration.

Print

BULK — Thickness of paper; also the thickness of the total number of pages in a publication.

Print

CHARACTER — Any single unit of type, such as a letter, number, punctuation mark, or other graphic symbol.

Print

BURNISH — To make shiny or lustrous, especially by rubbing.

Print

CHASE — A rectangular steel or iron frame into which letterpress material is locked for printing.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Vermont guide to curriculum content for industrial arts.

1. Montpelier, Vermont: Vermont Department of Education,
1979.

Vermont Department of Education
120 State Street
Montpelier, VT 05602

N/C

2. This material is:
 - a. A competency based instructional program. ☐
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
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 - a. Skill development. ☐
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 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☒
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 - c. Post Tests. ☐
 - d. Student workbook ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides ☐
 - h. Audio tapes ☐
 - i. Student learning packages. ☐
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8 ☒
 - b. Grade 9 ☒
 - c. Grade 10 ☒
 - d. Grade 11 ☒
 - e. Grade 12 ☒
 - f. Post secondary ☐
9. Number of hours per instructional module. ☐
10. Number of modules needed to complete a program of studies. ☐
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management ☒
 - b. Instruction ☒
 - c. Evaluation ☒
12. Overview

This guide,

"is an attempt to provide recommendations to assist industrial arts teachers in guiding students through learning experiences". (Vermont, 1979, preface)

The guide provides basic outlines of instructional units in drafting, electricity, graphics, metal, power, and woodwork.

Industrial arts programs in Vermont are based on philosophical statements that encourage the development of self worth and awareness, to the student as well as our technological society. Instruction in the industrial arts is preliminary to vocational and career preparation. However close these two areas are, the Vermont guide makes a strong distinction between them. The student needs the instructional time to experience the different areas of industrial instruction before entering a specific vocation, and this program allows time for the student to pursue this technological exploration.

In conjunction with industrial exploration, the student will be instructed in specific skills that are applicable to the job market. Therefore this guide has established a particular format for unit presentation. The format: objective, teacher task, student learning activity, resources, and basic competencies encourage technical skill development as well as promote an awareness to the relationship of technology and our industrial culture.

CURRICULUM - GRAPHIC TECHNOLOGY (CONT'D)

OBJECTIVE	TASK (TEACHER)	LEARNING ACTIVITY (STUDENT)	RESOURCE	BASIC COMP.
<u>LINE COPY</u> Given instruction student will be able to identify and produce a line copy.	Lesson and demonstration on making a line negative.	Mix chemicals, set up camera for line photography, expose a line negative, use a grey scale.	Graphic Arts Text, Job Sheet	Math 10 Listening 1
<u>HALF TONE</u> Provided with instruction the student will be able to identify a half tone.	Lesson and demonstration on making a half tone.	Reading assignment in text, identify half tone, explain the purpose of a contact film.	Text, Job Sheet	Reading 4 Speaking 2
<u>PLATE MAKER</u> Provided with instruction the student will explain the function of a plate maker and be able to describe the basic principles of operation.	Lesson and demonstration on equipment for exposing presensitized plates.	Expose an offset plate using a prepared flat, process a presensitized plate, set up offset press and run copies.	Text, Job Sheet	Listening 1
<u>DIRECT IMAGE MASTER</u> Student will be able to prepare and identify a direct image master.	Explain a direct image master using samples.	Prepare a direct image master, set up press for single color run.	Text, Job Sheet	Listening 1

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OBJECTIVE	TASK (TEACHER)	LEARNING ACTIVITY (STUDENT)	RESOURCE	BASIC COMP.
<u>PROCESS CAMERA (cont'd)</u> Provided with instruction the student will understand the principles of operation of the process camera.	Explain the basic principles of operation of the production process camera and demonstrate the following: diaphragm (F-stops), enlargements, reduction, timer.	Read unit in text on process camera, adjust and identify F-stops, set camera up for enlargement, and reduction, written evaluation, visual aids.	Comprehensive Graphic Arts	Reading 4 Listening 1 Writing 4
Students will be able to identify the kinds of film and the basic parts of a film.	Present a lesson on film, structure, kinds of film, handling film.	Text (reading and research of film), observe pieces of film, know the two main kinds of film.	Comprehensive Graphic Arts, Visual Aids, Library Books.	Reading 4 Listening 1
Provided with instruction the student will be able to identify a positive from a negative.	Explain how to identify a positive from a negative.	Visual aids, examine identify samples of negatives and positives, when to use a positive and a negative.		Speaking 2 Reasoning 4
Provided with instruction the student will be able to identify the solutions for processing film.	Explain processing of film and identify the solution.	Know dark room arrangements of chemicals, mix processing chemicals, orally identify chemicals.		Listening 1 Math 10 Speaking 1,2
<u>SCALE AND CROP PHOTOGRAPHS</u> Provided with instruction the student will learn how to scale and crop photographs.	Lesson and demonstration on scaling and cropping photographs.	Crop photographs, use a proportion wheel to determine percentage of enlargement and reduction, explain an enlargement and reduction.	Text, Job Sheet	Speaking 1,2

