DOCUMENT RESUME

ED 110 765 CE 004 573

TITLE	Cal Young Integration of Career Education into 9th Grade Classes: Suggestions for the Subject Areas.
INSTITUTION	Eugene Public Schools, Oreg.
SPONS AGENCY	Oregon State Board of Education, Salem. Div. of Community Colleges and Career Education.
PUB DATE	[74]
NOTE	105p.; Some text printed on colored pages may not reproduce clearly
EDRS PRICE	MF-$0.76 HC-$5.70 Plus Postage
DESCRIPTORS	Audiovisual Aids; Career Awareness; *Career Education; Careers; *Curriculum Guides; Grade 9; Instructional Materials; Jobs; *Learning Activities; Occupational Clusters; Occupational Information; Occupations; *Resource Materials; Secondary Education; Units of Study (Subject Fields)

ABSTRACT

The curriculum guide contains suggested learning activities and resource materials designed to integrate career education concepts into subject areas for the ninth grade. The guide provides such things as goals, teacher activities, expected student competencies, vocabulary lists, sample occupations and related information, lists of resource material and/or persons, audiovisual aids, and sample evaluation forms for the following subject areas: language arts, mathematics, business education, science, industrial arts, art, music, home economics, and social studies. The guide also includes a sample career education workshop agenda, sample career education topics for grades seven and eight, and lists of competencies and performance indicators for the various career development program goals. (JR)

CAL YOUNG JUNIOR HIGH SCHOOL

Cal Young Integration of Career Education into 9th Grade Classes

SUGGESTIONS FOR THE SUBJECT AREAS

Carol Campbell

Consultant

Summer Workshop Report

August 12 - 16, 1974

Cal Young Integration of Career Education into 9th Grade Classes

A Rationale' for Integration

Over the past two years a career education program for 7th and 8th graders has been offered at Cal Young with S.V.T.O.E. as an elective for 9th graders. With development of the 7th and 8th programs the need for S.V.T.O.E. diminished and was dropped from the curriculum. It was felt that there was a need for career education for all 9th graders and that it should be more specialized than the general courses offered in 7th and 8th grades. Instituting a separate course for this purpose would not be practical or possible since we could not hire new staff or obtain new classroom space. If someone from the existing staff were to teach such a class, other class sizes would increase. That all teachers should include career education in their regular classes has been strongly stressed by the State Department and other educators as being ideal. In addition, it has many advantages. It helps students to see school as a whole instead of being compartmentalized. Each class is seen as having concrete value towards the student's future instead of only those referred to as "career" classes. Integration also promotes more cooperation among staff members. Another advantage is that people in the subject areas can look at occupations in their area with more depth than someone who has to prepare generally for all areas of study. Career education also stresses activity through the use of field trips, guest speakers, individual job observations -- all techniques that can add life to the regular classroom. 9th graders are especially receptive to more activity in their school program and are future-oriented.

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The Career Education Committee has tried to facilitate integration by providing suggestions for activities that could be used in each subject area in 9th grade.

Carol Campbell
Janet Curtis
Gene Henry
Lizy Madathil
John Mills
Don Oleson
Mandy Samuelsen

LANGUAGE ARTS

Some Goals for Career Education in the Junior High

Each student can

1. gather for his own use as much information about himself as possible -- his needs, goals, abilities, values, interests, attitudes, beliefs, and traditions.

2. learn to use resource materials and personnel for in-depth study of occupations.

3. evaluate himself as a future employee -- what factors about him might affect his getting, holding, and succeeding in a job.

4. recognize the inter-relationship of the life roles: vocational, leisure, family, and citizenship.

5. acknowledge that every human being, in every vocational role, has human dignity and the right to the respect of himself and others.

6. apply and extend the basic skills of reading, computation, composition, spelling, speaking and listening.

Some Things Language Arts Teachers Can Do
That Could Easily Fit In Under "Career Education."

1. Point out occupations where the proper use of the English language is particularly important. A few examples are: salesman, secretary, reporter, actor/actress, receptionist, radio or T.V. announcer, preacher, teacher, lawyer.

2. Have students write letters applying for or inquiring about jobs.

3. Assign reading that reveals information about occupations.

4. Conduct role-playing where students interview or apply for jobs.

5. Have a secretary talk to the class about her need and use of proper grammar.

6. Encourage students to observe on-site application of English in an occupational setting and report either orally or written to the class.

7. Work with other teachers in reinforcing language arts in every class.

8. Students can demonstrate, orally and in writing, how to perform a particular task in a career field of interest; report on group career projects; complete application for parttime job; comprehend technical reading materials; understand oral directions; converse with others face-to-face, by phone, and in group discussion.

9. Role-playing, especially in job situations.

10. On-job visitation.

(All ideas below are found in Career Education Resource Guide which is in L.R.C.)

11. "The Me Nobody Knows", p. 111.

Students pair off (with friends?), ask questions, etc. Get to know person. At end each person predicts the career his partner is likely to choose.

Activities to show what "I" am like:

1. A "ME" box.
2. Scrapbook.
3. Diary, log.
4. Cartoons.
5. Poems, writing.

12. "That's What I Want To Be", p. 113.

1. Each person brings an object to school that represents some aspect of a career he is interested in.

2. Oral discussion in front of class.

3. Go into detail re: career - training, etc.

13. Career Corner.

Area in room showing available careers involving skills learned in Language Arts (p. 117).

14. Play 'What's My Line? (p. 123).

15. "Wheel of Fortune" (p. 124).

16. "At Your Leisure" (p. 129).

17. "Life Line" (p. 136).

18. "Who Needs It? (p. 140).

19. "Constructive Confrontations" (p. 160). Some role-playing situations.

20. "Forty Newspapers Forty" (p. 181).

Details are in book.

Career Education in Language Arts

Graduation requirements for Career Education that will be given in Language Arts classes.

Supplementary Responsibility

3.1.1.2 The student identifies the interactions and interdependence of life roles.

3.1.1.2.1 The student demonstrates how a person participates in each of the life roles in terms of time, function within roles, personal needs, values, abilities (art, media, role play, creative writing, verbalizing, interviews).

Evaluation determined by teacher judgment.

3.1.2.2 The student identifies experiences and skills he/she has that might be useful in specific occupations.

3.1.2.2.1 The student makes an inventory of his/her saleable skills and talents and experiences and then lists occupations where these skills and talents would be used in parttime or summer work as a teenager.

Evaluation determined by list (included)

3.1.4.2 The student recognizes the value of change of pace or activity to maintain maximum efficiency.

3.1.4.2.1 Given sketches of settings in which tension and/or fatigue is building, the student suggests activities to reduce the tension.

3.1.4.2.2 Given a variety of new situations (overload), the student defines coping skills people use to reduce personal anxieties.

Evaluation determined by teacher judgment.

3.1.6.2 The student is aware of essential factors in keeping a job.

3.1.6.2.2 The student demonstrates the ability to work as a responsible team member in classroom activities.

3.1.6.2.3 The student accepts and meets deadlines for assignments and projects.

Evaluation determined by teacher judgment and saleable skills form (included).

You have been given a sheet explaining what parts of the graduation requirements for Career Education our Language Arts Department is responsible for. Below are some concrete suggestions for use in the classroom to fulfill them. It is hoped that you will add to this list and let others in the department know what has worked for you, especially me so I can add it to the file.

In the L.R.C. there is a "career corner" with resources for students with some pertinent things for teachers.

In North Conference there is (will be) a marked area for Career Ed ideas, texts, etc. Please make use of and add to it.

In the L.R.C. there are teacher source materials for Career Ed. The library will also have some resources but most will be in the L.R.C.

Supplementary responsibility means these things will be covered in other classes as well as Language Arts.

Following are some suggestions to help you get started. Refer to the previous pages to explain the numbers.

Competency 3.1.1.2
P.I. 3.1.1.2.1

To be aware of this requirement and when situations that could be related to it come up in reading, to emphasize how a person's job affects their life style, relationship to others in the story, etc. Look at main characters in terms of how they use their leisure, what their personal needs are, what their abilities are. I guess the easiest way would be questions on these for discussion. Discussion could be whole class or group.

Some questions might be: How is the family conflict related to the father's job? How does _____'s personal needs (perhaps isolate a few) affect the people around him? How does _____'s job cause him to act?

Anyhow I think you already do this kind of thing and what we are being asked is just to be more aware of it and to stress it to be sure it is covered. I think it would be helpful if samples of questions you used were made available to the rest of us.

Another way would be through written paragraphs -- perhaps taking one aspect of a character participating in one of the life roles. It could be kept within the story or compared with the student's, his parent's, friend's life role.

Collages could be done on a character emphasizing aspects of each of his life roles as shown in the story through pictures, etc.

Charts could be made showing a character with lines out to the people and things he influences through his life role.

Competency 3.1.2.2
P.I. 3.1.2.2.1

This could be done with a chart similar to the one provided ("School Subjects in Relation to Life and Work").

It would probably be effective to discuss with students first what saleable skills they saw being developed in the class and how these would be used in parttime or summer jobs available to them.

The charts should be used at least once a year and probably once a quarter.

Competency 3.1.4.2
P.I. 3.1.4.2.1 and 3.1.4.2.2

Again, I see this as being easily incorporated into the literature program. Most stories will have some stressful situations. We just need to be aware of the requirements for the student and direct questions, assignments and discussions to make them aware of alternates to handle stress, especially in the job area.

You could also point out that that is one reason teachers try to vary activities in a block class.

Examples of questions might be: "When _____ is feeling this way, what could he/she do besides beat up the next door neighbor?" or "Why, since _____ usually loves his job, does he/she seem to detest it at this point?" "How could that be changed?" Etc. "In order to cope with his job situation (or home or ?) what does _____ do?"

Competency 3.1.6.2
P.I. 3.1.6.2.2 and 3.1.6.2.3

These are behaviors and I think the best way to make sure the student is aware of and can "pass" is to require standards that they would have to fulfill on a job -- such as showing up on time, participating, showing adherence to discipline set up in the classroom, etc.

It would probably help to verbally correlate classroom behavior requirements to job behavior requirements.

Some requirements are listed on the form "School Subjects in Relation to Life and Work."

That's All.

These words are used and stressed in 7th grade G.I.T. classes. Language Arts classes have been asked to reinforce meanings and use as spelling words.

Vocabulary Lists

(self-awareness)

physical characteristics
personality
*confident
*optimistic
helpful
sympathetic
*self-reliant
*trustworthy
honest
pleasant
cheerful
courteous
loyal
*cooperative
*poised
*self-controlled
*punctual
*tactful
alert
*persistent
*sincere
*modest
patient
reliable
thorough
*leisure
*ethics

* - 9th grade

(world of work)

demand (various definitions
journeyman
apprentice
social security
fringe benefits
blue collar worker
outlook
marital status
employer
employee
prestige
reference
white collar worker
trade
maiden name
skill
dependents
unemployment compensation
earnings
avocation
advancement
salary
training
profession
vacation

Some Jobs and Language Arts (State List)

Editor
Author
Reporter
Teacher
Clergyman
Lecturer
Pharmacist
Poet
Actress/actor
Radio-T.V. repairman
Librarian
Proof reader
Script writer
Social worker
Personnel manager
Receptionist
Salesperson (clerk)
Auctioneer
Interior decorator
Vocational counselor
Politician
Stenographer
Typist
Forester
Lawyer
Judge
Scientist
Engineer
Salesman

Career Education in Language Arts

Graduation requirements for Career Education that will be covered in 9th grade Language Arts.

Primary Responsibility

3.1.1.4 The student knows life roles change for himself and others.

3.1.1.4.1 The student depicts past, present and possible future changes in the life roles for a significant person in his life and for his own life using written and/or visual methods.

Evaluation determined by teacher judgment.

3.1.1.4.2 Using written, verbal or visual methods of expression, the student will demonstrate how other life roles would change if a person's occupational role changed.

Evaluation determined by teacher judgment.

3.1.2.7 The student relates his value system to occupational choices.

3.1.2.7.2 Using a list of personal values, the student identifies compatible occupations.

Evaluation determined by teacher judgment.

3.1.6.1 The student identifies procedures necessary in obtaining a job.

3.1.6.1.5 The student writes a personal resume.

Evaluation determined by teacher judgment and resume itself.

11

Concrete ideas to fulfill Career Ed requirements in Language Arts Classes. (Refer to first sheet for number clarification)

Those of primary responsibility - 9th

3.1.1.4.1 (1) When reading literature, stop at various times and discuss, write, role play, etc. possible alternates and their outcomes for decisions, predicaments, of characters.

(2) Student could create own character with an idea as to future. Give to another student at a decision point. That student makes decision for character. Could go to other students for other decisions. Discuss how character's life changed due to various decisions.

(3) Collages that picture person and show several distinct alternatives for future life style.

(4) Rewrite one of parent's present life style by changing his/her occupation. Go into detail. Perhaps write up . . ."A new typical day in _____'s life." Or write two -- one realistic, one "if".

(5) Student writes up paper showing two or more ways he could be living in 10, 20, ? years. Share with others.

3.1.1.4.2 (1) Create a person with a job. Build up (through discussion) probable life style, beliefs, abilities, opportunities, etc. Then take same and change occupation to see how life style changes.

(2) Create a person. Each student gives him a job and writes up a life style. Students exchange papers and compare/contrast.

(3) Students write up pix of their own future in two or three ways according to chosen jobs.

(4) "Wheel of Fortune" p. 124 in Career Education Resource Guide. Each followed by discussion as to causes, implications, fairness, etc.

(5) In literature form questions to help students be aware of how characters in stories would differ if their occupations changed or was different.

(6) This is closely related to previous one and ideas could be interchanged.

3.1.2.7.2 Before a student can fulfill this he must have some understanding of values. I see this as an integral part of the Language Arts program, whether or not Career Ed is on the scene. Books and kits available at C.Y. that deal with this are:

Values & Teaching - Rath, Harmin, Simon
Values & Clarification - Simon, Howe, Rirschenbaum
An Introduction to Values - Penny's, Kit 115.
Deciding: A Leader's Guide - Gelatt, Varenkorst, Carey

The last two have concrete lesson plans that seem extremely usable.

