DOCUMENT RESUME

ED 131 210 08 CE 007 892

TITLE Career Education: Learning with a Purpose. Junior High/Secondary Guide.
INSTITUTION State Fair Community Coll., Sedalia, Mo.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE [76]
NOTE 271p.; Not available in hard copy due to marginal reproducibility of original document

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Business Education; Career Awareness; *Career Education; Curriculum Guides; English Curriculum; *High School Curriculum; Home Economics Education; Instructional Materials; Junior High Schools; *Learning Activities; Mass Media; Mathematics Curriculum; Music Education; Resource Materials; Science Units; Secondary Education; Social Studies Units; Student Projects; *Units of Study (Subject Fields)
IDENTIFIERS *Career Education Project

ABSTRACT

Designed to supplement the existing curriculum at the junior high (grades 7-9) and secondary (grades 10-12) levels, this curriculum guide contains curriculum units to be used as models for fusing career education into the following areas: English, mathematics, science, and social studies (junior high); business, communications, French, home economics, mathematics, music, science, and social studies (secondary). Each teacher-developed unit is presented under the headings of objectives, procedures, resources and materials, evaluation, and comments on use. A listing of field trip sites and guest speakers for the Sedalia, Missouri area is appended. (TA)

Career Education: Learning with a Purpose
Junior High/Secondary Guide

by

Career Education Project
State Fair Community College
Sedalia, Missouri

ACKNOWLEDGEMENTS

Teachers from Benton, Pettis, and Saline Counties in central Missouri developed the materials in this guide. A thank you is extended to all those who contributed and to Marilyn Atkinson who prepared the contributions for publication.

The following is a list of the contributors and the school district each is from.

Pettis County

R-VIII Green Ridge:
Jim Walk
Clinton Waters

R-V Hughesville:
Anita Campbell
Phyllis Donnelly

R-IV La Monte
Mary Lynn Fillinger
Marcia Turner

Sacred Heart
Richard Bahner
Sister Barbara Borders
Mary Dooley

#200 Sedalia
Barbara Cooney
Mary Lee Cornell
Carolyn Gieschen
Bert Kimble
Charles Ledgerwood
Linda Piatt
Gene Reed
Delta Russell

R-VI Smithton
Dorothy England
Nadine Moore

Benton County

R-I Cole Camp
Raymond Schnackenberg
David Carson

R-II Lincoln
Roger Newell
Martha Vilelle

R-IX Warsaw
James Breshears
Meredith Case
Theresa Ford
Richard McKinley
Shawn Miller

Saline County

Marshall
Rod Cameron
Tom McCain

The activity which is the subject of this report was supported in whole or in part by the U. S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education should be inferred.

TABLE OF CONTENTS

FORWARD

Career Education attempts to help students understand the work ethics imposed by society; develops their work values based on their own personal interests in full awareness of society's demands; helps them become aware of the world of work and its values, prepares for, and ultimately begins and pursues a career, including the possibility of occupational change and the hope for productive use of leisure during that career.

"Career" itself is a confusing term. To us, it refers to the sum total of all the work done by a person in his lifetime. It differs from an occupation in that an occupation is a component of a career at a point in time.

As there is no set definition of Career Education, these materials have been prepared around the concept as it was conceived by these individuals in relation to the three general career education goals set up by the workshop participants.

They are:

For the student

(1) to develop an awareness of who she/he is and through effective decision-making what she/he can become;

(2) to become aware of the interrelationships of society with his/her school, community, family, work, and leisure;

(3) to become aware of the many facets of the world of work.

All objectives, goals and activities included in this guide were developed in relation to these general goals.

The activities which follow are offered as suggestions for supplementing activities in career education programs. This guide's purpose is not to tell the individual instructor what he or she must do. Rather the guide simply offers an example of what the teacher might do.

As you peruse the materials, take time to look at all activities rather than just your subject area. Many can be modified slightly and fit various situations.

Judy Rae Kuhlman
Observation/Exploration Specialist
Career Education Project
State Fair Community College
Sedalia, MO 65301

Subject Area(s) Language Arts

Unit(s) Reading - Leisure and Recreational

Objective(s): The student will become familiar with various awards presented to authors. The student will understand the procedure involved in writing and publishing of manuscripts. The student will read an award winning book.

Procedure:

Teacher presents information about the various awards presented to authors of juvenile books: Newbery Award, Mark Twain Award, etc.

Teacher presents copies of the award winning books in the school library.

Students have the opportunity to read the books.

Students view "The Story of a Book," or other suitable film dealing with production of a book.

Guest speaker - a writer in the local area.

Students have opportunity for questions and answers with the guest speaker.

Follow-up class discussion of the career related fields, as illustrator, promotional agents, book sales, etc.

Students do a project of their own design as a follow-up to reading a book. This could be a bulletin board, an oral report, a puzzle, a diarama, etc.

Resources and Materials:

School library.

Evaluation: Teacher checks and grades follow-up projects.

Comments on use:

Delta Russell

Subject Area(s) Language Arts

Unit(s) Literature - Short Stories

Objective(s): The student will become acquainted with a classic short story and become familiar with the characters in Dickens' "A Christmas Carol."

Procedure:

Read Charles Dickens' "A Christmas Carol."

Discuss each stage for comprehension.

Discuss the background information about Dickens and events surrounding his writing of the story.

Write a composition on one of the following topics:

a. People can carry the spirit of Christmas good-will with them all through the year.

b. Working conditions have greatly improved since the days of Bob Cratchit.

Resources and Materials:

An anthology containing Dickens' "A Christmas Carol"

Evaluation: Students discuss and share their ideas on the above topics with the class. Teacher checks compositions for spelling, punctuation, grammar, sentence structure, etc.

Comments on use:

Delta Russell

Subject Area(s) Language Arts

Unit(s) Literature - Classic Short Story

Objective(s): The student will become familiar with Washington Irving's "Legend of Sleepy Hollow." The student will understand the importance of character development in a short story. The student will become familiar with the biographical background of an American writer.

Procedure:

Read Washington Irving's "Legend of Sleepy Hollow."

Discuss the story for comprehension, with emphasis on the character development.

Discuss the character traits of Ichabod Crane and Brom Bones. Compare and contrast these two men.

Discuss Ichabod's ambition to be a wealthy land owner. Encourage the class to decide if he would have been a successful land owner. (why/why not)

Students role play one of the following scenes:

a. Ichabod in his classroom
b. Ichabod riding to Van Tassel's party
c. Ichabod feasting at the Van Tassel table
d. Brom Bones watching Ichabod dancing with Katrina
e. Ichabod listening to the old wives tales told at the party
f. Ichabod, being pursued by the Headless Horseman
g. Brom, hurling the pumpkin at the fleeing Ichabod

Students write a composition on the following topic sentence:

I would/would not have liked to be a student in Ichabod's class.

Students cooperate to compile two lists of reasons (would/would not) want to be a student in Ichabod's class. Filmstrip: "Irving to Sunnyside."

Resources and Materials:

Adventures for Readers, Harcourt Brace, or other anthology containing the selection

Evaluation: Teacher checks and grades the compositions written by the students.

Comments on use:

Delta Russell

Subject Area(s) Language Arts

Unit(s) Oral Presentations

Objective(s): The student will learn how to participate in a panel discussion.

Procedure:	Resources and Materials:
Present the methods and guidelines for participation in panel discussions.	Warriners, English Grammar and Composition, Harcourt, Brace, Chapter 24
Divide students into career interest groups.	
Allow time for students to research their career interest in the library.	
Present each panel discussion for the class, after time has been given for preparation of the panel by the students.	School library

Evaluation: Class evaluates each panel by use of a check-off sheet prepared by the teacher. This is a listening exercise.

Comments on use:

Delta Russell

Subject Area(s) English

Unit(s) Literature

Objective(s): Students will become aware of traits, qualities, and characteristics that can contribute to success in his life and other persons.

Procedure:	Resources and Materials:
Read a biography or autobiography or cuttings from several biographies or autobiographies.	Adventures in Reading, by Harcourt, Brace, and World
Class discussion of readings with the sharing of traits and qualities found.	Patterns in Literature, Holt, Rinehart, and Winston
Interview a person in the community that the students regard as successful and why he is successful.	Resource person in community
Write a composition either about the qualities for success or the qualities and traits found in the interviewed person that makes him successful.	Library From We, From Alone

Evaluation: Share compositions with class. Compositions checked by teacher for punctuation, spelling, etc.

Comments on use:

Mary Lynn Fillinger
Dorothy England
Delta Russell

Subject Area(s) English

Unit(s) Literature

Objective(s): Students will have general knowledge and understanding of the blind's world and occupations available.

Procedure:	Resources and Materials:
Read Helen Keller by Van Wych Brooks and The World at My Fingertips by Karsten Ohnstead.	Adventures for Readers Adventures in Reading School and public library.
Discussion of stories and problems blind may encounter in the world. Examine braille books.	Braille books
Invite blind person in community as a guest speaker with emphasis on what he encounters and occupations to blind people.	Guest speaker and his equipment
Question and answer period with guest speaker.	Local club for handicapped persons.
Follow-up discussion the next day.	
Write a poem or short story on blindness	
Read The Miracle Worker (Drama).	Themes in Literature, p. 314
Group notes on being blind.	

Evaluation: Sharing of poems and themes in class. Class discussion.

Comments on use: Children have much empathy for guest speaker and are amazed at all the equipment available to the blind

Mary Lynn Fillinger
Dorothy England
Delta Russell

Subject Area(s) English

Unit(s) Grammar--Parts of Speech

Objective(s): Students will have general knowledge of the purpose of parts of speech and their uses in language.

Procedure:	Resources and Materials:
Teacher introduces a blueprint to class.	Blueprint of building, etc.
Discussion of purpose of blueprint.	
Discussion of professions that use blueprints.	
Relationship of words to writers as blueprints to architects (analogy).	
Show sentence diagrams and places for parts of speech on diagram.	Examples of sentence diagram. Skeletal diagrams on overhead and chalkboard.

Evaluation: Class discussion and students see the parts of speech in language.

Comments on use: Students become more aware of uses and applications of parts of speech.

Mary Lynn Fillinger
Dorothy England
Delta Russell

Subject Area(s) Language Arts

Unit(s) Writing--Completing Business Forms

Objective(s): The student will be familiar with employment application forms and terminology used on the forms.

Procedure:	Resources and Materials:
Teach correct procedure for completing application forms.	Sample forms and resources from SFCC Career Education Library
Show students what is needed at hand for completing forms: social security number, names and addresses of references, etc.	
Present sample applications and go through one as a group, explaining terminology on the forms.	
Student completes application form individually.	
Ask a local personnel director to speak to the class regarding importance of the application forms; points employers look for, such as neatness, completion, accuracy; etc.	Local personnel director
Question and answer session with speaker.	
Follow-up discussion by the class concerning their applications, problems they had in completing forms, etc.	

Evaluation: Teacher checks forms for neatness, correctness, and completeness.

Comments on use:

Mary Lynn Fillinger
Delta Russell
Dorothy England

Subject Area(s) English

Unit(s) Speaking - personal interview

Objective(s): Student will become aware of the necessary information and procedure used in personal interviews.

Procedure:	Resources and Materials:
Present to class necessary information available for personal interview, also, correct manners and grooming.	Sinclair Fair Community College Career Education Library
Follow-up discussion.	
Have personnel director from local industry come and speak on the procedure used in personal interviews and give tips to students.	Local personnel director.
Class (role-play) interview classmates.	
Have two or three local businessmen come and interview with students observing businessman's checksheet.	

Evaluation: Businessman fills out checksheet on interview he gives students. Students complete checksheets on role playing for each other.

Comments on use:

Mary Lynn Fillinger
Delta Russell
Dorothy England

Subject Area(s) Language Arts

Unit(s) Letter Writing

Objective(s): The student will learn the correct form for a business letter. The student will learn to fold a letter and address envelopes correctly.

Procedure:	Resources and Materials:
Teach the six parts of a business le Teach the information needed in . ette inquiry. Write a letter of inquiry for a summer job to a business or industry where the student would like to be employed. Teach the correct way to fold the letter and address the envelope. Fold the letter and address the envelope.	Harcourt, Brace, English Grammar and Composition, and transparencie. Basic Language, Messages and Meaning, II, III, IV Language for Daily Use, Harcourt, Brace, and World, p. 210-213

Evaluation: Teacher checks the letter for correct form, grammar, punctuation, and necessary information included in body. Teacher checks for correct folding of letter and addressing of envelope.

Comments on use:

Mary Lynn Fillinger
Delta Russell
Dorothy England

Subject Area(s) English

Unit(s) Oral Speaking

Objective(s): The student will become acquainted with a career in which he is interested and will receive practice in giving an oral presentation to improve his public speaking.

Procedure:

Present the methods and guidelines in preparing and giving oral presentations.

Discussion of different [illegible] each student choosing a career of

Students interview a person in the area of their career or their interest area.

Preparation of speech from personal interview and research in library.

Presentation of speech.

Have class evaluate students in listening exercise using a prepared evaluation check-off sheet.

Resources and Materials:

Language for Daily Use, Harcourt, Brace and World, Unit 2: Speaking, Expressing Ideas

Basic Language Messages and Meanings, Chapter 4

Evaluation: Student evaluation sheets and discussion following speeches.

Comments on use:

Mary Lynn Fillinger
Dorothy England
Delta Russell

Subject Area(s) English

Unit(s) Language Arts (Interpretations)

Objective(s): The student will be able to differentiate between a straight factual news story and an opinionated editorial.

Procedure:

Discuss elements that comprise a straight news story.

Students will locate examples of news stories in newspapers on front page.

Students identify the elements of a news story (who, what, when, why, and how).

Discuss inverted pyramid style of journalistic writing.

Teacher presents the elements and purposes of editorials (inform, educate, [illegible] entertains).

Students locate an editorial that relates to a straight news story.

Students examine editorial [illegible] elements and purpose.

Students compare the editorial to the straight news story and separate fact from opinion.

Student takes a selected news story and writes an editorial on the story.

Students share with their editorials with the class and [illegible] opinions.

Resources and Materials:

Daily newspaper

Evaluation: Teacher reads and evaluates the student written editorial.

Comments on use:

Mary Lynn Fillinger
Dorothy England
Delta Russell

Subject Area(s) Mathematics

Unit(s) Advertising

Objective(s): To help students recognize the deception that is used in advertising.

Procedure:

Have students bring magazine advertisements that are well-known today.

Discuss the different techniques used in advertising to capture the public's attention.

Example: Use of a famous name to endorse a product
Generalities
Misuse of polls
Bandwagon

Resources and Materials:

Typical Gyps and Frauds by Changing Times Education

Magazines

Evaluation: Have students decide if certain magazine advertisements are as truthful as they appear.

Comments on use: Television advertisements are also very helpful to use in addition to magazines.

Theresa Ford

Subject Area(s) Mathematics

Unit(s) Percents and Decimals

Objective(s): Students can see how percentage is used in everyday situations.

Procedure:

Have a lesson on percent and decimal equivalents and on changing a percent to a decimal.

After students are familiar with the above problem, have them bring newspaper cutouts of a sale where items are a certain percent off the cost. Using these as problems, let students find the reduced price of the item.

Resources and Materials:

Newspapers

Evaluation: Give the students problems to see if they understand the use of percentage and how to find a percent of a number.

Comments on use:

Subject Area(s) Mathematics

Unit(s) Metrics

Objective(s): Students will become familiar with using metric measuring instruments. The student will gain experience in converting to different units.

Procedure:	Resources and Materials:
Have students measure different items measured for a discussion lesson later. They could also measure the item in meters, centimeters, or in millimeters.	Classroom items Masking tape
Students could tape a metric stick to the wall to use for measuring the heighth of the students in class.	Meter rulers Meter sticks

Evaluation: Check the accuracy of the information given on student worksheets.

Comments on use:

Subject Area(s) Mathematics

Unit(s) Metrics

Objective(s): To give a history of the metric system and why it is important for the United States to go metric.

Procedure:

Discuss the importance of learning the Latin and Greek prefixes before beginning actually working with metrics.

Compare the number of nations using the metric system with those using our system.

Discuss trade with those nations on the metric system and confusion of conversion. Consider the extra time and manpower used to convert these measures.

Resources and Materials:

"Metrication for Ame[illegible]
filmstri[illegible]

Evaluation: Use this film series as an introduction to the beginning of a metric lesson.

Comments on use:

Theresa Ford

Subject Area(s) Mathematics

Unit(s) Area and Perimeter

Objective(s): To give students an understanding of plane f ures. To give an understanding of the terminology geometry. (An opp nity to u square units and cubic units.)

Procedure:

Discuss the following polygons:

1. square
2. parallelogram
3. rectangle
4. triangle
5. trapezoid
6. pentagon
7. hexagon
8. octagon

Name the following figures.

1. front door
2. pastry board
3. baseball diamond
4. high school pennant
5. highway stop sign
6. a kit
7. gable end of a house
8. wheel of an automobile
9. diamond-shaped panes in church windows
10. gear wheels of a bicycle

Resources and Materials:

Classroom examples of geometric shapes

Geometric shapes or cutouts

Evaluation: Oral evaluation of the above terms.

Comments on use: Additional geometric terms could be introduced besides those given above. Example: circle, circumference, diameter, radius, pi, etc.

Subject Area(s) Mathematics

Unit(s) Perimeter and Area

Objective(s): To reinforce and extend basic ideas and skills related to measuring length as it applies to finding the perimeter and area of polygons.

Procedure:

Have students find the area of the following polygons using practical situations as given below:

1. Rectangles and square--painting walls, ceilings, floors, replacing glass window panes, making curtains, photographs.
2. Parallelograms--sections of building with modern architectual design.
3. Trapezoid--tents, gables, lamp shades, sheet metal castings for machinery and tools.
4. Triangles--pennants, surfaces of triangular prisms, wings of model rockets.

Resources and Material:

Cardboard models

Prisms

Classroom:
windows
walls
desks
tiles in floor
ceiling

Evaluation: Grade the worksheet to evaluate the student's ability to use the formulas correctly for finding areas.

Comments on use:

Theresa Ford

Subject Area(s) Mathematics

Unit(s) Volume and Surface Area

Objective(s): The purpose of this unit is to present the concepts and formulas for finding surface area and volume of prisms, cones, cylinders, pyramids and rectangular solids.

Procedure:

Discussion of concepts on volume and surface area.

Student copy of formulas needed.

Practical application problems that might be used.

1. How many cubic feet does a block of ice 4' x 3" x 8" contain? (surface area also).
2. How much ice cream can be packed into a cone 2" in diameter and 3½" deep?
3. How many cubic feet of air are there in a cone-shaped tent 20" diameter and 9' high?
4. How many cubic feet of dirt must be removed to make a cylindrical cistern 4' in diameter and 12' deep?
5. A stone pyramid has a rectangular base 15' by 12' and is 15' high. How many cubic feet does it contain?

Resources and Materials:

Set of cubic blocks

Rectangular solids

Cylinders

Triangular prism

A cone

Rectangular pyramid

Evaluation:

Comments on use: The surface area of the above items can also be found. Also in this unit could be introduced the following: cube and sphere.

24

Theresa Ford

Subject Area(s) Science

Unit(s) Chemical Reactions

Objective(s): The students will be able to describe the process used in industries for the production a common material found in the student's environment. The student will be able to write a letter of inquiry requesting materials. The student will be able to describe simple chemical reactions.

Procedure:

The students will list as many materials as they can that requires chemical reactions in their production.

The students will use two or three class periods talking about types of chemical reactions used in the production of materials common to the students.

The students will find as much material as they can on the production of one of the materials discussed in class. This will require research in the school library.

The students will be provided with the addresses of industries producing the materials they choose.

The students will write letters requesting information on processes and chemical reactions used by the company. Letters should be approved by the teacher.

Each student will present the materials they acquired to the class.

Resources and Materials:

American Iron & Steel Institute, Bedford Mills, NY 10507

American Society of Metals, 2238 Euclid Ave., Cleveland, OH 44115

Atlas Chemical Ind., Wilkington, DE 19899

Eastman Kodak Co., Rochester, NY 14650

Freeport Sulfur Co., 161 E. 42nd St., New York, NY

Reynolds Metals Co., 6601 W. Broad St., Richmond, VA 23218

U. S. Atomic Energy Commission, P.O. Box 62, Oak Ridge, TN 37830

Water Conditioning Foundation, 1202 Waukegan Rd., Glenview, IL 60025

Evaluation: Letter form used. Individual progress and report on reaction.

Comments on use: Students in physical science will be motivated by their interest in how various materials are made.

25

Clinton Waters

Subject Area(s) Science

Unit(s) Career Awareness

Objective(s): The student will be able to use resource material effectively to find information on careers in science related fields. The students will be able to list some of the science careers and select two or three that he is interested in.

Procedure:	Resources and Materials:
Students will write a paragraph explaining their concept of a career.	Occupations and Careers McGraw-Hill Book Co.
Students will make a list of as many careers as they can think of that are related to science.	Teaching Children about Technology McKnight Publishing Co.
Students will choose three of the careers they listed and research each.	Introduction to Occupations
Students will use as many sources as they can.	Careers: Exploration and Decision
Students will make a list of resources used in their inquiry.	Exploring Careers in Industry McKnight

Evaluation: Individual projects along with resources used.

Comments on use: This activity is best suited for eighth and ninth grade. This age has probably not given any real consideration to choosing a career.

Subject Area(s) Science

Unit(s) Population, Researching a Scientific Problem

Objective(s): The student should: be able to distinguish between an open and a closed population; become familiar with the microscope as a tool for research; be able to make a graph indicating the growth and stability of a population; be able to interpret a graph indicating a change in a population and make certain generalizations about factors which cause the fluctuation on the graph; become familiar with the procedure used in investigating a scientific problem; be able to make a comparison between his research on a population and the process used by a research biologist.

Procedure:

Students should be divided into groups of 5 or 10, preferably 10. Using a grease pencil, number the ten test tubes for each team starting with 0 and ending with 9. These numbers will represent the number of days the population culture will be allowed to grow. The population studied will be a yeast culture. Yeasts are used for two reasons; first they reproduce rapidly providing a large number of individuals, second they are cheap and easy to care for and grow.

Ten milliliters of the sterile medium should be placed into each tube and the tube covered with foil. Each student should be assigned a test tube if 10 members, 2 tubes if 5 members. Students should put 10 drops of the yeast culture into their own test tubes and recover with foil as quickly as possible.

The person who is assigned tube 0 should then drop 20 ml of formalin into his tube thus preserving the yeast at 0 days. The remaining tubes should be incubated at 22°C in a dark place. On the next day, the student assigned tube 1 should add 20 drops of formalin to his tube. This should be repeated each day until All 10 tubes are fixed with the formalin. After the first 2 days, students should be responsible for adding the formalin without being told. This should not require more than 4 to 6 minutes at the beginning of class. It will be necessary to fix two tubes during a weekend. It is best if the students label their tubes and have the teacher fix the

Resources and Material:

Grease pencil, 10 test tubes, sterile medium, yeast culture, formalin, aluminum foil, microscope slides, cover slips, microscopes, 15 test tubes for dillution, gradulated cylinder, 300 ml distilled water, bunsen burner

Preparation of sterile medium--1 cube beef bouillon, 20 grams sucrose, 25 ml of molasses, 500 ml of water--combine the above materials and heat almost to boiling. Filter the medium and place 10 ml in each test tube needed. Place the squares of aluminum foil over the test tubes and place in a beaker of boiling water for 15 minutes. Allow the tubes to cool before introducing the yeast culture.

Preparation of the yeast culture--2.3 grams dry yeast, 25 ml of distilled water--combine the yeast and the water. Stir until the yeast is well dissolved. Transfer 1 ml of this into 250 ml of distilled water. This will make a

Evaluation:

Comments on Use:

Subject Area(s) Science

Unit(s) Population (cont.)

Objective(s): The student should be able to predict population size at a future point by using rates of population determiners.

Procedure:

tubes during the weekend.

Students should be given another culture of the yeast so they can practice the process of dillution and counting. To make counts the students should work in pairs. This is to emphasize the importance of consistency in counts. Students should be told that a count of 75-125 is the best range of numbers to count. Each member of the team should make 4 counts by counting the number of yeasts visible in 4 different fields of the microscope. The second member should then make his counts using the same slide. After both have made their counts, each member should add his 4 counts together and divide by 4. If the average is farther apart than the chart indicates both members should make their counts over.

No. of Yeast per Average Count	Difference in the Two Averages
1 to 15	1
16 to 30	3
31 to 45	5
46 to 74	7
75 to 275	10

Resources and Materials:

0 day culture of about 15-20 yeast per count.

Ecology of Populations, Boughey, A.S., NY, Macmillan Co. 1968

Animal Populations, Browning, T.O., NY, Harper and Row Publishers, Inc., 1963

Biological Science, an Ecological Approach, BSCS, Rand McNally and Co., 1973

Ecology, Odum, E.P., NY, Holt Rinehart and Winston, Inc. 1963

Sourcebook for the Biological Sciences

Evaluation:

Comments on use: Yeast provide excellent characteristics for study. They are easy to see using a light microscope and reproduce rapidly. This activity will take about 15 days to complete, not counting the time for discussion on research careers. The amount of discussion will differ from one class to the next. Some of the problems that may arise are: Many students do not know what yeast look like. Students may not be able to use the microscope very good at first. Like any activity, there will be some students that will not read and follow the directions. Students may have problems under-

Subject Area(s) Science

Unit(s) Population (cont.)

Objective(s):

Procedure:

Dilutions should be explained carefully to students. Dilutions are made by using 9 ml of water and 1 ml of the yeast culture. If the culture is still too populous then repeat the dilution. Each dilution is by a factor of 10. Original culture 1:1, 1st 1:10, 2nd 1:100, 3rd 1:1000. The students need one or two days for practice on counting and diluting their cultures.

The students should set up data tables so they can record each count, the average, and average multiplied by the dilution factor for each culture tube. Each pair of the team should supply the rest of the team with their data. Each student should plot their data on a graph with the average number of yeasts per field times the dilution factor on the vertical axis and the days incubated on the horizontal axis. The class should then prepare a class graph on a bulletin board. Each team should enter their data on the graph using a different color line for their team. This will make it easy for the class to compare data.

Discussion: It is important that you discuss factors which could cause fluctuation in the line of the graph. Some students will also have trouble understanding how to interpret the data. It is important that the activity and discussion on a career in biological research is started. It should be pointed out that this procedure is very similar to that used by a research biologist.

Resources and Materials:

Evaluation: In using this activity, a teacher may at first become frustrated because there may be many small problems. Generally the activity gives students very good experience in researching a scientific problem, organizing data, using a microscope, working together as a group and interpreting data.

Comments on use: standing how to count the yeast and make dilutions. The teacher should explain this two or three times. Students should be told how to set up their data using a chart so it will be easy to compare with other data. It is important that students are kept working or the activity will bog down and the students will become uninterested. Advise students to keep the cultures covered to avoid contamination.

Subject Area(s) Science

Unit(s) Career Education in Science

Objective(s): The students will have reasons for learning out of the text. Students will be familiar with processes used in scientific related careers.

Procedure:

As the teacher goes through various units in science, he should refer to industrial, conservation, or any other career related to the topic. This gives the student an idea of careers open in the field of science and at the same time the students will become familiar with scientific processes.

Teachers should encourage class discussion related to careers involved in science.