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Visual communication-CBIE. Topeka, Kansas: Kansas State

1. Department of Education, 1974.

Kansas Vocational Curriculum & Research Center
Room 115, Willard Hall
Pittsburg State University
Pittsburg, Kansas 66762

\$6.00

2. This material is:
 - a. A competency based instructional program. ☒
 - b. An industrial education curriculum guide. ☒
 - c. An organized instructional program. ☐
 - d. A resource materials package. ☐
 - e. An art education curriculum guide. ☐
3. Course outlines indicate:
 - a. A job tasks. ☐
 - b. Unit content. ☒
4. Objectives identified for:
 - a. Specific job tasks. ☐
 - b. General learning outcomes. ☒
5. Instructional material organized to promote:
 - a. Skill development. ☒
 - b. Awareness to imagery and design. ☒
 - c. Job training. ☐
6. Contents of this package include the following materials.
 - a. Specific lesson plans. ☒
 - b. Pre tests. ☐
 - c. Post Tests. ☒
 - d. Student workbook. ☐
 - e. Instructor's manual. ☐
 - f. Equipment list. ☐
 - g. Slides. ☐
 - h. Audio tapes. ☐
 - i. Student learning packages. ☒
 - j. ☐
7. Instructional materials are designed to encourage individual progress. ☐
8. Materials are intended to be used at:
 - a. Grade 8. ☐
 - b. Grade 9. ☒
 - c. Grade 10. ☒
 - d. Grade 11. ☒
 - e. Grade 12. ☒
 - f. Post secondary. ☐
9. Number of hours per instructional module. 180
10. Number of modules needed to complete a program of studies. 1
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management. ☒
 - b. Instruction. ☒
 - c. Evaluation. ☒
12. Overview

The Kansas State Visual Communication program is an attempt to unify three industrial education subjects into one area. The integration of photography, printing, and drafting resulted in a package titled "Visual Communication".

The author of the guide maintains that in today's industrial-technological society, the integration of these concepts is a significant step towards a more aware population.

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Visual Communications is the process of transmitting ideas, thoughts, or concepts from one person to another through a stimulus perceived by the sense of sight. Many disciplines are involved in teaching about communication. The visual communication phase of Industrial Education is not intended to assume the role of these disciplines. Rather, it is intended to be a study of the technology of visual communications with emphasis on a general model for developing and producing communications in a number of different media systems. (CBIE, 1974, p.iv)

This program was designed to integrate technical communication skills into one course of study, an intent similar to the VICOED program developed by Schwalm at Western Washington State University. As a contributor to the development of this program he has influenced the preparation of a specific lesson by lesson course outline.

This course of studies is unusual because it does attempt this integration and blend of communication theory with the practical application of graphic arts skills. Hopefully this program will become a valuable resource for curriculum development in the future, for its attempt at unification can be significant in the development of career education programs, not only in visual communications but in other technological fields as well.

However, there is another reason for developing such a course (Visual Communications) the philosophy of career education, including industrial education is predicated upon the idea of exploratory experiences with careers which progress from broad to narrow as the child continues through school. (CBIE, 1974, p.iv)

ACTIVITY 1 FOR LESSON 37
(Teacher Guidelines)

OFFSET PRINTING

MEMO PAD

Student Learning Objectives

Learn the principles of offset printing including:

- a. producing an image carrier
- b. transfer of the image
- c. operating the offset press safely
- d. designing the communicative material
- e. working effectively producing communication material
- f. padding, binding, and trimming communication material for distribution

Each student will make a design layout for a memo pad which should communicate to the receiver at least three things about himself: (1) a line drawing depicting sender's occupation or character, (2) the sender's name, and (3) the sender's motto or slogan.

General Teacher Outline

I. Assembling the image carrier

- A. Prepare the copy for the copier.
 1. Select type sizes from the shop style sheet and use the Headliner or Selectric typewriter to compose the type for the pad.
 2. Complete the art work.
 3. Make a paste-up of the job.
 4. Make the offset plate on an electrostatic copier.
 5. Have design prepared so it will fit on an 8½" x 11" sheet of paper or a sheet half that size.

II. Transfer the image

- A. Prepare the offset press.
 1. Prepare the inking mechanism.
 2. Prepare the dampening system.
 3. Make initial inking and dampening.
 4. Install plate on the press and make feeder adjustments.
 5. Make register board adjustments.
 6. Adjust the impression.
 7. Make the trial impression.
 8. Adjust the margins.
 9. Adjust delivery.
- B. Run the job on the offset press.