"Values" - values are the basis upon which people decide what they are for or against, or where they are going and why. In other words, they give direction to life.

(1) In literature, stress questions as to what alternatives were available to characters. Reasons they had for choosing what they did. How their actions show what they believe . . etc.

(2) Ask - "What is your idea of success? happiness?" Answer using a number instead of a name. Pass to another student. From what was written what could reader tell about person.

(3) Game: The Magic Shop - Someone is a shopkeeper. Student enters his shop and requests something he wants (love, esteem, a skill, etc.) The shopkeeper bargains with that person. What will they give up to get what they want?

(4) Game: Island of the Forgotten. Example attached.

(5) Variation of "To Things I Love" sheet -- "To Things I'm Glad I Did This Summer."

(6) I'm not listing more because of the many ideas available in the books mentioned.

3.1.6.1.5 This will be required writing assignment in 9th grade.

(1) Define and explain purpose of "Resume."
(2) Study sample resumes.
(3) Each student writes one.
(4) Sharing and evaluating each other's in terms of how an employer would react to it.
(5) Marked, graded?, redone if not adequate.

Suppose you are piloting an airplane over the Pacific Ocean. You are alone. [illegible] you [illegible] going. After being in the air [illegible], your radio no longer works, and your instruments [illegible]. You have no idea where you are and fuel is running low. [illegible]. You crash land on the island [illegible]. You have food (nuts, berries, and [illegible]) on the island so survival is no problem. The climate of the [illegible] pass and there is no sign of rescue. [illegible]. When you search through the [illegible] you find the following:

- [illegible]
- [illegible]
- [illegible] different color
- [illegible]
- [illegible] hole in the center
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible] palm trees, rocks [illegible] in a couple of small caves [illegible] your life. There are only rabbits [illegible] there are various types of small birds.

[illegible] to build [illegible] your time? Give as much detail as [illegible].

PHYSICAL EDUCATION - HEALTH

1. Inform students about and provide opportunities for exploration of occupations related to physical education. Some examples: coach, referee, physical education teacher, professional athlete, sporting goods salesman, recreation specialist, sports announcer or writer, physical therapist.

2. Train and supervise interested students in coaching and/or refereeing teams, such as Little League, etc.

3. Arrange field trip to hospital for students interested in physical therapy.

4. Invite someone with a sedentary occupation to speak to the class about the importance of physical activity.

Ideas for P.E. - Health and Career Education

1. If you give the President's physical fitness test, include the need for physical stress in occupations. (See p. 110, Career Education Resource Guide, General Learning Press).

2. P.E. and the leisure life role. (See p. 129, above reference).

MATHEMATICS

The following pages consist of some ideas and suggestions for use in 9th grade math classes. The purpose of this is to integrate career education in the regular 9th grade classes. These are just suggestions and may be added on to, deleted or changed according to the teacher's discretion.

Activities being done in Math classes which are related to careers.

1. Story problems which are related to different occupations.

2. Discussing occupations related to the area they are working on. (This can be done for motivational purposes.)

3. "Stock market" unit in General Math class.

4. 'Consumer Math" in B.G.M. (almost 1 quarter).

5. Looking at computer applications in the fields of business, industry, medicine, education and government in "Computer Programming" class.

6. Writing a paper on career or an area in which computers are used.

Activities related to careers which could be done in Math classes:

1. Present, during the 2nd or 3rd week of school, when the students are familiar with the class and procedures, a checklist of responsibilities -- a forum that might be used to help the students further develop some desirable habits and responsibilities. (An example is attached. May make up own forms if desired.)

2. Have class discussions on occupations students are familiar with or are interested in. (This is meant just to fill in for 5-15 minutes of class time, when the students could use a break from regular classwork. Do this only a few times a year.)

3. At the top of their assignment paper, have the student write the name of an occupation that would require an ability to do what they are doing in their assignment that day; and be prepared to show or explain how it would be used in that occupation. This should also be considered sometimes with respect to everyday living situations as well as occupations.

4. Show film strips (related to math-oriented careers). Catalogue is available in library.

5. Use computer terminal to run Career Interest Survey. (The booklets needed for this survey are available in the Career Corner in L.R.C. If not, may call Sally Rainville at I.E.D.)

6. Review Math background needed for college degrees and everyday living. Also, relate classwork to occupations and everyday living experience.

7. The 9th graders may be sent to elementary schools (Gilham, etc.) during their Learning Center period, where they can assist younger children with math.

8. Point out occupations which involve varying amounts of mathematics (carpenter, electrician, bookkeeper, bank clerk, insurance, salesman, math teacher, draftsman, pilot, chemist, engineer, etc.)

9. Invite someone in one of these fields to discuss the importance of math in their job.

10. Have a personnel manager from some business firm (e.g., J.C.Penney Co.) come to class and explain why they require a mathematics test of their employees and then give the test to students to see how they would do.

11. Have a housewife talk about household uses of mathematics.

12. Visit a computer center and discuss the growing use of computers, showing how mathematics relates to that field.

13. Permit students to make on-the-job observations where math principles are applied. Have students report orally to the class.

14. Work with Industrial Arts, Homemaking, Science or other area teachers who are introducing occupationally related math to students.

15. Through individualized instructional materials, assist each student to become familiar with the mathematics peculiar to his/her occupational interests.

16. Problems related to different occupations can be given as extra credit work. (Some examples of projects of this type are attached.)

17. Have students create crossword puzzles, where 'across' section might present definitions of terms and the 'down' section might present math-related careers, industries, and machines, and, perhaps, clues about famous persons whose mathematical bent contributed to the advancement of science, economics, and business.

18. Time and measurement:

Pass out airline schedules, notebooks, tickets, menus, baggage checks, travel folders, and airline publications. Discuss different kinds of careers that are involved in the airline industry. (List these on the board; pilot, co-pilot, engineer, designer, flight-control engineer, stewardess, chef, advertising copywriter, reservation clerk, baggage clerk, etc.)

Suggest to the class that math is a kind of thread that runs through all these occupations and show math can be used in these jobs.

Ask the students to look at the airline schedules. Discuss how distance affects the cost of ticket and how speed affects travel time between two points. Then show the class an airline rate and schedule book and explain how the time and rate factors were arrived at.

Other activities can be derived from this.

OCCUPATIONS IN WHICH MATHEMATICS IS USED EXTENSIVELY

Architect
Draftsman
Pilot
Navigator
Optometrist
Physician
Bookkeeper
Statistician
Accountant
Surveyor
Bank clerk
Banker
Forester
Economist
Electronic technician
Insurance Agent
Actuary
Secretary
Commercial teacher
Mathematics teacher
Machinist
Plumber
Carpenter
Electrician
Broadcasting technician
Dental technician
Dentist
Chemist
Scientist
Engineer

GEOMETRY

1. Have guest speakers whose jobs require the use of geometry come and talk to the class about using geometry in their fields. (architect, draftsman, surveyor, forester, machinist, carpenter, electronic technician, engineer, navigator.)

2. Review geometry background needed for college degrees and everyday living.

3. Use computer terminal to run career interest survey.

4. Have class discussion on occupations students are familiar with or are interested in, and show how geometry could be used in some of these.

5. Show films related to math-oriented (especially geometry-oriented) occupations.

6. When they are working with certain areas of geometry, have them come up with at least one occupation where that specific area of geometry can be used.

7. Let them do a class project in which they have to do some research in the library and come up with a list of careers where geometry has to be used.

8. Visit a computer center and discuss the growing use of computers, showing how math relates to that field.

1. Use story problems related to different occupations.

2. Have guest speakers whose jobs require the use of algebra come and talk to the class. (Example: draftsman, surveyor, engineers, architect, forester, machinist, electrician, electronic technician, scientist, etc.) (List of resource persons attached.)

3. Occupational data can be used in graphing. (Manpower Resource Information Booklets, etc. available in LRC).

4. Once in a while, on top of their assignment paper, have the students write down an occupation which requires the use of that specific area in Algebra.

5. Use computer terminal to run career information survey.

6. Review Algebra background needed for college degrees and everyday living.

7. Use a checklist on class responsibilities-stress continually on desirable traits.

8. Have class discussion on occupations students are familiar with or are interested in and show how Algebra could be used in some of these. (Use 5-15 minutes once in a while when they could use a break from regular classwork.)

9. Show films related to occupations where Algebra is used and use of Algebra in everyday life.

   (Example: "A Way of Thinking About Numbers." (#0115).

   (14 min.: Deals with everyday use of Algebra. May order through Gene Henry from DCE Film Rental.)

10. Visit a computer center and discuss the growing use of computers.

11. Let them do a class project in which they have to do some research in the library and come up with a list of careers where Algebra has to be used.

12. Probability: Discuss different occupations where probability is used. (Statistician, actuary, etc.)

1. Balancing checkbooks, keeping accounts of household costs, income tax returns, insurance, etc.

2. Percent:

   (a) Discuss how percent can be used in business (discounts, installment buying, sale prices, mark-ups, etc.); in banking (loans, savings, interest rate, credits, notes) stocks and bonds;wages; investments; etc.

   (b) Do story problems related to these areas.

3. Ratio and proportion:

   (a) Measuring the heights of their room, trees, school, etc. indirectly using proportion.

   (b) Discuss the use of proportion in making the measuring wheel to measure long distances quickly. (This is used by traffic policeman)

   (c) Discuss the carpenter's 3-4-5 triangle.

   (d) Do story problems related to different occupations.

4. Graphing:

   (a) Use occupational briefs for the data for graphing.

   (b) Use Manpower Resource Handbook or any other occupational information. (Details of occupational briefs and Manpower Resource Handbook are given in G.M. Section.)

5. Warm-up problems can be given for reviewing decimals, fractions and whole number computation which are related to jobs, salaries and number of workdays. (some examples are attached).

1. Warm-up problems can be given, where jobs, salaries and number of workdays are involved. (As a review of decimals, whole number computation, fractions, etc. Some examples are attached.)

2. Graphing:

   (a) Obtain occupational briefs. (Contact Kevin Early for these) and distribute to the class. Have the students go through the briefs writing down 12 occupations and their starting salaries. Using the information collected, they are to make: (1) A bar graph showing the salaries for six of the occupations listed; and (2) a broken line graph showing the salaries of the other six occupations listed.

   (b) Use Manpower Resource Handbook (available in the "career corner" in LRC) for graphing. This gives a forecast of job availabilities. (This has to be explained to the class briefly.) Have the class select 7 or 8 occupations they would like to know about, show how the book is read, and put the information they come up with on the board. The students are to use this information in constructing a broken line graph.

3. Ratio and Proportion:

   (a) Use story problems related to different occupations.

   (b) Discuss the use of proportion in making measuring wheel used by traffic policeman.

   (c) Using proportion to measure large objects. (How this can be used in certain occupations.)

4. Percent:

   (a) Discuss the use of percent in banking (interest rate), loans, stocks and bonds, mark-up, selling price, discount, etc. in business, investments, wages, taxes, installment purchases, etc. in class.

   (b) Do story problems related to these.

   (c) Have students collect ads from newspapers where stories are advertising percent of discounts they are offering.

5. Geometric Constructions:

   Relate these to the occupations such as architect, draftsman, etc.

REVIEW PROBLEMS
(which can be used in G.M. and B.G.M.)

Multiplication Review:

Assuming that there are 52 weeks in a year, and a worker works 8 hours a day, 5 days a week, and has 3 weeks off for vacation and holidays each year, find the answer for the following:

(1) How many days would a person work in one year.

(2) How many hours would a person work in one year.

(3) How many days would a person work during a span of 40 years.

Decimals:

1. Have each student use the "Help Wanted" ads in the newspaper to find a job of interest to them and determine the salary it pays, and bring this information to class. Let them use this information to fill out the form (showing cost of living, etc.) (Example attached).

2. Discuss briefly: Social security benefits and contributions with the class and let them figure out the following:

   (a) If you pay $_____ into social security each year, and the employer pays an equal amount, how much will be contributed into your account for retirement benefits at the end of 40 years.

   (b) If you receive $_____ per month upon retirement, how many months will it take before you use up the amount you contributed to S.S.

   (c) How many years will it take before you would use up the contributions of both you and your employer.

3. Draw a floor plan of the classroom and divide it into rectangles. Obtain values for the lengths and widths of the rectangles in your drawing by making the appropriate room measurements.

   Determine the cost of covering the floor with covering that costs 86¢ per square foot. (Scale: 1/8" = 1 foot)

FILMS RELATING MATH TO CAREERS

(DCE Film Rental)

1. "Mathematician and the River" (20 min.) (#2848 in Films: 1974-75)
   Shows how math is used to understand the basic underlying forces of nature. The mathematician applies his theories and equations to the problem of flooding of the Mississippi River.

2. "Algebra: A Way of Thinking About Numbers" (14 min.) (#0115)

3. "Fred Meets A Bank" (Introduction to a bank and what it does. May be used when doing the unit on checking accounts, etc. in B.G.M.) (1963) (#1641)

4. "Paying by Check" (17 min.) (#3436)

5. "Probability" (12 min.) 1965 (#3670)
   Includes various research fields, where probability is used.)

PEOPLE TO CONTACT FOR FIELD TRIPS OR GUEST SPEAKERS

1.	Banking:	Mr. Gale Green (342-5661) First National Bank, Eugene	(Field Trip)
		or	
		Mr. Jack Forell (988-2373) U.S. Bank, Springfield	(Field Trip)
2.	Computers:	L.C.C. Data Processing	(Field Trip)
		or	
		U. of O. Computer Center	(Field Trip)
3.	Engineering:	Mr. Robert Hartley Eugene, Oregon	(Guest Speaker)
4.	Stock Exchange:	Harris Upham & Company, Inc. Eugene, Oregon	(Guest Speaker)
5.	J. C. Penney Co. Personnel Manager (Bill Hoeffner) Valley River Center Eugene, Oregon (Advance notice - 2 weeks)		(Guest Speaker)

Use the form below to determine how much of your salary can be set aside for savings, vacations, etc. after paying for most of the common costs of living.

Determine taxes using the procedure shown below. (The student should understand that the actual method is more complicated but this will give an approximate value.)