Resources/Materials:

Textbooks
Professional science books
Local industries, conservation agent, hospital, veterinarian, greenhouse

Evaluation: Student evaluation is by choosing of a career in science when they graduate from school.

Comments on use: Should be used for all ages.

Clinton Waters

Subject Area(s) Physical Science

Unit(s) Analysis of Air for Carbon Dioxide

Objective(s): The student will be able to perform the test for carbon dioxide. The students will become aware of other practices for testing air and waters.

Procedure:

Set up a test tube in a clamp on a ring stand. Slant the tube at an angle of 45° from the table with the open end up. Place the rubber stopper in the tube. Place a glass tube through the stopper at a 90° angle through the stopper about . Place the other end of the glass tube in the bottom of another test tube filled with lime water [illegible] grams of copper II carbonate in the test tube and restopper. Heat the copper (II) carbonate until a change in color occurs. Carbon dioxide will bubble through the lime water and form a white precipitate. The white precipitate indicates the presence of CO_2.

Invite an inspector of sewage treatment into the class and have him discuss what water is tested for various elements and compounds.

Invite an inspector from an industry that supervises the amount of pollution emitted by the plant into the air. Discuss ways that the presence of certain pollutants are detected.

Resources and Materials:

Ring stand, two test tubes, test tube clamps, copper (II) carbonate, lime water

Local inspectors of sewage treatment and industrial air pollution

Evaluation: Evaluate using lab technique and write-up.

Comments on use: This activity is well adaptable for general science classes, biology classes and chemistry classes.

31

Clinton Waters

Subject Area(s) Physical Science

Unit(s) Temperature of a Bunsen Burner
or Melting Point of Aluminum

Objective(s): Students will be able to determine the amount of heat produced by a bunsen burner. Students will be able to list ways that the melting point of metal ores are involved in the high cost of metals.

Procedure:

With a pair of tongs, hold a piece of aluminum wire in a bunsen burner. Have the students look up the melting point of aluminum and make observations of the wire in contact with the flame. Using the information about the melting point of aluminum, have the students determine the minimum temperature of the hottest part of the flame.

Have the students write a steel refinery and inquire about temperatures required for the processes and the amount of fuel used to make a given amount of steel.

Have a class discussion about commercial production of iron, copper and aluminum along with other metals that students bring up in class.

Resources and Materials

Aluminum wire,, Bunsen burner

Chemistry Handbook, New York, Handbook of Chemistry and Physics

Evaluation: Students should be evaluated using their observation and conclusion on the temperature of the burner flame.

Comments on use: This activity should be used with students at least in the ninth grade. Younger students may not understand the industrial production of metals.

Subject Area(s) General Scien

Title: Activity of Metals

Objective(s): Students will be able to list which of the metals, copper iron or magnesium is most active to least active. Students will become familiar with processes used in industries which involve activity of metals.

Procedure:

Prepare a diluted solution of potassium chloride and divide the solution equally among three beakers. In one solution, place a sanded nail. In the next solution, place a nail wrapped as tight as possible with a bare copper wire. In the last beaker, put a nail wrapped tightly with a piece of magnesium ribbon. Have the students observe these about three days. Most active metals will corrode first.

Plan a field trip to a local industry that uses metals in their production lines. Have the students make a list of chemical reactions that involve metals that are used in the industry.

Resources and Materials:

Potassium chloride, three beakers, three nails, copper wire, magnesium

Local manufacturer using metal reactions

Evaluation: Self-evaluation by interest levels of the individual.

Comments on use: This activity may be used effectively in a number of units in chemistry or physical science.

33 Clinton Waters

Subject Area(s) Science

Unit(s) Equipment

Objective(s) To help the students learn the names of laboratory equipment. The students will be able to use the equipment in the lab. The students will have seen how these instruments are used in professional jobs.

Procedure:

Show the students each instrument used in the lab and have them make a list of them and their uses.

Have the student use the equipment by making measurements and handling glassware with clamps and clamps.

Arrange a field trip to a local hospital and have the staff show the students how they use the same instruments in their work along with more advanced equipment.

When class returns to school, have them discuss the way some of the instruments in the hospital work and have them tell which they thought was the most interesting.

Resources and Materials:

Dying tube, tongs, erlenmeyer flask, funnel, iron ring, beakers, wide-mouth bottle, wing top, ring stand, buret clamp, bunsen burner, watch glass, forceps, test tube, florence flask, test tube clamp, test tube brush, graduated cylinder, glass plate, buret

Evaluation: Evaluate by written test over uses and names of instruments.

Comments on use: This activity is good for any science class that is involved in laboratory activities.

Clinton Waters

Area Biology

Cell Transport

Objective(s): The student will be able to describe the process of diffusion through semi-permeable membrane. The students will be able to list diseases that are treated by medication that is transported throughout the body. The students will understand the idea of transport against ... [illegible]

Procedure:

Set up a test tube on a stand using a clamp that will hold the tube firm enough to turn the tube upside down. Fill the tube with a solution that is just basic enough to turn phenophthalene pink. Use a small square of paper and cover the tube. Hold your finger on the paper and turn the test tube upside down. The pressure in the tube will be equal to the pressure outside and the solution will stay in the tube with the paper over the mouth. Place an erlenmeyer flask of concentrated sulfuric acid under the test tube. Lower the test tube 1/8 inch from the flask. As the acid diffuses through the paper, the solution will change the pink solution to a colorless solution. The paper serves as a semi-permeable membrane. The water cannot penetrate the paper but the acid can diffuse from the flask through the paper into the solution. Students should discuss other types of transport such as active transport. Students should make a list of diseases and discuss the way transport in cells feeds, spreads or treats diseases. In... pathology ... the class ... discuss ... [illegible]

Resources and Materials:

test tube, 1 stand, base solution, concentrated H_2SO_4, paper, local pathologist

Evaluation: Evaluate by write-up of observations on demonstration of diffusion.

Comments on use: ... and high school students will be fascinated by the changing of ... the solution

Clinton Waters

Subject Area(s) Chemistry

Unit: Production of Gases

Objective(s): The student will be able to prepare chlorine and study its properties. Students will become familiar with the process that professional chemists use in industrial processes.

Procedure:

Set up a ring stand. Elevate an erlenmeyer flask with a two hole stopper. Place a funnel through one hole until the stem is just above the bottom of the flask. In the second hole, place a glass tube that extends 1 cm into the flask. Use glass tubing as much as possible and set up 5 collection bottles with two hole stoppers in series with the glass tubing from the flask going to the bottom of the first bottle. The second hole will have a glass tube 1 cm into the bottle and this tube will connect to the second bottle in the same way tubing went into the first bottle. Repeat this until all 5 bottles are set up in a series. Half fill the last bottle with a sodium thiosulfate solution. Add 15 g of powdered manganese dioxide to the flask and then pour 40 ml of concentrated hydrochloric acid through the funnel tube. Heat the flask very gently to avoid too rapid production of chlorine. One way to tell when the bottle contains Cl_2 gas is by placing a white paper behind the bottle. The color will indicate if the gas is present. When the bottles are full, remove the stopper and place a glass plate over the top.

Add 20 ml of water to one bottle and quickly cover with glass. Shake hard and observe the color of the water. With another bottle test the effect of the gas on red and blue litmus paper. Test the effects of the gas on colored cotton cloth. With the last bottle, place some news print in the bottle and see if the gas will bleach the print.

Resources and Materials: Materials--ring stand, glass tubing, erlenmeyer flask, bottles for collecting gas, manganese dioxide, concentrated hydrochloric acid, litmus paper, red and blue cotton material, news print

Evaluation: Evaluate on lab procedure and safety precautions used in the laboratory activity. Students should follow-up the activity with a discussion of ways that this process could be used in industries.

Comments on use: Caution should be used in this activity since chlorine gas has a dangerous properties. This restricts the activity use to advanced students.

Subject Area(s) Biological Science

Unit: Careers in Nursing

Objective(s): To become familiar with requirements of the nursing profession. Students will be able to describe some of the disadvantages of the nursing profession.

Procedure:

Visit a local hospital and talk with nurses and nurses' aids. When students return to class, have a follow-up discussion by reviewing the information learned from the visit. If possible, have a professional nurse visit the class. Students will probably have more relevant questions at this time

References and Materials:

Community hospital nurse

Nursing home

Evaluation: Have students evaluate self-interest in profession.

Comments on use: This activity is probably more suited to girls that most boys.

Clinton Waters

Subject Area(s) Biological Science

Unit(s) Conservation--Farm Management

Objective(s): To give students first-hand experience at conservation practices on farms. Students will be able to make suggestions on improving conservation practices and not hindering from production.

Procedure:	Resources and Materials:
Discuss some ways farmers conserve soil and protect animals. Visit a local farm and talk with the farmer about what conservation means to him. Students should ask about ways the farmer prevents soil erosion. When students return to class they should discuss ways to increase the number of wild animals and improve farm production. Students should evaluate the conservation practices used on the farm as poor, fair or good.	Local farmers, conservation agent, conservation commission

Evaluation: Evaluate class reports of students and individual work on class activity.

Comments on use: Well adaptable for most age groups.

Clinton Waters

Subject Area(s) Science

Unit(s) Careers in Denistry

Objective(s): Students will become familiar with the dentistry profession and related occupations.

Procedure:
Visit a local dentist and have him tell the educational requirements, problems with the profession and advantages in the profession.

Discuss related occupations. Ask students to focus on the people involved in dental care--lab technicians, drug salesmen, equipment builders, false teeth makers.

Resources and Materials:
Local dentist

Evaluation:

Comments on use:

Subject Area(s) Physical Science

Unit(s) Metallurgy of Iron

Objective(s): To become familiar with the production of iron and steel. Students will be able to describe the chemical processes involved in purification of iron and the production of steel. Students will know the job opportunities in the steel and iron production.

Procedure:

Students will discuss building materials made of steel and iron.

Students will discuss castings and expense of steel parts for machinery such as farm equipment.

The class instructor should lead a discussion on the chemical production and refining of steel and iron. Discussion should include types of furnaces used in smelting processes.

The teacher should point out that large amounts of energy is required in the refining process and this increases cost of production as prices of fuel increase.

Students should write letters of inquiry to steel and iron industries asking for information on jobs in the industry and processes used in the plant.

Resources and Materials:

Gardner-Denver Co., Quincy, IL

U. S. Steel

Modern Physical Science, Holt Rinehart and Winston

Modern Chemistry, Holt, Rinehart and Winston

Evaluation: Individual evaluation by interest.

Comments on use: Addresses for many of the steel and iron industries may be obtaine from Modern Physical Science and Modern Chemistry published by Holt, Rinehart and Winston.

40

Clinton Waters

Subject Area(s) Biological Science

Unit(s) Forestry

Objective(s): Students will be able to identify many of the local trees. Students will be familiar with practices used by the forestry service. Students will be able to list job openings in forestry.

Procedure:

Discuss classification of the trees in the area which is walking distance from school.

Class will take a field trip to observe local trees and learn the common names of many varieties Students should make a list of the trees and record distinguishing characteristics of each tree type.

Invite a local forestry agent to visit the class to discuss ways that forest areas are managed.

Have the students make a list of jobs connected with the forestry service and post the list on the bulletin board.

Resources and Materials:

Local residence permission to show the class the trees in the area

Local forestry conservation agent

Research in school and local library

Missouri Conservation Commission, Jefferson City, MO 65101

Evaluation: Evaluate on common names of trees and research on jobs in forestry.

Comments on use: Students in junior high will enjoy the opportunity to get out of the school and walk around the community looking at trees. Many students at this age have decided to be conservation agents and this provides good opportunities to get a closer look at the profession.

Subject Area(s) Chemistry

Unit(s) Zinc and Its Properties

Objective(s): To become familiar with methods of research. Students will be able to list properties of zinc and describe some chemical reactions involving zinc.

Procedure:

Place one or two chunks of mossy zinc in a test tube containing 10 ml of dilute hydrochloric acid. Have the students make observations on the reaction. Test the gas evolved for hydrogen by placing a flaming splint in the tube. If there is a pop, this indicates the presence of hydrogen. Repeat this procedure only use dilute sodium hydroride in place of hydrochloric acid.

Sandpaper a piece of zinc and observe its physical properties. Bend the zinc to see how flexible it is. Using forceps, hold a small chunk of zinc in the outer edge of a burner and note the color change.

Discuss the industrial process of refining zinc and other chemical reactions using zinc in industries.

Resources and Materials:

Zinc, mossy
Dilute HCl
Dilute NaOH
Test tubes, sandpaper

Modern Chemistry, Metcalfe, Williams, and Castha, Holt, Rinehart and Winston, Inc.

Evaluation: Students can write this activity up as a lab and evaluation may be made on observations and organization of data.

Comments on use:

Clinton Waters

Subject Area(s) Biological Science

Unit(s) Conservation

Objective(s): To become familiar with job opportunities in conservation that does not require a four-year college degree. To be able to list jobs in conservation requiring a four-year degree. The students will be able to list types of conservation and describe the biological functions involved in conservation.

Procedure:
In class discuss the process of ecological balance and the pyramid of consumer levels.

Find out local conservation practices and list these on a bulletin board.

Have the students list conservation types, such as soil conservation, fish conservation, and water conservation.

Have the area conservation education coordinator visit the class and discuss the opportunities open to non-college graduates. The coordinator should discuss job openings and requirements of conservation agents.

The activity should be completed with a field trip to a conservation management area.

Resources and Materials:
Missouri conservationist
Missouri Conservation Commission
Local conservation agent
Nearest conservation management area

Evaluation: Class self-evaluation and individual project.

Comments on use: Usually teachers will find that conservation agents will be pleased to have the opportunity to talk to students. Most junior high students interested in science would like this activity because they usually hope to be conservation agents in time.

Subject Area(s) Biological Science

Unit(s) Veterinarian

Objective(s): To learn about the profession of a veterinarian. Procedures and materials used by a veterinarian in animal care. The students will become familiar with the education requirements for the profession and learn the academic requirements.

Procedure:
Visit a local veterinarian and discuss the profession in terms of academic requirements and materials needed to set up a veterinarian office.

When students return to class discuss the problems that a veterinarian might have. Talk about animal treatment and the possibility of malpractice suits against veterinarians.

Have the students talk about experiences that they have had on farms with animals that veterinarians have worked with.

Resources and Materials:
Local veterinarian
Local farmers and students in class that live on farms and have seen veterinarians at work

Evaluation: Evaluation may be made by having the students write a paper on the problems of a veterinarian.

Comments on use: This is a good activity for any age. Students in grades six through ten would probably like it most.

Clinton Waters

Subject Area(s) Junior High Science

Unit(s) Physical Science

Objective(s): The student will learn that the ignition system of a car is rather complex and that a person could specialize in just repairing and adjusting these parts.

Procedure:

Set up an operating car ignition system.

Resources and Materials:

Old distributor, coil, battery, high voltage wire, and spark plugs
If you don't have these, some student will; and he or she can probably help set them up.
An auto repairman or shop teacher if you need any help.

Evaluation: The students should learn how an ignition system works and something about how to adjust it.

Comments on use: Any auto mechanic can help and a trip to a good garage would be time well spent. The machines used today to analyze and adjust ignition systems could be demonstrated.

David Carson

Subject Area(s) Junior High Science

Unit(s) Aviation/Mechanical

Objective(s): The student will learn that civil light aircraft must be inspected every 100 hours if used for instruction and every 12 months in any case. The student will learn that most major repair or alteration or any inspection for either 100 hour or annual must be done by a certified airframe and powerplant mechanic generally with inspection authorization.

Procedure:

The federal regulations covering 100 hour and annual inspections could be discussed. Here is a service that must be done by trained, licensed people. A very good presentation could be made by any local airframe and powerplant mechanic. Any private pilot could explain the procedure for repairs, inspection, etc.

Resources and Materials:

APR Federal Aviation Regulations and Airman's Information Manual $4.95, available from Sporty's Pilot Shop, Clermont County Airport, Batavia, OH 45103

Local private or commercial pilot (he will have the above or its equivalent)

Evaluation: This would probably be used with any material on engines or airplanes. Without authorized, licensed mechanics, the airplanes are grounded. The student should understand this.

Comments on use: A visit to any airport will get a person all the free information and help needed.

David Carson

Subject Area(s) Junior High Science

Unit(s) Weather/Aviation Use

Objective(s): The student will know that (a) weather is tremendously important to all aviation activities, (b) there are specialized sources for receiving this information which could offer career opportunities.

Procedure:

Study weather information services provided by the "Flight Service Stations," "Weather Bureau Airport Stations," and "Flight Advisory Weather Service." This can best be done by having a local pilot come in and talk about how important weather information is and how he obtains this information. If possible, take a trip to a "Flight Service Center" near your location which offers weather information. Any pilot will tell you where these are located.

Resources and Materials:

Book, Aviation Weather for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402, $4.

Local private or commercial pilot

Any flight service station. Call any time for information at any major airport.

Evaluation: This would probably be used with a unit on weather. Questions could be included on the unit test asking why weather is so important and who supplies this information service.

Comments on use: Any pilot will be more than happy to help and names of people can be obtained by visiting any airport, especially one that offers flight instruction. Also, much free material (pamphlets, booklets, etc.) may be obtained for the asking.

David Carson

Subject Area(s) Junior High Science

Unit(s) Electricity

Objective(s): To repair a small electrical appliance so that the student will get an idea that repairmen are needed.

Procedure:

Ask any class to bring you some small electrical appliance that is broken. An iron, toaster, coffee pot, heater, fan, etc. could be used. It really does not matter if you fix it or not, but you should be able to figure out what is wrong. No real skill or knowledge is needed here as the students will learn much just by trying to fix something. The teacher must know enough to not get hurt by the 120 volt line. He or she must use simple safety precautions.

Resources and Materials:

Simple volt, ohm, meter (VOM)

Hand tools such as screwdrivers, pliers, soldering gun, etc. These could be borrowed from the shop.

Evaluation: The student should learn how much can be saved by simple repair jobs.

Comments on use: A science teacher should be able to do simple electrical repair jobs. If you get a job that is too difficult or complex, just say so and don't attempt it. Try and pick something you have a chance of fixing.

48

David Carson

Subject Area(s) Junior High Science

Unit(s) Electricity/Electronics

Objective(s). To stimulate interest in amateur radio (ham radio, not citizen's band).

Procedure:

Amateur radio is one of the best ways any person can become exposed to almost all phases of the broadcast and electronics world. The procedure is simple; contact the nearest amateur radio club or just a single ham, and he, she, or they will probably do the rest. The local radio station, electronics store, or civil defense organization will be glad to refer you to local amateurs (hams). Just tell the hams what you have in mind, and they will come to you with information, pamphlets, etc. They will probably invite interested people to club meetings or invite you and small groups of people to view their equipment in the classroom. They are generally friendly and quite happy to help.

Resources and Materials:

One or more hams

Evaluation: In general this activity will be done with a unit on electricity or electronics. Evaluation is judged by interest shown; anyone who becomes a ham knows a tremendous amount of practical information about electronics.

Comments on use: This activity depends upon how well you and the local amateur radio organization can work together.

David Carson

Subject Area(s) Yeast

Unit(s)

Objective(s):
The student will know that yeast is a microscopic, non-green plant used in bread and beer making. A discussion might follow about how many job opportunities are available in the baking and brewing industry.

Procedure:
Place some sugar or whatever into a jar (the amount is not critical--say about 1/4 cup). Add water to fill and some dry bakers yeast. Let it sit in a warm place for a few days. Some things you might want to do:

a. Let the students smell the mixture right after adding the water and yeast and again at the end of the period. Could they smell the fermentation process at work?

b. Watch for the tiny bubbles of CO_2 given off. Explain that this is what makes bread dough rise. Better yet, get some bread dough and let them figure out how it rises.

c. Take a yeast count everyday with a small sample and a microscope.

d. Try and figure out why yeast production stops after a few days--add some more sugar. The alcohol inhibits further growth, but see if the students can figure it out. You might add a little of the old mixture to a fresh one containing only water and sugar to see it on the yeast start growing.

e. See if the student can find out how the yeast are reproducing--this of course will take a microscope.

f. Set out a mixture of sugar and water to see if there are "wild" yeast spores around to start fermentation without any help from the bakers yeast.

g. After a few days, let the students taste the yeast, water, sugar mixture. There will be some alcohol there but not very much at all. Students will really want to taste this; emphasize that it's not beer or parent trouble may develop.

h. Investigate the possibility of producing a food supply from yeast. How much yeast can you get from one culture, and how could the yeast be prepared or sold? Investigate food products containing yeast (if any) in your area.

i. Investigate how yeast can break sugar down into CO_2 and alcohol. This could be used to lead into a discussion of enzymes and their use in producing beer, especially the production and use of malt.

j. Let some sweet corn or other seeds (barley for malt) germinate and then taste them to see if any starch has been broken down into sugar. Caution--use only untreated seeds, as many seeds for planting have been poisoned with a fungicide or pesticide.

k. Try to produce some maltose from corn starch using germinated barley seeds as malt.

l. Be sure and try to let the students look at the yeast cells with a microscope.

Resources and Materials:
Bakers yeast, quart jars (or almost any clear container), water, some sugar, molasses, honey or almost any substance containing large amounts of sugar. If possible, a microscope with 200 to 400 power magnification.

Evaluation:
A teacher could do any part or all of these things. The student could then be tested for concept understanding. The main idea here is that yeast is a non-green plant and does need an external food supply for energy. Naturally other non-green fungi could be introduced at this time.

Comments on use:
Have fun; it's simple and easy to do.

David Carson

Subject Area(s) Topographic Maps

Unit(s)

Objective(s):
The students will be able to use and interpret some of the information contained in a standard 1:24000, 7½ minute topographic map.

Procedure:
This lesson should be more in the way of a unit. A teacher could go about as far as he or she wanted to in this depending on class interest and the teacher's personal feelings about map reading.

The students should be given some background information as to who makes and uses topographic map booklets from the Geological Survey Dept. Then a few simple topo maps could be drawn upon a chalkboard and the students could try and figure out what kind of shape they were looking at. The teacher should explain what a contour is and how these lines can be used to present information about the topography of the land. The scale of the map should be considered and distances between various points on the map may be measured. It works much better if a topo map from your own area is used. Handouts with a simple topo map could then be used to demonstrate slope and profile making. The students could then be given a standard (scale) topo map of their own area, and they could use these maps to calculate various distances between two points, finding highest and lowest elevations, profile along a given line, slope of streams, finding cliffs and flat areas, best routes for future roads (powerlines, pipelines, etc.), best wildlife areas, and to simply become familiar with the land area of the map. The time spent here could vary tremendously; a teacher might spend a few days or several weeks investigating these maps. Many of the students will want to purchase a topo map of their particular area. The teacher might even want to use this as a money-making project. The maps cost 75¢ each and can easily be sold for $1. Most students will want to visit a particular area on the map; a field trip or several field trips could be scheduled to visit particularly interesting topographic features. This lesson is very open ended; considerable math can be used in finding distance and slope, or a person could get involved in making topographic maps from raw elevation data, or producing a model from a topographic map. Almost any subject can be considered with a topo map in hand.

The teacher might also wish to get other scale maps, some showing water, mineral, timber or other resources. There are maps which will show almost anything a person wants. A teacher would spend months on this topic and continually introduce fresh, new material. A class might also wish to visit the place where modern topo maps are made and gain some understanding of the photographic, computer technology now in use.

Resources and Materials:
Topo maps--should have one each or one for every two students.
Map reading booklet and symbols, U. S. Geological Survey, Washington, DC 20242 or obtain from Geological Survey, Box 133, Rolla, MO 65401
Rulers for every student

Evaluation:
Give the students a topo map and ask that they do something with it. Let them measure distance, slope, and make a profile, find various topographic features and then draw conclusions about land use and possible means of minimizing ecological damage. The students should be able to use the maps as another tool.

Comments on use:
Seventh and eighth graders seem to like to play with maps, especially on a clean floor.

David Carson

Subject Area(s) Population Density

Unit(s) Sampling - Junior High

Objective(s):
The student will be able to make a scientific estimate of a population in any given area.

Procedure:
The student will determine how many dandelions (clover plants, field sorrel, hawkweed, grass blades, crab grass, plants, daisies, etc.) are in his or her backyard. First they have to determine how they are going to sample (probably lay out several areas, take an average for a particular area, and then find the total area and multiply) and then try and figure out how best to go about this in their backyard. The teacher might want to just ask this question and give no instructions whatever, letting the students try on their own and then seeing what happens. The next day a discussion could show up both good and bad points about their methods. The students would then try again and see if they have better, more valid results. This idea of sampling will not be new to seventh or eighth graders, but they will have trouble trying to go out and do it. They will also probably have problems with trying to find area and then extrapolating the data to cover larger areas. Also advantages and disadvantages should be discussed. Valid sampling is highly dependent upon use of error minimizing techniques.

Resources and Materials:
Meter stick (yard stick or tape measure)
Backyard or cleared grassy area
Some time after school

Evaluation:
Seventh and eighth graders have a good imagination, so for an evaluation say that they are a conservation employee and they have a limited budget to find the rabbit population of their county so that hunting seasons and bag limits can be set. Give them a time limit of plans needed to sample the population density of the rabbits. The students will probably want to think about it for a day or two and then write a paper during class on how they will gather this data. It should be fun. The teacher could set limits on money, equipment, manpower, and time limits if needed.

Comments on use:
The technique of sampling is used a tremendous amount; the students should have some idea as to how it works and its advantages and its disadvantages.

David Carson

Subject Area(s) Science

Unit(s) Insects

Objective(s): Preparation of a report on the number and type of insects that can be found at night.

Procedure:

A student may go out at night and look on the underside of leaves and flowers in his garden and on tree trunks to find insects. A light may also be set up at night and various flying insects will be attracted to it. Also the reaction of various insects to light should be noted. This procedure is for use in the early summer.

Discussion on nocturnal behavior of insects vs. human beings.

Resources and Materials:

Evaluation:

Comments on use:

David Carson

Subject Area(s) Junior High Science

Unit(s) Gelatin

Objective(s): To find out how Jello is made.

Procedure:

Write a letter to the Jello Company: General Foods Corporation, White Plains, NY 10625. Ask them how they make Jello, where the gelatin comes from and how it is prepared.

Resources and Materials:

Evaluation: Most of the students will be very interested and surprised at the results. Jello is a fine product; but at first glance, its preparation may seem a bit repugnant.

Comments on use:

David Carson

Subject Area(s) Junior High Science

Unit(s) Starch

Objective(s): To see what happens to potato starch grains when boiled.
To understand nutritional elements of food.

Procedure:

Cut a very thin slice of raw potato and look at the starch grains under a microscope. Note their size and appearance. Have a student boil a potato and let them determine when it is done. Examine the boiled starch grains under the microscope. Note the difference. A discussion might follow on why its easier to digest cooked potato starch than raw starch grains.

Class discussion on importance of good nutrition for physical well being. How well does your family adhere to meeting seven basic foods requirements.

Resources and Materials:

A container, water, and heat source suitable for boiling a potato

Home ec teacher
Discussion or materials on 7 basic foods

Evaluation:
The student should be able to see the differences between the starch grains and know why cooked potatoes are easier to digest.

Comments on use:
Bring salt and eat the cooked potato.

David Carson

Subject Area(s) Junior High Science

Unit(s) Sugar

Objective(s): To change table sugar (sucrose) to caramel.