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ACTIVITY 1 FOR LESSON 37
(Student Procedure)

HANDOUT SHEET FOR MEMO PAD ACTIVITY

NOTE TO THE

STUDENTS: Do each of the following items in the sequential order given and check to the left of the number when complete.

The operations involved in making a photographic offset plate for the memo pad and printing it on the offset press are technical processes.

1. Make a design layout for a memo pad using paper furnished by the instructor, size 5½" x 8½". The sheets of this pad should communicate at least three things to the receiver: (a) your name, (b) a line drawing depicting your occupation or character, and (c) your motto or slogan.
2. After receiving the instructor's OK on your design layout, select type sizes from the shop style sheet and, using the Headliner, compose the type for the pad.
3. Refer to your layout. Your layout is your guide for making the paste-up. Arrange the type according to the layout. Draw in the area where your picture will be placed.
4. When the layout is complete, present it to the instructor so it may be approved before it is sent to have an electrostatic plate made.
5. Familiarize yourself with the safety rules for operating the offset press.
6. Receive from your instructor thirteen (13) sheets of 17" x 22" paper. Using the math formula for paper cutting that was discussed by the instructor, determine how many sheets of 5½" x 8½" sheets can be cut from the larger 17" x 22" sheets. Set up the paper cutter with your group to cut the paper to size. Have the instructor OK the cut before you cut the paper to size.
7. Etch and mount the plate on the offset press and print 100 sheets for your memo pad.
8. Place several memo pads in the padding press. Place chipboard between each pad and on top and bottom. Jog the sheets together and tighten down the press. Apply the padding compound.
9. After the padding compound dries (one hour), trim the memo pad in the paper cutter.
10. Turn the memo pad in for a grade.

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GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

- Ward, W., Butler, D., & Butz, N, etal. Printing. Topeka,
 1. Kansas: Kansas State Department of Education, 1972.

Kansas Vocational Curriculum and Research Center
 Room 115, Willard Hall
 Pittsburg State University
 Pittsburg, KS 66762

\$6.00

2. This material is:
 - a. A competency based instructional program..... ☐
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 - c. An organized instructional program..... ☐
 - d. A resource materials package..... ☐
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3. Course outlines indicate:
 - a. A job tasks..... ☐
 - b. Unit content..... ☒
4. Objectives identified for:
 - a. Specific job tasks..... ☐
 - b. General learning outcomes..... ☒
5. Instructional material organized to promote:
 - a. Skill development..... ☒
 - b. Awareness to imagery and design..... ☒
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6. Contents of this package include the following materials.
 - a. Specific lesson plans..... ☒
 - b. Pre tests..... ☐
 - c. Post Tests..... ☐
 - d. Student workbook..... ☐
 - e. Instructor's manual..... ☐
 - f. Equipment list..... ☐
 - g. Slides..... ☐
 - h. Audio tapes..... ☐
 - i. Student learning packages..... ☐
 - j..... ☐
7. Instructional materials are designed to encourage individual progress..... ☐
8. Materials are intended to be used at:
 - a. Grade 8..... ☐
 - b. Grade 9..... ☒
 - c. Grade 10..... ☒
 - d. Grade 11..... ☒
 - e. Grade 12..... ☒
 - f. Post secondary..... ☐
9. Number of hours per instructional module..... 180
10. Number of modules needed to complete a program of studies.....
11. For implementation of this curriculum material, strategies are outlined for:
 - a. Management..... ☐
 - b. Instruction..... ☐
 - c. Evaluation..... ☐
12. Overview

This program provides an introduction to the printing industry. It is not designed to be used in a vocational program, rather to be incorporated into the general framework of Industrial Education.

This course in printing is designed to provide experiences which will help the student understand the techniques and appreciate the contribution of the printing industry to the industrially oriented society in which we live. (Ward, 1972, p.x)

GRAPHIC COMMUNICATIONS CURRICULUM MATERIALS REVIEW.

Although the program tends to encourage the exploration of printing technique, three objectives of the guide are significant.

1. Developing an awareness of the economic, historical, and social significance of printing.
2. Improving aesthetic appreciation and the integral techniques of planning and designing involved.
3. Developing pre-vocational skills relative to the production areas of the printing industry. (Ward, 1972, p.x)

The package also contains suggested shop layouts, equipment lists and standard reference lists.

UNIT C - ASSEMBLY

LESSON 3 - "Copy for Pasteup"

Learner Objectives:

At the completion of this lesson the student will be aware of the variety of materials available for use as camera copy on pasteups as evidenced by participation in class discussion.