Property tax - Multiply the value of your home by .025
Federal Income Tax - Multiply your yearly salary by .12
State Income Tax - Multiply your yearly salary by .04
Social Security - Multiply your yearly salary by .058 (this amount not to exceed $631.80)

Name_____ Occupation_____

Salary per year_____per month_____per week_____

Expenditures per month

Federal Income Tax	
Property Tax	
State Income Tax	
Social Security	
Home Payment	
Home Insurance	
Electricity	
Fuel	
Water	
Food and Miscellaneous	
Clothes	
Car Payment	
Car Operation & Maintenance	
Dr. & Dentists (or insurance)	
Phone	
Newspaper	
Garbage	
Total	

Salary per month----------	
Expenditures per month----------	
Difference----------	

Project No._____ Name_____
Grade_____

PAINTING BY CONTRACT

Mr. Spillum's tool shed needs a new paint job. It also needs a coat of tar put on the roof. Although putting tar on a roof is not your specialty, you agree to do it as part of the job. You are to be paid by the square yard. (Put answers on another paper.)

1. The first problem is to measure the surface that you are to cover. You climb the roof and discover that the roof is a rectangle measuring 12 feet by 10 feet.
   a. Draw a diagram of the roof to the scale of 1/2 inch to 1 foot
   b. What is the area of the roof in square feet?

2. You are to receive 18 cents a square yard for putting the tar on the roof. Mr. Spillum will provide the tar, so what would you receive for this part of the job?

3. The back of the shed is 12 feet by 7 feet.
   a. What is its area in square yards?
   b. How much will you receive for painting the back of the shed at 12 cents a square yard?

4. You drew the dash line you see in the diagram.
   a. What shape is the surface below this line?
   b. What is its area in square feet?
   c. What is its area in square yards?

5. If you do not know how to find the area of the triangle you see in the plan above, you may be helped by the diagram to its right.
   a. What is the area of rectangle X?
   b. Triangle Y is equal to the triangle in the plan of the end of the shed. You see that it is also equal to 1/2 of the area of rectangle X. Its area must, therefore, be equal to 1/2 of 9 x 3 or 13 1/2 square feet. Since 9 feet and 3 feet are the length and width of the rectangle, the area of the triangle is equal to 1/2 of the product of the length and width of the rectangle.

6. How much did you receive for painting the whole shed at 12 cents a square yard?

7. How much did you receive for the whole job, painting and tarring?

Project No._____ Name_____
Grade_____

MILL CLEAN-UP MAN

You are the clean-up man at a sawmill and planer. Your job is to among other things, gather up mill ends and scrap material that can be sold into cord piles. This wood will be sold for fire wood by your company. A cord represents a pile of wood 4 feet high, 4 feet wide and 8 feet long. You are paid $2.50 per hour when you pile wood. Your company sells the wood for $15 a cord if it is picked up at the mill.

PUT YOUR ANSWERS IN THE BLANK TO THE LEFT OF THE PROBLEM.

_____1. A prospective customer comes out where you are working to see what type and how much wood he would be getting for his money. He asks you how many cubic feet are in a cord?

_____2. Another man comes to you and tells you that he has a garage 23 feet wide and 30 feet long and 15 feet high. He wants to fill his garage with wood and wants to know how many cord it will hold. Tell him.

(a)_____3. The man above has been told by the company that if he takes that many cords of wood that they will give him a 2% discount on each cord of wood he buys. This amounts to (a)___dollars per cord or (b)___dollars on the total amount.

(b)_____

_____4. Normally you can pile a cord of wood in three hours. Your company would be making a profit of_____dollars per cord.

(a)_____5. If you can pile a cord of wood in three hours and your company offers a customer a 2% discount, the company would only make a profit of (a)___dollars. Why then, would they want to make this discount? (b)

(b)_____

_____6. Because of offering a 2% discount on quantity orders, the profit decreases. Your employer then tells you that you must work faster and try to get a cord of wood piled in two hours. This would increase the company profit on a quantity order to____dollars per cord

(a)_____7. If you are working an eight-hour shift, how many cords of wood can you pile at the rate of three cords per hour? (a) At the rate of two cords per hour? (b)

(b)_____

_____8. Would you have more incentive to pile more cords of wood faster if you are paid by the hour, or by the cord?

(a)_____9. Your employer offers you the above choice. He tells you that he will pay you $2.50 per hour, or he will pay you $5.25 per cord on the days you pile wood. Which would you choose? (a) Why? (b)

(b)_____

_____10. A man comes to the yard with a truck that when level full has a capacity of 5 cubic yards. To save time piling the wood to measure it and then loading it into the truck, he wants to put it directly into the truck. How many cords of wood can the truck hold?

Project No._____ Name_____
Grade_____

AUTOMOBILE BUYER

You are in the market for one of the new small import pickups (Ford Courier, Chevrolet Luv, Datsun or Toyota) and are doing some comparing before you buy. Fill in the blanks in the chart below for each brand from the pamphlets on the bulletin board.

	FORD COURIER	CHEVROLET LUV	DATSUN LI'L HUSTLER	TOYOTA HI LUX
Fuel Tank		11.0		
Turning Radius				turning diameter
Weights:				
GVW				
Curb				
Payload				
Length				
Overall				
Wheelbase				
Width				
Overall				
Wheelbase				
Height				
Bed-Height	---	---	---	
Length				
Overall width				
Road Clearance	---	---		

Additional information:
1. The base cost for all pickups averages about $2,400.00.
2. Maximum speed is approximately 90 m.p.h.
3. The mileage is about 25 miles per gallon of gas.

PUT YOUR ANSWERS IN THE BLANK TO THE LEFT OF THE PROBLEM.

(a)_____ (b)_____ 1. Using the information you gathered from the pamphlets, find (a) the number of miles a Datsun can go on a full tank of gas, (b) the number of miles a Toyota can go on a full tank of gas.

_____ 2. How much would it cost to fill the tank of a Courier if you had 2.5 gallons left in the tank, and gas was 34.9 cents per gallon?

(a)_____ (b)_____ (c)_____ 3. There are 231 cubic inches in a gallon. How big must the gas tank be for the (a) Ford, (b) Chevy, (c) Toyota?

_____ 4. Find the overall capacity (cubic contents) of the Toyota pickup bed.

_____ 5. How much more gas must you put into the Luv to fill it, if there are already 3 gallons 1 quart in the tank?

_____ 6. If a bushel equals 1 1/4 cubic feet, how many bushels of corn would you haul in the Toyota?

_____ 7. What would be the area of space the Datsun would occupy?

_____8. If you were making a large cardboard box to put a Courier into, what would be the dimensions, allowing an additional inch on each side of the box?

(a)_____ 9. The curb weight is the basic weight of the automobile before adding
(b)_____ the payload (people and things hauled). The gross volume weight (GVW)
(c)_____ is the total of the curb weight and the payload. Figure the following and make sure you enter your answers on the chart on page one as well as here. (a) GVW for a Luv (b) GVW for Datsun (c) Toyota payload.

_____10. If you took one of these vehicles on a 120.6 mile trip and could expect to get 25 miles per gallon, how many gallons of gas would it take?

_____11. The Datsun went down the freeway at a rate of 70 miles an hour. How far will it travel in 2.3 hours at that rate?

_____12. What is the perimeter of the bed or the Luv pickup?

_____13. What is the perimeter of the entire Luv pickup?

_____14. Draw a scale model in rectangle form showing the perimeter of the Courier pickup. Use a scale of 1/4" = 4".

_____15. If 128 cubic feet of wood = 1 cord of wood, how many cords of wood could you haul in the Toyota?

_____16. You weigh 125 lbs. and have two passengers, one weighing 207 lbs. and one weighing 35.5 lbs. How much junk could you haul to the dump in the back of your Datsun without overloading it?

_____17. You weigh 160 pounds and are the only passenger in your Luv pickup. How many 125 lb. calves could you haul to market?

_____18. What fraction of a ton is 1440 lbs.?

_____19. If your Courier pickup costs $2,400.00, how much is it worth per pound (figuring curb weight)?

_____20. Before starting on your trip, you fill the tank on your Toyota. After a 50-mile trip you have 7 1/2 gallons left. How many miles did your pickup travel using one gallon of gasoline?

_____21. In a 3-hour race, a Datsun traveled [illegible]6 miles the first hour, 89.1 miles the second hour and 90.3 miles the third hour. What was the average rate of speed an hour?

_____22. If you have to pay $2,400.00 for a little Ford pickup in the U.S., how many English pounds would you pay for the same vehicle? (1 pound = $4.8665)

(a)_____ 23. How many pounds are there in a load of hay weighing 1.375 tons? Could you carry this load in your Toyota and still have room for one 175 lb.
(b)_____ driver?

_____24. You buy 5 gal. gas at 34.9 cents and 2 quarts of oil at 35 cents. What change will you receive from a $5.00 bill?

_____25. You drive to a town 210 miles from here at an average rate of 50 miles an hour and back at an average of 60 m.p.h. How much longer did it take to go than return?

CREDITS

	POINTS	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W
Have book	4																							
Have pencil	3																							
Have paper	3																							
Have assignment	4																							
Total																								

WEEKLY BALANCE

	1st wk	2nd wk	3rd wk	4th wk	5th wk
M					
T					
W					
Th					
F					
TOTAL					

LOSSES

	POINTS	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W
Tardy																								
Assignment not complete																								
Total																								

MID-TERM BALANCE

1st wk	
2nd wk	
3rd wk	
4th wk	
5th wk	
TOTAL	

BALANCE

	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W	Th	F	M	T	W
Daily credits																								
Daily loss																								
Daily balance																								

Cal Young Jr. High School

General Math: School Subjects in Relation to Life and Work

Subject:_____ Name_____

Directions: Student: Check skills you believe you have mastered and then check those skills you like to perform.

Teacher: Check skills student has demonstrated in your class.

Work attitudes, getting along on the job	Check if student does these things	
	Student	Teacher
1. Follows directions		
2. Is punctual		
3. Attends class regularly		
4. Brings necessary equipment		
5. Accepts and meets deadlines for assignments		
6. Does own work		
7. Is pleasant to work with		
8. Able to accept anything		
9. Able to take constructive criticism		

General Math - B.G.M. Student's Name_____

Things learned in this class that might be used on the job (saleable skills)	Student		Teacher
	Yes, I can do these	Yes, I like doing it	Yes, student can perform
1. Have a good understanding of computation			
2. Can think creatively			
3. Can apply this knowledge to other areas			
4. Is willing to go deeper to find new information			
5. Balancing checkbooks			
6. Make and interpret a graph			
7. Work with percent			
8. Work with money			
9. Using a ruler and other mathematical tools			
10. Use proportion to measure large lengths			

Algebra

Student's Name_____

Things learned in this class that might be used on the job (saleable skills)	Student		Teacher
	Yes, I can do these	Yes, I like doing these	Yes, student can perform
1. Have a good understanding of computation			
2. Can use a slide rule			
3. Can think creatively			
4. Construct and interpret graph			
5. Can apply knowledge to o other areas			
6. Can use a table of information			
7. Can find solution for problems dealing with real life, using algebraic principles			

Geometry

Student's Name_____

Things learned in this class that might be used on the job (saleable skills)	Student		Teacher
	Yes, I can do these	Yes I like doing these	Yes, student can perform these
1. Have a good understanding of computation			
2. Can use ruler, protractor, compass, and other mathematical tools			
3. Can draw neatly			
4. Can think creatively			
5. Can apply knowledge to other areas			
6. Can be logical in thinking			

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INTEGRATING CAREER EDUCATION IN BUSINESS EDUCATION

Introduction

TYPING:

Students learn a skill which is a basic occupational as well as a personal-use skill and have the basis for advanced vocational training.

BRIEFHAND:

Students learn a basic notetaking skill which is now being used in place of Gregg shorthand in some offices where extremely high speed dictation is not necessary. Also, the students become acquainted with a writing system based on phonics which may facilitate the learning of Gregg shorthand in senior high school.

INTRODUCTION TO BOOKKEEPING:

Students explore what bookkeeping and accounting are like by going through a simplified bookkeeping cycle. They find out if they like to work with figures, to do work that is highly detailed, and to do work that calls for a high degree of accuracy and neatness.

SOME SUGGESTED ACTIVITIES FOR INTEGRATING CAREER EDUCATION IN BUSINESS ED.

TYPING:

1. Composition exercise. Have students mentally project themselves ten or fifteen years into the future and write a brief description of what they think their life style might be. If necessary, write a list of guide words on the board for consideration (e.g., married or single, own or rent home, furniture, car, clothes, vocation, recreation and entertainment, insurance. savings).

2. Have students write a letter of application, including a personal data sheet, of their own, for a summer job using a model in a text as a guide to arrangement rather than merely copying the sample in the text. Follow up by having students type a letter requesting an interview and a "thank you for the interview" letter.

3. Have students compose, type and mail a letter requesting information about a particular occupation they are interested in. (This lends itself nicely to an interdisciplinary assignment with another department.)

4. Expose students to three or four styles of business letters rather than just one.

5. Have students compose and type a letter of complaint to a company about a defective piece of merchandise they have purchased.

6. Near the end of the year have some students role-play secretaries, typists, etc. for hypothetical businesses in which they type invoices, memos, business letters, and other forms normally encountered in a business office. (This probably wouldn't be done with all students.)

7. For timed writings, get away from the text and instead use excerpts from various types of occupational information such as pamphlets put out by the State Employment Office, and articles from magazines such as Career World. (Check the Career Corner in the Learning Center.)

8. Arrange for small groups to watch teacher aides demonstrate the use of the ditto, mimeograph and thermofax machines.

9. Guest speakers. Invite a secretary, stenographer and typist to talke about their jobs.

10. Films. There are several films appropriate for junior high school students showing various occupations which require typing skill.

INTRODUCTION TO BOOKKEEPING:

1. Have each student go through the CIS questionnaire on the computer and, in addition, have students ask for the educational requirements and the 300-word description of jobs in the bookkeeping and accounting fields.

2. Do U.S. National Banking checking account simulation. Include writing personal checks, reading bills and reconciling bank statement.