Procedure:	Resources and Materials:
Gently heat a little sugar until it melts. Continuously stir and add more sugar until a liquid amber mass results. This is hard to do without burning it; go slow and if the liquid becomes very dark brown or black, start over. If you heat it too strongly, it will also catch on fire; you have been warned. When all the sugar has changed into a smooth amber liquid, pour it out onto the foil spread over a flat surface--its very hot so use a formica desk or lab top desk. Let it cool. Break it up into small pieces and let the students each eat a bit.	1 cup of sugar, 250 ml. beaker, a sheet of heavy tinfoil or aluminum foil, ringstand, ring, wire gauze, bunsen burner, and a long stirring rod You don't really need any of this; all you are going to do is gently heat a container of sugar.

Evaluation: A chemical change has taken place here and the sucrose has been converted by heat into semisweet caramel. The students should understand by direct participation that the caramel is no longer the same as the sucrose.

Comments on use:
Much enthusiasm will be created. Some will do this several times at home just to see if they can make caramel.

David Carson

Subject Area(s) Junior High Science

Unit(s) Molds

Objective(s): To grow some bread mold from spores contained in the dust from th classroom.

Procedure:

Moisten two paper towels and place them in the bottom of the quart jar. Place some bread or rolls on top of the towels and then wipe a small moistened piece of the bread in the dust from a corner of the room, placing it in the jar also. Put a lid on the jar to prevent the bread from drying out. After some mold has formed, it can be examined under a microscope. I suppose its possible that there would be no mold spores in the dust, but this has never happened yet.

Resources and Material

One quart jar and lid, bread or rolls (preferably homemade) and some water

Evaluation: The student should be able to identify major parts of a mold (mycelium, spore cases, spores, and filaments). The student should understand the function of these parts.

Comments on use: Someone will want to know if the bread can still be eaten. It can, but it might make someone mildly sick. The teacher might suggest that some mold be grown on cheese and then tasted to see if the flavor has improved.

David Carson

Subject Area(s) Junior High Science

Unit(s) Food Calories

Objective(s):
To show that food calories are a measure of heat (not temperature) produced when a food is burned.

Procedure:
Set the beaker of water on the stand, supported by the wire gauze on the ring over the small container of nuts. The nuts may rest on the metal base of the ring stand and the ring stand should be on an asbestos pad to prevent burning the desk. The nuts will have to be heated before they will burn by themselves, and this is best accomplished with a propane torch or bunsen burner. Try and take the temperature of the water just when the nuts start burning or take the temperature beforehand and then set the beaker on the ring stand just when the nuts start burning. The idea is to determine how many degrees temperature rise a known amount of nuts can raise a known amount of water (in this case 250 ml. of water). From this, the number of calories of heat the water absorbed can be calculated. Calories - (number of ml. of water) times (centigrade degree rise in temperature).

Resources and Materials:
A small metal pan full ot assorted shelled nuts, 250 ml. beaker of water, thermometer, ring stand, ring, wire gauze, a heavy asbestos pad, and a burner or torch. You don't really need any of this. The idea is just to burn the nuts and heat the water with the fire. Anyway to do it is all right.

Evaluation:
The student should be able to tell how food value is calculated and what a calorie is.

Comments on use:
Due to the many errors the teacher cannot say that the burning of the nuts supplied a certain number of calories, but the teacher can say that so many carories of heat were absorbed by the water. If the food was dry, burned in pure oxygen, and no heat escaped anywhere else but into the water, then an exact determination of calories produced could be made. The objective is to show the student how heat can be measured and how food value is measured. A discussion of possible errors could be a subject in itself here. Some students will probably want to look up how a lab grade calorimeter is constructed. Also, the calorie used here (1 calorie is the amount of heat needed to raise the temperature of 1 gram (ml.) of water 1 centigrade degree) is not a food calorie. 1 food calorie is 1000 standard calories.

Subject Area(s) Science

Unit(s) _____

Objective(s): Proper utilization of the school nurse.

Procedure:	Resources and Materials
The school nurse should know a great deal more about the human body than you do and also about health and medical careers. The nurse might be invited to speak on various subjects, such as: a. Various types of eye tests for color blindness and visual acuity b. Detection of Glacoma c. How various tests such as the TB tests are administered and read d. Proper methods of giving artificial respiration e. Any sort of health oriented or medical occupation	One school nurse

Evaluation:

Comments on use: Anyone who can help you in the classroom should be at least consulted. The school nurse is a very valuable person. The teacher should use the nurse as a resource person for many different classroom activities.

Subject Area(s) Science

Unit(s)

Objective(s): To obtain peanut oil from peanuts.
To explore various use of peanut oil.

Procedure:

Grind up the peanuts and put them in a small jar. Cover them with carbon tetrachloride and let the mixture stand for ten minutes. Pour off the liquid into a small dish and let the carbon tetrachloride evaporate. **Caution: carbon tetrachloride is a poison; do not allow the liquid to evaporate in the classroom. Take it outside. Avoid any exposure to carbon tetrachloride.

The oil that remains after evaporation is peanut oil. The peanut oil may be tested to see if it burns and also to get an idea as to how much heat it will produce. Some idea of food value may be obtained in this manner. Do not eat any of this oil as some carbon tetrachloride may remain in it.

Discuss various uses of peanut oil in home and industry. Have students research other areas for possible current uses.

Resources and Materials:

Peanuts, carbon tetrachloride, small dish and jar

Evaluation: The students should know what peanut oil is and how it may be obtained. This should give the students some insight as to why nuts have so many calories. The extraction of oil with a solvent is an important chemical process. How many other oils could be extracted in this way? How many people are engaged in, say, the production of corn oil?

Comments on use:

David Carson

Subject Area(s) Science

Unit(s)

Objective(s): To show that most seeds store at least a part of their food as star and that this starch is broken down to sugar when the seed germinates.

Procedure:

Place a few grains of corn or barley (other cereal grains will also work) on a section of paper towel and put it in a jar. Keep the towel moist until the seed germinates. Then chew up the seed to taste it. If there is a sweet taste, the starch has been broken down into sugar. Crush a seed that is not germinated and taste it to see if there is any difference.

Resources and Materials:

Corn or barley grain

**Caution--these seeds may be treated with a fungicide; check before using.

Paper towels

Evaluation: The student should be able to tell why starch is stored up in seeds rather than sugar and also why the starch is broken down (by enzymes) into sugar when the seed germinates. The student must understand that sugar is water soluble and starch is not; therefore, the starch is trapped within the cell, but the sugar can dissolve and move out.

Comments on use: Students think this is lots of fun (especially tasting the seeds). This could also lead to discussions in the growing of grains and how more food value might be obtained in our grain.

David Carson

Subject Area(s) Science

Unit(s)

Objective(s): To measure your lung capacity.

Procedure:

Fill the can with water and invert it into a sink or try partially filled with water so that the water contained in the can does not run out. Place one end of the tubing in the open mouth of the can under the surface of the water and have a student empty his lungs of air into the can. As air is forced into the can, the water runs out. The average seventh grader can almost empty a gallon can. Some air will naturally remain in the lungs so this is not an accurate test.

Resources and Materials:

A one gallon "AB Dick" duplicator fluid can or a gallon can with a small opening, a large tray or sink that will hold several gallons of water, and about three feet of small, flexible rubber tubing.

Evaluation: The students will all try to empty the can--girls generally have less lung capacity. If a record is kept, this may show up in the classroom.

Comments on use: It's more fun to use a glass jar rather than a gallon can, but they must be handled much more carefully.

64

David Carson

Subject Area(s) Science

Unit(s)

Objective(s): Determination of blood pressure and heart rate before and after exercise.

Procedure:

Ask the school nurse to come in and take the blood pressure and heart rate of, say, 4 or 5 students while at rest, and then let them exercise for a few minutes, taking the pulse and blood pressure again. Do this one student at a time.

Discuss need for physical check-ups to possible prevent heath problems.

Resources and Materials:

One school nurse with a sphygmometer

Evaluation: Encourage the students to ask the nurse questions about what blood pressure is, what is excessive BP or pulse rate, why exercise helps a person and questions in general about the heart and circulatory system.

Comments on use: If the teacher does this right, the nurse will teach a far better lesson than you can.

David Carson

Subject Area(s) Science

Unit(s)

Objective(s): To measure the size of something within the field of view of a microscope.

Procedure:

Place the ruler under the microscope on its lowest power so that the width of the field of view can be measured. Have the students try this with higher magnifications (they can probably do it at 100x, but not at 400x). Calculate how far it is across the field of view at 40x, 100x, and 400x.

Resources and Materials:

One microscope (40, 100, and 400 power, if possible) and a metric system ruler

Evaluation: Let the students look at various things under the microscope and estimate their length and width by comparing with a known field of view.

Comments on use: So many times a student will look at something under a microscope and then say, "How small is it?" This lesson will at least let the student estimate the size of what they see under a microscope. Many people are engaged in the optic industry; a discussion of how microscopes work might also be appropriate.

Subject Area(s) Life Science

Unit(s) Ecology

Objective(s): Students will learn about careers in the ecological field and about what private citizens can do to help make the jobs of these people easier.

Procedure:	Resources and Materials:
Students will hear a talk from a local conservation agent concerning his job and problems associated with it.	Missouri State Conservation Department
Students will report to the class on pollution or other environmental problems which they have observed in their community.	Personal experience
Students will organize a clean-up project in their community and carry out the project in order to gain personal experience as to the magnitude of the pollution problem.	
Students will develop and execute a plan for educating people or at least making the people of their community aware of the need for individuals to do their share to reduce the pollution problem.	Advertisements in local paper, posters, surveys

Evaluation:

Comments on use:

Roger Newell

Subject Area(s) Life Science

Unit(s) Ecology

Objective(s): Students will understand the concept of "natural balance," or how all living things in a community are interrelated. Students will be familiar with man's influence on nature. Students will learn about changes within a community.

Procedure:	Resources and Materials:
Students will read about and discuss the various relationships which exist, beneficial and harmful, within a wildlife community.	Exploring Life Science, Thurber and Kilburn, Allyn and Bacon Publishers, pp. 17-29
Students will read about successions in fallow-fields, on bare rock, in ponds, and in forests and will visit some of these areas to observe succession in various stages.	Textbook - local wildlife communities
Students will learn about the exchange of vital gases (O_2CO_2) between plants and animals through the use of an experiment involving snails and green plants to produce gases, then testing with bromothymol blue solution.	Textbook - actual laboratory experiences
Students will read about man's influence or his environment and report or discuss findings.	Textbook - local news media-observation
Students will do an exercise on the importance of predator control (birth rate of meadow mice and resulting population explosion without predators or disease).	Teacher's hypothetical situation on blackboard

Evaluation:

Comments on use:

Roger Newell

Subject Area(s) Life Science

Unit(s) Careers in Life Science

Objective(s): Students will gain knowledge and understandings of careers related to life science; what careers are, in fact, related to life science and what these people do.

Procedure:	Resources and Materials:
Students will read about the forestry-lumber industry and will view films concerning the wise use of forest resources and the people engaged in forestry. Students will hear a talk by a local or nearby farm agent (MFA, Mo. Farmer's Coop, the University of Missouri Agriculture Department, etc.) concerning farming as a career and wise farming practices.	Textbook, library resources, films from local libraries and Missouri Conservation Department University of Missouri Extension Services, MFA, Missouri Farmers Coop, NFO

Evaluation:

Comments on use:

Subject Area(s) Health

Unit(s) Drug Education

Objective(s): Students will become familiar with the various dependency-type substances commonly abused, their effects upon the human body, and the various ways in which the substances are abused. Students should be able to make an intelligent decision concerning their own use of these substances. (To use or not to use)

Procedure:	Resources and Materials:
Students will conduct an indepth study of the Surgeon General's reports concerning cigarette smoking.	Copy of the Surgeon General's Reports
Students will try to find out more about the relationship between cigarette smoking and accidents.	The National Safety Council, 425 N. Michigan Ave., Chicago, IL 60611; The American Insurance Institute, 85 John St., New York, NY 10038
Students will conduct a debate as to the pros and cons of smoking from the teenager's viewpoint.	Textbook, school library
Students will research a particular type of drug dependency and report to the class as though they actually were the dependent person.	
Students will hold a panel discussion on the magnitude of the drug problem in their own geographical area and what can be done to help.	Personal knowledge, talk with people in the community, talk with medical personnel, student surveys
Students will hear a talk by local police or State Patrolman concerning drug abuse in their community or area.	Local police, State Highway Patrol

Evaluation:

Comments on use:

Roger Newell

Subject Area(s) Health

Unit(s) Health Careers - Services

Objective(s): Students will gain an awareness of what people in the various health careers actually do and some of the requirements of the health occupations.

Procedure:	Resources and Materials:
Students will each select a health-related occupation, research this occupation, and tell the class what is involved in being a physician, nurse, opthamologist, etc. as though they actually engage in this occupation. (Students may dress in the attire suitable to their particular occupation.)	Library, textbooks, interviews with people in health-related fields
Students will view films on health-related occupations.	State Fair Community College resource materials Department of Health films Missouri State Career Education resources
Students will participate in panel discussions concerning the availability and cost of medical personnel and treatment in Benton County.	Local hospitals, ambulance services, health-related personnel in the county
Students will tour the ambulance facility in their own vicinity, including a talk on the use of the various ambulance equipment and ambulance procedures by a qualified ambulance operator.	Local ambulance service
Students will try to find out some of the methods presently being used in modern heart surgery and try to find out some of the heart-surgery techniques which are still experimental.	The Heart Information Center, National Heart Institute, Bethesda, MD 20014 - The American Medical Assoc., 535 N. Dearborn St., Chicago, IL 60610 - The American Heart Assoc., 44 E. 23rd St., New York, NY 10010 - The American Medical Association, 535 N. Dearborn St., Chicago, IL 60610 - The Food and Drug Admin.,
Students will find out all they can about quackery in order to protect themselves and others from unsafe or useless "medical" practices.	
Students will try to find out the specific educational qualifications necessary to become a psychiatrist and	

Evaluation:

Comments on use.

Subject Area(s)

Unit(s) Health Careers - Services, p. 2

Objective(s):

Procedure:

a clinical psychologist and the services provided by each.

Students will try to find out the basic principle upon which the artificial kidney operates and also try to find out other uses for this machine.

Resources and Materials:

Washington, DC 20204

The American Psychology Assoc., 1200 17th St., Washington, DC 20036. The American Psych. Assoc., 1700 18th St., Washington, DC 20032. The National Institute of Mental Health, 5455 Wisconsin Ave. Chevy Chase, MD 20203. Kidney Disease Control Program, 4016 N. Fairfa Arlington, VA 22203. The American Medical Assoc.

Evaluation:

Comments on use:

Roger Newell

Subject Area(s) Life Science

Unit(s) Heredity

Objective(s): To show how a geneticist can predict to a degree what an animal's traits might be.

Procedure:	Resources and Materials
Mark 2 squares of paper with the letter B for brown eyes and M for mother. Mark 2 more squares with the letter b for blue eyes and F for father. Place both M squares and both F squares together to represent the 2 genes for eye color in both the mother and the father. Move one M square and the other F square down and place them side by side. Ask livestock farmer to explain to the class breeding procedures in reference to breeding for desirable traits in reference to milk production, beef sales, etc.	Paper, scissors, pen or pencil, ~~doctor, nurse, geneticist~~ Livestock farmer Biology text

Evaluation:
What is the gene combination of the fertilized egg cells? Are other combinations possible?
The gene for brown eyes (B) is stronger than the gene for blue eyes (b). What is the color of the eyes of a child with the two genes Bb?

Comments on use:

Subject Area(s) Life Science

Unit(s) Plants: Interdependence

Objective(s): To show how a conservation agent can help improve fishing in lakes and ponds.

Procedure:	Resources and Materials:
Fill each of the 6 in. test tubes 3/4 full of water. Into test tubes #1 and #2 place one small snail and some algae. Into #3 put only some algae. In #4 put only one small snail. Place a cork in each test tube. Place test tubes #1, #3, and #4 where sunlight cannot reach it. After 2 days, begin checking each test tube and record what is happening. Continue checking for 5 days. Invite ecologist and/or conservation agent to explain other types of imbalance relationships that cause pollution.	4 each 6 in. test tubes marked #1, #2, #3 and #4 6 corks snails algae dark place sunlight ecologist conservation agent

Evaluation: Describe and explain what happened in each of the test tubes. Why do both the snail and algae survive when together in a test tube exposed to the sun?

Comments on use:

Subject Area(s) Life Science

Unit(s) Plants

Objective(s): To see why farmers need to use fertilizers.

Procedure:	Resources and Material:
In a small pot plant a tomato seed in a known weight of soil. Allow the plant to grow the tomatoes ripe and ready to eat. Very carefully remove the plant from the soil. Retain as much soil as possible. Very carefully weigh the soil.	Seeds, pot, soil, water, scales

Evaluation:
Students should be able to explain the differences in weights of the soil.
Students should be able to predict what would happen if the same soil were used over and over without adding to it.

Comments on use:
Very careful measurement of weight is required.

Tom McCain

Subject Area(s) Life Science

Unit(s) Plants

Objective(s): To show why some farmers need to irrigate their crops.

Procedure:	Resources and Materials:
Half fill a 6 inch test tube with water. Half fill a 500 ml beaker with water and add a few drops of red ink to the water. Cover the test tube with sausage skin and secure it with a rubber band. Turn the test tube upside down into the beaker of water and ink. After 1 hour check the color of the water in the test tube.	6 inch test tube 500 ml beaker sausage skip rubber band red ink eye dropper

Evaluation: The student should be able to explain how the ink got into the test tube. The student should be able to explain how nutrients get into plants.

Comments on use:

Subject Area(s) Life Sciences

Unit(s) Properties of water

Objective(s): To show the student how ice cream is made.
To show the student the relationship between ice and salt when it is used as coolant.

Procedure:	Resources and Materials:
Select an ice cream recipe and follow its directions. Place the container with the liquid ice cream inside into the ice cream freezer and start the motor or begin the cranking. Fill 1/4 of the freezer around the container with crushed ice, add a very thin layer of salt. Alternate ice and salt until freezer is full. Add ice and salt as needed until the motor stops or becomes too hard to crank. Store or eat the ice cream.	Ice cream recipe and ingredients Freezer, salt, ice, power source

Evaluation: The student will be able to explain why the salt is added to the ice.

Comments on use:

Subject Area(s) Life Science

Unit(s) Microorganisms

Objective(s): To show one way that man can preserve food for future use.

Procedure:	Resources and Materials:
Place a small piece of bread in each of 4 sterilized baby food jars. Moisten each piece of bread and put the lids on tight. Take jar #1 to the kitchen area, open it, walk around the kitchen and put the lid back on. Take jar #2 to the locker room, open it, walk around the locker room, and put the lid back on. Open jar #3 in the classroom, walk around and put the lid back on. Do not open jar #4. Place all four jars in a warm dark place. Check for mold in 2 days and then every day for 5 days.	4 baby food jars with lids marked #1, #2, #3, and #4 Bread, water, eye dropper

Evaluation:
The student should be able to explain why mold grows on the bread in the jars.
The student should be able to explain why the amounts of and color of mold is not the same.

Comments on use:

Subject Area(s) Life Science

Unit(s) Properties of Water

Objective(s): To show how a water plant operator can test water.
To show students how water aids plant growth.

Procedure:	Resources and Materials:
Fill one clean, dry pyrex beaker with tap water; One with pond water; and one with rain water. Boil the water in each beaker until all the water is gone. Observe the beakers after they cool. Discuss what was left in the beakers and explain why. Discuss relationship of water chemical content to plant growth.	3 beakers, tap water, pond water, rain water, heat source

Evaluation: Students should be able to explain why sediment was left in the beakers. Students should be able to explain why this property of water can aid plant growth.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Microorganisms

Objective(s): To make the student aware that mold can be used to process food.

Procedure:	Resources and Materials:
Use a standard bread recipe to make bread. Observe what happens when the recipe says to "cover the dough and let it rise." Invite baker or home economy teacher to the class to explain uses of yeast.	Standard bread recipe and ingredients Oven A baker or home economy teacher

Evaluation:
The student should be able to explain what is happening when the bread rises.
The student should be able to explain what the yeast (mold) does to the sugar.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Microorganisms

Objective(s): To show how a laboratory technician can collect and grow bacteria cultures for study.

Procedure:

Using the prepared agar plates, collect bacteria in #1 by removing the cover and rubbing your finger across the surface of the agar.

Collect bacteria in #2 by using a cotton swab to run on the inside of your mouth and then on the surface of the agar.

Collect bacteria in #3 by dipping a sterile wire loop in pond water and rubbing it across the surface of the agar.

Place the agar plates in a warm dark place for 24 hours.

Resources and Materials:

Textbook, lab technic [illegible]
3 prepared agar, plates marked #1, #2, & #3
Wire loop, sterile cotton swabs

Evaluation:

The student should explain why the agar is needed to grow bacteria.
The student should be able to list at least 5 places to collect bacteria.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Microorganisms

Objective(s): To show how a laboratory assistant can prepare a nutrient for growing bacteria.

Procedure:

Mix together in a pan:
- 1 pint cold water
- 5 beef boullion cubes
- 1/4 tsp. salt
- 1/4 tsp. soda
- 1/4 oz. gelatin

Boil gently until mixture is clear.

Sterilize 12 petri dishes by boiling.

Pour the hot nutrient into the petri dishes, cover immediately and allow to cool.

Resources and Materials:

- 12 petri dishes
- 5 boullion cubes
- salt
- soda
- gelatin
- water
- heat source
- pan
- measuring spoons
- scales

Evaluation:

Students should be able to explain why the beef boullion cubes and the gelatin are used.

Students should be able to tell why the petri dishes need to be sterilized.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Microorganisms

Objective(s):
To show students how microscopes are used to see very small things.

Procedure:

Mount a specimen on a slide.

Place the slide on the microscope stage.

Turn the mirror so that light passes through the specimen and into the lenses.

Look into the eye piece and turn the coarse adjustment until a fairly clear picture is seen.

Sharpen the picture with the fine adjustment.

Resources and Materials:

Microscope, light source, slides, specimens

Evaluation:
Students should be able to demonstrate efficient operation of a microscope.
Students should be able to explain the importance of correctly using a microscope.

Comments on use:

Subject Area(s) Life Science

Unit(s) Cells

Objective(s): To show how a laboratory assistant prepares a slide for study.

Procedure:

Cut an onion into quarters. Separate several layers from one quarter of the onion. Select an inner layer and peel off a piece of the inner skin with a pair of tweezers. Place the small piece of skin on a clean slide. Place a drop of water on the onion skin on the slide. Add a drop of iodine to the skin and water. Place the slide on the microscope stage and observe the "skin."

Resources and Materials:

Onion, knife, slide, microscope, tweezers, water, iodine, eye dropper

Evaluation:

The student should be able to state w[illegible] the iodine is added.
The student should be able to find the nucleus, cell wall, individual onion cells.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Circulation

Objective(s): To show how a nurse or laboratory technician can tell your bloc type

Procedure:

Draw two circles on a clean dry slide and label one circle Anti-A and the other Anti-B.

Place a drop of liquid from the bottle marked Anti-A in the Anti-A circle and do the same for the Anti-B circle.

Prick your finger with a lancet.

Use a toothpick to place a drop of blood into the Anti-A circle.

Use another toothpick to place a drop of blood in the Anti-B circle.

If your blood clumps in Anti-A, you have Type A. If your blood clumps in Anti-B, you have Type B blood. If it clumps in both, you have Type AB and if it does not clump at all, you have Type O.

Resources and Materials

Microscope slide
Anti-A serum, Anti-B serum
toothpicks and lancets

Evaluation:
The student should be able to predict what would happen if Type A blood was mixed with Type AB blood.

Comments on use:

Parent permission should be obtained.

Tom McCain

Subject Area(s) Life Science

Unit(s) Circulation

Objective(s):

To show one way a doctor can tell if you are in good physical shape.

Procedure:

While sitting, take your pulse in your wrist for one minute, wait one minute and take it again; do this one more time and make an average.

Hop on one foot fifty times and take your pulse immediately for one minute. Rest one minute and take your pulse again. Do this until the pulse rate is fairly constant.

Resources and Materials:

Watch with a second hand

Evaluation:

Students should be able to explain why the pulse rate is high after exercise.
Students should be able to explain why the pulse rate begins to slow or become lower after exercise.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Respiration

Objective(s).

To show how a coach can tell if his athletes are getting in shape.

Procedure:	Resources and Material
Count how many times you exhale in one minute in a resting position. Do this three times and make an average. Run the length of a football field and count the number of times you exhale in one minute immediately afterward. Do this three times and wait one minute before each count. Find the average. Find out how long it takes to get back to your resting breathing rate.	atch with a second hand

Evaluation:

Students will be able to tell why the breathing rate was fast after exercise. Student should be able to tell why more oxygen is needed for exercise than for resting.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Nervous System

Objective(s):

To show how a boxer can defend himself against being hit every time.

Procedure:

Have your partner sit on a table or chair high enough that his feet do not touch the floor.

Place a blindfold over his eyes.

Tap your partner gently just below the kneecap with a rubber mallet.

Have your partner clap his hands as you strike his knee with the mallet.

Observe the reaction.

Resources and Materials:

Table or chair, rubber mallet, blindfold

Evaluation:

Students should be able to explain why the clasp occured after the knee jerked.
Students should be able to show how reflexes help animals to survive.

Comments on use:

Tom McCain

Subject Area(s) Life Science

Unit(s) Nutrition

Objective(s):

To show one way man can preserve food for future use.

Procedure:

Weigh the grapes; wash them in water and blot dry.

Remove the grapes from the stems and spread evenly on a tray.

Place a screen or cloth over the grapes.

Place the tray in direct sunlight to dry.

Check for dryness after four days. If not dry, wait one more day.

When dry, weigh the grapes and place in a glass container for storage.

Discuss the need for preserving food stuff for all members of the ecologic system. Examples: squirrels, human beings, rats, etc.

Resources and Material

Grapes, water, tray, screen or cloth, scales and sunlight

Evaluation:

The students should be able to explain what happened to the grapes and why raisins weigh less than grapes.
The students should be able to suggest methods of preserving other foods.

Comments on use:

Subject Area(s) Life Science

Unit(s) Aquatic Ecosystem

Objective(s):

The student will be able to explain why fishermen fish at a certain depth.

Procedure:

Fill one quart jar with cold water and the other with hot water. Place a few drops of food color in each of the small bottles. In one, place hot water; in the other, place cold water; and put the caps on. Explain what happens when the bottle of cold water is placed in the jar of hot water and the cap is carefully removed. Explain what happens when the bottle of hot water is placed in the jar of cold water and the cap carefully removed.

Have students draw a diagram of a shallow lake that has a cold system flowing into it.

Discuss implications of fresh water ecology and fresh water foods.

Resources and Materials:

Two wide mouth quart jars, two small bottles with caps, food color, eye dropper and heat source

Evaluation:

The students should be able to conclude that the plants and animals differ at different depths in lakes and ponds.
The students should be able to diagram what happens when a cold system flows into a shallow lake.

Comments on use:

90

Tom McCain

Subject Area(s) Life Science

Unit(s) Environments

Objective(s):
To show how ecologists study the effects of temperature change on living things.