At the completion of this lesson the student will recognize that pasteup copy can be divided into two categories - line copy and continuous tone copy, as evidenced by an objective test.

At the completion of this lesson the student will be able to pasteup or draw rule forms as evidenced by satisfactory completion of the learner activity.

Presentation Outline:

I. Copy for pasteup

- A. Line copy - good contrast required
 - 1. Black or red range for ortho film
 - 2. Matte finish preferable to glossy because of flare on camera
 - 3. Etch proofs (reproduction proofs) of hot type
 - 4. Strike-on copy (spray it with fixative to prevent smearing)
 - 5. Photographic composition (cut-in corrections difficult)
 - 6. Stats or PMT prints - screened prints of continuous tone copy
 - 7. Screens and patterns
 - 8. Pre-printed art
 - 9. India (or red) ink
 - 10. Rules and borders on pressure-sensitive tape
 - 11. Amberlith and Rubylith
 - 12. Bourges materials
- B. Continuous tone copy
 - 1. Mount for stability and handling
 - 2. Scale and/or crop
 - 3. Indicate size for window in line copy
 - 4. Outline and dropout

II. Proofing

- A. Provide acetate overlay for corrections to protect camera copy
- B. Copying best to prevent soiling of original pasteup
 - 1. Xerox - good flat process, size limitation
 - 2. Diffusion transfer process - excellent quality
 - 3. Various blueprints used by newspapers
 - 4. Many others in use - avoid those bending pasteup or heating it

III. Sorts book

- A. During slack time, cast or printout alphabets and sorts of your fonts
- B. Provide good proofs - high contrast
- C. Wax all

- D. Press in book of gloss or plastic stock
- E. Use for quick corrections, alterations, or changes noticed while pasting up job as a time saver

IV. Copy-to-plate systems

- A. Quality improving
- B. Primary use in past has been on small offset duplicators
- C. Several on market now
 - 1. Itek
 - 2. Addressograph-Multilith
 - 3. 3M
 - 4. AB Dick
 - 5. Rotaprint
 - 6. Kodak PMT system
 - 7. Agfa-Gavaert

Required for this lesson:

Supplies: Pressure sensitive tape

Equipment and Tools: Graham professional pasteup kit - see appendix E, for vendor (also used in Lesson 2 - "Basic Pasteup Techniques")
Precision layout grid

Teaching Aids: Transparencies - see appendix A, for source
Supply catalogues

Teacher Activity:

- 1. Send for catalogues of adhesive tapes and patterns. Some suppliers will send samples or fold-out charts which you may post.
- 2. Give lecture based on learner objectives, show audio-visual presentation, and pass around catalogues.
- 3. Demonstrate inking lines with rapidograph pens and ruling with pressure-sensitive tape.
- 4. Additional demonstrations and lessons are suggested in presentation outline, such as proofing, a sorts book, and copy-to-plate systems that by-pass the intermediate step of a negative if there is no continuous tone copy.

Safety Procedures:

None

Additional References:

Textbooks: See appendix D, for source

This chapter contains reviews of 68 graphic communications curriculum guides. The materials range from single page outlines to elaborate resource packages and illustrate a variety of curriculum strategies. Graphic communications education is considered an industrial education course throughout the United States and Canada and all programs reviewed reflected this affiliation. The programs emphasized skill acquisition and technical training rather than image and idea development. Of the reviewed guides 42.6% were industrial education programs and generally stressed skill and technical development in respect to an understanding of our technological society. However 48.5% of the reviewed programs emphasized competency based education. The dependence on performance objectives for student achievement of planned learning outcomes indicates skill acquisition for job attainment. The remaining materials included in this chapter were four resource packages and one art education/graphics curriculum guide.

The content of all programs reviewed was similar, but, depending on the style of presentation, the format varied considerably. This author provided examples from each guide and the sample sheets illustrate similar topics or units wherever possible. The sample sheets will allow the reader to compare format, style, and coverage of the reviewed material.

The guides varied in length and many programs were components of a comprehensive industrial education curriculum guide. The advancement from industrial education to vocational training was evident in the competency based programs. Emphasis on performance objectives indicated a vocational bias in training students for entry level job skills.

These materials could all be used in future program development in this province regardless of the philosophical direction the Ministry of Education will pursue in establishing graphic communications as a recognized course. Although a number of excellent curriculum programs were reviewed e.g. (Pollock, 1974; Hawkinson, 1975; PICA, 1977), they could not be instituted without modification to suit the particular needs in this province. Because skill training is only a component of graphic communications, study must be initiated to encourage development of programs that blend art with technology.

The curriculum materials collection can provide a base for continued research in graphic communications program development.