3. Guest speakers. Invite a bookkeeper and a CPA or accountant to class to talk about their jobs.

4. Field trips. One especially interesting one is to the U.S. National Bank.

5. Explain why and how a social security card is important. Encourage students to apply for one. Provide forms. Can have students fill out in class and mail forms. Forms can be obtained from the Social Security office.

6. Provide work permit forms for students who are 14 or older. Forms can be obtained from the State Employment office.

7. Have students keep a personal cashbook record of their own income and expenses for a set period (one week to one month) on forms you provide.

BRIEFHAND:

1. Have students each interview a worker in some field, take down answers to questions in briefhand, transcribe notes into longhand (or read orally in class). Some role-playing practice might be helpful before proceeding with this.

2. Have a secretary and a stenographer speak to class about their jobs and, if possible, have them demonstrate the use of dictaphone and compare with shorthand.

3. Work observation. Arrange to have some students observe a court reporter during and after a court session.

4. Dictation practice. Use career-oriented material from magazines, books, etc.

5. Have a court reporter as guest speaker and demonstrate stenograph (or other machine shorthand) equipment.

6. Take dictation from TV or radio commercial. Collect and reproduce so each student has a copy. Use as a transcription exercise.

7. Tape reocrd conversations with people in various occupations about their jobs (Note: have them speak very slowly), then use the tapes for dictation practice.

8. Briefhand games (e.g., Briefhand Jeopardy and Password) use various occupations for the different categories and words.

SOME SOURCES OF INFORMATION ON CAREERS FOR BUSINESS EDUCATION

Places to Write

Accounting Careers Council
National Distribution Center
P.O. Box 650, Radio City Station
New York, NY 10019

Bureau of Educational Assistance Programs
Division of Vocational and Technical Education
U.S. Office of Education
Washington, DC 20202

United Business Schools Association
1730 N. Street, N.W.
Washington, DC 20036

National Assn. of Legal Secretaries
4412 Village Road
Long Beach, CA 90801

American Institute of Accountants
666 Fifth Avenue
New York, NY 10019

Public Relations Staff
General Motors Building
3044 West Grand Boulevard
Detroit, MI 48020

National Secretaries Association
616 East 63rd Street
Kansas City, MO 64110

National Shorthand Reporters Assn.
25 West Main Street
Madison, WI s53703

Publications

1. Instructional Media Catalog - Lane IED
2. Career Information System Visit File and Resource Person List
3. Catalog for Elementary and Seconday Community Resources - Lane IED
4. Opportunities in Office Occupations - Vocational Guidance Manuals, 235 E. 45th Street, New York, NY 10017 - $4.50
5. Career World, Volume 1, Number 4, pages 11-15. Good article on business careers.

Films and Filmstrips

MB 720368* Why Not Accounting?
MA 681370 Accounting: Basic Procedures
MA 730071 Careers: Clerical
MB 672310 Careers in Business Data Processing
MB 720467 Help Wanted: Secretary
MB 690125 Typing Skills: Daily Job Techniques
MA 672706 The Secretary: A Normal Day
MA 672705 The Secretary: Taking Dictation
MA 672704 The Secretary: Transcribing

Filmstrips

FR 720118 Office Education, Series 1
FR 710280 Secretarial Training, Set 2, Part 2
FR 710281 Secretarial Training, Set 2, Part 3

*Represents the Lane IED order number

SUGGESTED SALEABLE SKILL ITEMS TO BE USED WITH THE "SCHOOL SUBJECTS IN RELATION TO LIFE AND WORK" FORM

Briefhand

1. Take oral dictation for three minutes at 40 w.a.m. with 90% accuracy.
2. Transcribe 200 word passage with 95% accuracy.
3. From five minute oral dictation at 30 w.a.m., take and organize notes in outline form.

Introduction to Bookkeeping

1. Write a check in ink with 100% accuracy.
2. Maintain a checkbook balance through 17 checks and reconcile correctly a bank statement.
3. Set up and maintain a set of books, using the simplified bookkeeping cycle, for 30-day period of transactions.

Typing

1. Center and type material correctly.
2. Arrange and type correctly a mailable business letter.
3. Address correctly a postcard or envelope.
4. Arrange and type correctly and outline.
5. Arrange and type correctly a table of at least three columns.
6. Use carbon paper properly.
7. Correct errors efficiently and properly.
8. Type at a rate of 40 w.a.m. (4 error cutoff) for three minutes.

CAL YOUNG JUNIOR HIGH SCHOOL

School Subjects in Relation
to Life and Work

School Subject:_____ Student's Name:_____

Directions - Teacher: Check skills student has demonstrated in your class.

Student: Check skills you believe you have mastered and then check those skills you like to perform.

Things learned in this class that might be used on the job (saleable skills)	Student		Teacher
	Yes, I can do this	Yes, I like doing it	Yes, the student can do this activity
Examples: Use of microscope			
Can organize data			

Before you actually get your first job the closest thing you have to a boss is your teachers at school. So, how you work in the school situation might be an indication of you as a worker in future years. Below is how you and your teacher see you as a worker:

Work attitudes, getting along on the job	Check if student does these things	
	Student	Teacher
Does his/her share of group work		
Follows directions		
Is pleasant to work with		
Is punctual		
Attends class regularly		
Accepts and meets deadlines for assignments		

Introduction

The two ninth grade science courses at Cal Young are not structured to easily allow radical change to incorporate science career education. However, the incorporation of career education can be accomplished by the classroom teacher accepting the responsibility to actively implement all or part of the activities that are suggested in the following pages.

The suggestions that follow serve as a starting point for the teacher to build upon. To the degree that a particular teacher changes the format to be compatible with his/her teaching style will determine the success of the program.

It is the responsibility of the teacher to plan ahead according to the course as to how and when the skills being learned should be capitalized upon. It is further hoped that the teacher will produce a singular course of study that enriched the student not only as to the knowledge of the discipline but that will bring realism to the subject by the incorporation of possible careers.

Finally, it is hoped that the teacher will begin the difficult and arduous task of making a list of 'behavioral objectives' of the course material that relates to specific occupations. These would serve as indicators for the student.

CAREER EDUCATION INTEGRATION IN NINTH GRADE SCIENCE AT CAL YOUNG
(IPS & ISCS II)

Methods of incorporation of Career Education into the science area.

1. Specific or broad reference in discussion to the occupations that use the skills or knowledge currently being discussed or used.

2. Reference to the specific occupation that would use the lab technique the student will be learning or has just learned.

3. Utilization of films that show applications of the information or techniques (skills) currently being presented or used. (A master list of rental films available in Oregon will be produced "hopefully" from which selection can be made.)

4. Use of bulletin board to show occupation types that use the knowledge or techniques that are currently being presented or used in the class. This could be made the responsibility of the students in the class.

5. Field trips to specific industries that are relevant for the subject matter and/or techniques.

6. Guest speakers that are experts in the occupation that uses the knowledge and skills being learned.

Note: Items 5 & 6 should refer to Occupational Information Access System (OIAS) and catalog for Elementary and Secondary Community Resources - IED

7. Use of checklist to identify some skills that are used in science occupations.

List of Occupations by Major Subject Area
(by no means exhaustive)

BIOLOGY

Biochemist
Biophysicist
Oceanographer
Nurse
Physician
Dentist
Sanitary Engineer
Pharmacist
Science Teacher
Dietician
Veterinarian
Lab. Technician
Curator
Nurseryman
Dental Hygienist
Ecologist
X-ray Technician
Anthropologist
Zoologist
Phytologist
Entomologist
Limnologist
Physical Therapist
O tometrist
Opthomologist
Landscape Architect
Archaeologist
Game Management
Game Warden
Forester
Paleontologist
Fishery Biologist
Food & Drug Inspector
Animal Husbandry
Agriculture
Public Health Service
Pet Shop
Horticulture

CHEMISTRY

Biochemist
Dental Hygienist
Nurseryman
Curator
Lab Technician
Veterinarian
Dietician
Physician
Photographer
Assayer
Science Teacher
Geologist
Nuclear Engineer
Pharmacist
Fireman
Dentist
Meteorologist
Chemist
Archaedlogist
Ecologist
Sanitary Engineer
Nurse
Physical Chemist
Metallurgist
Chemical Engineer
Bacteriologist
Oceanographer

GEOLOGY

Forester
Game Warden
Nurseryman
Lab Technician
Assayer
Science Teacher
Geologist
Navigator
Civil Engineer
Meteorlogist
Pilot
Archaedlogist
Ecologist
Seismologist
Civil Engineer
Oceanographer
Paleontologist
Landscape
Architect
Physical Geolo
Geologist
Curator
Stratigrapher

PHYSICS

X-ray Technician
Curator
Lab Technician
Assayer
Welder
Science Teacher
Geologist
Navigator
Nuclear Engineer
Fireman
Mechanical Engineer
Dentist
Electronic Tech.
Meteorologist
Electrician
Pilot
Physicist
Archaeologist
Ecologist
Optometrist
Physician
Draftsman
Architect
Biophysicist
Aeronautical Eng.
Geophysicist
Oceanographer
Metallurgist

Note: The broad field of laboratory technicians would include such specific occupations as - dental, medical, optical, environmental pollution control, police, food and drug administration, food processing, quality control, weights and measures, university . . . . .

Possible Student Project

Give credit to a student for a research paper that would define the particular skills that would be needed for a particular science related occupation. The paper should also include the various levels of training needed.

Permit the student to make a visitation to that occupation during class with his parent. He could then share with the class his experiences.

Possible Student Project

Allow students to plan and demonstrate how specific lab. techniques or concepts are used in specific occupations.

CHECKLIST OF SKILLS OR TECHNIQUES THAT RELATE TO SCIENCE OCCUPATIONS THAT ARE TO BE FOUND IN IFS AND/OR ISCS II

School Subject:_____

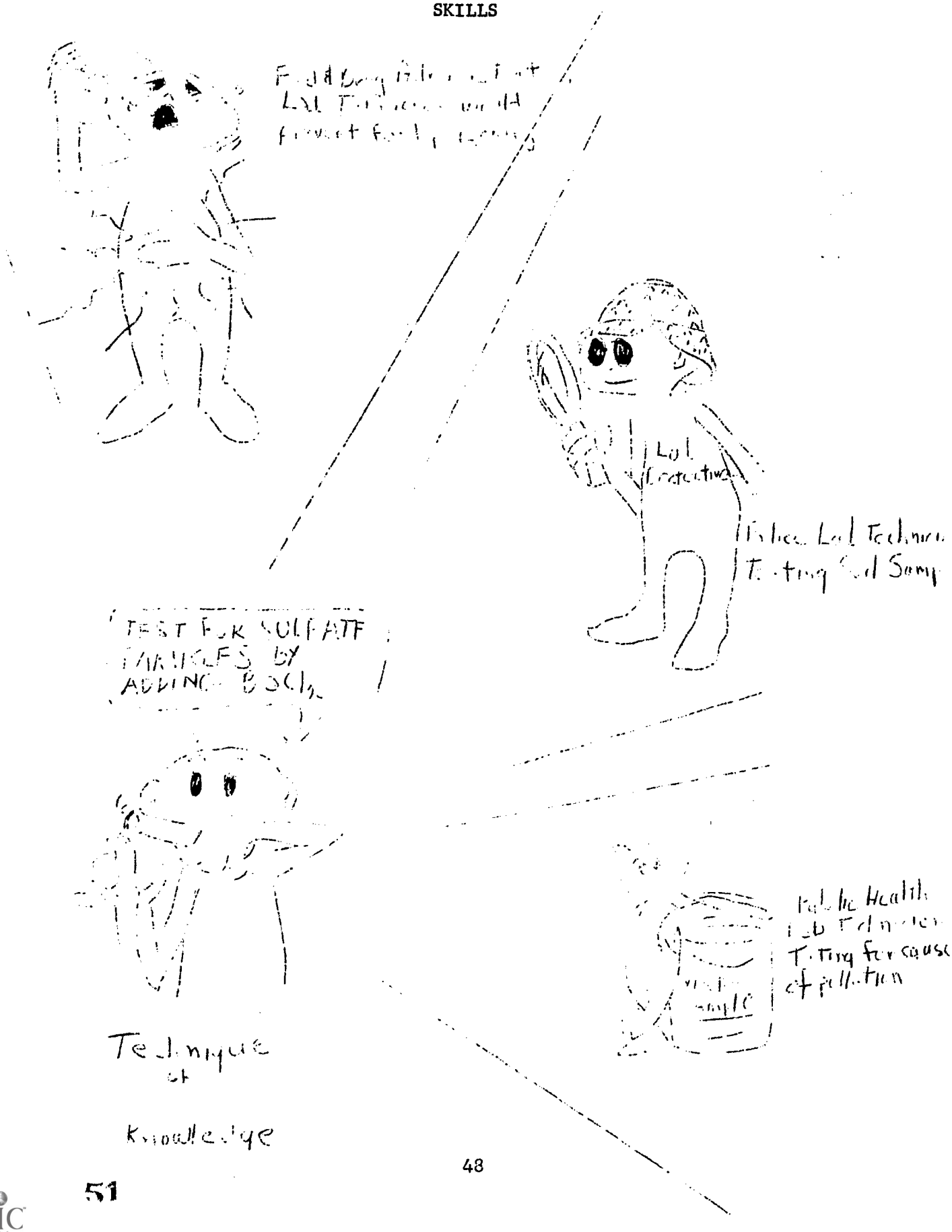
Skills and Concepts learned in this class that might be used on the job	Student		Teacher
	Am able to do it	Like doing it	Student can perform this skill
Can measure mass, length and volume			
Can derive density			
Can determine pH			
Can analyze chemicals by using flame test			
Can use a simple spectroscope			
Understands the procedure of identifying an unknown			
Can organize and graph data			
Can make predictions from data			
Can use glassware properly			
Can use a triple-beam balance			
Can use dangerous chemicals safely			
Can make dilutions			
Can use aseptic technique			
Can use paper chromotography to separate substances			
Can separate substances by freezing or boiling			
Can determine the size of substances by indirect means (Langmuir's)			
Can determine the presence of radiation by photographic means			