Procedure:

Draw a circle on the floor and place a frog in the circle. Gently touch the frog with the sponge to make it move. After ten seconds, measure in cm the distance the frog moved. Do this two more times and make an average. Fill the bowl with water and ice. Place the frog in it for five seconds. Immediately place the frog in the circle and cause it to move. Measure in cm the distance the frog moved after ten seconds. Do this two more times and make the average.

Discuss life cycles in all animals.

Compare the cycle relationship to human activities and lifestyles.

Resources and Materials:

Frog, water, ice, chalk, sponge, meter stick, bowl and watch with a second hand

Evaluation:
The student should be able to explain what happens to frogs in winter.
The student should be able to tell how this might help explain the disappearance of many species of reptiles and amphibians.

Comments on use:

Subject Area(s) Life Science

Unit(s) Conservation

Objective(s):
To show how farmers can control erosion in their fields. To show students the need for societal agriculture needs.

Procedure:

Place sand on a long board or in a long box lined with plastic. Tile the board or box so that water may flow easily into a drain or large container. Spread the sand evenly and slowly pour water on the sand. Explain what happens. Mark circular grooves in the sand and slowly pour the water on the sand. Explain what happens.

Discuss the implications of poor soil conservation on food supplies of the notion.

Resources and Materials:

Sand, board or box, water, a drain or large container, soil conservation agent

Evaluation:
The student will explain how contour farming can benefit the farmer.
The student will draw conclusions on the food production and supply on farms where erosion is not controlled.

Comments on use:

Tom McCain

Subject Area(s) Social Studies

Unit(s) History - U. S. Constitution

Objective(s): The student should understand the issues and feelings evident in the Constitutional Convention. The student will participate in the lawmaking process as in Article I.

Procedure:

A mock Constitutional Convention--Assign each student to research one person present at the Convention.

During the mock convention, the student will represent that person, his state's views, etc. when discussing the basic issues.

A mock Congress--Divide the class into 4 (2 House and 2 Senate) Congressional Committees. Each committee reviews a bill then submits it to the House (or Senate) floor. The process continues through the President and the possibility of an overridden veto.

Each student will compose a notebook of newspaper clippings illustrating different parts, qualifications, and procedures found in the Constitution. Each clipping should have that section underlined with an explanation of how that illustrates a Constitution principle. The Article in which that principle or fact is found should also be indicated. If possible, have a newspaperman as a guest speaker to discuss how his knowledge of history is important in contemporary newspaper writing.

Discuss current bills under consideration in Congress that students might be interested in.

Resources and Materials:

Foundations of Freedom, pp. 194-204

Article I of the U. S. Constitution

Newspaper, paper, glue

Evaluation:

Critique notebook.

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) Geography - European

Objective(s): The student can examine the European influences in America and individuals' lives.

Procedure:	Resources and Materials:
Examine a U. S. map. Note all the Spanish and French names found for rivers, cities, etc. Using foreign language records, illustrate the differences in languages and forms of communication in other countries. Discuss the opportunities as a translator or interpreter for a person who is bi- or multilingual.	Foreign language records

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) History - American Revolution

Objective(s): The students should discover the influences [illegible]he Americans during the revolution and how they can still see these influ[illegible]s today with different subject matter.

Procedure:	Resources and Materials:
Examine some of the Revolutionary slogans and sayings. Draw a contemporary slogan or saying.	Foundations of Freedom, pp. 124-125
Examine the use of propaganda in the Revolutionary War. List the contemporary examples of propaganda in commercials, advertisements, political literature, etc.	Foundations of Freedom, pp. 132-136
Sketch an example of propaganda trying to influence someone to buy a product, vote for a candidate, etc.	
Illustrate that every situation can be understood in different perspectives.	Mania America, pp. 72-75 Foundations of Freedom, pp. 135-136
Write two newspaper articles. One found in an American newspaper describing the Boston Massacre; the other for a British newspaper describing the Boston Riot.	

Evaluation:

Comments on use:

Subject Area(s) Social Studies

Unit(s) Geography - European

Objective(s): The student recognizes the similarities and differences between European and American cultures, resources and environments.

Procedure:

The student will write a letter to a friend in the U. S. as if he were one of the Norweigians described in the text. The letter should include description of his occupation, family, lifestyle, etc.

Provide examples of the different types of currency found in Europe. Have the students complete exercises on how to exchange money from one country's currency to another.

Discuss the procedures and problems of international banking.

If possible, have a banker knowledgeable on the the subject of international banking visit the class.

Resources and Materials:

Living as World Neighbors, pp. 130-135

Local banker

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) Geography - United States

Objective(s): The student will have a general idea how environment affects life-styles. The student will be able to identify the locations and reasons for various resource, industrial and farm centers in the U. S.

Procedure:

As an eskimo, how many different uses can you list for all parts of the seal.

Have the students indicate the major rivers and cities on a U. S. map. Then have them glue on representations in the proper places for the various resources, productions, crops, etc.

The students should write a short composition on where they would choose to live considering their occupations, the lifestyles, the climate, the environment, recreation possibilities, etc.

Resources and Materials:

Living as World Neighbors pp. 14-17

Maps, glue, popcorn, cotton, small steel nails, small plant charcoal pieces, toothpicks (lumber), rice, sugar cubes, rubber bands, play coins (U. S. mints), etc.

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) History - American Indian

Objective(s): The student will recognize the various social systems of American Indians.

Procedure:

Sketch a family totem pole.

Compare this social system to others of interest. Examples: American, British, some African tribes, China, etc.

Discuss how social systems influence lifestyles.

Have students describe the social system of their town.

Resources and Materials:

Foundations of Freedom, pp. 33-39

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) Geography

Objective(s): The student will discover lifestyles in the United States different from their own.

Procedure:

After reading the selections on migrant workers and the Vietnamese teens, the student will write a letter to an imaginary friend as if he were one of these people. The subject of the letter should reveal feelings about this type of lifestyle.

Resources and Materials:

"Migrants No More," Reader's Digest, pp. 98-102, July 1975

"World Cultures: Vietnamese Teens Tell Their Stories," Search Magazine, pp. 14-16, September 9, 1975

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) History - America

Objective(s): The student will discover the components that influence the size, crops, etc. of farms.

Procedure:

Sketch plans of the three different farm systems found along the Atlantic Coast - New England subsistence farming, Middle Atlantic - commercial farming, and the Southern plantation system.

Discuss how this type of farming influenced working habits, social class, and individual aspirations.

Resources and Materials:

The Foundations of Freedom, pp. 87-88

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) Geography

Objective(s): The student will have an opportunity to plan a trip to some location in the United States at least 400 miles from his home.

Procedure:

The student will choose a location to visit at least 400 miles from home. The student will map out an automobile route to that city. If possible, the Chamber of Commerce of that location should be contacted. The student should present the places to visit enroute and at the destination. A possible budget for the trip will also be figured plus a list of clothing and recreational equipment appropriate for the area will be compiled.

Resources and Materials:

Road maps, addresses of Chambers of Commerce

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) Geography

Objective(s): The students will compare the philosophies and lifestyles of various world religions.

Procedure:

Several students will do further research on world religions. These students will compromise a panel discussing the characteristics of each religion. Example of participants could be a Hindu of the Brahman caste, a Hindu of the Untouchable caste, a Hebrew from Israel, a Moslem from Egypt, a Christian from Beirut, Lebanon, a Christian and a Jew from the U. S., a Catholic and Protestant from Ireland.

Discuss implications of religious beliefs on lifestyles, value systems, etc.

Resources and Materials:

Current reference materials

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) History

Objective(s). The student will study the effect that the stock market has on individuals and the nation.

Procedure:

Discuss the causes and results of the stock market crash of 1929. Provide a simulated stock market game. Let each student "buy" $5,000 worth of stocks. Every other day, let the students read the stock reports in the newspaper to record the progress of their stocks.

Invite a stock broker to class to discuss stocks and the feasibility of another crash.

Resources and Materials:

Newspapers with the stock exchange

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) World Geography

Objective(s): To give the student further study of China using sources besides the text. To give students an opportunity to formulate and organize a group activity. The student will recognize the component parts of a newspaper and television newsbroadcast.

Procedure:	Resources and Materials:
The students divide themselves into groups of three to five. They are responsible for presenting various aspects of China in either a newspaper or newsbroadcast manner. The presentations should include current and historical news, weather reports, commercials, etc.	Maps, current magazines
After the presentations, feast on and enjoy some Chinese fortune cookies.	Fortune cookies

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) History

Objective(s): The students will analyze the affect that the wildcat banks of the 1830's had in causing the Panic of 1837. The students will discover components of the present bank system.

Procedure:	Resources and Materials:
Discuss land speculation, worthless money, wildcat banks, the Panic of 1837, and depression. Analyze what to look for in opening a savings or checking account today. Discuss the difference between borrowing money for land speculation in 1830 and taking out a loan today.	Foundations of Freedom United States History to 1877 pages 301-302

Evaluation:

Comments on use:

Phyllis Donnelly

Subject Area(s) Social Studies

Unit(s) History

Objective(s): The student will discover different inventions, their effect on America, and the patent procedure.

Procedure:

Discuss the effects the Industrial Revolution inventions had on the United States. Ask the students what they think has been the most important invention yet? What would they invent if they could? Analyze the patent procedure and the reasons for it.

Have students invent a product on paper and apply for a patient.

Materials:

Foundations of Freedom
U. S. History to 1877, pp. 285-290

Evaluation:

Comments on use:

Phyllis Donnelly

FOREWORD

Career education at the secondary level strives to develop the relationship between academic studies and life outside of school, to help each student to personally identify a desired life role, and to make possible the preparation necessary for fulfilling that life role.

There is no set "career education program" to be adopted by all school systems. Rather career education is a concept to be adapted to the needs of each community, each school system.

Nowhere in this guide is there a definition of career education. So many definitions have been developed that any individual can search for--and find--the one that suits his/her purposes. The activities, ideas, and suggestions herein do reflect the concept as it has been understood and implemented by the contributors.

Our goal in preparing and compiling these materials is to provide an idea bank. You as an educator can select those suggestions that could be easily integrated into your curriculum and enhance its value for your students.

Different contributors have approached this goal with various methods. Briefly stated activity suggestions comprise the bulk of the material. Please browse through the materials to find ideas that might be integrated with your on-going curriculum. Don't limit yourself to only one subject area--you may find an idea from another discipline that you can use with only slight adjustments.

We hope you enjoy the guide and would be happy to hear any comments you have on it.

Phyllis B. Stuerke
Secondary Specialist
Career Education Project
State Fair Community College
Sedalia, MO 65301

Subject Area(s) General Business

Unit(s) Careers

Objective(s):

The student will recognize herself/himself in terms of her/his feelings--both negative and positive--and her/his ambitions without clouding the picture with society's terms.

Procedure:

A paper is assigned of one to two pages in length. In this paper, the student is to describe herself/himself in terms of her/his feelings and ambitions. She/he is not to use terms as female, black, old, intelligent, single. These are words that society assigns. The assignment is to dig deep and look at what's inside.

Resources and Materials:

Evaluation:

By removing society's terms, the student can evaluate his feelings and ambitions. From this evaluation, he can better see what career he wishes to pursue.

Comments on use:

Besides helping the student, the teacher becomes enlightened as to some secret feelings. This always aids when helping students with their problems.

Martha Vilelle

Subject Area(s) General Business

Unit(s) Careers

Objective(s): The student will answer some questions about his life and his career.

Procedure:

This booklet offered by the Institute of Life Insurance, takes a walk through the student's future including career, marriage, children, education, shopping skills, and insurance. The students are asked questions such as "What do you think is the ideal family size?" and "Why do you think a man usually earns more than a woman?" You may follow the sequence of subjects suggested in the book, plus adding your own personal experiences.

...s and Materials.

A Date With Your Future, Education Services, Institute of Life Insurance

Evaluation: There is a checklist in the back of the book for them to fill out to check for understanding.

Comments on use: I thought this booklet was very good. Many of the questions asked in the booklet led to interesting discussion, and the students seemed to do some real thinking about their "future."

Martha Vilelle

Subject Area(s) General Business

Unit(s) Business Communication

Objective(s): The students will write an effective letter of application.

Procedure:	Materials:
Discuss items needed in a letter of application--chapter 54, textbook. Prepare transparencies of various letters of application. Show these in class and point out why one is more effective than another--good points and bad points. Discuss what statements might "turn a prospective employer off." Have students make a rough draft of a letter for themselves. Proofread these with them and give suggestions. Prepare final copy of letter--preferably typewritten with no errors. Take the final copies to the school superintendent and have him make criticisms of them.	General Business for Economic Understanding, Southwestern Typing paper Transparencies Superintendent or local businessman to read the letters and make criticisms

Evaluation: Evaluate the students upon the letter--how neat, complete, concise, and courteous.

Comments on use:

110 Martha Vilelle

Subject Area(s) Business Law

Unit(s) Contracts

Objective(s): Students will make rulings on cases presented to him using laws studied in contract unit.

Procedure:	Resources and Materials:
Appoint a prosecuting attorney, defense ney, and judge. Give a copy of a case to each person a chem time to research it. Begin the court session with the prosecution presenting its case first, then, the defense. Have the judge rule upon the case. Let each student have an opportunity to be either an attorney or judge with different cases.	Applied Business Law Cases concerning contracts

Evaluation: Evaluate the students upon their presentation of the cases or rulings.

Comments on use:

Subject Area(s) Business Law

Unit(s) Insurance

Objective(s): To expose the class more effectively to insurance and how it works by having an insurange agent speak to the class on the different types of insurance.

Procedure:	Resources and Materials:
The students will read and study chapter 34 on "Nature of Insurance." This chapter will be discussed before the agent comes to speak to the class.	Applied Business Law
An insurance agent will come to speak to the class on the different types of insurance.	MFA Insurance Agent
After the agent finishes his discussion, there will be time for a question/answer session for the class.	

Evaluation:

The guest speaker allowed the students to get an outside and updated view on the types of different insurance policies. The class will be able to use the information that was received to better understand the following insurance materials.

Comments on use:

Worked quite well. The class got some updated information that they wouldn't have received from their text.

Subject Area(s) Business Law

Unit(s) Court System

Objective(s):
The students will be able to actually see a court in session and how the jury is picked, the lawyers defend their clients and the duties of the judge.

Procedure:

Have students read and study chapter 6 on "The Court System." Discuss this chapter before the field trip to the court house.

When the students arrive at the court house, Judge Barker briefs the students on the case they will be seeing and how the court system works.

The students will actually sit in on the court case and hear the pleadings of the case and the verdict.

The students will prepare a [illegible] the case they saw in court.

Resources and Materials:

Applied Business Law

Judge Charles Barker

Evaluation:
Each review will be evaluated by instructor by using a check sheet.

Comments on use:
Worked quite well for me. The students enjoyed seeing what we had talked about in action. Seemed to be an excellent learning experience.

Shawn Miller

Subject Area(s) Business Law

Unit(s) Court System

Objective(s):

The students will be exposed to how the court house and its offices are set up and what offices are in the court system on the county level.

Procedure:	Resources and Materials:
The students will read and study chapter 6 on "The Court System." This chapter will be discussed before the field trip to the court house.	Applied Business Law
The class will visit each office in the court house.	Visit such offices as county clerk, county recorder, assessor, circuit court
Each court office has a person who explains the duties and functions of each court office.	

Evaluation:

The students have to identify each court office and the person who holds the office. The duties and functions of each should also be known. Can also ask questions such as "What office should you go to for . . . . (hunting and fishing permits, filing deeds, etc.)?" This is shown on a quiz given to the students.

Comments on use:

This plan worked very well in my class. The students enjoyed visiting each office and learning their functions first-hand.

114

Shawn Miller

Subject Area(s): Business Math

Unit(s): All Units

Objective(s):
Each student will be able to work problems at a quicker rate with greater accuracy.

Procedure:
The students are given problems (one at a time) on the board or orally by the teacher. Each student is to work the problem as quickly as possible obtaining a correct answer. When a student finishes the problem, he raises his hand and tells the answer. If correct he doesn't have to do any more speed drills that day. Only three guesses are accepted. The last one to finish the drill has extra problems due for the next day.

Evaluation:

Comments on use:
Have used this in my math class. Seems to work good in developing speed in working problems.

Shawn Miller

Subject Area(s) Shorthand

Unit(s) Careers in the Office

Objective(s): The students will take dictation (office style) from local businessmen, with different types of interruptions.

Procedure:	Resour
Set up little "offices" in the room with boss's desk, boss's chair and secretary's chair. Place toy telephones on boss's desk. Have boss (local businessman) paired off with shorthand students. The boss will dictate a letter to shorthand student as he would in a real office situation. Have the boss dictate several letters. There will be various interruptions as the phone rings, someone at the door, etc. Students will transcribe letters. Discuss how to handle various interruptions.	Guest dictators Shorthand pads and ink pens Toy phones

Evaluation: Evaluate the project by class participation in the discussion of how to handle various interruptions.

Comments on use:

116

Martha Vilelle

[illegible] [illegible]

[illegible] Careers in the Office

Objective(s): The students will see a secretary doing her routine work in the office.

Procedure	Materials
Begin by considering what would be routine jobs that a secretary must do daily. Are these important; if so, why? Show the film "The Working World of a Secretary," which describes the basic office practices and procedures such as memos, mail and the telephone. Arrange for the students to go in pairs to spend a morning (9-12 a.m.) with local secretaries. Have them keep a diary of all work done. Return to class with diaries. Discuss these. Consider the questions: "Is this a career for me?" "Do I want to do this type of work?"	[illegible] Film: "The Working World of a Secretary" Eye Gate

Evaluation: Evaluate the class by their participation in the discussion.

Comments or Observations:

Subject Area(s) Shorthand

Unit(s) Careers in the Office

Objective(s): Students will determine [illegible]lls are needed to [illegible] legal secretary and what training can le[illegible] ills.

Procedure:

Spend at least one morning with a local legal secretary. Have the students keep a diary of what is done in the office.

As a guest speaker, have a local lawyer speak to the students on what he expects of his secretary. Have a question and answer session.

As a guest speaker, have a representative of a college with a developed business program present to the students what classes are required to be a legal secretary. Have a question and answer session.

Resources and Materials:

A local legal secretary for the students to observe in her work

A local lawyer to speak to the students

A college respresentative to present programs offered to become a legal secretary

Evaluation: Quiz the students upon the skills [illegible]eded to be a legal secretary.

Comments on use:

Martha Vilelle

Subject Area(s): Typing

Unit(s): Business Letters

Objective(s): The student should be able to compose and type correctly a busine letter.

Procedure:	Resources and Material
Discuss in class the various parts that can be used in a business letter. Students should be able to identify these different parts and their proper placement.	Sample letter will be provided by the teacher to show proper form and content
Student should type at least two business letters that vary in form and content. These should be handed in to the instructor.	Use: Attention line Subject line Reference line Blind carbon copy Hand printed letterhead

Evaluation: Instructor will evaluate each letter and record the best garde for each student.

Comments on use: This has not be used yet in my class.

Shawn Miller

Subject Area(s) English

Topic: Grammar

Objective(s): To make students aware of the misuse of grammar in written and spoken language, thus, becoming aware of their own efforts in correct speaking and writing.

Procedure:

Grammar Notebook

Students are to keep a daily journal of mistakes they see and hear in everyday language.

1. The exact quote
2. The quote corrected
3. If possible, the situation and who said it (the quote)
4. This is sometimes more beneficial if students listen and read for specific mistakes (ex. verb-subject agreement, dangeling modifiers, sentence fragments, etc.).

Resources and Materials:

Evaluation: The journal should continue from one to two weeks. Graded on number of entries, neatness, accuracy of corrections.

Comments on use:

Rod Cameron

Subject Area(s) Freshman English

Unit(s) Grammar

Objective(s): To learn parts of speech and/or parts of a sentence.

Procedure:

Baseball Grammar

Divide class into two teams.
Each team selects a pitcher and coach.
The pitcher asks a question to each batter.
Batter has 15 seconds to answer question.

a. If batter does not answer, he has struck out.
b. If batter answers wrong:
    1. The batter is out.
    2. If a runner is on base, he may attempt to answer the question.
        a. If the runner on answers correctly, he and all runners advance one base (as in a sacrifice fly).
        b. If he answers wrong, he is considered thrown out trying to advance on a fly ball.
c. If batter answers correctly:
    1. All runners advance one base.
    2. After reaching first base, runner has option of answering an additional question.
        a. If he correctly answers additional question, he advances another base (as in a double).
        b. If he is wrong, runners remain, the hitter is thrown out trying to reach second.
d. Before each pitch, the lead runner on base may attempt a steal by telling the pitcher he wants to answer instead of the batter.

Resources and Materials:

Plain English Workbook

Evaluation:

Comments on use:

Subject Area(s) Freshman English

Unit(s) Grammar, cont.

Objective(s):

Procedure:

1. If he answers wrong, he is out.
2. If he answers correctly, he advances one base.

e. Teacher acts as umpire and time keeper.
f. Hits, runs, stolen bases may be counted as extra credit.

Resources and Materials:

Evaluation: This worked very well in reviewing for a test.

Comments on use: It is best to simulate many of the rules of baseball for the sake of excitement. However, if the game becomes too complicated, the students become too "bogged" down in rules instead of reviewing.

Rod Cameron

Subject Area(s) English

Unit(s) Language Study

Objective(s) To learn the use and definition of "reports," "inference," and "judgment."

Procedure:

Students divide into groups of 4 to 7 members.

They select a product which they will sell in competition with another company.

Name products and company (ex. Chevrolet, Impala).

Create packaging, a slogan, magazine ads, and a 1 minute TV commercial (videotape if possible).

A board of investors will view a presentation of each group's ad campaign and will invest accordingly.

The company that sells its product to the investors may be awarded actual credit or extra credit.

Discuss techniques employed by each group.

Resources and Materials:

Dynamics of Language, first chapter

Evaluation:

Comments on use: Investors may be persons (teachers) from outside the class to insure objectivity. Evaluation sheets are filled out by the investors citing strengths and weaknesses of each group's presentation.

Rod Cameron

Subject Area(s) English

Unit(s) Language Study

Objective(s): To learn how the connotations, sounds, and implications of words influence mood in descriptive writing.

Procedure:

Students form a circle (15-25 is best).

Each is instructed to title a piece of paper with some scene they wish to describe (ex. haunted house, sinking ship, snow-storm).

Then, each student writes one descriptive, mood setting sentence about that scene.

Each paper is passed around to each other person in the class and each one of them adds a mood-setting detail.

Afterwards a discussion over which scene was most effectively developed is valuable.

Resources and Materials:

Dynamics of Language
"The Artist's Angle" unit

Evaluation:

Comments on use: Students should be encouraged not to depend on elements of plot to make their scenes interesting.

Rod Cameron

Subject Area(s) Novels (modern)

Unit(s) Reading trends

Objective(s): To become aware of reading trends with environment of students. Develop awareness of popular books, reading tastes and reading emphasis within community.

Procedure:	Resources and Materials:
Students decide on a series of questions for a survey to be answered by students, faculty, others in community. The questions should be guided toward discovering tastes, quantity and quality of reading.	

Evaluation:

Comments on use:

Rod Cameron

Subject Area(s) 8 English

Unit(s) Literature

Objective(s): To improve reading comprehension. To make literature more enjoyable. To improve self-image.

Procedure:

Begin reading A CT Yankee in King Arthur's Court questions arise, divide class into four groups. Distribute work sheets (story-study sheets). Let students record grades on charts as they complete work. Have a test every fifth chapter. Allow time to build King Arthur's castle. Students are held responsible for abstracting information on what castle looks like. Give bonus of 10 percent to the group with the best scores on the test.

Resources and Materials:

Copies of A CT Yankee in King Arthur's Court

Building material for a castle

Sets of story-study sheets

Chart on bulletin board to record students' grades

Evaluation: Multiple choice test every fifth chapter. Multiple choice vocabulary test every fifth chapter. Working together.

Comments on use: Using this scale: 60% for I, 70% for M, 80% for S, 90% for E, a low class achieved the following: 1/3--S's, 1/3--M's, 1/3--I's.

126

Meredith Case

Subject Area(s) English --Modern Novel

Unit(s) Reviews

Objective(s): To understand and discuss the use of literary techniques and the strengths and weaknesses of [illegible] novels.

Procedure:	**Resources and Materials:**
Select and read novels. Read several book reviews and summarize them. After class lectures and discussions on the development of literary technique in modern literature (i.e. character development, plot development, setting, theme, style). Students write reviews on the novels they have read. In doing this, they are to use the professionally written reviews as examples.	Newspapers and magazines that include book reviews Any novel selected by the student to read. Use of selected stories from The Fractured Image and Life Force for discussion of each aspect of literary technique (plot, character, setting, theme, style). Use one story to emphasize each aspect.

Evaluation:

Comments on use:

Rod Cameron

Subject Area(s) English

Unit(s) Novel--The Red Badge of Courage

Objective(s): To help the students understand the symbolism, theme, characterization and content of The Red Badge of Courage. To study the court system.

Procedure:

Class discussions on symbols, theme and characters in the novel.

Student-lead discussions on "what is courage" or "what is the purpose of war."

Create in the classroom a trial of Henry Fleming. Although this trial does not appear in the novel, you use the characters in the book to create the trial. Appoint two conflicting personalities as defending and prosecuting attorneys. Give them two or three days to prepare their cases. Assign students to the parts of Henry Fleming, the tall soldier, the loud soldier, the tattered soldier, and Henry's mother. You may expand on small characters such as the farm girl and Henry's girlfriend at home. Have the attorneys work with the witnesses. Assign certain witnesses to work with each attorney. Such as--Prosecution--the tattered soldier, the tall soldier and the farm girl. Defense--Henry's mother, the loud soldier, Henry's girlfriend and Henry Fleming. Assign students to the roles of jury, judge and various roles in a courtroom. Give them two days to research courtroom procedures. The students must stick to the facts in the novel, but some of the characters may be expanded. They can't change the novel, but they can add to it. Go through the trial and let the jury make their own decisions.

Resources and Materials

The Red Badge of Courage by Stephen Crane

Evaluation:

Comments on use: Students seemed to enjoy the novel much more when they were personally involved.

Subject Area(s): English

Unit: Creative Writing

Objective(s): To learn the process of preparing and sending a manuscript for publication.

Procedure:

Notes on spacing and typing a manuscript for publication are given, using the Writer's Market as a source.

Basic Laws of Copyright are covered. The terms for what rights to sell are covered, (i.e., all rights, first serial rights, second serial rights, reprint rights, simultaneous rights, public domain).

How to properly address an envelope is discussed.

After a student has written, then neatly typed his manuscript, he selects a market to send it to along with a SASE.

All possible markets are discussed briefly. Students are instructed to read magazines before submitting to them.

Resources and Materials:

Writer's Market

Evaluation:

Comments on use:

Rod Cameron

Subject Area(s): English

Unit(s): Short Story Writing

Objective(s): Understanding the short story. To develop the ability to write a short story.

Procedure:

I develop a procedure booklet for each student with step-by-step instructions and space to complete each step. This booklet is used after we have read and discussed several short stories. Since each step is evaluated by teacher and pupil, the lost feeling that often accompanies the assignment to write a short story does not develop.

The first step is a memory probe. Each student lists strong memories--either incidents or people--that have had special significance. Each memory is described. The student is then asked to isolate the feelings associated with the time remembered. These feelings are listed in a separate column.

Students then share the incidents and feelings they have written about and working together, zero in on something that might form the basis of a good short story.