CHAPTER VI

Art and Technology - the Potential
for Program Development in British Columbia

Present status of the art resource guide

At the present time art and graphic communications are being taught in this province without the benefit of a recent provincial curriculum guide. The art guide/resource book, will be completed, published and implemented by September 1982. The development of the art guide has followed standard ministry development practice and hopefully the implementation of this document will be started during 1981-1982 with the full introduction in the school system by September 1982. The Ministry's Curriculum Implementation Branch will be developing strategies for implementation throughout the province. In conjunction with the Ministry, the provincial association of art teachers - the British Columbia Art Teachers' Association and the Art Education Faculty at the University of British Columbia expect to be cooperating in these implementation strategies. The cooperation between Ministry personnel, the professional association and the Universities is imperative for successful acceptance of this document.

The 1972 Graphic Communications proposal

However, the graphic communications curriculum guide at the present time has not been scheduled for implementation. Throughout the past two years the author has been in contact with the Ministry (Oliver, Note 5 & 6; Verge, Note 7; Daneliuk, Note 8) in regard to the status of the guide. During this time a number of proposed timelines for ratification have been discussed, but none have been acted upon. In recent discussion with a representative (Verge, Note 9) of the Curriculum Development Branch of the Ministry of Education the latest proposal submitted was to attach the guide to the Career Preparation program. However this particular scheme has yet to be accepted by the appropriate officials. As indicated earlier many problems exist with the development of the Career Preparation program and it will be perhaps difficult to implement a broadly based program within the restrictive confines of Career Preparation.

The potential for a program of studies that combines the image/design and the development of skills has existed in this province. But without the cooperation of the Ministry in recognizing the validity of graphic communications, this possibility may not be realized.

Graphic communications as an interdisciplinary program

This author appreciates the difficulty in deciding where to place the graphic communications curriculum. Should it be an

Art, (Schofield, 1975) Industrial Education, (Hawkinson, 1974) Career Preparation, (Hambrick, & Jones, & Losee, 1968) or Business Education (Hertz, 1978) program? All these areas could state precedents throughout North America to substantiate their claim. The Ministry has also found this decision difficult to make. Perhaps this is not a decision which needs to be made; rather graphic communications might be established as a separate subject area without necessarily tying it to any of the above mentioned subject areas. Graphic communications is an interdisciplinary program of studies, drawing units and components not only from these three areas but from other areas of the curriculum as well. Because of its broad base as an interdisciplinary subject it is, perhaps, difficult to classify. It is this broad scope of what could be considered to be involved in graphic communications that has contributed to the lack of response from the Ministry to ratify and implement a program of studies.

Graphic communications affects everyone. We cannot escape the influence of the printed image in our present society. A medium with such effect this should be included in the curriculum of this province. The inclusion of a program of studies in this field will expose students to the potential of the media to manipulate and modify public opinion and to attain technical job skills.

The mediums of graphic communications: photography, film, television, and printing can be taught from both a technical or an aesthetic perspective. They cannot be separated (McFee, 1974) to teach one without the other is not allowing the potential of the subject to be realized. Technique is necessary, if not imperative. However, what the technique can produce is equally as important. The present trend although is not to stress both aspects of these mediums. As the survey has shown curriculum guides throughout North America are predominantly performance based. This emphasis on performance and measurable skills indicates the desire by curriculum developers and administrators to train students in specific skills. Task analysis of any of the graphic communications mediums are presently available that identify all the tasks (Kentucky Department of Education, 1980; Pollock, 1979) necessary for entry into a trade. The Ministry of Education in this province has also implied that this form of training is acceptable (Industrial Education, British Columbia, 1977). However technical competency does not necessarily imply the ability to use the medium to communicate

Effective expression depends on good visual design and good visual design depends on careful observation, imagination and the proper use of tools and techniques (Patterson, 1978, p. 104).

If the nature of our comprehensive secondary school is to "foster the optimum growth and development of each student" (Killeen, & Ornes, 1979, p. 201) then the emphasis of only one aspect of a subject field could be detrimental to the students' development.

The Ministry, in this author's opinion, must take steps to identify and implement strategies for teaching one or all of the mediums of graphic communications in both the technical and aesthetic areas.

The scope of program development already established in this province has affected the implementation of a prescribed curriculum guide. There is a wide range in the blend between technical training and aesthetic education. This range should be analysed and if possible a rationale written to explain the direction that graphic communications education should take in this province. If a prescribed outline is justified it should be necessary to establish the intensity of training from a general outline to an indepth prevocational program.