Can separate substances by crystallization			
Can develop and modify a model			
Can identify CO_2 using: flame test, Phenol red, lime water			
Can use the Winkler test for oxygen (qualitative and quantitative)			
Can identify copper, iodine, CO_2, oxygen and NH_3, SO_4			
Can identify chemical reactions			
Can make operational definitions			
Can titrate (stoichiometrics)			
Can control the rate of chemical reactions by use of temperature, concentration, mixing and use of catalysis			
Can use the qualitative test for glucose			
Can make a simple measure of calories by calorimetry			
Can separate particles by electrophoresis			
Can design a simple experiment			

CHECKLIST OF WORK HABITS AND ATTITUDES THAT MIGHT BE AN INDICATOR OF YOU AS A WORKER IN FUTURE YEARS

	Student	Teacher
Does his/her share of work		
Follows directions		
Completes work assignments on time		
Is punctual		
Is pleasant to work with		
Attends class regularly		
Will adapt to difficult situations		
Is willing to share expertise with others		
Is responsible for the maintenance of equipment		
Will offer suggestions for improvement		
Does not burden others with personal problems		
Tries to gather all information before making a decision		

EXAMPLE OF BULLETIN
BOARD TO ILLUSTRATE OCCUPATION
SKILLS



EXAMPLE OF BULLETIN BOARD TO ILLUSTRATE
OCCUPATIONAL SKILLS AND KNOWLEDGE NEEDED FOR ONE JOB

Police Laboratory Detective

A. Chemistry Skills

1. able to use chemical test to identify substances
2. able to titrate
3. able to test for powder burns
4. able to set up experimental procedures
5. able to distill
6. able to use micro-chemical techniques
7. able to take and develop photographs

B. Biology Skills

1. able to identify blood species and type
2. able to identify hair species
3. able to determine body cooling rates
4. able to determine post-mortem lividity
5. able to identify plant and animal species and their parts
6. able to make wet and permanent slides
7. able to use a microscope

C. Physics Skills

1. able to run a spectroanalysis
2. able to run comparison tests on bullets
3. able to examine documents and judge authenticity
4. able to separate substances for specific identification
5. able to identify various fibres
6. able to determine trajectories

D. Geology Skills

1. able to identify minerals
2. able to identify soil samples and place location
3. able to determine how recent a rock surface was exposed
4. able to trace the history of a pebble (type of erosion)

E. Other Skills

1. able to train police officers in evidence collecting
2. able to classify fingerprints
3. able to set up a resourse center of all the plants, animals, rocks and minerals to be found in the area
4. understands weather and climate of the area

FIELD TRIP EXAMPLE:

Place: Eugene Sewage Disposal Plant

Purpose:

1. To see large scale chemical separation

   a. filtration
   b. sedimentation
   c. aeration

2. To see large scale chemical decomposition

   a. oxydation
   b. biologic chemical degradation
   c. titration

3. To see quality control performed routinely on city waste products.

4. To see skills being learned in the laboratory being practiced on a job.

FIELD TRIP EXAMPLE:

Place: Mahlon Sweet Airport (Weather Service Office)

Purpose:

To see how the techniques, skills and knowledge the student has been learning is put into actual use.

To give the student the opportunity to relate his learning experiences with possible employment.

To extend the students appreciation of the weather services and with the requirements of this particular occupation.

To give the student an awareness of the related employment possibilities to be found at the airport (traffic control, mechanic, Federal Aviation Department, Lane County Pollution Control, radio communication, flight services, etc.)

I. Things that all departments should do in the career development area for graduation requirements.

A. Competency # 3.1.2.2.

The student identifies experiences and skills he/she has that might be useful in specific occupations.

Performance Indicator #3.1.2.2.1. The student makes an inventory of his/her saleable skills and talents and experiences and then lists occupations where these skills and talents would be used in parttime or summer work as a teenager.

B. Competency 3.1.6.2. The student is aware of essential factors in keeping a job.

Performance Indicator #3.1.6.2.2. The student demonstrates the ability to work as a responsible team member in classroom activities.

Performance Indicator #3.1.6.2.3. The student accepts and meets deadlines for assignments and projects.

Given is a form example that each dept. could use to fulfill the two career area competencies for all classes.

INDUSTRIAL ARTS

Some Career Education ideas that Industrial Arts teachers can use.

1. Job observations could be arranged for students who want to see what people do in different jobs. Parents should go with student for transportation and supervision. Students could go to work with their parents. Oral or written report could be a follow-up assignment. Student should be given information on what to look for when they go to observe.

2. List and discuss occupations related to or requiring background in Industrial Arts.

3. Provide activities giving students experiences in using tools basic to shop and industry.

4. Develop mass production units. Students can form companys, buy stock, produce a product by assembly line process, and sell it. This can be done also in a simple form without studying the aspect of the company organization or selling the product. It is valuable in showing how we get most of our products. This activity can be used in most of the areas in Industrial Arts: wood, metal, plastics, crafts, graphic arts, electricity, and/or construction.

5. Provide practical and conscious application of mathematics, physical, chemical and biological principles to classroom and lab problems.

6. Invite a guest speaker or demonstrator into class so students can get first-hand information about the work he does. He could also talk about avocational possibilities of the occupation.

7. Select a product and have the students try to identify all the jobs in the industry that went into production of the article.

8. Have the students go to a store and purchase the items needed to complete a project. (This could not be used with all students.) This will help them understand where various materials are sold and where they can be purchased.

9. Have students gather or prepare raw materials for a project, such as cutting wood from a tree, salvaging metal, making ceramic tile from clay, tanning leather, making stain.

10. Students could "invent" machines. Career Education Resource Guide, p. 108.
    Concepts: Careers require different knowledge, abilities, attitudes.
    Careers can be grouped in various ways into "families."

requiring similar abilities and providing similar rewards. Work experience facilitates career decision-making. Changes and conditions in the world affect careers. Different occupations are interrelated in many ways.

Performance Objectives: The student will be able to describe a variety of careers that relate directly or indirectly to the production and utilization of a typical technological device.

Materials: Readings about mechanical devices in common use, do-it-yourself magazines, scraps of wood, paper, string, wire, metal.

Lesson: In relation to inventions or technological advances, industrial revolution, student could "create" their own "machines." (windlasses, elevators, paddlewheels, gears, lever, wheel, axle, wedges.) Student could also make a technological museum to display work.

11. Discuss the importance of inspections and inspectors as a career in regard to quality control. Different examples of inspecting jobs could be given: production, line and building inspectors.

12. Study service occupations by talking about "who fixes what" or "who takes care of what."

13. Teacher and/or students could make a bulletin board on careers available.

14. Students could try to identify industrial careers in the community. For a resource student could use people or places they know, the "yellow pages," products they might want. For example, maybe their neighbor is a welder or millwright, or there is a machine shop on the way to school or do they make "mag" wheels in town.

14. Select a skill such as soldering, or measuring in thousandths and see how many different jobs require that skill.

15. Have students try to determine the effect of an occupation in terms of its contribution to the community rather than its prestige. Example: What contribution does the small engine repairman make to the community?

16. Discuss avocations that students could have through skills gained in your class; also you should talk about the importance of an avocation of some kind.

17. Have one class leave the room in a big mess. When the next class comes in, they won't be able to perform because of the irresponsibility of the other class. Relate this then to the interdependence of workers and responsibility of individual workers.

18. A suggested form for studying an occupation.

19. Make up a card game like "Concentration" using skills, terminology, and related occupations that could be matched on cards. Students could play the game to learn terminology and relation of occupations and skills.

How to play.

1. Two to four players for a set of cards.
2. Turn all cards face down.
3. First player turns up any card.
4. He then turns another up.
5. If the two cards match (or are equivalent), the player keeps the cards and repeats the process.
6. If the two cards do not match, he puts them both face down in the original place and the next player takes his turn.
7. The winner is the person who collects the most cards.

20. A suggested form for studying an occupation given in Gardiner Jr. High Schools, SUTOE Integrated publication, June, 1974, p. 88. Students consider fourteen different items concerning an occupation.

21. Prepare consumer units of study on tools and furniture.

22. The teacher can present lessons on the apprenticeship training programs of various occupations. A good source of information is Career World "Apprentice Training," Feb. 73, p. 11. Students should be exposed to what apprentice training is.

23. In the area of manufacturing, McKnight & McKnight Pub. Co.'s "World of Manufacturing" course has many good activities that could be incorporated in various classes to present career information.

24. Present students information about what is available when they get to high school in Industrial Arts. This may help them to see the progression of training for a career in industry.

25. Have students compile a daily performance record. Each student receives a form and daily at the end of class briefly fills in his activities of the class and rates himself with a score from 1 to 5 according to how he feels he performed or how much he has accomplished. At the end of the grading period he should be able to see how well he has used the time and compare this to his grade for the class. He should also be able to relate this to working for an employer and "earning his pay."

Career Education activities that are already a part of Cal Young Industrial Arts that can be emphasized to the students as having career value.

1. The use of math computations in figuring costs and quantities of material.

2. Safety education in regard to machine operation, work conditions and attitudes.

3. The value of time and productivity.

4. The appreciation of craftsmanship in products.

5. Skills in use of tools and processes.

6. Shop activities give students a chance to find various aptitudes.

7. The use of reading to follow instructions.

8. We offer the course "World of Construction" which explores occupations in the construction industry.

"Engineers & Engineering Technicians"
Career World, Mid-Oct. 1972, p. 3

"Repairmen & Mechanics, Good Jobs Where you Work With Your Hands - No or Little College Required."
Career World, Sept. 1972, p. 9

"Apprentice Training"
Career World, Feb. 1973, p. 11

"Careers for the 70s in Building Construction"
Industrial Education, March, 1974, p. 14

"Careers for the 70s in Auto Body"
Industrial Education, Nov. 1973, p. 10

"Careers for the 70s in Graphic Arts"
Industrial Education, Oct. 1973, p. 8

"If You're Looking For a Good Job, Consider the Building Trades"
Career World, Nov. 1972

"Hand-on Jobs in Manufacturing"
Career World, Oct. 1973

"Careers in the 70s in Drafting"
I.A.V.E., Sept. 1973

Apprenticeship information:

Apprenticeship Council Mailing List.
Apprenticeship Information Center
1030 N.E. Couch Street
Portland, Oregon 97232

Architects

The American Institute of Architects
1785 Massachusetts Ave.
Washington, DC 20036

Automotive Service Industry Association
230 N. Michigan Avenue
Chicago, I11 60601

Ford foundation reprints multi-listing
Ford foundation
320 East 43d Street
New York, NY 10017

Auto Mechanics

David Bachman, Roger Fisher
University of Delaware
Dept. of Pub. Instr.
Dover, Delaware

Automobile Manufacturing Assn.
Automotive Information
320 NW Center Bldg.
Detroit, MI 48202

Building Trades

Associated General Contractors of America, Inc.
1957 E Street, N.W.
Washington, DC 20006

American Federation of Labor & Congress of Industrial Organization
Building and Construction Trades Dept.
815 16th St. N.W.
Washington, DC 20006

Assistant Director of Education
General Building Contractors Assn., Inc.
Suite 1212 #2, Penn Center Plaza
Philadelphia, PA 19102

International Hod Carrier's Building and Common Laborers' Union of America
905 16th Ave.
Washington, DC 20006

Electrician - Electronics

National Electrical Contractors Assn.
1220 18th Street, N.W.
Washington, DC 20036

Portland General Electric Co.
More Power to You Kit
Portland, Oregon

Electronic Industries Assn.
2001 Eye Street, N.W.
Washington, DC 20006

Engineering

Engineers Council of Professional Development
345 East 47th Street
New York, NY 10017

National Society of Professional Engineers
2029 K Street, NW
Washington, DC 20006

Foundry

Foundry Educational Foundation
1138 Terminal Tower
Cleveland, OH 44113

Furniture Upholsterers

Upholsterers International Union of North America
1500 N. Broad Street
Philadelphia, PA 19121

Graphics

Educational Council of the Graphic Art Industry, Inc.
4615 Forbes Ave.
Pittsburg, PA 15213

Industrial Designers

Industrial Designers Society of America
60 West 55th Street
New York, NY 10019

Machinists

The National Machine Tool Builders Assn.
2139 Wisconsin Ave. N.W.
Washington, DC 20007

American Society of Tool & Manufacturing Engineers
20501 Ford Road
Dearborn, MI 48128

Mechanics

International Assn. of Machinists and Aerospace Workers
1300 Connecticut Ave. N.W.
Washington, OR 20036

Public Relations Staff
General Motors Building
3044 West Grand Boulevard
Detroit, MI 48202

The Metallurgical Society of AIME
345 East 47th Street
New York, NY 10017

Operating Engineers

International Union of Operating Engineers
1125 17th St., N.W.
Washington, DC 20036

Painters

Painting and Decorating Contractors Assn. of America
2625 West Peterson Ave.
Chicago, ILL 60605

Plasterers

Bricklayers, Masons and Plasterers' International Union of America
815 15th St., N.W.
Washington, DC 20005

Sheetmetal Worker

Sheetmetal Workers' International Assn.
1000 Connecticut Ave., N.W.
Washington, DC 20036

Surveyors

American Congress on Surveying and Mapping
Woodward Building
Washington, DC 20005

Films

These films are available through Lane IED

MB 650314 Building A House
MB 710255 Building Trades
MB 710142 Auto Mechanics
MA 730272 Careers; Construction
MA 730395 Jobs in Small and Major Electric Appliance Repair
MB 700464 Your Career in Forestry
MB 730258 Architectural Careers
MB 720086 The Industrial Worker
MB 720063 People Who Make Things
MB 720479 People Who Fix Things
MB 670268 Technicians in Our Changing World

Some Careers Related to Industrial Arts Education

Machinist
Sheetmetal Worker
Plumber
Carpenter
Cabinetmaker
Instructer Mechanical Drawing
Industrial Arts Teacher
Shop Teacher
Tool Designer
Electricians Helper
Electrician
Engineer
Engineer Aide
Draftman - electrical
Draftman - Mechanical
Diesel Mechanic
Service Station Attendant
Draftman - Architectural
Aircraft mechanic
Auto Body and Fender Man
Auto Mechanic
Gunsmith
Farm mechanic
Farmer
General mechanic
Wood Turner
Planer Operator
Logger
Log Sawyer
Log Grader
Painter
Blacksmith
Welder

ART

Some Career Education ideas that art teachers can integrate into 9th grade classes.