Other steps include developing a beginning incident and a climax, creating a theme, developing [illegible]. (The students build a ladder from the beginning incident to the climax and then expand the ladder.)

Each first draft is corrected using a color code to indicate problems with accuracy, mechanics, economy, wordiness, sentences, or paragraphing. (Some get pretty colorful! A fellow student also corrects each paper.

After writing a second draft and reading and correcting for theme and plot, a final draft is written.

Resources and Materials:

Copies of teacher-prepared procedure book--how to write a short story in ten easy steps.

Evaluation: Each step is evaluated by teacher and pupil. Final product is evaluated by teacher.

Comments on Use:

Excellent

130

Meredith Case

Subject Area(s) English

Unit (s) Crying Out for Justice

Objective(s)

To study the [illegible] to the average student [illegible] and provide [illegible] reading skills.

Procedure:

Assign short stories to be read such as: "Trials at Salem" by Stephen Vincent Benet; "Under the Lion's Paw," by Hamlin Garland; "Testimony of Trees" by Jesse Stuart and "The Lottery" by Shirley Jackson.

Have the students act out the one-act play "The Lottery" then stage a real lottery in which no one knows who will draw the black dot. After one student has drawn the black dot--have the other students decide how to kill this person. A discussion about how the person felt should follow.

Resources and Materials

Evaluation:

Comments on use:

Subject Area(s) English

Unit(s) Poetry

Objective(s): To understand the nature of poetry. To appreciate poetry.

Procedure:

Read ten poems of different types aloud.

Distribute handbooks--"What is Poetry."

Class discussion based on ten poems and handbooks.

Write first draft of poems.

Have "buddy" correct.

Write second draft.

Have teacher correct.

Read to class.

Class comment.

Submit best poems to National Scholastic contest.

Resources and Materials:

Ten selected poems
30 copies teacher-prepared handbook, "What is Poetry" containing information about poetry areas listing steps for writing poem with space to complete each step.

Evaluation: Check poetry for scanning. Analyze poetry for other qualities of good poetry.

Comments on use: Very successful. Ten entries submitted to National Scholastic. Two students participated in original poetry contest (reading

Meredith Case

Unit(s) Introduction

Objective(s): Assesse personal values in terms of subject area (journalism).

Procedure:

Make a list of your individual values that arise from your basic human needs as related to journalism.

Explain how each of these needs can be meet in journalism by you, by the instructor and by the class.

Resources and Materials:

Paper
Pen
Silence
Concentration

Evaluation: Make a chart relating your individual values arising from basic human need. Explain how these needs can be met by you, the class, the instructor.

Comments on use: excellent result from standpoint of relating class to self and setting personal objectives.

133

Meredith Case

Subject Area(s) English II

Unit(s) Novel--Newspaper writing

Objective(s): To help the student understand the different types of newspaper writing using Silas Marner as a source material.

Procedure:

Divide the class into groups appointing an "editor" for each group.

Divide the novel into sections according to the time elements involved and assign the sections to the groups.

Spend time studying the different parts of the newspaper, the style of writing, advertising techniques and any other things you find to be relevant.

Have the groups decide what they wish to include in their papers. The editor will delegate responsibilities as to the writing and producing of the paper. All material will be centered around the specific facts of Silas Marner and of England during that period in history.

Resources and Materials:

Silas Marner by George Eliot
Newspapers
Material on how the newspaper is written
Resource material on England during the period in question

Evaluation: The group's final copies of their paper should show their understanding of newspaper writing.

Comments on use:

Mary Lee Cornell

Subject Area(s) English

Unit(s) Reading the Newspaper

Objective(s):
To improve reading skills. To acquaint students with the newspaper. To interest students in reading.

Procedure:

Give each student a newspaper. Assign different articles to different students. After reading the articles, have students meet in groups of four or five and discuss their articles. After a week or so of reading the paper every day, the students can attempt writing their own newspaper.

Resources and Materials:

Evaluation:

Comments on use:

Anita Campbell

Subject Area(s) English/Bus. Communications

Unit(s) Selling

Objective(s): To help students become more aware of the techniques used in the field of advertising.

Procedure:

Discuss things that turn buyers on and things that turn buyers off. Have students indicate what advertisements appeal to them and which ones do not. Point out techniques involved.

Have each student develop a new product and then work up a sales promotion packet for the product.

Each packet should include:

(1) A newspaper or magazine ad
(2) An ad for classified section of newspaper
(3) A sales promotion letter
(4) A 60-second radio or TV commercial
(5) One other form of advertisement. This could be a billboard, a demonstration, a display (floor or window), or any other type that might be appropriate for the product.

Resources and Materials:

Example of different types of advertising. (Can be brought in by the students)

Evaluation:

Comments on use:

Mary Lee Cornell

Subject Area(s) English--Business Communication

Unit(s) Telephone Usage

Objective(s): To help students understand proper telephone techniques in the world of business.

Procedure:

Teach basic techniques called for in telephone usage. Could record correct and incorrect procedures for illustration. Show filmstrip if available.

Have each student compose a message to be recorded by person answering phone.

Draw or assign partners. Using the teletrainer, have each pair of students record each others message. It is important that they not read the message before hand.

Resources and Materials:

Teletrainer kit (can be reserved with the Bell Telephone Co.)

Mimeographed copy of a form for recording a telephone message

Filmstrip from Office Worker Series, Interpretive Education entitled "Using the Telephone" (KT JRSR CE8 State Fair Community College)

Evaluation: During the conversation, evaluate the techniques utilized. Staple your comments with the recorded message and the original message for final evaluation.

Comments on use:

Mary Lee Cornell

Subject Area(s) Speech

Unit(s) Introduction

Objective(s): To develop the ability to use the telephone with ease and poise and to communicate in this manner more accurately.

Procedure:

Draw for partners.

Call a friend for information--perhaps to get an assignment.

Call for directions--perhaps how to get to the park.

Call to ask for a date.

Call in answer to a classified ad (teacher might write ad on board).

Resources and Materials:

Two dummy phones

Evaluation:

Was objective achieved?
Was question expressed clearly to receiver?
Was information clearly communicated?

Comments on use:

Class enjoyed it and grew easy in each other's presence.

138

Meredith Case

Subject area(s) Speech

Unit(s) Small Group Communication

Objectives:
To teach students how to work within a group. To give students a more tolerant attitude toward others' opinions and respect their values though they be different from their own. To develop listening skills.

Activities:
Seat students in a circle and begin a round-robin series of self-introductions. The first person introduces himself, spells his last name and gives one fact about himself. The next person must then give all the facts about the person before him before he introduces himself. Continue this process until every member can pronounce and spell the name of every other member of the group and relate a fact about each other. After this task is accomplished, a discussion topic should be assigned to the group. Each group should select someone to take notes on the discussion. Every member must contribute to the discussion at least once on each of the questions to be answered. Each student should write a short report on the discussion.

Have each student write a telegram to another person within the circle containing a message that they think that person would like to hear. After a few minutes telegrams should be collected and passed out to the people for whom they were intended. No one should know who sent the telegrams. The discussion would go around the circle with each person reading his messages and commenting on them with the rest of the class giving their comments also. Discussion: How well does the person sending the telegram know you?

Assign homework project: Students are to think about and then write down their values and where they acquired these values--family, friends, church, and society. Upon class meeting, each student in turn would explain his values and discuss them. A discussion to follow might be: (1) How are your values different from those of your parents? (2) How are your values similar to those of your parents? (3) Who influences you the most on what you value?

Hand out moon survival situation. The group is to come to a consensus on the order of importance of the items. The order must be agreed upon by each member before it becomes part of the group decision. Consensus will be difficult to reach. Try as a group, to make each ranking one with which all group members can at least partially agree.

Guidelines:
1. Avoid arguing for your own individual judgments. Try to approach the task on the basis of reasoning.
2. Avoid changing your mind solely for the purpose of reaching an agreement and avoiding conflict.
3. Avoid "conflict reducing" techniques, such as majority vote, averaging, or trading ideas in order to reach decisions.
4. In making decisions, view differences as helpful, rather than unfortunate.
5. Do not seek information outside the group.

Anita Campbell

Moon Survival

Your group represents the crew of a space ship that was scheduled to land at a space station on the lighted surface of the moon. Due to a radar error during powered descent you have landed some 200 miles away from the station. The rugged terrain on which you have landed caused much damage to your ship and equipment and since the survival of each and all depends on your reaching the space station, the most critical items available must be selected for the 200 mile trip. Below are listed the fifteen items left intact and undamaged after the landing. Your task is to order these items in terms of their importance in helping you reach your destination.

Select a group reporter and on the basis of the group's consensus on the importance of the items, place the number 1 in front of the most important items and so on through number 15, the least important.

___ Box of matches
___ Carton of dehydrated food
___ 50-ft. length of rope
___ Parachute silk
___ Portable heating unit
___ Two 45 caliber pistols & cartridge
___ Carton of dehydrated milk
___ Two 100 lbs. tanks of oxygen
___ Stellar map (of moon's constellation)
___ Inflatable life raft
___ Magnetic compass
___ 5 gallons of water
___ Signal light
___ First-aid kit
___ Solar-powered transmitter-receiver

Anita Campbell

Subject Area(s) English

Unit(s) Original Humor (Short Forms): Analyzation

Objective(s): To analyze what creates short forms of humor in order. To develop own skill in creating visual/verbal humor.

Procedure:	Resources and Materials
Students collect samples of the following types of cartoons a. Single frame and cartoon strip b. Hero adventure strip and soap opera strip c. Newspaper column (humorous)	Sunday/daily papers Magazines Newspaper column, e.g. Erma Brombeck, Art Buchwald
Spend one or two classes as needed on <u>each</u> type to: a. analyze how humor was created (general elements) b. analyze specific characteristics of this (one) form of humor	Draw from teacher's personal analyzation of humor and students' immediate analyzation of examples they selected.

Evaluation: Leaflet containing class notes and analyzation of our samples.

Comments on use: I have not found any particular printed sources for humor elements.

141

Sister Barbara Borders

Subject Area(s) English

Unit(s) Original Humor--Type A: Analyzation

Objective(s): (The following is the specific procedure for the types of humor already listed.)

Single frame and cartoon strip

Procedure:	Resources and Materials:
Using a single frame cartoon: In small groups of four or five, share examples explaining why the cartoon is funny. As a group, draw up a list of elements of humor. Groups will combine these lists so that the class will come up with a class guide list of elements of humor. Teacher add elements, examples not covered by students such as: exaggeration/understatement; nonsense elements, such as stupidity, filler, slapstick; contradiction/the unexpected, such as irony, out of time/out of place Write captions for the photos circulated--as a small group. Test these out on other small groups to see how successful your group was. Using a strip, analyze how the sequence builds up to a "punch line." In small groups, rearrange sequence to change or wreck punch line climax.	Samples Single frame/cartooned strips Photos/posters

Evaluation:

Comments on use:

Sister Barbara Borders

Subject Area(s) English

Unit(s) Original Humor Type B: Analyzation

Objective(s): Hero adventure/soap opera strips

Procedure:

In small groups, share examples brought to find general elements of humor and to find specific elements for this type of strip.

As a class, draw up a list of specific characteristics. Teacher add elements not covered by students, such as:

Hero adventure
typical situation requiring ACTION
typical hero type
secondary characters (bad guy, victim)

Soap operas
typical situation requiring EMOTION
typical listener/advisor
secondary characters: people with emotional problems

In small groups, plan to act out either a soap opera or a hero adventure (as assigned) for the class to be graded on: (a) how well did the skit illustrate the characteristics of this type of humor? (b) how original was it? (c) how funny was it?

Compare cartooned/acted versions and lead into how this type of humor could be developed into a strictly written form.

Resources and Materials:

Cartooned strips: hero adventure, soap opera

Evaluation:

Comments on use:

Subject Area(s) English

Unit(s) Original Humor: Analyzation

Objective(s): Humorous newspaper column

Procedure:

Read column and decide what general humorous elements are present and what particular changes were made from visual to verbal presentation.

In class discussion, evaluate how effective different techniques, situations, characterizations were to create verbal humor.

Resources and Materials:

Newspaper column--dittoed for student use: e.g. by Erma Brombeck, Art Buchwald, Bill Vaughn, and Richard Armour

Evaluation:

Comments on use:

144

Sister Barbara Borders

Subject Area(s) French

Unit(s) Telling Time, #1

Objective(s):
Learn to tell time in French. Learn shapes, colors, plus materials in French. Learn to listen, hear and follow commands.

Procedure:

In French instruct students to:
Go to blackboard and design a circle marking horizontal and vertical lines.
Choose materials from assortment on table--le papier bleu, un cleu, un regle, etc.
Cut out circle; mark it; cut out indicators; mount them and thus make a clock.
Indicate various times on clock according to times given. Raise clock to verify understanding.

Script:
Le premier rang: Allez au tableau noir.
Prenez la craie. Dessinez une cercle.
Mettez une ligne horizontale entre la cercle.
Mettez une ligne verticale entre la cercle.
Dessinez une ligne diagonale de gauche a droit entre la cercle, etc.
Asseyez-vous.

Maintenant debeut. Allez a la table. Choisissez un papier bleu, des ciseaux, un clou, un regle, et un papier blanc.

Prenez le papier bleu et les ciseaux. Coupez une cercle. Prenez un style mettez une ligne horizontale entre le cercle. Mettez une ligne verticale entre la cercle. Maintenant, mettez une ligne diagonale de gauche a droit. Mettez un autre ligne diagonale de droit a gauche.
Dessinez le numero 12 en haute de la ligna verticale

Resources and Materials:

Scissors
Colored paper--marked in circles
Brads
Ruler
Pen/marker

Evaluation:

Comments on use:

Subject Area(s) Frenc

Unit(s) Tel:..g Tim , #1, p. 2

Objective(s):

Procedure:

Dessinez le numero 6 au but de cette ligne. Dessinez le numero 3 au droit de la ligne horizontale. Dessinez le numero 9 au gauche de cette ligne. Mettez les numeros 1 et 2 entre les numeros 12 et 3. Mettez les numeros 4 et 5 entre les numeros 3 et 6. Mettez les numeros 7 et 8 entre les numeros 6 et 9. Mettez les numeros 10 et 11 entre les numeros 9 et 12. Mettez un point daus le centre de la cercle.

Prenez le papier blanc. Dessinex deux indicateurs: Un grand indicateur et un pepit indicateur.

Coupez-lez. Mettez le but de grand indicateur sur le point. Mettez le but de petit indicateur sur le but de grand indicateur. Poussez le clou entre les buts.

Veus avez une horloge.

Tournez le grand indicateur a douze.
Tournez le petit indicateur a trois.
Quelle heure est-il?
Il est trois heures.

Etc.

Resources and Materials:

Evaluation:

Immediate evaluation in the finished product--has it been completed according to instructions? Students may also check themselves as they go along by watching others. The clock provides the same kind of evaluation--students may check their own accuracy and teacher has immediate feedback.

Comments on use:

Excellent for introducing the unit on the telling of time: students are curious about the product, enjoy the challenge of following instructions and are eager to show correct times on clocks in step with their neighbors.

Barbara Cooney

Subject Area(s) French

Unit(s) Telling Time, p. 3

Objective(s): Students learn to tell, hear, read and write time in foreign language.

Procedure:

Construct clock according to instructions using paper, scissors, clips, etc. Make clock correspond to instructions.

Cassette tape airplane and train (terminal).
Students announcing arrivals and departures
Students comprehending cassettes

Read tour brochures [illegible] day.

Write invitations specifying time.

Resources and Materials:

Large clock for beginning students (hardboard)

Paper, scissors, clips and rulers for making clocks

Realia--tour brochures

Cassette tape

deuxieme livre, AMSCO
A-LM Harcourt Brace

Evaluation: Dictation of time/written dictation corresponding clock to speaker's instructions. Ability to write time. Check oral ability.

Comments on use:

Barbara Cooney

Subject Area(s) French I

Unit(s) Letter Writing--Correspondance Etrangere

Objective(s):
To become acquainted with people from a different culture, thus broadening student's own perspective and interests, knowledge of country and people. To realize that language is a current, living vehicle for communication. To develop skills in writing with focus on letter writing. To develop skills in translating and acquaint students with use of idiom.

Procedure:

Ordering of pen pals: Students are invited to order pen pals early in the year and are able to specify nationality, sex, age, and interests. Through IYS one will receive two extra pen pals for every ten ordered. These extras will be adopted by the members of the class who have not ordered their own.

Writing of letters: The class is assigned to write a letter of introduction to his/her pen pal in the target language (French) following formula for letter writing. After the rough drafts are corrected and approved, the letters are copied onto airmail stationery. If necessary, envelopes are available. The class might also be provided with stamps or find them available in the classroom.

Incidental vocabulary used: lettre, papier a ecrire, envelopper, l'enveloppe, timbre, le facteur, la buite de poste, par avion, le bureau de poste, la rue.

Facts learned: types of paper to be used in writing airmail letters, stamps, information necessary, basic operation of American and French postal system; location of countries on map, cities, provinces, differences in addressing letters, etc.

Resources and Materials:

International Youth Service order forms and bulletins

Packet of airmail stationery and envelopes
Roll of airmail stamps

Map of French-speaking countries
Atlas

Evaluation:
Students are given credit for having completed a letter in French to a specific person; however, I give a few more points to those who have included more detail in correct grammar.

Comments on use:
Students are very enthusiastic about this project and, partially because they feel it is student-initiated, participate eagerly, unanimously.

Barbara Cooney

Subject Area(s) French II or III

Unit(s) Business Letters

Objective(s):
The student will be able to write a simple business letter in French; translate a simple business letter; understand the basic format of French business letters, abbreviations, idioms.

Procedure:	Resources and Materials:
Students translate several letters making list of vocabulary peculiar to business concerned; secondly, listing idioms used in typical business letter; thirdly, explaining abbreviations used.	File of sample business letters (kept current) received from firms in French-speaking countries with focus on France & Canada. Include variety: factories, medical, legal
Students compare their translations to those on file.	File of translations and sample responses to letters on file
Students respond to a letter according to the directions given, then compare their response to one on file.	Business stationery
Letters are typed on business stationery.	Typewriters (if available)

Evaluation:

Letters are evaluated according to these criteria: communication of basic information, correct grammar, correct use of idiom, correct use of form, correct spelling, neatness

Comments on use:

Subject Area(s) French II

Unit(s) Swiss Minidocs

Objective(s):
To study culture (Swiss) in depth (using minidocs as inspiration or starting point).

Procedure:

Assign an in-depth study of one minidoc topic--written or oral report.

Using criteria for evaluating culture, examine one or all minidocs: background; artefacts, clothing, people, attitudes, etc.

Develop a minidoc using (in French) similar structures.

Resources and Materials:

Minidocs
American-Swiss Association

Evaluation:

Comments on use:

150

Subject Area(s) French II

Unit(s) Swiss Minidocs (Mini-documentaries)

Objective(s):
To acquaint students with culture (Swiss) as manifested in television documentary. To familiarize students with vocabulary. To emphasize construction of complex sentences plus the Ne . . . que construction.

Procedure:

Show film: Minidoc: Jazz, Yodelling, July 4th, William Tell--discuss immediate impressions.

Distribute French script for second showing. Ask students to interpret general meaning, to familiarize themselves with French pronunciation. Point out constructions: (1) C'est une tradition qu'un grand nobre . . . (2) ce n'est qu'un aspect . . . ce n'est que maintenant que le cameraman . . . (3) . . . mais ce qui compte . . .

Resources and Materials:

Swiss Minidocs, American-Swiss Association, Inc., 60 East 42 St., New York, NY 10017

Evaluation:

Performance in translating and pronouncing. Self-evaluation: Compare self-taped pronunciation with film and student translation with enclosed transcript in English. Objective test of vocabulary and sentence structure.

Comments on use:

Barbara Cooney

Subject Area(s) French II

Unit(s) Metiers--Various Occupations

Objective(s):
To become acquainted with the names of various occupations and some basic vocabulary connected with each career. To inventory self in regard to careers. To relate occupations with need for foreign language.

Procedure:

Self-inventories: Les Emplois et Vous: Qu'est--ce que vous aimez faire?

Articles:
Quand êtes-vous heureux? Passepartout Se/Oct 69,
Le Travail C'est La Santé. Ça Va Jan. 73,
Presentation of metiers: Show pictures of different occupations emphasizing name plus vocabulary of profession--relate to foreign language occupations--all in French.

Role playing different occupations.

Matching pictures with dialog or job descriptions.

Bulletin board--Famous people in occupations requiring foreign language. Word games/puzzles.

Lisez un journal du Canada, de France, etc.

Trouvez (les) pour quelques metiers.

Choisissez un metier et faites une liste de vocabulaire necessaire

Resources and Materials:

Kit:
When I Grow Up, I Want to Be . .
Instructo

Passepartout Sept./Oct. '69
Xeorx: Feu Vert April, '73
Scholastic: Ca Va Jan '73
Ca Va Juin '73

Evaluation:

Comments on use:

Name _____ Date _____

1. Etes - vous heureux?

Très heureux ___
Assez heureux ___
Pas très heureux ___
Pas d'avie ___

2. Pour vivre heureux aujourd'hui, qu'est-ce qui est important?

	Important	Pas important	Sans avis
Aimer son métier	___	___	___
Avoir des amis	___	___	___
Pouvoir continuer à apprendre	___	___	___
Ne pas rester en dehors de la vie politique du pays	___	___	___
Avoir beaucoup de loisirs	___	___	___
Faire des voyages	___	___	___
Avoir une voiture	___	___	___
Ne pas s'occuper des autres	___	___	___

3. Vous sentez-vous libre?

	Très libre	Pas assez libre	Sans avis
a. Quand vous discutez avec vos parents	___	___	___
b. Dans votre façon d'occuper vos loisirs	___	___	___
c. Avec celui ou celle que vous aimez	___	___	___
d. Dans vos achats	___	___	___
e. Quand vous choisissez votre métier	___	___	___
f. Dans votre vie à l'école au lycée	___	___	___
g. En politique	___	___	___

Les Emplois et Vous

Mettre en rapport avec vos emotions.

Qu'est-ce vous aimez faire? Ne répordez pas trop vite. Pensez pour une moment. Votre réponse seriez très important. Que vous aimez faire maintenant vous aiderait decidez que travail vous aimeriez dans l'avenir.

La premier chose vous avez faite est vous mettre en rapport avec vos emotions autour que vous aimez faire. Considérez le vraiment. Cherchez vous profoundément.

Regardez la liste aux choses faire. Pres de chaque, encerclez le nombre à exposer comment vous sentissez. Encerclaz 1 s'il est quelque chose ce que vous aimez à faire. Encerclez 2 si vous n'êtes pas sûr. Encerclez 3 s'elle est quelque chose ce que vous n'aimez pas à faire.

Si Vous Aimez:	1 2 3
Travailler dans la maison	1 2 3
Travailler avec gens	1 2 3
Travailler avec machinerie.	1 2 3
Résoudre intiguer	1 2 3
Travailler ensemble proposer	1 2 3
Parler pour étrangers	1 2 3
Jouer un instrument musical	1 2 3
Travailler avec tout le mande	1 2 3
Réparer la moto	1 2 3
Raconter des histoires	1 2 3
Prendre exercise physique	1 2 3
Travailler avec votre mains	1 2 3
Lire un livre	1 2 3
Fait une voiture modèle ou une avion modèle	1 2 3
Ecrire une lettre	1 2 3
Argumente avec votre aimés	1 2 3
Travailler avec les nombres	1 2 3
Dessiner las portraits	1 2 3
Rassembler les choses	1 2 3
Vendre les choses	1 2 3
Faire las réparations dans la maison	1 2 3
Faire une expérience scientifique	1 2 3
Planter un jardin	1 2 3
Maintenir les détails	1 2 3
Aider autres personnes	1 2 3
Devenir sale	1 2 3
Travailler dans l'usine	1 2 3
Être actif	1 2 3
S'asseoir tranquillement	1 2 3
Travailler dans un office ou l'ecole	1 2 3
Travailler a un bureau	1 2 3

Subject Area(s) French II

Unit(s) A Second Language Opens Many Doors-Research Project

Objective(s):
To initiate awareness of language as a tool to self-development. To acquaint students with available opportunities. To show students values in foreign language study--specifically, monetary value.

Procedure:

Research Projects:
Choose 1 - 4 - 5 weeks usually first quarter.

List of jobs available in foreign country and/or requiring a second language--mounted display notebook collection (30 points)

Report of approximately 1000-1500 words on one specific bi-lingual job or study opportunity or one career with emphasis on value of foreign language. (40 points)

Research paper of approximately 1500-3000 words (3 sources): study abroad; one or several careers in the field of foreign language; service abroad (missionary work, Action); A.F.S. and other opportunities for student travel. (50 points)

Resources and Materials:

Casewit, Curtis W. How To Get a Job Overseas, ARCO Publishing Co., New York

James, Charles J. The Directory of Overseas Summer Jobs

Evaluation:
Evaluate on point basis (which might vary from listing above) according to criteria for research paper: organization, documentation, complete bibliography, content.

Comments on use:
I keep resulting products on file for further discussion throughout year, for others to share as interests shift, for sources for other projects.

Barbara Cooney

Subject Area(s) French II

Unit(s) A Second Language Opens Many Doors: Research Project

Objective(s):
Introduce various articles and materials useful in future research project. To acquaint students with opportunities available as a result of studying a foreign language.

Procedure:

Introduction: Activity 1

Choose one field: medicine, law, teaching, dramatics, business, etc.

Perusing materials, articles available, list five ways a foreign language can be an asset in this field.

Discussion of findings--How can language study lead to finding better jobs? What jobs require a language? What are college requirements in foreign language area? Why study a foreign language?

Resources and Materials:

"It's a Shrinking World," Accent on ACTFL, Sept. 73
Walser, F. Leroy, "Career Education Holds FL Challenge" Accent on ACTFL, Sept. 73
Merlclein, Helmut A. & Georges Cooley, "International Business Without Foreign Languages?" Accent on ACTFL, Sept./Nov. 74
Carney, Helen, "Developing a Dialogue about Careers," Accent on ACTFL, Sept./Nov. 74
Lester, Kenneth A. "The Career Crisis," Accent on ACTFL, No. 75
Johnson, Teresa; Taub, Alice Kent, A Foreign Language: A Key Asset, Dept. of Modern Languages, St. Louis Univ., St. Louis, MO, 1975 (75¢)

Evaluation:

Since this is an introductory activity, evaluation is in the final research paper; however, I evaluate this on these criteria: Does student participate in discussion? Has he completed the listing? Point system.

Comments on use:

Usually evokes response from class and the discussion seems to inform members of class. Also, has been good to follow up project with similar discussion.

Subject Area(s) French II

Unit(s) A Second Language Opens Many Doors: Research Project

Objective(s):
To show students that jobs using a foreign language are available. To acquaint students with the sources for finding these jobs. To acquaint students with job ads in English and in target language.

Procedure:

Introduction: Activity 2

Look through magazines, newspapers to find at least 1 to 3 available jobs demanding a knowledge of foriegn language or sojourn in foreign country.

Mount on paper listing source of want ad plus translation if necessary or copy if impossible to cut out.

Post on bulletin board.

Resources and Materials:

Canadian Newspapers in French and English: Montreal, Quebec, Toronto
French newspapers
Papers from French-speaking countries
Christian-Science Monitor
New York Times
Wall Street Journal
Business magazines such as Forbes, Fortune
Travel magazines such as Holiday Inn magazine
U. S. Civil Service brochures
Trade journals

Evaluation:

Has student completed project according to specifications? I give credit points for finished job.