Program development - a cooperative effort

Development of curriculum materials for graphic communications in the nineteen eighties will depend on the combined efforts of representatives from the Ministry of Education, the graphic arts industry, the art/industrial education professional associations, and the faculties of education. Among

these groups a common set of tasks and objectives could be established. If a common statement of goals could be published a relationship would develop that does not presently exist. We need to establish a dialogue among people concerned with the development of graphic communications education to encourage a better understanding of the mutual problems of curriculum design, apprenticeship, financing and facilities.

Resource material is already available, as presented in chapter Five, that could be modified to suit the needs of this province. However a concentrated effort is necessary if the institutions, the Ministry and the industry are to be united in preparation of a common statement of goals.

With the introduction of the Art curriculum, proposed for September 1982 and considering the lack of status of the graphic communication curriculum guide, the potential for a significant change is evident. If the people concerned are coordinated, the development of a graphic communications program of studies that blends art and industrial education is possible. The art curriculum provides a base for curriculum development in respect to imagery development where the material reviewed in this paper describes resources for technical development. Because of the history of graphic communication development and the background of the majority of instructors in this province (Hodder, Note 2) a unique program of studies

could be prepared. Because the majority of graphic communications instructors are trained art educators, and because of a lack of technical training provided by the teacher training institutions, it would seem that preparation of courses of study that blend the technical with the aesthetic could be undertaken using for reference the material reviewed in this thesis.

However while the potential does exist for a unique course of studies, practical problems of organization and implementation are apparent. Facilities, equipment, inservice training, Career Preparation, size and diversity of schools are all areas that should be of concern to an industry/educational committee. The relationship and the solution of these problems are perhaps necessary before development of a program could be initiated. The problems of curriculum development in this province can be solved, but only with the combined cooperation of all parties concerned. Through this cooperation, graphic communications, the third largest industry in North America, could be recognized in the provincial school system. The recognition is imperative, because this province should not only educate students in the effect the media have on our daily lives but also provide the ability for our children to become trained to accept jobs and careers in the field. It should not be necessary to advertise abroad for a trained graphic arts technician.

Hopefully the future will bring a realization that the Ministry of Education has not provided the leadership to coordinate the introduction of a scheme of graphic communications education that allow the flexibility in education as well as training for many students in the province.

With the introduction of Career Preparation, the Ministry has indicated a desire to incorporate more industrial skill development at the secondary level, but there are indications that graphic communications may not be included (Abel, Note 10). Therefore steps should be taken to encourage persons to see the importance of this subject area and to assure its inclusion in secondary programs.

CHAPTER VII

Conclusion

Graphic communications education in this province is not officially recognized by the Ministry of Education despite the fact that seventy-five programs exist throughout the province. The Faculties of Education in British Columbia do not prepare teachers specifically to teach graphic communications, although courses are available in photography, television, film and printmaking. Without formal recognition by the Ministry of Education and the teacher training institutions, prospects for the continued development of graphics communications curricula and resource materials are limited.

Although these discrepancies are apparent the Ministry of Education has provided school districts with financial support for equipment and facilities.

This thesis project was initiated because this author was concerned about the lack of educational and financial guidance from both the Ministry of Education and the provincial teacher training institutions especially in a period when society is demanding more accountability in programming and fiscal management of education in this province. It seems incongruent to

provide funds and facilities for graphic communications programs without the benefit of a curriculum guide.

A curriculum guide indicates a sequence or series of activities that should be included in a program of instruction. But the Ministry of Education has been negligent in preparing such a document for this subject area. Without a frame of reference individual instructors have attempted to prepare course outlines and resource materials. Depending on the background and expertise of each author many different concepts of graphic communications have been implemented. Flexibility in curriculum design is important, but equally important is a degree of continuity among various schools and school districts. Presently in this province graphic communications education is not coordinated; programs range from printmaking that emphasizes the development of imagery to more trade oriented pre-vocational printing tasks.

Before new programs in any subject area can be developed, it is appropriate to survey what has already been developed. This thesis project was the first step in that development process - to uncover existing graphic communication curricula and resource materials. This has involved correspondence with every provincial and state education agency, the six American regional vocational curriculum centres, and various graphic arts instructors. The process entailed a compilation of

68 graphic communications curriculum guides. These guides, which represent the official curriculum policy of the particular issuing educational agency, range from one page course outlines to elaborate resource material packages. Graphic arts is considered an industrial education subject in the United States and the majority of programs reflect this affiliation by stressing skill development through competency based instructional programs, emphasizing performance objectives. Although technical competence is an important aspect of graphic communications, the increasing sophistication of graphic machinery would indicate that instruction in machine manipulation should not be the only concern of a graphic communications program. The image that is produced in any of the four component areas, photography, film, television, and printing, must be considered an important segment in curriculum design.

This author outlined in Chapter II an organizational model that has defined terms associated with the field of graphic communications. The model is based on the definition of visual communications.