1. Act out occupations related to art or which are facilitated by art. Examples are: window trimmer, cartoonist, painter, photographer, architect, jeweler, advertising layoutman, dentist, sign painter, fashion designer. (See list for additional occupations)

2. Bring in college art professor to discuss occupations in which art is used. This could be other resource person as well.

3. Arrange for art students to make advertising displays, posters and signs for community businesses.

4. Organize an art fair within the school where artists in the community come and demonstrate their talent and talk to students.

5. Help students to arrange on-site job observations of occupations in art in the community.

6. Organize a mass production activity where students produce an article such as a simple leather project or a ceramic project. Along with this, you could discuss individuality in design and workmanship, costs, etc.

7. Take a product like paint or other art media and identify and discuss the jobs that went into preparing it.

8. Students could try to produce their own materials for art to help show that there are occupations that are related to art that do not involve producing "art work."

9. Student could carry on ad campaigns to see how effective advertising is, how many different ways there are, and careers available in advertising. For additional help with this activity, see "Career Education Idea Book." 1971 Portland Public Schools.

10. Study service occupations related to art: supply stores, repairmen, sales representative.

11. Prepare bulletin board in class on art careers. Students could help with this.

12. Students could try to identify art careers in the community. "Yellow pages" would be a help.

13. Film: "Careers in Art" MB 710015.

14. Have students identify occupations that require knowledge and use of skill in the use of colors. Additional information: Career Resource Guide, p. 156.

15. Discuss the importance of having an avocation and the possibility of art fulfilling this need.

16. Have one class leave the room in a bad mess; when the next class comes in, they cannot perform because the previous class was irresponsible. Relate this to the world of work.

Sources of Additional Career Education Information

Advertising

The Advertising Federation of America
655 Madison Ave.
New York, NY 10021

Public Affairs
American Assn. of Advertising Agencies, Inc.
200 Park Avenue
New York, NY 10017

Graphics

Educational Council of the Graphic Art Industry, Inc.
4615 Forbes Ave.
Pittsburg, PA 15213

Career World, Dec. 73

Ceramics

Business Manager
The American Ceramic Society
4055 North High St.
Columbus, OH 43214

Cartooning

Newspaper Comics Council
260 Madison Ave.
New York, NY 10016

Some Careers Related to Art

Architect
Artist
Commercial Artist
Sculptor
Painter
Cartoonist
Architectural Draftsman
Mechanical Draftsman
Mechanical Engineer
Stage, TV, Screen Designer
Art Teacher
Carpenter
Cabinet Maker
Sign Painter
Watchmaker
Jeweler
Tailor
Displayman
Advertising Layoutman
Beautician
Photoengraver
Interior Decorator
Dancer
Lithographer
Cartographer
Dental Technician
Dentist
Photographer
Fashion Designer

MUSIC

Some Career Education ideas that music teachers could integrate into their 9th grade classes.

1. Job observations. Help students arrange on-site visitations of occupations wherein musical training is beneficial.

2. Identify occupations related to the field of music. A few examples are: salesclerk, piano tuner, choir director, dance band player, actor/actress, composer, singer, music teacher, dancer.

3. Have students interview adults with occupations of interest in the area of music.

4. Invite resource people in music related occupations to speak to students about job opportunities, advantages, disadvantages, needed education, background, salary, etc.

5. Find a resource person who has music as a hobby or avocation who can relate its significance in his life. Possibly they could also perform.

6. Take an example product such as an instrument or music materials and have student try to identify all the jobs that went into its production.

7. Study service occupations which relate to music, such as repairman, tuner, and sales person.

8. Teacher and/or students could prepare bulletin board on music careers or activities.

9. Students could try to identify music careers in this community. They could get information from "yellow pages" or personal knowledge, etc.

10. Discuss the value of music as an avocation.

11. Show the film "To Be a Performer" MR 720286.

CAREER EDUCATION INFORMATION SOURCES

Instrument Society of America
530 William Penn Place
Pittsburg, PA

National Assn. of Schools of Music
1501 New Hampshire Ave., N.W.
Washington, DC 20036

"ASCAP the Facts"
American Society of Composers, Authors & Publishers
575 Madison Ave.
New York, NY 10022

National Assn. of Schoo

SOME CAREERS RELATED TO MUSIC

Composer
Orchestra Leader
Clergyman
Religious Director
Music Director
Recreation Leader
Music Librarian
Music Critic
Radio or TV Announcer
Concert Singer
Dancer
Comedian
Actor/Actress
Dramatic Reader
Music Specialist
Piano Tuner
Music Store Clerk
Chorus Girl
Teacher
Choir Director
Pianist
Arranger of Music
Organist

HOME ECONOMICS

Some Career Education ideas that Home Economics Teachers could integrate into their 9th grade classes.

1. Point out occupations closely related to homemaking. Some examples are: babysitting, waitress, practical nurse, housewife, cook, beautician, stewardess, dietician, clothing designer, interior decorator, home extension agent.

2. Provide field trips, films, speakers, demonstrators, which point out employment opportunities such as those listed above. Example: Invite a dietician in when studying balanced menus and special menus or diets. She could talk about her work as well as diets and menus.

3. Provide laboratory experience and/or work experience opportunities in areas such as child care, decorating, housekeeping, menu planning, cooking, etc.

4. Invite a resource person from a clothing store, beauty school or charm school to speak about and demonstrate charm and poise. There is a visit file for resource persons available in Eugene.

5. Through individualized instructional methods, introduce students to the specific requirements of occupations that require related knowledges and skills.

6. Encourage on-site observations of jobs that require homemaking and related skills and assign oral and/or written reports of observations.

7. Mass production activities could be used to show production methods. Example: Students could organize a mass production of a simple sewing project like an apron or duffle bag.

8. By taking a product such as a garment or prepared food item, have student try to identify all the different jobs that it took to produce it. Also, the resulting cost could be discussed with the same item, or raw materials that went into it.

9. A discuss could be centered around the idea of inspecting and quality control.

10. Students could be made aware of the service occupations related to home

economics such as sewing machine repair people, sales representatives, etc.

11. Bulletin board displays on careers could be used.

12. The teacher could organize lessons around the idea of the student as a consumer of goods and services. Quality, price, and use of goods could be discussed. Where to get services and costs could be presented.

13. The careers in home economics in the community could be investigated.

14. An activity to help demonstrate responsibilities: Have one class leave the kitchen a mess. When the next class comes into the room, they will not be able to perform their task because the previous class was irresponsible. Relate this to the world of work.

15. Discuss how skills learned in home economics can become a valuable avocation.

SOME CAREERS RELATED TO HOME ECONOMICS

Cook
Food Sales
Appliance Sales
Child Development
Occupational Therapist
Physical Therapist
Vocational Teacher
Reporter
Author
Flight Stewardess
Food Processing (test kitchen)
Institution Management
Home Demonstration Agent
Extension Service
Home Economist
Nutritionist
Dietician
Advertising
Research
Social Service Worker
Interior Decorator
Psychiatrist
Social Worker
Clothes Designer
Milliner
Home Maker
Registered Nurse
Practical Nurse
Baby sitter
Governess
Beautician
Waiter
Waitress

Some occupations in home economics that require apprenticeship training. (number indicates normal years of apprenticeship training.)

Baker (3)
Brewer (2-3)
Butcher - meat cutter (3)
Candy maker (3-4)
Canvas worker (3)
Cook (3)
Cosmetician (2)
Dairy products makers (2-3)
Tailor (4)
Textile technician (2-4)
Upholsterer (304)

SOURCES OF ADDITION CAREER EDUCATION INFORMATION

Film: "Bakery Beat" MB 690680

Article: "Careers in Home Economics" Career World, Nov. 72

Beauty Culture

National Beauty Career Center
3839 White Plains Road
Bronx, NY 10467

Beauty Culture Vocational Technical Division
Department of Int.
Dover, Delaware
(Tells about actual work, requirements and job opportunities)

Cooks and Chefs

Ed. Director, National Restaurant Assn.
1530 N. Lake Shore Drive
Chicago, Ill. 60610

Cosmetologist

National Hairdressers and Cosmetologists Assn.
175 5th Ave.
New York, NY 10010

Dieticians

American Dietetic Assn.
620 N. Michigan Ave.
Chicago, Ill. 60610

Food Processing - Food Retailing

Institute of Food Technologists
Suite 2120, 221 N. LaSalle St.
Chicago, Ill. 60601

National Assn. of Food Chains
1725 Ege Street, N.W.
Washington, DC 20006

Home Economist

American Home Economics Assn.
1600 20th St., N.W.
Washington, DC 20009

Interior Designers and Decorators
National Society of Interior Designers, Inc.
Suite 700
157 West 57th Street
New York, NY 10019

Apparel Industry Occupations

American Apparel Manufacturing Assn., Inc.
200 K Street, N.W.
Washington, DC 20006

Baking Industry

American Bakers Assn.
1700 Penn Avenue. NW.
Washington, DC 20006

Career Education Integrating into Social Studies

PI 3.1.2.3.1 If other tests are available rather than CATB, we could very easily work this into the pre-registration course in the spring. The purpose of the test being to help a student identify his aptitude and abilities to be able to relate those with corresponding occupations.

PI 3.1.2.3.2 With the results of the aptitude test given and the interpretation of results completed, we will make use of the information. Have prepared a list of 10 specific occupations and the abilities required by each, then have the students compare these with his own abilities.

This exercise will best fit in the spring in the pre-registration (Careers Orientation Course) in preparation for high school scheduling and job clusters.

PI 3.1.2.4.1 After using an interest inventory such as "Job O" or "Kuder" (both already available in the building), have the students identify 10 occupations which relate to their results from the inventory. This will be used during the pre-registration in preparation for high school scheduling and understanding job clusters.

PI 3.1.4.4.1 By using a (prepared) guide for goal setting, have the students develop their own goals and then compare their goals with the prepared guide.

PI 3.1.4.4.2 Using the results gathered from the aptitude test, the list of occupations and abilities necessary for those, the interest inventory and related occupations list, and the process of goal setting, have the students list the steps involved in the process of career decision-making.

PI 3.1.4.4.3 In preparation for the high school registration, have the student develop a model schedule taking into account his interests, abilities and what is available in the present high school program.

The high school scheduling handbooks and if possible, high school counselors would be additional sources of information in this exercise along with the previously gathered data

PI 3. 1.5.3.1 and 3.1.5.6.3 The method of providing opportunity for career knowledge and skill development in related occupations is offered in the high school cluster programs.

The clusters available in the Eugene High Schools, a list of typical occupations related to each, and a brief description of the clusters and which schools offer them will be given to the students to study. Following an investigation of the materials, have the students describe the program and how it might apply to them in relation to their other results. It should be noted the cluster which is not available at Sheldon can be taken by a student from the Sheldon area with no out-of-area charge.

PI 3.1.2.2.1 Given a list of saleable skills, and experiences relating to social studies, have the students determine the skills and talents they have. Have them list parttime or summer work where these would be used. This lesson could be used anytime during the year.

PI 3.1.6.2.2 The opportunity to demonstrate ability to work as a responsible team member is given several times during the year. In role-playing, simulations, group work activities, and generally cooperating in the usual day-to-day class activities.

PI 3.1.6.2.3 The accepting and meeting of deadlines for assignments and projects is an integral part of the entire year's program.

A form which checks skills pertaining to career ed. could be used or it could be included with the regular grading system and tallied quarterly.

Suggested Activities:

Career Education Resource Guide (in the library):

Some of the suggested lessons can be used as they are, others would need to be revised to fit our circumstances.

p. 111 - "The Me Nobody Knows" - The students use observations about ones personality and life style and relate these observations to career choices and leisure-time activities. The lesson could be written.

p. 113 - "That's What I Want to Be" - The students will be identifying various considerations involved in choosing a career. The lesson can be used the way it is written, but can easily be revised.

p. 115 - "Mississippi" - This activity shows the need of viewing the diversity of occupations that contribute to all areas of community life and the necessity of an awareness of the interdependency of these occupations.

This probably would need to be revised but it does have possibilities.

p. 123 "What's My Line"' - The idea is adapted from the television show with the purpose of helping students name and describe a wide range of diverse occupations.

Very little revision would be necessary for this activity.

p. 148 "Survival Specialists" - This activity helps students to identify and describe occupations that have changed or developed recently responding to the need to improve man's use of the environment. This can be used as is.

DISTRICT 4J HIGH SCHOOLS AND VOCATIONAL CLUSTERS

Vocational Clusters	South	North	Sheldon	Churchill
Office Operation	XX	XX	XX	XX
Marketing	XX	XX	XX	XX
Mechanics	XX	XX	X	XX
Electricity-Electronics	XX	XX	X	X
Metals	XX	X		
Construction	XX	XX	X	
Forestry		X	X	XX
Health Careers	X	X	X	XX
Food Services	XX			
Child Care Services			X	XX
Social Services		X		
Housing and Home Furnishings			X	

Job Cluster: Office Operations

Function: processing facts and materials needed to operate a business

Typical occupations:

secretary	meter readers	bookkeeper
clerk-typist	library assistants	key punch operator
stenographer	receptionists	office machines operator
cashiers & bank tellers	stock clerks	accountants & auditors
general office clerks	shipping & receiving clerks	computer operators
messengers	postal clerks	programmers
lumber checkers	order & credit clerks	

High School Offerings:

The curriculum provides training for a multitude of office occupations. Possible courses include such courses as bookkeeping, business machines, business math, communication, typing, record-keeping, data processing, personal grooming, and office procedure. A cooperative work experience program is available to students in this cluster area at the 12th grade level. All four Eugene high schools have state approved clusters in this area.

Job Cluster: Marketing

Function: distribution of goods, delivery, selling

Typical Occupations:

sales persons	sales manager	grocery checker
real estate salesman	sales clerk	buyer
auto salesman	insurance salesman	department manager
delivery boy	route man	

High School Offerings:

This is also called "Distributive Education" and includes combinations of subject matter that acquaint the student with goods and services from the producer to the consumer. Subjects deal with selling, buying, transporting, storing, prompting, financing, marketing research, and management. All four Eugene high schools have a full marketing cluster program. Students manage the school store as an actual business as part of the program in each school. Students are involved in related activities provided through the Distributive Education Clubs of America. Work experience is available in grade 12.