Comments on use:

Allows student to share information and helps them to start thinking about a research project.

157

Barbara Cooney

Subject Area(s): French II

Unit(s): Language in the Marketplace

Objective(s):
To acquaint students with media and commercials from another country. To understand a culture through advertising. To develop advertising selling a product in French. To become familiar with imperative structures.

Procedure:

Film--Students discuss criteria for evaluating advertising.

Students watch films and discuss according to these criteria: products, prices, background, music, artefacts, psychological approach, with the idea of developing a paper, comparing one commercial to an American commercial for similar product.

Students become familiar with vocabulary and pronunciation of commercials so that they can "dub in" sound track.

Follow-up activities: Students develop their own commercial (or lay-out for advertising) which will sell an American product in France (or Switzerland). Use imperative.

Students prepare salestalk in French persuading a Swiss or French person to buy an American product.

Resources and Materials:

American-Swiss Association, Inc. 80 East 42 Street, New York, NY 10017

Film: "Language in the Marketplace" (a series of commercials, script, criteria for evaluating advertising, bibliography)

Evaluation:
Paper evaluated on organization; completeness.

Comments on use:
Students are interested in films and discussions and enjoy developing follow-up activities.

Barbara Cooney

Subject Area(s) Homemaking

Unit(s) Clothing - Creative Costume

Objective(s): Student demonstrate ability to make their own pattern. Student develops a leisure time activity.

Procedure:	Resources and Materials
Use basic pattern and then design a garment. Cut all pieces of pattern needed. Make trial garment before final garment. Have local designer discuss vocation and need for training. Make transparencies of before and after pattern in preparation for public appearance of students.	Flat Pattern Design by Mallen Local department store for merchandise as well as fashion trends

Evaluation: Students make checklist to be used for garment.

Comments on use: Students commented--they really learned fitting techniques needed in the making of any garment. Most students do not want to take the time for this course. In other words, their creative spirit has not been sparked.

Subject Area(s) Home Economics

Unit(s) Clothing - Creative Costume

Objective(s): Student demonstrates an ability to work in stage costume designing.

Procedure:	Resources and Materials:
Secure cooperation of school production department (drama, music, etc.) to allow students to design a costume, perhaps not make 50 of each, but at least learn difference between stage costuming and fashion wear.	A speaker from Lyceum Theater costume department Text

Evaluation: Parents who saw production could evaluate costuming. Students develop checklist.

Comments on use: For only the very interested select few students.

Nadine Moore

Subject Area(s) Home Economics

Unit(s) Housing - Furniture Renovation

Objective(s): To develop an appreciation for construction and finishing of furniture.

Procedure:

Select a piece of furniture to be restored.

Discuss use of this skill as a part- or full-time business.

Resources and Materials:

Pamphlets:
"Formby's Tips on Furniture Repair and Care"
U. S. D. A.--"Refinishing Furniture"

Local person--one who does refinishing, upholstering, etc.,
McGinnis Upholstery Shop
Sarah's Shop, Blackwater
Industrial arts teacher

Evaluation: Grade individual projects.

Comments on use: Students enjoy this but very time consuming for school.

161

Nadine Moore

Subject Area(s) Home Economics

Unit(s) Child Care

Objective(s): To develop an awareness of kinds of services available for care of children. To develop an attitude of service rather than just observation toward [illegible].

Procedure:	Resources and Materials:
Field trip to the following centers-- [illegible]	Supervisors in each center
[illegible] Children's Therapy Center Sheltered workshop	
[illegible]	
Nursery schools Public Private	
[illegible] Kindergarten	
[illegible] made by student for a game to use, [illegible] center.	
Following field trip, take time to discuss jobs available in these centers and explore what each person's job includes--training needed as well as [illegible] responsibilities.	

Evaluation: Students write an evaluation of trip--partly structured by list handed out before trip.

Comments on unit: Students talk about it for many years later.

162

Nadine Moore

Subject Area(s) Home Economics

Unit(s) Personal Culture

Objective(s): The student will become aware of responsibilities of operating a business. The student will be able to know and practice social graces.

Procedure:

Organized class into a company with president, vice-president, etc., advertising, etc. Each student was responsible for making items to be sold in our "boutique" shop called "La Tienda." Students were paid for cost and some for labor. Profit from shop was used to take class out to a meal, where the students practiced good manners learned in personal culture class.

Resources and Materials:

Charm--Chapter on dining out.

Harold Richardson, [illegible] spoke several times on setting up displays, advertising, and marketing.

Evaluation:

Comments on use: I am not sure this activity belonged in this unit, but it could be used with any money unit, etc. Perhaps it took a little too much time.

Nadine Moore

LA TIENDA

(The Store)

An Adventure in Merchandising

Objectives

1. To learn some techniques of managing a business.
2. To finance a class dinner to practice "eating-out" skills learned in Personal Culture Class, a semester course in home economics.
3. To be creative in crafts.
4. To realize profit on basis of individual production.
5. To inform and communicate with customers.
6. To keep records, individual as well as for the business.
7. To work together for a common goal.
8. To gain experience with different careers--advertising, managing, selling, bookkeeping.

Introduction

This group experience was actually an outgrowth of a unit in Personal Culture Class on Restaurant Dining as related to the social graces used in the world of work.

The fifteen girls of tenth, eleventh, and twelfth grades wanted to "eat-out" but needed money to finance the undertaking. The class decided to earn the money by having their own business, selling handmade items, such as clothing, crafts, food and kits for the "do-it-yourself" enthusiast.

Place

Approval was secured from the school administration to proceed with the project away from the school premises, hoping to work with more people. This meant that our students would be going off campus each day to work on the project. A local Community Center on Main Street of town offered the use of their building free of charge. Incidentally, this center was not in use and needed much clean up.

Organization

An organization was needed to operate the new business. Qualities needed by persons who would hold the various offices were discussed by the class and then the class selected the following officers: manager, assistant manager, and treasurer. Committees chosen were advertising, production, and display.

Theme

A Spanish theme was chosen, thus the name La Tienda, Spanish for "The Store." Many students were enrolled in Spanish classes also. The decor of

the store was to reflect the Spanish influence. Signs were in both languages customs were carried out, and costumes depicting that culture were used.

Hours

The store was to remain open for three days after school, 4 p.m. - 7 p.m., and all day on Saturday, 10 a.m. - 4 p.m. Poor lighting in the building accounted for the early closing hours; and also, this conformed to the rest of the town's store hours.

Finances

Students voluntarily chose what items they wished to mass produce and then paid an assessment for their labor. The class voted that each student could produce as much of any one item and as many different items as they thought would sell and they had time to produce. They were asked to keep a record of the number of items offered for sale, the cost to produce, and ascertain the selling cost in order to determine the amount of profit realized. The organization decided to return one-half of amount realized from each student's total sales to the student and the other one-half was left for the "eating-out" experience. After all expenses were paid, each girl had $0.45 to spend as she chose for the dinner.

Selling Merchandise

Individual student's items were coded with student's three initials, so cashier and treasurer could complete the bookkeeping task. Each item sold was written on a sales ticket with the code of item listed. Persons selling each sale filled initialed sales ticket, in case of error in addition. An adding machine was used to eliminate errors.

Advertising

Among the class, perhaps the busiest group were the advertising committee members. A month before the opening date, large windows of the building were covered with paper advertising the coming of a new business. Eventually the name of the business was painted on those windows. The local newspaper gave a full page ad, spot announcements were made on local radio, handbills were distributed to students at school and posted in business houses in neighboring towns, and the officers were interviewed on a local radio station - all to promote interest. Copies of advertising are enclosed.

Program

Opening-day ceremony included ribbon-cutting by the Mayor Pro tem, the principal of the school and officers of the store.

A pinata was constructed and filled with small toys and goodies. This was broken by the "small-fry" customers as a part of the opening-day ceremony.

To stimulate interest, a craft demonstration by a local craft shop employee was scheduled for one evening.

On the last day in the morning, a cake decorating demonstration was given by a local homemaker proficient in that art. The cake was then given to the person whose name was drawn from among the customers who had visited the store during its operation.

Cooperation

The local merchants were enthusiastic for the new business. One placed his merchandise on consignment for additional profit for the store. The local banker visited the store daily and commented on the value of the experience of the store to the students and to the community.

State Fair Community College Marketing Specialist discussed principles of merchandising, display methods, and floor layouts with the students during the planning sessions. Audiovisual Specialist, also from State Fair Community College provided a progress report in slides for the project, beginning with the building clean-up, through classroom [illegible], ribbon cutting ceremony to the final dinner party.

Observations

Although the store did not sell out of merchandise, more variety of merchandise could have been offered for sale. The girls observed quite easily what kind of merchandise their customers wanted and even produced some of those items after daily closing hours.

Students worked outside of regular class time on the items for the sale, but about four weeks of class time was utilized for this project.

Some girls assembled items for a project, wrote the directions for making them, and sold the results as a "do-it-yourself" project. Creativity was encouraged by this type of project both on the part of the seller and also to allow the buyer some freedom of observation.

To attract more customers students prepared to sell coffee and lemonade [illegible] with food items to be eaten while browsing in the store. The town has no restaurant service during the store hours. This was not successful, however, possibly due to inadequate facilities.

Comments

The superintendent of schools cut short a trip to the lake to patronize the business before closing time. He was impressed with the character of the operation.

The principal commented that it was a successful, valuable learning experience and wished more of this type of learning could be initiated.

One special education student enrolled in the class operated the adding machine as a cashier with accuracy and a real sense of accomplishment for her.

The teacher felt it was a real stimulant to interest in the classroom. Some teachers perhaps would not like to allot that much time to such an activity. This was an especially cooperative class and time well spent according to the teacher.

One merchant in town commented on the value of this experience to his business, as well as a practical learning experience.

Because of the popularity of some of the items sold, girls took orders for future delivery - perhaps the start of their own business.

Slide Presentation

A set of slides depicting progress of La Tienda with narration by the student manager is available from the State Fair Community College Library.

Evaluation

Each officer and committee was asked to keep a folder of materials used and then to evaluate the value of each.

At the end of the project, each student was asked to write an evaluation of this endeavor. The form of this evaluation was not structured in any way, but each student related what this experience had meant personally. Some felt they had learned to meet the public better; others liked the profit they had realized themselves; and, of course, all liked the dinner party. No formal written test was administered.

LA TIENDA WORK SCHEDULE

Wednesday

3:30 to 5 - 5 to 7:30

Tami	Kim
Jana	Pat

Thursday

3:30 to 5 - 5 to 7:30

Mary	Diann
Chris	Peggy

Friday

3:30 to 5 - 5 to 7:30

Connie	Nancy
Donna	Barbara

Saturday

9:30 to 12:00	12:00 to 2:00	2:00 to 4:30
Pat	Donna	Mary
Kim	Connie	Chris
Tami	Barbara	Diann
Jana	Sherry	Peggy

4:30 to 6:00

EVERYBODY CLEAN UP!

Cindy and Vanica will be there all the time. Be sure to contact one of us if you can't work your scheduled time.

GOOD LUCK!!!!

170

INDIVIDUAL STUDENT RECORD OF ITEMS OFFERED FOR SALE

Name: Code:

Items	What Sold	# Items	Your Expense	Total Price	Profit
Candles	6	6	$6.00	$12.00	$6.00
Cookies	4 doz.	5 doz.	$1.00	3.00	1.50
				Total	$7.50

LA TIENDA (THE STORE)

Where: UCCI Bldg.
Main Street
Smithton, MO

Dates of Operation:
Apr. 23 - 4-7 p.m.
Apr. 24 - 4-7 p.m.
Apr. 25 - 4-7 p.m.
Apr. 26 - 10-4

Special Features:
Macrame Craft Demonstration
Thurs. Apr. 24 6:30 p.m.

Cake Decoration:
(drawing for cake)
Sat. Apr. 26 10 a.m.

WELCOME

Owners: Personal Culture Class
Smithton High School

Manager: Cindy Moon
Asst. Manager: Vanita Southard

OFFERS THE FOLLOWING ITEMS FOR SALE:

* Wood and leather jewelry
* Pajama Bags
* Hanging Planters (also do your own kits)
* Summer Skirts
* Pillows
* Homemade food products
* Aprons
* Pot Holders (variety of colors and sizes)
* Soap Baskets
* Dresser Scarf
* Live plants for the person with a green thumb
* Decorative Candle Holders
* Paper Flowers
* Creative Crewel Embroidery
* Clean-up turtles
* Terrariums (many sizes and shapes)
* Decoupage items, placques
* Many other items too numerous to mention

GRAND OPENING--Wed. Apr. 23 Help us break the PINATA with prizes for all

COME-N-BROWSE COME-N-BUY COME-N-BROWSE COME-N-BUY

172

April 18, 1975

KMOS-TV
2100 West Broadway
Sedalia, MO 65301

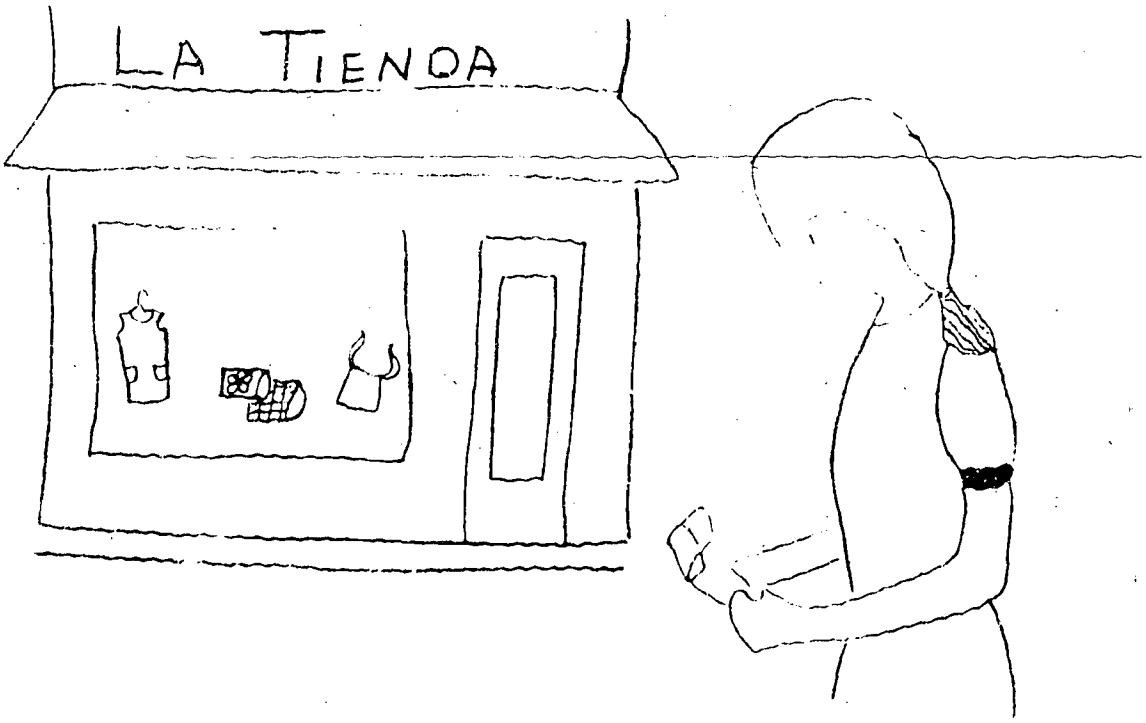
Dear Sir:

Our personal culture class would appreciate you announcing on television about our shop called La Tienda, which stands for "The Shop." Please tell that it is all homemade goods, even food. Store hours will be April 23 to 26, weekdays 4:00 p.m. to 7:00 p.m. and on Saturday from 10:00 a.m. to 4:00 p.m. It is located on Main Street in Smithton at the UCCI building. Grand opening will consist of a pinata breaking for all ages of children.

Sincerely yours,

Jana Green
Advertising Manager
Smithton Personal Culture Class
Smithton High School

LOCAL NEWSLETTER ADVERTISEMENT



THE LA TIENDA IS A SHOP RUN BY GIRLS TAKING A PERSONAL CULTURE CLASS AT SMITHTON HIGH SCHOOL. IT WILL BE FULL OF DELIGHTS AND HOMEMADE SURPRISES. IF YOU WANT TO BUY THINGS WITH THE "PERSONAL" TOUCH, COME TO OUR SHOP AND SEE.

THE LA TIENDA WILL BE AT THE UCCI BUILDING ON MAIN STREET, SMITHTON. IT WILL BE OPEN WEDNESDAY THROUGH SATURDAY, APRIL 23 TO 26.

SHOP HOURS: WEDNESDAY, APRIL 23, 4-7 P.M.
THURSDAY, APRIL 24, 4-7 P.M.
FRIDAY, APRIL 25, 4-7 P.M.
SATURDAY, APRIL 26, 10 A.M.-4 P.M.

MANAGER: CINDY MOON

ASST. MANAGER: VANITA SOUTHARD

Merchandise Tags

Candle
2.00
PLM

Item
Selling Price
Student's Code

Sales Slip

Date _____ 19___

M _____

Address _____

Reg. No.	Clerk KCK	Account Forward		
1	Basket	DLC	2	50
2	Turtle	PGP	1	50
3	Candle	CJH	1	98
4				
5	Mats	NFM	5	98
6			3	50
7			9	48
8				
9				
10				
11				
12				
13				
14				
15	41			

Your Account Stated to Date — If Error Is Found Return at Once

Date _____ 19___

M _____

Address _____

Reg. No.	Clerk Vds	Account Forward		
1	pillow	VG	3	00
2	blouse	KCK	2	00
3	decoupage	Comm	1	00
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15	32			

Your Account Stated to Date — If Error Is Found Return at Once

Subject Area(s) Math

Unit(s) Estimating Area of Land

Objective(s): To give students a "feeling" for the amount of land included in an acre (hectare).

Procedure:

Have students gather any outside materials which give the area of some familiar section of land. Examine information in class in an effort to give students a reliable and memorable mental reference as to the extent of an acre (hectare). For example, define an acre as the patch of ground enclosed in a square whose sides have length equal to the distance from the goal line to the opposite 30 yard line on a football field.

Resources and Material :

Evaluation: Here it is not essential that students know exactly (sq. yds., sq. m., etc.) what an acre (hectare) is but rather that they develop a "feeling" for this area by relying on mental pictures of known areas.

Comments on use:

Subject Area(s) Math

Unit(s) Math in Wildlife Management

Objective(s): To give students an opportunity to sort out relevant data and arrive at meaningful conclusions from various statistical data.

Procedure:

Have students examine resource material in search of data regarding a particular wildlife situation, i.e., deer kill during a particular hunting season. Have students make a list of questions which could be answered by data, i.e., "How many hunters purchased deer tags?" Use data to arrive at answers to questions involving percentages, probability, etc.

Resources and Materials

Pamphlets from Mo. Dept. of Conservation
Missouri Conservationist
Field and Stream
Outdoor Life
Sports and outdoor columns from newspapers

Evaluation: Attempt to evaluate students' use of data by use of essay questions such as "What data is needed to find answer to . . .?" Evaluate math skills by checking work on use of data to arrive at conclusions.

Comments on use:

Rich Bahner

Subject Area(s) Math

Unit(s) Math in Sports

Objective(s): Give students opportunity to gather their own data and use it to draw conclusions.

Procedure:

Have students record data from a sporting event such as a school game or professional event. Give students in advance some examples of what sort of data to record, i.e., turnovers, fouls, field goals in a basketball game. Do not spell out specifically what students should record.

Have students evaluate one team's performance using the data in an effort to determine what was most meaningful factor in the team's win (loss).

Resources and Materials:

Evaluation: Compare and contrast students' and your statistical evaluations.

Comments on use:

Subject Area(s) Algebra I

Unit(s) Ratio and Proportion

Objective(s): To encourage students to find applications of algebra in solving household (business, etc.) problems

Procedure:

Have students hand in "recipes" one day in advance. Tell the students when "recipes" are returned that a situation has arisen in which more (less) of one material has become available. Their job now is to rewrite their "recipe" so that the finished product in the original "recipe" but was built with more (less) material.

Resources and Materials:

Each student brings one "recipe" (might be cooking, instructions for building a model, etc.)

Evaluation: Check accuracy of proportions.

Comments on use:

Subject Area(s) Math

Unit(s) Using Addition and Subtraction Properties of Equality to Solve Simple Equations

Objective(s):

To illustrate that two changing quantities may remain in a relationship of equality while changing. To illustrate how adding or subtracting equal numbers will maintain an equality relationship while exposing an unknown quantity.

Procedure:

Place the pebble at one end of the stick along with 3 coins of the same denomination. Place enough like coins on the other end to balance. Point out the analogy between the fulcrum point and the = sign. Take one coin from each side and note that the balance is undisturbed (i.e. both sides still =). Continue this until the pebble remains alone balanced by the remaining coins. The balance (equation) has been preserved while finding what weight in coins actually adds to the pebble. Using different weight coins, illustrate what happens when unequal numbers are subtracted from each side and that the weight of the pebble cannot be determined. Reverse the process for the addition property.

Resources and Material

... stick ... to ... place ... a pencil ... Several coins with ... actual ... representing ... Several coins

A small pebble

Evaluation:

Comments on use:

Richard McKinley

Subject Area(s) Math

Title(s) Logic

Objective(s). To analyze statements and draw logical conclusions. Hopefully, this will help students analyze arguments, advertisements, etc. leading to analyzing mathematical statements and drawing correct conclusions.

Procedure:

Have students find an advertisement that heavily appeals to being successful, beautiful, sexy, etc. if you use the product. Then have students break down the ad into assumptions made and conclusions which logically follow.

Resources and Materials:

Magazines and/or newspapers

Have students find campaign or political speeches. You may just use an excerpt from one. Break down the speech into separate parts and analyze each by judging suppositions and conclusions. Also judge what type of appeal is used.

Magazines and/or newspapers

Evaluation:

Comments on use:

181

Linda Platt

Subject Area(s) Math

Unit(s) Metric

Objective(s): To estimate size of items using metric units, especially linear units. To measure items estimated using meter sticks, tapes, etc.

Procedure:

Divide class into two teams. Have one student from each team go to board and draw lines a given length (such as 1 m, 40 cm, etc.) or give an estimate of items in the classroom in specified units (height of doorway in cm, height of tallest boy in cm, width of room in m, etc.).

Then have the two students measure the item(s) and point goes to team having closest answer.

Sources and Materials:

[illegible]

[illegible] with [illegible] (or [illegible])

[illegible]

Evaluation: Students enjoy this game even the best students do about the same as the poorer ones.

Comments on use: You may need to set a time limit for answers (10-15 sec.). Can also be used with metric weight (mass) or capacity but not as effective.

182

Linda Platt

Subject Area(s) Math

Unit(s): Metric

Objective(s): To learn the basic units of the metric system.

Procedure:

Write the 7 basic units on cards (approx. 13 cm x 18 cm). It is best to begin with linear units or with the symbols for them (km, hm, dam, m, dm, cm, mm). Give them to 7 students and have them arrange themselves from smallest to largest. It's fun to give them to the students without them knowing what their own card says (pin them on their back) and have them arrange themselves.

Resources and Materials:

(" x 7")
M rker
Str t pins--optional

Evaluation: Works well with junior high students during first day or two of metric study.

Comments on use: Can adopt this to units for mass (weight) and capacity. Could be adopted to measures such as 17 cm, 175 mm, 1.7 m, etc.

Linda Platt

Many of the following activities could be acceptable at any upper elementary level through high school (grade 12). Some (such as repair of instruments) would be more acceptable in a fundamentals class. This, however, would be good for all instrumentalists due to the fact that somewhere in their instrumental career they will undoubtedly have mechanical problems with their instruments. Many times minor adjustments could easily be made by the student who would thus save money.

Several of these activities (such as decorating for concerts) would be possible only if you have the time or are artistically inclined.

Many activities can be culminated in one or two days; however, researching and reporting activities as well as instrument repair activities would obviously take several days.

Hopefully, you could develop some of these ideas with different activities and also keep the monotony in the classroom from becoming standard day after day.

Subject Area(s) Music

Unit

Objective(s):
The student will become aware of the requirements necessary to open and maintain a successful business.

Procedure:

Place a student in an apprenticeship to an existing dealer, maybe for a week or month, or at least a day.

Establish a reputation as a competent repairman or reliable source of information.

Eventually, be accepted as a member of Dunn Bradstreet credit union. They will back you on orders or shipments (can be over $10,000/shipment) and other sponsors.

Draw up physical plans for the ideal music store. Include all areas of music, pianos, instruments, showcases, etc., catalog orders for music, and lesson areas.

Resources and Materials:

Information
Carl Wilken, Wilken Music
Sedalia, Missouri

Evaluation:
This would be a very long term project, which requires much time, patience, and a reputation of competence which eventually gains you support of dealers and sponsors.

Comments on use:

135

Jim Walk

Subject Area(s) Elementary Music

Unit(s)

Objective(s):
To become aware of the construction of stringed instruments as a career

Procedure:	Resources and Materials
History of Stradivarius and Guaniere instruments, present day value.	Any music history book Milton Cross History Appel Dictionary of Music
Structure and parts orientation.	Violin, viola, cello, bass and bows for each
Information on what makes a string instrument work.	Pictures on each if above isn't available
Assign students to make a string instrument and play them.	
A professional person to come and play and demonstrate.	
Have students try to play, to see the technical facility it requires to play.	
Have a violin builder come and show how to build, tools required, instruments in various stages of building (beginning to finished product).	Mr. & Mrs. Banning from St. Louis appear at the Arts and Crafts Fair at Arrow Rock each year. He builds violins and she demonstrates.

Evaluation:

Comments on use:

Jim Walk

Subject Area(s) Elementary Music

Unit(s)

Objective(s):
The student will relate art and music by starting with a recording and entering carrels, filmstrips, based on it.

Procedure:
Teach songs for elementary classes by having students sing the song while the teacher draws the stories on the board with pictures. Students could also do the illustrations.
Example: Frosty the Snowman, The Twelve Days of Christmas

For older students they can learn to draw and listen to recordings with which they are unfamiliar, incorporating impressionism in music.

Actual filmstrips or films could be developed--might be done in conjunction with art class if art teacher is interested.

Resources and Materials
Music and words
Recordings of the songs are most helpful
Chalkboard-chalk
Knowledge of the song and story

Evaluation:

Comments on use:
This is fun for the students as well as a teacher who likes to draw. Sometimes, however, they get more interested in the pictures that you draw and forget to sing. This is a good outlet for students who also are not involved in an art program.

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):
Awareness by students of the people and occupations by observing theatrical productions from beginning to end.

Procedure:

Follow a production from beginning to end--tryouts, rehearsals, etc.--performance.

a. actors
b. directors
c. designers

Have various members of cast talk to class to explain their roles in the production.

Resources and Material

Books on drama and theater from your library.

People involved in production

Stagestruck: Your Career in Theater, Hirschfeld New York Messner, 1963

Evaluation:
The students will evaluate the whole production and how each person's role effects the overall effort.

Comments on use:

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):
The student will be aware of how personalities and attitudes stabilize job positions
Children's personalities relating to the world of work.

Procedure:

Sing songs affecting different attitudes and behaviors and expressions.

Make a bulletin board showing different occupations.