...as the process of transmitting ideas, thoughts, or concepts from one person to another, through a stimulus perceived by the sense of sight. (Visual Communications, CBIE-Kansas, 1974, p. 4)

The sender who conceives the idea or concept of a printed product must be able to manipulate his idea graphically and technically in order that the receiver perceives the idea. The idea must be presented as an image, which implies reference to graphic design and basic principles of colour, line, shape, form and texture. Once the image has been prepared, it must be reproduced which implies a knowledge of technique and machine manipulation. Graphic communications processes rely on developing imagery and skillful reproduction for the receiver to comprehend the sender's message.

The components of graphic communications can be separated. The following categories can be considered to constitute graphic communications: printmaking, drafting, printing, photography, film, and television.

Graphic communications education should not be concerned with just one or two of these segments. Rather graphic communications education programs should have a wider scope, and should encourage student awareness to all forms of graphic expression.

The Ministry of Education is presently considering a proposal to include graphic communications in the Career Preparation program. If this proposal is adopted, it would have a detrimental impact on programs already in existence.

Career Preparation is a program designed to be incorporated in a comprehensive school system that allows a student to cluster a series of related courses to provide advanced standing in a post secondary institution. Two stated criteria for the offering of Career Preparation courses that could not be met by existing graphic communication programs are post-secondary articulation and instructor trade experience. In conjunction with these requirements, Career Preparation implies an emphasis on skill training. Career Preparation programs would tend to de-emphasize the desirability of a blend between art and technology. Graphic communications is really an interdisciplinary course of studies, blending imagery from art education and skill acquisition from industrial education. Programs that exclusively stress either component can not provide the student with a well-rounded instructional program. A printed product cannot be completed without a design and a design cannot be reproduced without technical skills. Therefore graphic communications curriculum development must incorporate concepts and ideas from art education as well as technical skill acquisition from industrial education.

Programs reviewed in this thesis, e.g. Pollock (1979), Hawkinson (1974), PICA (1977), Graphic Communication of White Bear, Minnesota (1978), and Ohio State (1975) are competency

based programs that would, in conjunction with the revised British Columbia art guide (1982) provide a strong foundation for future curriculum development in graphic communications education.

This thesis provides a benchmark, a start in the process of implementing research to develop a program of studies integrating art and technology.

The artist must be familiar with technology for the greatest impact on his audience. However technology cannot promote itself without the benefit of creative and talented designers. How the school system provides for these opportunities in the students' development, is the next step in the process. The process of expanding curriculum to encompass technology and design, which will allow students the flexibility to become skillful in specific tasks as well as expand their creative awareness is a necessary task. A program should be designed to allow the greatest number of students to control, or at least be aware of, the influence the graphic industry can and will have on them.

The increased impact of visual information on today's society will continue to grow and expand, and it is the responsibility of our system to illuminate, as much as is possible, the benefits of such information in conjunction with the pitfalls of over indulgence and reliance on media.

Graphic media is becoming evermore sophisticated and simple machine manipulation and operation is no longer a significant educational endeavour. It is imperative, that students understand the history and background of print and video imagery to be able to cope with the sheer magnitude of the daily and continual bombardment of this information.

Not only will graphic media continue to expand, but also the cost of such ventures. [E.g. thirty seconds of commercial air time during the broadcast of the American football championship-Super Bowl XV cost \$250,000.] With such costs at stake producers of graphic material will continue to explore avenues that will guarantee the success of their messages. The success of the information package whether in print, film, or television will depend to a significant degree on the awareness of the audience. It is our responsibility to educate the audience not only in the technical aspects of production but in emotional and psychological aspects as well.

Therefore the integration of art and graphics is significant in the development of any program that dwells on the manipulation of imagery, whether those programs fall under the specific jurisdiction of art, industrial education or business education. All these areas have a responsibility to inform, provoke and in turn develop awareness to the real manipulative power of graphic design.

This province is at the threshold with the potential for developing a program of studies that would in fact provide avenues of discovery for our students.

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APPENDIX A
Initial request letter



art department

delta secondary school
4615 51st Street
Delta British Columbia
V4K 2V8
CANADA
112-604-946-4194

Dear Sir:

I am presently completing a Masters Degree in Art Education at the University of British Columbia, Vancouver, B.C.

In conjunction with my work in Art Education, I am preparing a survey and collection of resource materials and curriculum guides for Graphic Arts Education. These materials will form a base for continued work in curriculum development at both the district and provincial levels.

At present, there is no prescribed curriculum or resource manual for this province. A limited proposal was submitted to the Ministry of Education in 1972, but it was never released. During the past year, however, the proposal was revived in draft form, available for comment and constructive criticism. Hopefully, the material assembled from this survey will demonstrate current trends and directions in Graphic Arts curriculum development. This input will provide a needed stimulus to develop a prescribed curriculum guide and resource manual for this province.