Information Sheet

Job Clusters: Social Services

Functions: Community Service

Typical Occupations:

social worker
appraiser
caseworker
group worker
probation officer
community organization worker
recreation leader

High School Offerings:

North Eugene High School has a program in social service called "Applied Citizenship Training (ACT)." The student takes a social studies course through ACT with an emphasis on economics; psychology, and social-political concepts. An attempt is made to give the student an understanding of the nature and operation of his community and local government. Through an ACT English course the student learns writing skills, interviewing techniques, and analysis of information in the evaluation of experiences for good reporting skills necessary in social service occupations. The community placement segment of the ACT program consists of three areas of emphasis. First, the student is acquainted with the function and purpose of various community agencies. The students work in the community and plan a project associated with that work. Finally, the students share their experiences with each other and the community.

Job Cluster: Housing and Home Furnishings

Function: graphic arts, interior design

Typical Occupations:

housekeeper
interior designer
hotel/motel management
upholsterer
seamstress
painter

High School Offerings:

Sheldon High School has an interior design course where students become part of the team for the project house being built by the construction classes in the district. Students in interior design learn about floor plans, styles of architecture, traffic patterns, storage, and use of color. They make selections of floor coverings, appliances, lighting, and furniture. Also, students learn about financing a home through a study of building and renting costs, purchasing and financing.

Information Sheet

Job Cluster: Metals

Function: production; making metal parts and products

Typical Occupations:

arc welder
machinist
foundry worker
sheet metal worker
combination welder
engineer
scientist

High School Offerings:

Programs in metal working are offered at both South and North Eugene High Schools. The goal of these programs is to provide the student with enough training to either enter a job upon graduation or to continue to a post-high school program. Areas included in the courses offered are arc-gas welding, sheet metal, foundary, machine tool operations, and best treatment of metals.

Job Cluster: Construction

Function: production of buildings

Typical Occupations:

Programs are offered in construction at North, South and Sheldon Highs. Students take a beginning course in construction which teaches the use of hand and power tools used in the construction industry. Practice is on cabinetry construction. A second course in this area presents the various building trades. Lumber and other construction materials are studied. Other areas covered include choosing a building site, finance, zoning, building codes, contracts and surveying. Advanced course subjects include land survey, transit use, concrete and foundation work, masonry, dry wall and we wall, roof and wall framing, interior and exterior finish, insulation, heat, roofing, painting, glazing, cabinetry, blueprint reading, and others. The student learns through building on an actual project house.

Information Sheet

Job Cluster: Forestry

Function: production or service

Typical Occupations:

forester	grader	clipperman
veneer drier	sawyer	millwright
core layer	faller & bucker	forester aide
millman	foreman	log scaler
pondman	green chainman	

High School Offerings:

Programs are offered at North, Sheldon and Churchill High Schools. Students in these programs study natural resources and explore the fields of wildlife, range, and watershed management. They develop job skills in cruising, mapping, forest protect on, reforestation, and harvesting techniques. Field trips are a large part of this program to enhance and broaden the concepts discussed in class. Work experience in the forest products industry and related services industries may be available to seniors.

Job Cluster: Health Careers

Function: service; diagnosis and treatment of health needs

Typical Occupations:

lab assistant	physical therapist	x-ray technician
medical technologist	nurse	medical secretary
orderly	dental assistant	pharmacist
nurse's aide	doctor's assistant	dietician
emergency room orderly	EKG or EEG technician	

High School Offerings:

Programs in the health careers are offered at all four Eugene high schools. The Health Careers Cluster program is designed to prepare students for entering jobs in a broad group of occupations or for post-high school or higher education. Skills and knowledge common to key occupations in the health field are included in the course. Study of medical ethics, community health services available in Lane County, the role of the health assistant, basic procedures in bedside care, communication skills, medical terminology, anatomy and physiology, basic emergency care and allied health fields will be included.

Job Cluster: Food Services

Function: distribution, preparation of food

Typical Occupations:

waitress	chef	fry cook
watier	kitchen helper	bartender
bus boy	dinner cook	butcher

High School Offerings:

South Eugene High School provides a cluster program in food service. The program provides two types of job training. For students interested in restaurant food preparation: students will learn how to cook in a commercial kitchen by using the equipment in the school cafeteria. For students interested in waiting tables and cashiering: practice these skills in a "faculty restaurant," the cafeteria serving line, and the cafeteria snack bar. Students may enroll in both courses simultaneously. Job placements will be made in restaurants of all types in the Eugene area.

Job Cluster: Child Care Services

Function: nursery school education, service

Typical Occupations:

teacher	teacher's assistant	housewife-mother

High School Offerings:

Both Sheldon and Churchill Highs have child care programs. Students will explore the world of children, see it through their eyes and discover how they play, learn, and develop. The students will have the opportunity to observe, play with, and teach pre-school children in neighboring centers. An actual child care center has been established at Churchill High School.

Job Cluster: Mechanics

Function: repair work in production or services; technical help

Typical Occupations:

automobile mechanic
construction equipment mechanic
garage foreman
diesel mechanic
office machines serviceman
service station attendant
tire repairman
maintenance man
aircraft mechanic
boiler operator

High School Offerings:

Programs are offered at all four high schools. The student first takes a course in mechanics to try out the cluster. Most students completing this course are qualified to work as service station attendants. The advanced mechanics classes include study of automobile electrical systems, engine overhaul, fuel systems, tune-up, hydraulics, brakes, suspension systems, body service, shop operation, and test equipment. A cooperative work experience program is available for seniors.

Job Cluster: Electricity-Electronics

Function: electrical theory, repair, testing, installation

Typical Occupations:

electronics technician
electrical applicance serviceman
maintenance electrician
electronics assembler
electrician
scientist
engineer
radio & TV operator and engineer
electronic equipment salesman
telephone technician
computer serviceman
auto electrical specialist

High School Offerings:

Programs in electricity-electronics are offered at all four high schools. Students interested in this cluster take a basic course in electricity-electronics to try out the subject and then if interested advance to further work in this area. The more advanced work combines a study of electrical theory with practical work in construction, troubleshooting, and reapir. Generally, the program is set up so that students can progress at individual speeds. A work experience program is available for seniors who are in the second year of the program.

SOME CAREERS RELATED TO SOCIAL STUDIES

Librarian
Teacher
Cartographer
Experimental Psychologist
Educational Psychologist
Anthropologist
Archaeologist
Paleontologist
Ethnologist
Historian
Politician
Foreign Correspondent
Author
Reporter
Script Writer
Editor

Archivist
Lawyer
Clergyman
Social Worker
Clinical Psychologist
Economist
Sociologist
Genealogist
Industrial Psychologist
Public Administrator
Social Psychologist
Personnel Manager
Public Relations Director
Geographer
Actuary
Statistician

MORE WORKSHOP RESULTS:

1. Workshop Objectives.
2. Workshop Agenda
3. An Overview of Topics Taught in GIT-7 and GIT-8
4. How We Plan to Meet Performance Indicators
   for the Career Development Process Portion
   of the District Graduation Requirements

CAL YOUNG JUNIOR HIGH SCHOOL

Cal Young Career Ed. Workshop
August 12-16

Objectives:

1. To develop a semester program at Cal Young Junior High by integrating career education into the ninth grade subject area classes.

2. To write a statement of rationale for integrating ninth grade career education into the subject area classes of the school.

3. To acquaint workshop participants with the 7th and 8th grade career programs taught in the school.

4. To examine district graduation requirements in career education education and make sure the opportunity for meeting these requirements is available to every student within the program offered in the school.

* * * * * *

Tentative Agenda

Monday

Workshop Info
Why Integrate?
GIT-7 and 8 reviewed
Some suggestions for you

Tuesday

Graduation Requirements
in Career Education
Where are we lacking?
Your assignemtn - work session

Wednesday

Work session

Thursday

Work session

Friday

Morning - work session
Afternoon - Reports
Evaluation

Topics Covered in Career Ed for 7th and 8th Grades at Cal Young

GIT-7:

1. awareness of self
   awareness of growth in self
   ways we communicate: tone-of-voice, facial expressions, clothing
   autobiography
   interests
   values
   taking a stand on social issues
   the 5 life roles we all play: family member
   leisure person
   ethical person
   worker
   citizen
   seeing yourself at age 25
   attitudes toward work
   personality assessment by self, a friend a parent

2. visitation on-the-job with a parent (optional)
   the classified ads of the newspaper - what are they?
   skills needed for a job
   filling out a job application
   analyzing a completed application from an employer's point-of-view
   the employment test
   role play the job interview
   what you should consider when looking for a job
   where to obtain job information
   how to use specific occupational resources
   how to use the card catalogue and Reader's Guide in the library
   writing a business letter to get occupational information
   interviewing a guest speaker on his/her career
   examing a variety of careers
   the payroll check - deductions
   social security
   the cluster concept of jobs
   (the D.O.T. classification of jobs
   The data-people-things digits and what they tell you)

GIT-8:

Using resource materials to obtain information on careers:
exposure to a variety of occupations
the cluster concept and clusters available to students locally
further work with the D.O.T. classification of jobs
the Neelde And Sort system of CTS to help students identify jobs for themselves in relation to personal interests and abilities
use of audio-visual materials
fitting a person to a job

Making decisions through a simulation game called Life Career:
considering need for education
marriage/family
type of work to choose
use of leisure time

Self-awareness
- interests
- abilities
- personality
- values
- matching interests and abilities to occupations
- awareness of growth in self

Working in a small group to study a local business:
- a visit to a business to observe occupations first-hand
- a hierarchy of work roles in a business
- interviewing a person about his/her job
- practicing decision-making in the group

Consumer-Economics:
- basic budgeting
- fixed and variable expenses - what are they?
- planning a menu and a grocery list
- use of weekly supermarket ads
- comparison shopping and unit pricing
- checking out a used car
- using classified ads for buying an automobile
- decision-making

* * * * * *

Vocabulary stressed: (add to spelling lists in LA?)

for self-awareness:

ethics
physical characteristics
personality
confident
optimistic
helpful
sympathetic
self-reliant
trustworthy
honest
pleasant
cheerful
courteous
loyal
cooperative
poised
self-controlled
punctual
tactful
alert
persistent
sincere
modest
patient
reliable
thorough
leisure

for World of Work:

demand
journeyman
apprentice
social security
fringe benefits
blue collar worker
outlook
marital status
employer
employee
prestige
reference
white collar worker
trade
maiden name
skill
dependents
unemployment compensation
earnings
avocation
advancement
salary
data-people-things number
training
profession
vocation

SUPPLEMENT TO CAREER DEVELOPMENT : GRADUATION REQUIREMENTS

Sub. Area 1.0 Career Development Process — Cal Young Junior High

Performance Indicator Number	Class or Dept. to Satisfy	Means of Evaluation
3.L.L.1.1	GIT-7	Teacher's judgment (T.J.)
3.1.1.2.1	GIT-7	T.J.
3.1.1.3.1	GIT-7	T.J.
3.1.1.4.1	LA	T.J.
3.1.1.4.2	LA	T.J.
3.1.2.1.1	GIT-7	Self-awareness vocabulary list from GIT-7
3.1.2.1.2	GIT-8 Life Career Unit	T.J.
3.1.2.2.1	GIT-8 You & Job Choice and LA resume	T.J
3.1.2.3.1	Soc. Studies	See Jim Holst for possible tests
3.1.2.3.2	Soc. Studies	T.J.
3.1.2.4.1	Soc. Studies	Job-O or Kuder
3.1.2.4.2	GIT-8	You & Job Choice, Self-awareness unit, T.J.
3.1.2.4.3	GIT-8	Needle Card Sort System, CIS
3.1.2.5.1	GIT-7 or 8	T.J.
3.1.2.5.2	Health Dept.	T.J.
3.1.2.6.1	GIT-7 and GIT-8	"Personality Rating Sheets" Self-awareness units

3.1.2.6.2	GIT-7 and GIT-8	T.J.
3.1.2.7.1	GIT-7	T.J.
3.1.2.7.2	LA	T.J.
3.1.3.1.1	GIT-7 job simulation	T.J.
3.1.3.1.2	GIT-7	T.J.
3.1.4.1.1	GIT-8 Life Career Unit	T.J.
3.1.4.1.2	GIT-8 Self-awareness Unit	T.J.
3.1.4.2.1	Health	T.J.
3.1.4.2.2	Health	T.J.
3.1.4.3.1	add to GIT-7 or 8	T.J.
3.1.4.4.1	Social Studies	T.J.
3.1.4.4.2	Social Studies	T.J.
3.1.4.4.3	Social Studies	Use format of Sheldon region
3.1.5.1.1	GIT-7 job simulation	T.J.
3.1.5.2.1	GIT-7	Use GIT-7 World of Work vocabulary list
3.1.5.3.1	GIT-8 and Social Studies	T.J.
3.1.5.3.2	GIT-7	T.J.
3.1.5.3.3	GIT-7	T.J.
3.1.5.3.4	GIT-7	T.J.
3.1.5.3.5	GIT-7	T.J.

3.1.5.3.6	GIT-7	T.J.
3.1.5.4.1	GIT-7	T.J.
3.1.5.4.2	GIT-7	T.J.
3.1.5.5.1	GIT-7	T.J.
3.1.5.5.2	GIT-7	T.J.
3.1.5.5.3	GIT-7 and GIT-8	T.J.
3.1.5.5.4	GIT-7 and GIT-8	T.J.
3.1.5.6.1	GIT-7	T.J.
3.1.5.6.2	GIT-7 and GIT-8	T.J.
3.1.5.6.3	Social Studies and GIT-8	T.J.
3.1.6.1.1	GIT-7	T.J.
3.1.6.1.2	GIT-7	T.J.
3.1.6.1.3	Doesn't apply to Jr. High	
3.1.6.1.4	GIT-7 and films: Job Interview: 3 young Men Job Interview: 3 Young Women	T.J.
3.1.6.1.5	LA	T.J.
3.1.6.1.6	GIT-7	T.J.
3.1.6.2.1	GIT-7 and all classes	T.J.
3.1.6.2.2	All classes	T.J.
3.1.6.2.3	All classes	T.J.