Stress how people and jobs in these areas are different.

Discussion of jobs in music and problems which could arise, role playing.

Resources and Materials

Brother John, Warner Brothers

Ideas, Thoughts, and Feelings, album, L.P. $6.95

Allyn & Bacon, Human Relations Development, G. M. Gazda $6.95

Your Emotions Intermediate, filmstrip, cassette, United Learning 663 West Howard Street, Niles, IL 60648

Evaluation

Comments on use:

Subject Area(s) Music

Unit(s)

Objective(s):
To become aware of the requirements and training of a piano technician.

Procedure:	Resources and Materials:
Have a tuner work on a piano in a classroom in view of the students. Actual attempt to tune a string by students. Explanation of tools and use. Explanation of structure and parts of a piano. Explanation of technician school for tuning career by a licensed accredited tuner.	Sedalia piano tuners: George Young, Mike Rooks, Jim M. Cramer Brochures by Piano Tuners Guild

Evaluation:

Comments on use:

I have done this. Some of the students were amazed at how complicated tuning a piano can be, also how delicate the inside parts actually are.

Jim Walk

Subject Area(s) Music

Unit(s) _____

Objective(s):
Understand and be aware of the requirements of a good private music teacher.

Procedure:

Have a private teacher attend classes or schedule an afterschool assembly.

Talk about the costs of private lessons for a non-professional teacher as opposed to a professional private teacher in terms of guilds and unions.

Problems in scheduling for students, problems like school ball games, jobs.

Allow some advanced students to take on lessons with supervision.

Resources and Materials:

Evaluation:

Comments on use:
I have students giving lessons for $1 per lesson. Gives them more pride and helps lighten the load in beginner band.

Subject Area(s) Music

Unit(s) _____

Objective(s):

The student will become aware of his community and his musical heritage.

Procedure:

Field trip to Lyceum Theater. Arrow Rock.

Students participating in summer theater at Arrow Rock.

Organizing and setting up a production in your own school.

Getting the assistance of drama, art, and home economics departments.

Attending community musicals or plays.

Study folklore of the area, things that have happened; find songs that relate to subject area.
e.g. Lard Hill, Green Ridge, MO Railroad (M.K.T.) kills some hogs belonging to widow. R. R. will not pay for hogs. She and her kids grease an uphill grade on tracks every night until payment is made. Hogs? The Sow That Took the Measles.

The students might develop plans to restore old historical buildings in the community--e.g. an old opera house, etc.

Search out and visit the buildings.

Resources and Materials:

History and theater books of dress, music and decoration of the periods

Book of the Theater of Yesteryear, Doubleday

J. C. Penney Bicentennial Music, 1975

Evaluation:

Comments on use:

Subject Area(s) Music

Unit(s)

Objective(s):

Students shall learn to develop a theme, organize music developing the theme, and develop decorating ideas around the theme.

Procedure:

Explain to the students the types of concerts (oratorios, cantatas, etc. or any less formal concerts).

Select type of music and concert to be performed.

Design decorations correlating the music and the theme.

Students will actually carry out and decorate the area of the concert.

Resources and Materials

Cooperation of art department

Lots of cardboard, paint, junk lumber

Band Director's Guide

Doubleday Book of the Theater

Evaluation:

Comments or use:

Don't get bogged down on the decorations. The music should come first and foremost.

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):
Students will become aware of the different musical styles that a teacher must be able to present and changes in musical styles that occur through the years.

Procedure:

Research school music programs of past years.
Interview with older or retired music teachers.
Interview with a more recent graduate music teacher and discover the styles of music used in their concerts.

Prepare and perform music suggested by M.E.N.C. contest lists.

Prepare and perform music recognized as more popular of the day.

Compare and contrast the selections and performances.

Resources and Materials:

Records and music of rock and roll era

Electronic equipment
Synthesizers, electric guitars, amplifiers

Music of hard rock

Evaluation:

Comments on use:

Subject Area(s) Music

Unit(s)

Objective(s):

Students will become aware of the historical progression of music as it relates to national or world events.

Procedure:

Working knowledge of classical selections.

Students will study and chart music of eras and styles and characteristics of each era.

Music lists from each era.

Reading articles from professional journals.

Resources and Materials:

Viewing of 2001, A Space Odyssey

Grout, History of Music

M.E.N.C. Magazines, Missouri School of Music Magazine

Evaluation:

Comments on use:

195

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):
To explore music therapy in relation to therapeutic arts of the exceptional child.

Procedure:

Discuss:

A. Requirements for a degree in music therapy

B. Personal requirements

C. What is N.A.M.T.
National Association of Music Therapy--
Representative will visit.

Take a field trip to State School at Marshall.

If possible, include actual working with exceptional child, deaf children, etc.

Resources and Materials:

Catalogs from colleges developing this area

Civil Service or employment offices

N.A.M.T. P.O. Box 610, Lawrence, KS

Journal of Music Therapy to be ordered from above

Evaluation:

This would be good for anyone interested in physical education or special education and music. Sedalia has a part-time music therapist--Gwen Kappelman--La Monte, MO.

Comments on use:

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):

The student shall learn the value of a poet's work and how it could be set to someone's music.

Procedure:

The students will set an existing poem to music and/or write a poem to existing music.

Research poets or writers whose works (poetry or prose) have been set to music.

Resources and Materials:

Elizabeth Barrett Browning: How Do I Love Thee, G. Schirmer
Any prose or poetry books

Evaluation:

Comments on use:

Unit(s)

Objective(s):

The child will become aware of the requirements of becoming a professional instrumentalist.

Procedure:	Resources and Materials:
Field trip to St. Louis or Kansas City Philharmonics.	
To sit and work with a professional on a piece of music.	
To sit in on a lesson with a teacher and a private student.	
To allow advanced students to work with younger or beginner students. Have professional groups appear for the student body.	
Have a music union official talk with the interested students on costs of unions, advantages of organized unions and disadvantages.	
Breakdown of the areas of specialization in instrumental areas.	Career in Music Education, Charles Gary, M.E.N.C., Washington, 1965
Requirements for these areas.	Careers & Opportunities in Music, Alan Rich, New York, Dalton, 1964
Salaries and opportunities.	

Evaluation:

Comments on use:

I allow students to work with younger or beginner students now. It sometimes seems like the students relate better than between teacher and student.

198

Jim Walk

Subject Area(s): Music

Unit(s)

Objective(s):

The children shall become aware of interraction of jobs in music and a radio station.

Procedure:

Disc jockey will visit class.

Discussion of music played in morning, noon, and evening.

Types of music in regard to station F.M., A.M., country, rock.

Play different records and let students place according to time of day.

Visit a station.

Resources and Materials:

Contemporary records

Mood records

Evaluation:

Comments on use:

Jim Walk

Unit(s)

Objective(s):

Students shall be aware of the job opportunities in areas of stage and dance bands.

Procedure:

Orientation on stage bands.

Make up of instruments required.

Music and styles of stage band.

Students will make up their own band.

Resources:

Career Opportunities in Music, American Music, 332 S. Michigan Avenue, Chicago, IL 60604

Evaluation:

Comments on use:

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):

Students shall become aware of qualifications for a music teacher.

Procedure:

Students write to state department of education for state requirements for degree.

Write to college or university for that school's program in music.

Spend a day with a college student majoring in music.

Spend a day with a teacher in the classroom on music.

Resources and Materials

Band Director's Guide
State curriculum guides
Teacher's manuals
Fundamentals of Conducting

Evaluation:

Comments on use:

Unit: Career Awareness

Objective(s):

Students shall become aware of the fine arts, their interraction and their effec. on society.

Procedure:

Make a bulletin board on the "Arts" - related jobs.

Student makes a career chart depicting jobs in art, music, and English.

Each student selects activities relating to jobs in these areas.

Example--Listen to music "An American in Paris" (Gershwin).
Draw pictures of scenes depicted.
Write story or poem about the activities in the recording.

Resources and Materials:

Wonderful World of Music
Doubleday, 1956

This Is an Orchestra
1950

Evaluation:

Comments on use:

202

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):

Students will become aware of music and its affect upon employees and their work, patience, etc.

Procedure:

Research and report which industries "pipe in" music into their working areas.

Interview employees and get their opinion of music being played.

Have students list places from own experiences that have utilized piped-in music.

Resources and Materials:

Factories
Motels
Retail businesses
Restaurants
Dentists

Evaluation:

Comments on use:

Subject Area(s):

Unit(s):

Objective(s):
Exploring science of sound (mechanical) in relation to music

Procedure:

Orientation on pitches, wave lengths, speed of sound.

Have an announcer or D. J. visit classroom. Talk about wave length and how equipment for broadcasting is used.

Visit a radio station.

Experiments in classroom to measure wave lengths.

Take a long bottle, two feet in length, open at both ends, through that extend a thin metal rod. Place sawdust or sand in bottom of bottle. Cork both ends. Vibrate the rod by simply placing hand on bottle and rub end of rod. Count the indentations in the sawdust. Check with science teacher for formula for measuring wave length.

Resources and Materials:

Tuning forks

Various pieces of equipment relating to chemistry

Formulas on measurement of wave lengths

KDRO Radio, Sedalia
Yates Broadcasting (KSTS), Sedalia
KMMO-KMFL, Marshall
Long bottles, cork at both ends, 2 corks, sawdust and long metal rod

The Science of Sound, Bell Telephone Labs, Inc., Folkways Records & Serv. Corp.

Evaluation:

Comments on use:

Subject Area(s) Music

Unit(s) _____

Objective(s):

Students shall become aware of different jobs which are [illegible]n music.

Procedure:

Sing songs about different occupations.

Discuss history and geography relationships to the songs.

Games, role playing, acting out songs, guessing jobs.

Resources and Materials:

"Erie Canal"
"Casey Jones"
"Arkansas Traveler"
"I've Been Working on the Railroad"
etc.

Evaluation:

Comments on use:

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):
Students shall be aware of the business world concerning music employees.

Procedure:

Contact area music stores for acceptance of individual students for one day or a few hours to work in the store or simply to observe.

Could make calls to purchaser on an order which has arrived or to make collection on overdue bills.

Make deliveries--pianos, etc.

Demonstrate instruments to customers.

Resource Materials

Wilken Music
Shaw Music
Ike Martin Music
Mike Rook's Music

Demonstration ability required

Evaluation:

Comments on use:
Wilkens has students, college and high school level, who actually sell and give lessons at the store.

Subject Area(s) Music

Unit(s)

Objective(s):
Students will be exposed to occupations in vocal music.

Procedure:

Have a professional visit the class.

Students research and report on hiring operatic or popular singers.

Students will discuss voice qualities, appealing or otherwise.

Record each student's voice; play back for class and guess "Who's Who in the Tape Recorder."

Research requirements of a music degree.

esources and Materials:

Jobs in the Performing Arts, Chicago: Science Research Associates, 1966

Evaluation:

Comments on use:

Subject Area(s) Music

Unit(s)

Objective(s):

Students shall become aware of different music for different professions.

Procedure:

Discuss music of various organi-- church music, funeral music, music, patriotic music.

Resources and Materials

Star Spangled Banner
Old Rugged Cross
Beyond the Sunset
Stand By March from movie--
Greatest Show on Earth

Evaluation:

Comments on use:

208

Jim Walk

Subject Area(s) Music

Unit(s)

Objective(s):

Students will become aware of music activities in their leisure time.

Procedure:

Have students keep a tally of every time they hear music during a day or week.

Each student will present a piece of music (record, etc.) depicting their leisure time music interests.

Make up a musical skit choosing background music in which the title words carry out the mood to be depicted. The songs chosen would have to be easily recognized by other participants and audience.

Resources and Materials:

Records of mood music

1001 Songs from Reader's Digest

Dance Careers for Men and Women, A. A. for H. & P. E. and R., 1201 16th St., N.W., Washington, DC 20036

Evaluation:

Comments on use:

Subject Area(s) Music

Unit(s) Instruments of Orchestra--Care and Repair

Objective(s). Ability of students in band to do minor repair on their instruments.

Procedure:	Resources and Materials:
Orientation to families of instruments, sight by pictures and handling and playing. Discussion of care and repair. Repairman to visit class. Disassemble an instrument. Reassemble an instrument. Place a simple problem in the horn. Have a student find the damage.	Band Director's Guide Instruments Repair and maintenance kits Lists of costs for repairs of particular work (glazing, refinishing, dent removal, repadding)--Leblanc

Evaluation: Visit a factory if available.

Comments on use:

Subject Area(s) Music

Unit(s)

Objective(s):

Students will become aware and research various occupations in music careers. or hobby areas.

Procedure:

Student will chart at least ten career areas relating to music, e.g. piano teacher, orchestra leader, etc.

The students will team up and play the game of "What's My Line" and select a musical occupation to demonstrate while opposition guesses.

Students will select an occupation and study a person who has excelled in this area.

Students will research the salaries of musicians.

Have the students fill out a teacher-made q-sort to better understand their interest in music.

Resources and Materials:

Children's Dictionary of Occupations
Counselor Films, Inc., 2100 Locust St., Philadelphia, PA 19103
Occupational Outlook Handbook, U. S. Dept. of Labor, Washington, DC
Brochure of M.T.N.A., M.E.N.C., and N.A.S.M., 10¢ each, 2209 Career Tower, Cincinnati, OH 45202
Kuder Form DD Occupational Interest 11-Adult Survey SRA - Science Research Associates, 259 Research Associates Inc., Chicago, IL 60611

Evaluation:

Comments on use:

Jim Walk

MUSIC Q - SORT

NAME _____

1. What are your plans for when you get out of high school?" _____

_____

2. Are you interested in music as a hobby or as a possible career? _____

Hobby / Career

3. List all the jobs and careers in music that you can think of. In the space at the right, check that that you would like to know more about.

_____ ( )

_____ ( )

_____ ( )

_____ ( )

_____ ( )

_____ ( )

_____ ( )

_____ ( )

4. What can you learn in music class that will help prepare you for a possible career in music or some related field?

5. What type of music do you like best?

_____

6. What is your favorite song?

_____

Subject Area(s) Science

Unit(s) Genetics

Objective(s): To teach the student laboratory procedures which they might be required to perform in a career within the medical field.

edure

The student will lance his/her own finger and determine blood type, clotting time and hemoglobin count. When the class has finished, we will consider the class to be a gene pool and compare them to the national average.

Resources and Materials:

Anti A and anti B
Blank microscope slides
Hemoglobin charts
Blood lances
Alcohol

Evaluation: It has always worked well and stimulated class interest in genetics.

Comments on use: Make sure that you have signed parental permission slips before doing the lab.

Charles Ledgerwood

Subject Area(s) General Science

Unit(s) Electricity

Objective(s): For each pupil to know about electrical circuits and their practical applications.

Procedure:

Discuss with the pupils ways in which electricity may be used in the home.

Show the pupils parallel circuits used in wiring a home.

Show students series circuits and discuss their importance.

This is used to develop a career in building trades of wiring homes and commercial buildings.

Resources and Materials:

Parallel and series circuit boards

Have a local electrician talk to the class about home wiring and electrical circuits

Evaluation: Have pupils draw both series and parallel circuits and explain their uses. Pupils could draw in the circuits used in an average home.

Comments on use: This activity would depend on the ability of the local speaker used to help with the program.

214

James Breshears

Subject Area(s) Science or Ecology

Unit(s) Conservation

Objective(s): To determine the shade value of a tree as compared to its actual value for lumber.

Procedure:

The International Shade Tree Conference and the National Arborist's Association say a shade tree is worth $9 per square inch of trunk diameter as measured 4 1/2 feet above the ground. This is figured by determining the diameter, squaring this figure, multiplying by 0.7854, and then multiplying by $9.

The lumberman is concerned with board feet. For this, you need the diameter of the tree 4 1/2 feet above the ground and then determine how many times the trunk can be cut into 8 ft. lengths. This can be done by triangulation or by having a student stand next to the tree and reaching as high as possible, which is about 8 ft. and then guessing at the height. This is then checked on the board foot chart and the number of board feet is multiplied by 20¢.

Resources and Materials:

Meter stick
Heavy string 6 ft. long
Conversion chart for determining board feet

Evaluation:

Comments on use: Can be used to show jobs in forestry and some of the jobs they perform. Can be used to stimulate interest in learning different types of local trees.

Charles Ledgerwood

Subject Area(s) Ecology or Science

Unit(s) Erosion, Soil Types, Conservation

Objective(s): To show that compaction of soil results in decreased absorption of water, therefore, causing water run off.

Procedure:

Use a magic marker to mark the cans one inch from the bottom. Select four different areas around or on the school grounds which receive different levels of student use. Push the cans into the soil to the premarked line, pour 250 ml of water into each can and time how long is required for the water to be absorbed. The absorption time is directly related to how compact the soil is.

Resources and Material:

4 small cans of the same size with both ends cut out
250 ml beakers
1 gallon plastic jugs
Watch with a second hand
Magic marker

Evaluation:

Comments on use: This shows: (1) The adverse effect of soil compaction which results in erosion; (2) How to determine if a septic tank would work well; (3) Why put cattle or horses in a wood lot cuts down on forets production.

Charles Ledgerwood

Subject Area(s) Earth Science

Unit(s) Minerals

Objective(s): To develop a knowledge of different properties used to identify minerals. To be able to identify minerals that are found locally.

Procedure:

Give pupils ten different minerals and have them to group them in any way they can.

Discuss the above groups and arrive at the best way to identify minerals.

Give the pupils a number of minerals or rocks found locally and have them identify each using the properties discovered in the above activities.

Discuss the importance of mineral identification to both mining and agriculture.

Resources and Materials:

A good selection of minerals for identity from Wards Scientific
Have a local geologist or agri-fertilizer salesman speak to class on the economic importance of minerals.

Evaluation: Give the pupils a group of mineral specimens for identification. Each pupil should be able to write a paper discussing the economic importance of the rocks and minerals found locally. Lime quarries--or gravel pits or the possibility of undiscovered minerals of importance.

Comments on use: This will give the pupils some insight on the local importance of rocks and minerals.

217

James Breshears

Subject Area(s) Chemistry

Unit(s) Organic Chemistry

Objective(s):
To show that an alcohol and an acid can be combined to produce an ester. To make the ester methyl salicylate.

Procedure:

Have students weigh out grams of salicylic acid and mix with ml of methyl alcohol. Then measure ml of concentrated sulfuric acid to be used as a catalysis and add to the previous mixture. The odor of methyl salicylate (wintergreen) will then be evident.

This type of reaction would be very important to organic chemist, chemical manufacturers, among others.

Resources and Materials:

Test tubes, balance sulfuric acid, methyl alcohol and salicylic acid

Evaluation:

Write equations for the reactions of alcohols and acids.

Comments on use:

A quick, easy experiment to do.

Raymond Schnackenberg

Subject Area(s) Chemistry

Unit(s) Solutions

Objective(s):
To have students become aware of the different ways solution may be designated.

Procedure:

Explain to the students the different ways solution strengths are designated and how they are prepared.

Have the students prepare solutions of different concentrations.

Discuss the different occupational areas in which preparation of solutions of given concentrations are important; for example, pharmacologist, chemists, and physicians among many others.

Resources and Materials:

Beakers, scales, graduated cylinder and appropriate chemicals to make different solutions

Evaluation:
Give a test on solutions and how they are prepared.

Comments on use:

Subject Area(s) Chemistry

Unit(s) Chemical Reactions

Objective(s):

To show students that the total mass of reactants are equal to the total mass of products in chemical reactions.

Procedure:

Have the students put some potassium chromate in a test tube and some lead nitrate in an Erlenmeyer flask. Place the test tube in the flask and stopper the flask. Weigh the stoppered flask. Invert the flask. This combines the reactants and a reaction takes place. Explain why a reaction has taken place. Now have the students again weigh the stoppered flask to show no loss or gain of mass.

Important in any career in which chemistry is involved.

Resources and Materials:

Flask, test tube, balance, rubber stopper, lead nitrate and potassium chromate solutions

Evaluation:

Comments on use:

This lab shows the concept of conservation of mass in chemical reactions very well.

Raymond Schnackenberg

Subject Area(s) Chemistry

Unit(s) Properties of Substances

Objective(s):
To have students find the densities of different solids and liquids.

Procedure:

Explain density and how it can be found.

Have students measure volume of solids by water displacement, and the mass by using an equal-arm balance.

The density of liquids are to be found by using density bottles.

Discuss the different occupations in which the finding of densities would be important, for example, analytical chemist and lab technicians.

Resources and Materials

Different liquids to find the density of such as alcohol and acetone

Different solids to find the density of such as different metals or woods

Other materials needed are balances, density bottles, water and beakers

Evaluation:

Have students solve density problems.

Comments on use:

Raymond Schnackenberg

Subject area(s) Chemistry

Unit(s) Solutions

ective(s): To have stud... ...in experience in separating the components of a solution by distillation. ... students learn ter... concer... distillation. Have student... aware of th... ...nce ... distil... ...many occup... areas

Pr...dure:

... students assemble sever... different distillation setups. Then have stud... use their setup to actually separate differe... ...lutions by distillation.

...scuss the different kinds of ...cupations that may involve a distillation proc...ss -- for example, the importance of distillation in an oil refinery.

Resources and Mat...

Distillation ma...
Different soluti... ...e separat...d
Film loops on di...llation

Evaluation: Give short test on distillation terms.

Comments on use: The students usually gain much more by actually being able to do and see the distillation themselves.

222

Raymond Schnackenberg

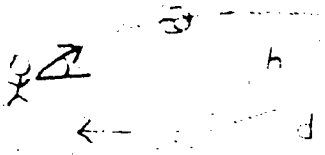
Subject Area(s) Physics

Unit(s) Velocity

Objective(s):
To find the velocity, height and [illegible] ectory of a thrown baseball.

Procedure:
The students are taken outside to measure the distance a baseball is thrown and to measure the time of flight to the best of their [illegible]. Then using velocity formulas, the velocity, height and angle of projectory can be calculated.

Illustration



Discuss careers which would involve using velocity and projectories.

Resources and Materials
Baseball, tape measure, stop watch

Evaluation:
Give test on projectory problems.

Comments on use:

Raymond Schnackenberg

Subject(s): American History

Unit: Politics or Candidates

Objective(s). To help students understand realistically the issues of [illegible] of American History that is being studied.

Procedure:	Resources:
In any unit, discuss the political elections (ex. Civil War period, progressive era, depression era. etc.)	American History text
Choose 2 people to role play the two Presidential candidates. Have them make speeches for their respective parties and platforms.	Research material period of time
Conduct the campaign in the class with class members dividing into political parties of their own choosing.	
Hold the election.	
Compare class results with actual historical results.	
Ask class to write papers explaining why they voted as they did.	

Evaluation: By logistics of their though processes as recorded on the paper telling why they chose that party and that candidate also how their decision could have affected history.

Comments on use:

224

Subject Area(s): Social Studies

Unit(s): Civics--State Government

Objective(s): The student will be familiar with the process of state government. Be able to understand the steps in which a bill becomes a law.

Procedure:

Read and discuss in class the unit explaining state government.

Mock General Assembly:

- Students divide into House of Representatives and Senate.
- Elect Speaker and President Pro Temp.
- Divide into political parties.
- Election of minority and majority leaders.
- Appointment to committees.
- Introduction and passage of legislation (they propose it, etc.)
- Final assembly of both houses to discuss achievements.

Written evaluation on student's part.

Resources and Materials:

Textbook

Evaluation: Test over the unit (objectives); graded homework; bonus points for effort during the mock General Assembly.

Comments on use: I have used this in past classes and found the students are very cooperative and enthusiastic in being able to actually become involved in the legislative process. They have even filibustered in the Senate. Overall, it reinforces the process of the path a bill must take before it becomes a law (on the state level)--which also (as a by-product) enforces the national legislative process.

Subject Area(s) Civics

Unit Court Systems

Objectives: To [illegible] students [illegible] court procedures and have a very elementary understanding of how the [illegible] works.

Procedure	Resources and Materials
Study [illegible] in text [illegible] court [illegible] law.	
Choose [illegible] class members to play [illegible] roles: judge criminal lawyers witnesses recording secretary bailiff Remainder of the class is jury.	
Conduct trial based on supposed crime. Example: robbery	
Have jury make decision.	
Discuss the events that [illegible]	

Evaluation: There will [illegible] formal evaluation--only class participation and discussion. This is used [illegible] illustrate the system through which they operate. The instructor will have to carefully watch [illegible] make sure all procedures are [illegible] authentic. What I want to achieve in this unit is for students to become acquainted with court room procedure.

Comments on use:

[illegible] Contemporary Issues

[illegible] Drugs

Objectives: Student will understand drug categories and their effects and the existing laws in each category.

Procedures:

Lecture defining and explaining categories of drugs
- a. depressants
- b. stimulants
- c. hallucinogens
- d. hard narcotics
- e. misc.

Explain existing drug laws, federal and state.

Hand out sheets (past histories of drug cases from various magazines--have students play case worker to help or explain the problems in these cases).

Survey conducted on drug usage and possible legalization of drugs.

Panel discussions--possible legalization of each of the above categories.

Master play drug culture songs: "White Rabbit" "[illegible] in the Sky," etc. Discuss how this influenced groups

Resources and Material:

[illegible]. State Council on Drugs
Dial a Drug, Dial a Book (poster)
Drugs A to Z (book)
Drug pamphlets for student use

Evaluation: Test over drug categories and drug laws.

Comments on use: Effective if material merely presented, no value judgments on the part of the teacher, simply know what drugs are and the laws pertaining to them

227

Bert Kimble
Marcia Turner

Subject Area(s) Contemporary Issues

Unit(s) Consumerism

Objective(s): Student will learn how to budget money.

Procedure:

Study the unit on consumer problems.

Students are instructed to write the job they want to have for their career--the gross income, the size of their family, etc.

Then they compute (using tax tables) their net monthly income and from that figure (again, stating family size) project a realistic budget--see chart.

	Jan	Feb	March	April	May	June	July
Food							
Clothes							
House							
Utilities							
Auto							
Auto upkeep							
TOTALS							

	Aug	Sept	Oct	Nov	Dec	Total
Food						
Clothes						
House						
Utilities						
Auto						
Auto upkeep						
TOTALS						

Resources and Materials:

Problems of democracy

Pamphlets on jobs or interviews with people in that field

Evaluation: Evaluation is given on the basis of a completed budget and a report on outlook on occupation and salary.

Comments on use: Students seem to enjoy "spending" their money before they earn it and never cease to be amazed at how quickly it disappears.

Marcia Turner

[illegible] Consumerism

Objective(s): Student will be able to watch or compare the rate of inflation or lack of [illegible] in economy.

Procedure:

Give students a list of products.
Examples: flour, sirloin steak, chicken, shampoo, deodorant, etc.

They will then proceed to put their own favorite brand names and sizes to each product.

Over a period of 7 months, they are to go to the same store, looking for the same products and write the price changes over a period of months--one trip a month.

Resources and Materials

Grocery stores

Evaluation: Grade will be given on completeness of charts over the alloted time point system based on a number of comparisons.

Comments on use: Students learn to compare prices if they use two or more stores each month, they also learn the cost of living increase we have been experiencing and finally they learn how to keep track of something (their assignment) over a period of time.

Marcia Turner

Subject Area(s) Contemporary Issues

Unit(s) Consumerism

Objective(s): Student will be able to watch or compare the rate of inflation or lack of change in economy.