I would appreciate a copy of your department's curriculum guide for Graphic Arts and, if available, the price of the associated resource manual. Any further information regarding catalogues of Art and Industrial Arts resource materials would also be appreciated.

Thank you for your co-operation.

Yours truly,

Peter Scurr
Graphic Arts Instructor

PS/cb

APPENDIX B
Respondents

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Arkansas Department of Education Education Building, Capitol Mall Little Rock, AR 72201	Brenda Turner Specialist-Art Education
California Department of Education 721 Capitol Mall Sacramento, CA 95814	James Allison Program Manager-Industrial & Health Education Louis Nash Consultant in Arts Education
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Colorado Department of Education 201E. Colfax Ave. Rm. 523 Denver, CO 80203	Patricia Burger State Governmental Relations
Connecticut Department of Education 165 Capitol Avenue Hartford, CT 06115	Robert J. Saunders Art Consultant
Dallas Independent School District Skyline Career Development Center 7777 Forney Road Dallas, TX 75227	Paul Harris Director Curriculum Career Education
Delaware Department of Public Instruction Townsend Building Dover, DE 19901	no response
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APPENDIX C
Bibliography of reviewed
curriculum guides

Art and design teaching guide. St. John's, Newfoundland:
Newfoundland Department of Education, 1977.

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Confederation Building
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A1C 5R9

N/C

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Education, 1974.

Alberta Department of Education
Devonian Building, West Tower
11160 Jasper Avenue
Edmonton, AL
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N/C

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2220 College Avenue
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N/C

Visual communications-graphic arts. Edmonton, Alberta:
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Alberta Education
Devonian Building, West Tower
11160 Jasper Avenue
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T5R 0L2

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Alberta Education
Devonian Building, West Tower
11160 Jasper Avenue
Edmonton, Alberta
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N/C

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Vocational-Technical Curriculum Laboratory
Rutgers - The State University
Building 4103 - Kilmer Campus
New Brunswick, NJ 08903

\$4.75

Braun, R. T., Craig, G. W., & Dickson, W. S., etal.
Vocational printing guide. Richmond, Virginia:
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Virginia State Department of Education
Division of Vocational Education
Ninth Street Office Building
Richmond, VA 23219

N/C

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US Office of Education, Division of Vocational & Technical
Education, 1966.

U.S. Government Printing Office
Washington, DC.

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1976.

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228 North La Salle Street
Chicago, IL 60601

N/C

Cook, W., Dorroh, R., etal. Photography. Montgomery,
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Vocational Education & Community Colleges, 1974.

Instructional Materials
Trade and Industrial Education
P.O. Box 2847
University, AL 35486

\$1.75 (1.25, 1.75, 1.00)

Craig, G. W., & Dickson, W. S., etal. Vocational printing guide, transparency master set. Blocksburg, Virginia: Virginia Polytechnical Institute, College of Education, 1974.

Virginia Department of Education
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Ninth Street Office Building
Richmond, VA 23219

N/C

Erzinger, L., Lawley, G., & Bradley, H., etal. Salesmanship, advertising & display. Chicago, Illinois: Chicago Board of Education, 1978.

Chicago Board of Education
Department of Curriculum
228 North La Salle Street
Chicago, IL 60601

\$7.50

Garrison, C., Rogers, T., Briggins, C. TV cameraman. Montgomery, Alabama: Alabama State Department of Education, Division of Vocational Education & Community Colleges, 1975.

Instructional Materials
Trade & Industrial Education
P.O. Box 2847
University, AL 35486

\$1.75 (1.25, 1.75, .75)

Graphic arts. Montgomery, Alabama: State Department of Education, Division of Vocational Education, 1977.

Instructional Materials
Trade and Industrial Education
Box 2847
University, Alabama 35486

\$3.00

Halpern, G. Line photography. Pittsburgh, Pennsylvania: Graphic Arts Technical Foundation

Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

Halpern, G. Lithographic offset feeder operations.
Pittsburgh. Pittsburgh, Pennsylvania: Graphic Arts
Technical Foundation.

Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

Halpern, G. Web offset pressmanship. Pittsburgh,
Pennsylvania: Graphic Arts Technical Foundation.

Graphic Arts Technical Foundation
4615 Fobes Avenue
Pittsburgh, PA 15213

Member \$5.10

Non-member \$10.20

Reichel, L. Colour separation photography. Pittsburgh,
Pennsylvania: Graphic Arts Technical Foundation.

Graphic Arts Technical Foundation
4615 Forbes Avenue
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Member \$5.10

Non-member \$10.20

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