Area 3: CAREER DEVELOPMENT
Sub Area 1.0: CAREER DEVELOPMENT PROCESS

PROGRAM GOALS	COMPETENCIES	PERFORMANCE INDICATORS
1.1 Students understand how life roles are related to the career development process.	3.1.1.1 The student knows the major categories of life roles	3.1.1.1.1 The student lists the four life roles (occupational, avocational, family, community) and demonstrates his understanding by choosing one or more of the following ways to describe each role: Creative writing Verbal explanation Musically Art media Puppetry Role playing
	3.1.1.2 The student identifies the interactions and interdependence of life roles.	3.1.1.2.1 The student demonstrates how a person participates in each of the life roles in terms of time, function within roles, personal needs, values, abilities, (through graphs, art, media, role play, puppetry, creative writing, verbal explanation, interviewing the person).
	*3.1.1.3 The student recognizes his his own participation in life roles.	3.1.1.3.1 The student demonstrates how he participates in each of the life roles in terms of time, functions within roles, and personal needs, (graphs, art media, creative writing, personal biography, verbal explanation).
	*3.1.1.4 The student knows life roles change for himself and others.	3.1.1.4.1 The student depicts past, present, and possible future changes in the life roles for a significant person in his life and for his own life using written and/or visual methods.

PROGRAM GOALS	COMPETENCIES	PERFORMANCE INDICATORS
		3.1.1.4.2 Using written, verbal or visual methods of expression the student will demonstrate how other life roles would change if a person's occupational role changed.
3.1.2 Students will develop the ability to use an analytical process to access his or her own abilities, aptitudes, values, and experiences.	3.1.2.1 The student understands how an adequate self-concept affects participation in the life roles.	3.1.2.1.1 Given a list of self-concept terms the student defines his meaning of the terms.
		3.1.2.1.2 Given a description of three people, the student states how each person's self-concept affects their function in the life roles.
	3.1.2.2 The student identifies experiences and skills he/she has that might be useful in specific occupations.	3.1.2.2.1 The student makes an inventory of his/her saleable skills and talent and experiences and then lists occupations where these skills and talents would be used in part-time or summer work as a teenager.
	3.1.2.3 The student relates abilities and aptitudes to occupational choices.	3.1.2.3.1 After completing a standardized aptitude test the student identifies occupations which correspond to his test results.
		3.1.2.3.2 Given a list of 10 specified occupations and the abilities required for each, the student relates these abilities to his own.

PROGRAM GOALS	COMPETENCIES		PERFORMANCE INDICATORS	
	3.1.2.4	The student understands the relation between his interests and possible occupational choices.	3.1.2.4.1	After completing a standardized interest inventory the student identifies 10 occupations which correspond to his inventory results.
			3.1.2.4.2	The student identifies several interests and lists occupations that combine these interests.
			3.1.2.4.3	The student completes an interest inventory computer program and describes how his interests determine the occupations he obtained.
	3.1.2.5	The student understands how physical requirements and attributes relate to possible occupational choices.	3.1.2.5.1	The student identifies the physical requirements for a given list of occupations.
			3.1.2.5.2	The student reviews his past and current physical status and determines any possible effect these might have on his occupational choices.
	3.1.2.6	The student makes self-personality observations and relates these to possible choices of occupation.	3.1.2.6.1	Given a prescribed list of personal traits, the student compares these with a self evaluation and then compares this evaluation with ratings done on him/her by an adult and at least one friend.

PROGRAM GOALS		COMPETENCIES		PERFORMANCE INDICATORS	
				3.1.2.6.2	Given various occupations, the student identifies personal traits that would be appropriate to those occupations.
		3.1.2.7	The student relates his value system to occupational choices.	3.1.2.7.1	The student completes a set of activities designed to help clarify and identify values.
				3.1.2.7.2	Using a list of personal values the student identifies compatible occupations.
3.1.3	Students are aware of the effect of interpersonal communication in the work role.	3.1.3.1	The student recognizes the need for interpersonal communication in jobs and identifies behaviors that affect work relations.	3.1.3.1.1	Through role play or case study analysis the student shows the effects of interpersonal communications on the job.
				3.1.3.1.2	The student lists behaviors which are supportive and non-supportive of job success.
3.1.4	Students understand that Career Development is a life-long process involving change, decision-making and goal adjustment.	*3.1.4.1	The student recognizes change as normal in the lives of people and understands how change affects career decision-making for an individual.	3.1.4.1.1	Using a case study, the student notes how change affects the person's life, and what career decisions were made as a result of these changes.
				3.1.4.1.2	The student lists changes noted during the last year in terms of physical size, interests, foods liked, experiences, changes in dress or hairstyle, friends or beliefs.

PROGRAM GOALS	COMPETENCIES	PERFORMANCE INDICATORS
	3.1.4.2 The student recognizes the value of change of pace or activity to maintain maximum efficiency.	3.1.4.2.1 Given sketches of settings in which tension and/or fatigue is building, the student suggests activities to reduce the tension.
		3.1.4.2.2 Given a variety of new situations (overload), the student defines coping skills people use to reduce personal anxieties.
	3.1.4.3 The student recognizes current trends in occupational roles.	3.1.4.3.1 From a list of occupational titles, the student identifies those which have changed or are changing.
	*3.1.4.4 The student relates goal setting to the process of career decision-making.	3.1.4.4.1 Using guidelines for goal setting, the student establishes goals and critiques them to insure that they adhere to the suggested guidelines.
		3.1.4.4.2 The student lists the steps involved in a career decision-making process.
		3.1.4.4.3 Prior to registration in senior high school the student develops his high school program model considering his own interests and abilities and the opportunities available to him.
3.1.5 Students are familiar with occupational background information.	3.1.5.1 The student identifies role expectations between employer and employee.	3.1.5.1.1 The student describes expectations of employer and employee in relation to each other.

PROGRAM GOALS	COMPETENCIES		PERFORMANCE INDICATORS	
	3.1.5.2	The student understands common terms, phases, and definitions used in exploring occupations and the job market.	3.1.5.2.1	The student demonstrates an understanding of words associated with the world of work.
	3.1.5.3	The student identifies places or methods of training and education which can provide him with occupational knowledge and skills.	3.1.5.3.1	The student describes the high school cluster program.
			3.1.5.3.2	The student describes a two-year technical training program and lists occupations which fall in this category.
			3.1.5.3.3	The student describes the function of a four-year professional program (or longer) and identifies five occupations which this training covers.
			3.1.5.3.4	The student describes the apprenticeship program and identifies occupations with which this program is involved.
			3.1.5.3.5	The student describes on-the-job training and identifies a typical situation where on-the-job training is used.
			3.1.5.3.6	The student identifies at least two other methods of occupational training (other than those listed above) and lists a typical occupation for each.

PROGRAM GOALS	COMPETENCIES	PERFORMANCE INDICATORS
	3.1.5.4 The student understands: (a) the need for updating occupational knowledge and skills throughout his working life, and (b) recognizes advancement may be dependent upon additional training and experience.	3.1.5.4.1 The student explains the necessity for continued training in occupations.
		3.1.5.4.2 The student identifies types of job advancement that are related to additional training and experience.
	3.1.5.5 The student is familiar with the ways to obtain occupational information.	3.1.5.5.1 The student uses the card catalogue and the Reader's Guide in a library.
		3.1.5.5.2 The student writes a business letter to an organization to obtain job information.
		3.1.5.5.3 The student reports information on a variety of occupations using the skills he has learned for making use of resources.
		3.1.5.5.4 Given the Occupational Outlook Handbook the student locates designated information.
	3.1.5.6 The student understands job classification according to skills and knowledge which jobs have in common.	3.1.5.6.1 The student defines different career clusters and builds listings of jobs for each of these clusters.
		3.1.5.6.2 The student locates in the Dictionary of Occupational Titles jobs based on involvement in the three areas of data, people, and things.

PROGRAM GOALS		COMPETENCIES		PERFORMANCE INDICATORS	
				3.1.5.6.3	The student picks cluster areas of interest and identifies cluster programs in his/her school, region or district.
3.1.6	Students understand how to obtain and keep a job.	3.1.6.1	The student identifies procedures necessary in obtaining a job.	3.1.6.1.1	The student fills out a job application correctly.
				3.1.6.1.2	Given a completed job application the student identifies mistakes made in filling out the application and discusses the general impression the given application might make on an employer.
				3.1.6.1.3	The student takes an employment test in high school.
				3.1.6.1.4	Each student participates in and evaluates the interview situation.
				3.1.6.1.5	The student writes a personal resume.
				3.1.6.1.6	The student identifies agencies and other sources which provide help for job hunters.
		3.1.6.2	The student is aware of essential factors in keeping a job.	3.1.6.2.1	The student relates attendance and punctuality to keeping a job.
				3.1.6.2.2	The student demonstrates the ability to work as a responsible team member in classroom activities.
				3.1.6.2.3	The student accepts and meets deadlines for assignments and projects.

PROGRAM GOALS	COMPETENCIES	PERFORMANCE INDICATORS
3.2.1 Students will develop general (core) competencies needed to function in a career cluster or a broad range of related occupations.	3.2.1.1 The student identifies key occupations, jobs, opportunities, and salaries in a cluster.	3.2.1.1.1 Given a list of occupations the student identifies the key occupations in a chosen cluster. 3.2.1.1.2 Given a key occupation, the student states the various jobs in that occupation. 3.2.1.1.3 Given a list of key occupations, the student states the employment outlook for those occupations. 3.2.1.1.4 Given a list of key occupations, the student states the income levels for those occupations.
	3.2.1.2 Basic cluster skills and knowledge. A. Guidelines for development of cluster competencies. Competencies in this area will be developed for each cluster. These competencies must include: a. Specific cluster skills 1. Persons presently employed in key cluster occupations should be consulted for information on relevant skills needed in the cluster.	

PROGRAM GOALS	COMPETENCIES	PERFORMANCE INDICATORS

3.2.1.2 Basic cluster skills and knowledge (continued)

2. Skills and knowledge primarily needed for formal educational purposes should not be included in the competencies. For example: a mathematics concept, needed in understanding a physical process and which is not used on the job, would not be a career competency.

b. Safety training where appropriate to cluster.

c. Job observation and/or work experience if appropriate.

d. Specialized communication and computation skills as appropriate.

e. Understandings of probable future changes or trends within the cluster.

f. All of these competencies need to be related to current practice in the field.

B. The competencies developed will be reviewed to insure that they conform to the guidelines.

PROPOSED CLUSTER ORGANIZATION

Introduction

This list is based on an analysis performed by the Career Information Service at the University of Oregon. It covers about 95% of all occupations including all of the Oregon clusters.

It is suggested that this list be adopted, with suitable guidelines, for the purpose of guiding schools in expanding their exploratory cluster offerings.

11 ADMINISTRATIVE OCCUPATIONS
14 CLERICAL OCCUPATIONS
16 BOOKKEEPING-ACCOUNTING OCCUPATIONS
21 SOCIAL RESEARCH AND PLANNING OCCUPATIONS
23 ENGINEERING AND DESIGN OCCUPATIONS
26 LABORATORY OCCUPATIONS
31 MECHANICS OCCUPATIONS
34 BUILDING MAINTENANCE OCCUPATIONS
41 AGRICULTURAL AND FORESTRY OCCUPATIONS
42 CONSTRUCTION OCCUPATIONS
43 FOOD PRODUCTS OCCUPATIONS
44 TEXTILE AND APPAREL OCCUPATIONS
45 TIMBER PRODUCTS OCCUPATIONS
47 GRAPHIC ARTS OCCUPATIONS
54 METAL WORKING OCCUPATIONS
56 ELECTRICITY AND ELECTRONICS OCCUPATIONS
59 OTHER PRODUCTION OCCUPATIONS
61 TRANSPORTATION OCCUPATIONS
71 STOCK CONTROL OCCUPATIONS
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Definitions - Career Education

- C. I. S. - Career Information System. An exploratory computer program which allows students to investigate occupational titles and descriptions based on their answers to a questionnaire.
- Career Cluster - A family of occupations related by a large proportion of common skills and knowledges.
- Core Competencies - Those skills and knowledges which are common and basic to the occupations in a career cluster.
- Career Decision - A choice of a broad area of occupations which seem to fit the interests, aptitudes, abilities, and opportunities of an individual.
- Career Development - Is a series of on-going processes in which a person learns about himself, and his life-roles, and applies that knowledge to a selected life-style and occupational pattern.
- Career Education - Includes the examination and understanding of self, life roles, and life styles as they relate these to occupational choice and preparation.
- D. O. T. - Dictionary of Occupational Titles. An index of occupations and their worker characteristics. Published by the U. S. Government Printing Office.
- Decision-Making Process - 1. Identify issue
  2. Gather data
  3. Analyze data
  4. List alternatives
  5. Select an alternative
  6. Evaluate outcomes (may need to select another alternative)
  7. Make a final decision
- Goal-Setting - Is the process by which individuals decide for themselves what they want to do and then devise their own systematic procedures for achievement.
- Job Entry - (Skills and knowledge). The information and skills required to begin work in any given occupation.
- Key Cluster Occupation - An occupation in a cluster of related occupations which a) contains a large number of the common skills or core competencies in the cluster and, b) which employs a relatively large proportion of those employed in the cluster occupations.
- Life Roles - Are the four major areas in which a person functions: Occupation, Avocation, Family, and Community.
- Life Style - Is the manner in which a person fulfills his life-roles.
- Occupational Education - An area that pertains directly to instruction and skill development related to employment.
- Occupational Outlook Handbook - An occupations dictionary published by the U. S. Government Printing Office.
- Saleable Skills and Knowledge - The information and skills a person now has which could make him employable.

- Values Clarification - Systematic approach involving specific processes by which students identify values (e.g. Rath and Simon).

- Vocational Education - A program designed to provide a student with sufficient job skills to be employable in an occupation.

4/25/74:dr