Procedure:

Give students a list of projects--example, flour, sirloin steak, chicken, shampoo, deodorant, etc.

They will then proceed to put their own favorite brand names and sizes to each product.

Over a period of 7 months, they are to go to the same store, looking for the same products, and write the price, making a chart, showing price changes over a period of months--one trip a month.

Resources and Materials:

Grocery stores

Evaluation: Grade will be given on completeness of charts over the alloted time. Point system based on a number of comparisons.

Comments on use: Students learn to compare prices; if they use two or more stores each month, they also learn the cost of living increase we have been experiencing-- and finally they learn how to keep track of something (their assignment) over a period of time.

230

Marcia Turner

Read unit in book on techniques and purpose of surveys.	Resources and Materials: Textbook
Allow student to decide upon a topic in which he is interested that pertains to America.	
Have him formulate questions and type survey. Give survey and formulate results (prejudice, popular slogans, autos, issue in the community, etc.)	Masters and paper
Present results in class.	
Type [illegible] with all [illegible] and [illegible] topics.	Masters and paper

[illegible] was evaluated on appearance (how well typed, etc.)--the number of people interviewed, pertinence of topic and how results were tabulated.

[illegible] I worked with method with two sociology students. It was extremely successful--each had a different topic. They learned more about their particular interest area, as well as reinforcing the unit in the book on how to sway the public and how surveys are not always a legitimate means of finding answers (anyone can predetermine the outcome of a survey). These surveys were to some extent professional in that they were typed and run off for effectiveness.

Subject Area(s) Social Studies--Contemporary Issues

Unit(s) Vocational

Objective(s): To allow students time to explore the various occupational choices available to them upon graduation from high school, including nature of work, preparation, experience, duties, importance of work to society, etc.

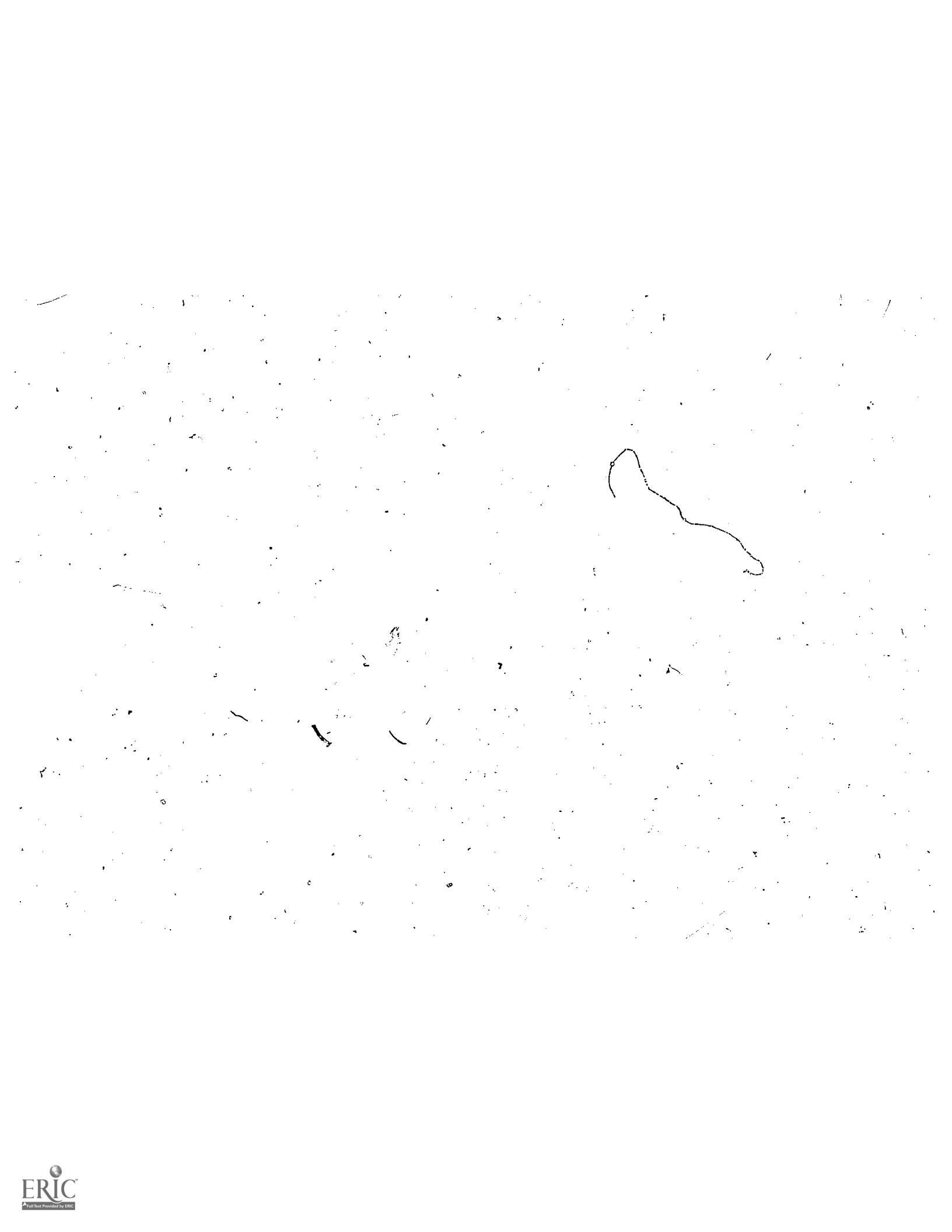
Procedure:	Resources and Materials:
Provide students with a list of objectives of the unit.	Typed print-out detailing instructional objectives
Provide students with list of various sources of information available to them in their exploration.	Dictionary of Occupational Titles
Provide an assignment dealing with three job investigations. Explanation: Students will choose three jobs of particular interest to them, then using the resources available, explore these occupations and report on them (outline provided as a guide for completion).	Dictionary of Occupational Titles file Occupational Outlook Handbook Careers file (library) Filmstrips relating to various occupations Tapes relating to differing occupations Magazines, books, etc. Speakers from the community Guidance counselor
Students to interview five people in a full-time occupation which the student might be interested in going into himself.	
Provide a research topic and provide student with the inquiry method directions to complete.	
Fill out a proper application blank.	
Conduct mock interviews after viewing filmstrips.	

Evaluation: Based on student's ability to relate to another person how one goes about deciding on a wise occupational or vocational choice.

Comments on use: Must keep students busy--provide instructions or guidelines and make sure they are adhered to.

232

Bert Kimble



	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
	J and S Accounting Warsaw, MO	Ms. Sue Cable	438-7395	No	—	8-12	Yes
CPA)	107½ West 3rd Sedalia, MO	Ms. Virginia Zahringer	826-8160	Yes	5	11-12	Yes
x Service	400 S. Washington Sedalia, MO	Mr. Wayne Stackhouse	827-1829	Yes	—	8-12	Yes
	900 W. Main Sedalia, MO	Dr Alexander	826-3300	Yes	1-6	9-12	No
	SFCC or 110½ W. 5th Sedalia, MO	Faith Lovell	826-7100 or 826-6824	—	—	7-12	Yes
s	SFCC Sedalia, MO	Mr. Joe McBride	826-7100	Yes	—	7-12	Yes
cruiter	357 E. Business Rt. 50 Sedalia, MO	Sgt. Will Collier	826-8355	Possibly	any	7-12	Yes
urance Co.	4800 E. 63rd Kansas City, MO	Mr. John Irish	333-6800	Yes	20	11-16	No
ctrical	Highway 50 Sedalia, MO	Personnnel Director	827-1712	Yes	30	6-12	Yes
ckers LTD.	480 Richards Road Kanasas City, MO	Mr. Al Ekland	471-4141	Yes	20-30	8-12	Possibly
	Route #2 Sedalia, MO	Mr. LeRoy Young	826-6762	Yes	—	5-12	No
al Co.	4th & Park Sedalia, MO	Mr. Don King	836-4000	Yes	20	K-12	Yes
ller	Commerce Building Sedalia, MO	Mr Buller	826-1181	Possibly	small	4-12	Yes
er	514 S. Ohio Sedalia, MO	Sgt, Bingham	826-8355	Possibly	any	7-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Artist	203 [illegible] Marshall, MO	Ms. Thelma Hansen	886-8464	No	_	7-12	Yes
Attorney at Law	Cole Camp, MO	Mr. Pete Stelling	668-4858	No	_	_	Yes
Attorney at Law	Warsaw, MO	Mr. Edwin F. Brady	438-5116	Yes	4-5	9-12	Yes
Attorney at Law	Farmer's Saving Bank Marshall, MO	Mr. Larry McClure	886-6986	No	_	7-12	Yes
Attorney at Law	110 E. 5th Sedalia, MO	Mr. Adam B. Fischer	826-8112	Possibly	_	8-12	Yes
Ault's Skelly Station	1570 S. Kentucky Marshall, MO	Mr. Bob Ault	886-6792	No	_	7-12	No
Auto Body Shop	Cole Camp, MO	Mr. David Luetjen	668-3155	Yes	2-4	9-10	No
Auto Club of Missouri	400 S. Kentucky Sedalia, MO	Mr. Bell	826-1800	Possibly	_	K-12	Possibl
B & E Market	1701 S. Kentucky Sedalia, MO	Mr. Jim Dick	826-2188	Yes	30	8-12	No
Banges	78 S. Jefferson Marshall, MO	Ms. Dolly Kiser	886-3716	No	_	7-12	Yes
Banquet Foods	253 W. Marion St. Marshall, MO	Mr. Caton Martin	886-3301	Yes	20	4-9	Possibl
Benton County Enterprise	Warsaw, MO	Mr. Mahlon White	438-6312	Yes	4-5	9-12	Possibl
Benton County R-I School	Cole Camp, MO	Mr. Vergil Oglevie	668-4427	No	_	_	Possibl
Benton County R-IX	Warsaw, MO	Dr. John Boise	438-7351	No	_	8-10	Yes
Benton County Sheriff's Department	Warsaw, MO	Mr. Robert Bresherars	438-5252	Yes	5-6	9-10	No
Beverly's House of fine food	1705 W. Broadway Sedalia, MO	Mr. Puckett	826-9655	Possibly	small	K-12	Possibl

NAME	ADDRESS	CONTACT PERSON	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	CAN SPEAK
Bill Greer Motors Inc	[illegible] Sedalia	[illegible] Greer	826-5300	Yes	--	K-12	Yes
Bolding Grocery	Cole Camp, MO	Mr. E.E. Bolding	668-4634	No	--	K-12	Possibly
Boonslick Regional Library	Sixth & Lamine Sedalia, MO	Ms. V. Corley Mr. Parker	826-6195	Yes	25	K-12	Possibly
Borchers & Heimsoth	Cole Camp, MO	Mr. Erwin Borchers	668-4923	Possibly	--	--	No
Bothwell Hospital Physical Therapy	Sedalia, MO	Ms. Nevin Almquist	826-8833	Yes	7-15	7-12	Yes
Bothwell Hospital	Sedalia, MO	Ms. Marie Nicholson	826-8833	Yes	30	12-16	No
Breech Academy - TWA	6300 Lamar Avenue Box 7[illegible] Overland Park, KS	Ms. Ann Rabaris	891-7500	Yes	20	11-16	Yes if
Brick Mason	RFD 3 Warsaw, MO	Mr. Lee Slavens	438-5360	No	--	--	Possibly
Broadway Car Wash	310 W. Broadway Sedalia, MO	Mr. Dale Arms	826-0375	Yes	25-30	1-12	No
Broadway Lanes, Inc.	2110 W. Broadway Sedalia, MO	Ms. Edith Simons	827-04[illegible]	Yes	Large	K-14	Possibly
Brown, McCloskey, Buckley	[illegible] W. 5th St. Sedalia, MO	Ms. Mabel Glenn	826-[illegible]	No	--	--	No
Buell Body Shop	417 S. Kentucky Sedalia, MO	Mr. Clarence Buell	827-0038	Possibly	--	K-12	Possibly
Business Mens Assurance	BMS Building Kansas City, MO	Ms. Almeta Wilcher	753-8000	Yes	20	11-16	No
Business & Office	SFCC Sedalia, MO	Ms. Shirley Evans Joann Billington	826-7100	Yes	10-15	1-12	Yes
C[illegible]ver	[illegible] Sedalia, MO	Mrs. Aust[illegible]	826-3200	Yes	15-2[illegible]	K-1[illegible]	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Cablevision, Inc.	602 S. [illegible] Sedalia, MO	Manager	826-9033	Yes	20	5-9	Possibl
Cafeteria Cook at Elementary School	305 E. Cherokee Sedalia, MO	Mrs. Cleo Reed	826-1068	Yes	—	K-6	Yes
Car Dealer Town & Country Motors	3110 W. Bdwy. Sedalia, MO	Mr. Bill Shumake	826-5400	Yes	—	6-12	Yes
Car Wash Robo Car Wash	W. Main Street Sedalia, MO	Mr. Larry Hancock	826-5911	Yes	—	--12	Possibly
Cargill Incorporated	Marshall, Mo	Mr. Jack Hartwick	886-7478	Yes	20-25	9	Possibl
Cargill Nutrena Feeds	Smithton, MO	Mr. Gene Hudiburg	343-5319	Yes	10	7-12	Yes
Cash Hardware Stores	106 W. Main Sedalia, MO	Mr. Jim Bass	826-6565	Possibly	—	8-12	Possibly
Cash U.S. Super	Cole Camp, MO	Mr. Jim Cash	668-3700	Possibly	—	--	No
Central Fire Station	6th and Hancock Sedalia, MO	Station fire chief	826-8044	Yes	—	K-12	Possibly
Central Missouri Electric Co-op (REA)	North Highway 65 Sedalia, MO	Mr. Ed Walters	826-2900	Yes	25	K-12	Yes
Cindy's Beauty Salon	9th & Warren Sedalia, MO	Ms. Jackie Kaho	827-2562	Possibly	—	8-12	Possibly
CIT Financial Services	State Fair Shopping Center, Sedalia, MO	Mr. George Benheimer	826-5700	Possibly	—	8-12	Possibly
City Offices	214 N. Lafayette Marshall, MO	Mr. Ron Collins	886-22[illegible]	N		[illegible]	Yes
Civil Rights	State Human Rights Dept. Jefferson City, MO	Donna Noble	314-751-3325	Possibly	30	7-12	Yes
Classic Studio	6th & Kentucky Sedalia, MO	Mr. Ed Brummett	826-8888	Yes	5-10	7-12	Yes

	ADDRESS	CONTACT PERSON	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKE
urnitur	Highw[illegible] Marsh[illegible]	[illegible] Perkins	886-[illegible]53	No	____	7-12	Yes
arina	Highway 65 Sout[illegible] Sedalia, MO	Mr. Jerry Smith	827-[illegible]692	Yes	[illegible]	9-12	No
nk	10th & Walnut Kansas City, MO	Mr. John Wells	234-2000	Yes	20	11-1[illegible]	No
	1639 Country Club Sedalia, MO	Mr. E. A. Fischer	826-[illegible]377	Possibly	____		Possib
n	620 Hillcrest Drive Knob Noster, MO	Mr. Charles Jordon	563-[illegible]738	No	60	K-12	Yes
upermarket	701 E. Broadway Sedalia, MO	Mr. Bill Smillie	827-3190	Yes	15	K-12	Yes
tractors	N. 65 Highway Sedalia, MO	Mr. Ralph Viebrock	826-6551	Yes	____	6-12	Possib
	La Monte, MO	Ms. Jeannie Whitworth	347-5415	No	20	7-12	Yes
	Cole Camp, MO	Ms. Phyllis Templeton	668-[illegible]50	Yes	[illegible]	9-12	No
and Garden	Marshall, MO	Mr. Delford Thompson	886-5000	No	____	7-12	Yes
ns & Needle	112 S. Ohio Sedalia, MO	Ms. Sue Branson	826-[illegible]769	Yes	10-15	K-12	Yes
surance Agency	Warsaw, MO	Mr. Gordon Creasy	438-3621	No	____	7-12	Yes
ique	Tipton, MO	Ms. Dale Yantz	433-2626	No	____	K-12	Yes
	321 W. Second Sedalia, MO	Mrs. Zimmerschied	826-5040	Yes	1 a day	7-12	Yes
ropical Fish	610 W. 16th Sedalia, MO	Mrs. DeHaven	826-9512	Possibly	____	K-12	Possibl

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
esearch	Marshall, [illegible]	Mr. Don Warr	886-7438	Yes	10-40	5-12	Possibly
	Sedalia	Mr. Russell Stone	826-9250	Yes	___	K-8	Yes
ols	Warsaw, MO	Mrs. DeLong	438-5307	No			Possibly
	Cole Camp, MO	Ms. Marie Musser	668-4521	Yes	2-4	9-10	Yes
	Marshall, MO	Mr. Jerry Arnett	886-2233	Yes	25	7-9	Yes
	Route 2 Sedalia, MO	Mrs. Brenda Houk	826-7194	Yes	___	6-12	Yes
st	1806 W. 11th Sedalia, MO	Mr. Jim Kaymer	827-1212	Possibly	Small	7-12	Yes
	Warsaw, MO	Dr. Shepardson	438-5421	No	___	K-12	Possibly
	Cole Camp, MO	Dr. D. V. Reimenitter	668-3312	Yes	4-6	9-12	Possibly
	1810 W. 11th Sedalia, MO	Dr. Robert Vit	826-5445	No	___	9-12	Possibly
	Commerce Building Sedalia, MO	Dr. Gary Evert	826-0263	Possibly	Small	K-12	Yes
eopathy	1701 S. Lafayette Sedalia, MO	Dr. Joe Bennett	826-6633	Yes	5 at a time	7-12 maximum	Yes
op	3312 S. Highway 65 Sedalia, MO	Mr. Don Kabler	826-4684	No	___	8-12	Yes
	Highway 65 South Sedalia, MO	Mr. Don Carr	826-7310	Yes	1-10	8-12	No
ation	La Monte, MO	Mr. D. I. Sevier	347-5385	No		7-12	Yes

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAK
facturing	Main & [illegible] Rd. Sedalia, [illegible]	[illegible] Stuart	[illegible]	Yes	[illegible]	4-[illegible]	[illegible]
evrolet	Warsaw, [illegible]	Mr. Floyd Durnam	[illegible]-5133	Yes	[illegible]	8-[illegible]	Yes
nastic Club	5127 Merriam Dr. Merriam, KS [illegible]	Mr. Gerald Carley	913-262-4525	Yes	3	K-[illegible]	Possib
ckage [illegible]	18 S. Jefferson Marshall, M[illegible]	[illegible] David Esser	886-2107	No	___	7-12	Yes
Station	Warsaw, [illegible]	[illegible]	438-6022	No	___	7-[illegible]	Possib
g & Heavy Equip.	Smithton, MO	Mr. Bill Marriot	343-5634	Possibly	___	4-[illegible]	Possib
Bank of Lincoln	Lincoln, MO	Mr. Karl Kroenke	547-3311	Yes	4-[illegible]	9-[illegible]	Possib
Insurance	1806 [illegible] 11th Sedalia, MO	Mr. Jack Newby Mr. Jerry Newby	827-0122	Yes	1-[illegible]	9-[illegible]	Possib
ion	211 S. Kentucky Sedalia, MO	Mr. Jacks	826-8044	Yes	1-1	K-12	Possib
Vet. Hospital	1701 W. Main Sedalia, MO	Dr. Peacock	827-2057	Yes	10-1[illegible]	K-12	Yes
erinary	711 W. Main Sedalia, MO	Ms. Connie Austin	826-1441	Possibly	___	4-1[illegible]	Yes
	2 S. Jefferson Marshall, MO	Mr. Norvelie Brown	886-6823	No	___	7-12	Yes
[illegible] Jeweler	225 S. Ohio Sedalia, MO	Mr. Tom Hudson	826-2772	Possibly	___	K-12	Possib
otor & ion Exch.	210 East 3rd Sedalia, MO	Mr. Forrest Allen	826-3644	Possibly	Small	5-1[illegible]	Possib

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Golf	Walnut Hills Country Club, Sedalia, MO	Mr. Ward Anderson-Pro	827-0861	Yes	___	K-12	Possibly
Green Ridge Farmers & Merchants Bank	Main Street Green Ridge, MO	Mr. Bob (Robert) Roach	527-3311	Yes	10-15	K-12	Yes
Green Ridge Post Office	Main Street Green Ridge, MO	Mr. Melvin Ream	527-3385	Yes	30	K-6	Possibly
Green Ridge Printing Office	Main Street Green Ridge, MO	Mr. Jim Stark	527-3521	Yes	Small	K-6	Possibly
Bill Greer Body Shop	Main Street Sedalia, MO	Mr. Orval Burd	827-2162	Yes	5	10-12	No
Hallmark	25th & McGee Kansas City, MO	Ms. Rose A. Lightle	274-4667	Yes	20	11-16	Yes
Harris & Reid	Farmer's Savings Bank Marshall, MO	Mr. Mike Reid	886-5544	No	___	7-12	Yes
Heinzler Bros. Welding	Marshall, MO	Mr. Frank Heinzler	886-7775	Yes	20-25	7-9	No
Helicopter Pilot	Whiteman Air Force Base, Knob Noster, MO	Sgt. Greg Roberts	563-5511	No	___	K-12	Yes
Highway Patrol	Mo. State Fair Grounds Sedalia, MO	Mr. Curt Mathews	827-3366	Possibly	___	K-12	Yes
History Johnson/Kennedy Adm.	History Department SFCC, Sedalia, MO	Mr. Paul Neider	826-7100	No	___	8-12	Yes
Hobson & Son Carpet	2805 W. Broadway Sedalia, MO	Mr. Bob Comfort	826-1192	Yes	15	K-12	Possibly
Holiday Inn	32nd & Limit Sedalia, MO	Mr. Jim Grieshaber	826-6100	Yes	40-50	8-9	Possibly

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Home Lumber	207 E. North Marshall, MO	Mr. Roland Wood	886-3342	No	___	7-12	Yes
Homemakers Furniture Co.	809 S. Limit Sedalia, MO	Mr. Shoemaker	826-2122	Yes	___	7-12	Yes
Housewife & Mother	Sedalia, MO	Ms. Judy Holman	826-1759	No	___	K-3	Yes
Horse Racing	P.O. Box 951 Sedalia, MO	Mr. Anderson	826-7114	Yes	1-10	9-12	Possibly
Howard Construction	1509 N. Ohio Sedalia, MO	Mr. Olen Howard	826-5750	Yes	5-15	8-12	No
Hurtt's Pharmacy	504 W. 16th Sedalia, MO	Mr. Hurtt	826-2872	Yes	1-10	8-12	Possibly
IBEW Local 814 Credit Union (Secretary)	2111 W. Broadway Sedalia, MO	Ms. June Kuhlman	826-0814	Yes	6 at a time	8-12	Possibly
IGA	2402 W. Broadway Sedalia, MO	Mr. Ralph Huff	827-1452	Yes	25	K-12	Yes
Industrial Loan & Investment	120 W. Fifth Sedalia, MO	Mr. Firman Boul	826-4800	Yes	25	7-12	Yes
Installment Buying	Farmer's Bank of Lincoln Lincoln, MO	Mr. David Hair	547-3311	Possibly	___	7-12	Yes
J & J's Barber Shop	1421 S. Limit Sedalia, MO	Mr. Jack Smith	827-2485	Possibly	___	K-12	No
Jack Couts' Running Quarter Horses	Mo. State Fairgrounds Sedalia, MO	Ms. Tina Brown	826-1135	Yes	5-10	K-12	No
Jefferson Elem. Public School-Admin.-Teaching	305 E. Chestnut Sedalia, MO	Ms. Imogene Peoples	826-1068	Yes	___	K-8	Yes
Jim's Garden Center	1000 W. Main Sedalia, MO	Mr. James Foster	826-4411	Yes	15	4-9	Possibly

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
	SPCC Sedalia, MO	Mr. David Terrell	826-7100	Possibly	Any	7-12	Yes
Appliance	2907 W. Broadway Sedalia, MO	Mr. Ray Thompson Mr. Paul Johnson	827-2326	Yes	15-20	7-12	Yes
Chiefs	K. C. Chiefs Football Club, One Arrowhead Club, Kansas City, MO	Mr. Bob Springer	924-9300	Yes (fee)	____	7-12	Possibly
	West Highway 50 Sedalia, MO	Mr. Herb Brandes	826-5005	Yes	15	K-12	Possibly
	Marshall, MO	Ms. Alice Alexander	886-5611	No	____	7-12	Yes
	2500 E. Broadway Sedalia, MO	Mr. Bill Cline	826-2500	Yes	15	K-12	Possibly
	Marshall, MO	Mr. Bill Coman	886-5444	Yes	15	7-12	No
	Highway 65 North Marshall, MO	Mr. Harold Douglas Mr. Jim Athon Mr. Jack Abdon	886-7422	No	____	7-12	Yes
	2100 W. Broadway Sedalia, MO	Mr. Stuart Gressley	826-1651	Yes	15	K-12	Yes
State Park	Knob Noster, MO	Park Manager	563-2939	Yes	____	K-12	Possibly
	North 65 Highway Sedalia, MO	Mr. Carl Yates	826-1050	Yes	10	K-14	Yes
lders, Inc.	2800 W. Main Sedalia, MO	Mr. Bob Cook	826-0522	No	____	K-12	Yes
acturing	108 W. Pacific Sedalia, MO	Mr. John Pelham	826-3310	Yes	Small	7-12	Possibly

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKE
m, Barnett, ritz Film	118 W. Fifth Sedalia, MO	Mr. Donald Barnes	826-5428	No	____	11-12	Yes
ning	La Monte, MO	Ms. Pat Scott	347-5627	No	____	7-12	Yes
er Horses	710 W. Sixth Sedalia, MO	Ms. Susan Sauers	827-1778	Yes	____	K-12	Possib.
ry Manufacturing	Route 2 Sedalia, MO	Mr. LeRoy Young	826-6762	Yes	20	7-16	No
o	20 S. Jefferson Marshall, MO	Mr. Lee Beardon	886-7313	No	____	11-12	Yes
	2401 W. Second Sedalia, MO	Ms. Diane Cordry	826-7719	No	1-15	7-16	No
	Smithton, MO	Mr. Dirck	826-6189	Yes	____	4-12	Possibl
Era Newspaper	Lincoln, MO	Mr. George Williams	547-3800	Yes	Inquire	Inquire	Possibl
t	Hughesville, MO	Mr. Bill Wheeler	826-8630	Yes	10-15	1-12	Yes
ter	Arrow Rock, MO	Mr. John Carey	837-2108	Yes	30	8-12	Possibl
	1034 Main Kansas City, MO	Mrs. Cullen	221-3737	Yes	20	11-16	No
Judge--Pettis	901 S. Vermont Sedalia, MO	Ms. Hazel Palmer	826-8816	No	____	11-12	Yes
Shop	Thompson Hills Shopping Center, Sedalia, MO	Ms. Shirley Morley	826-0560	Possibly	Small	K-12	Yes
uiter	602 S. Ohio Sedalia, MO	Mr. Charles Davidson	826-9220	Possibly	Any	7-12	Yes
Steak House	2901 W. Broadway Sedalia, MO	Mr. Gary Bilder	826-9727	Yes	20	K-12	Yes

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
er of Commerce	214 N. Lafayette Marshall, MO	Mr. Leo Hayob	886-7464	No	____	7-12	Yes
l & Greenhouse	160 W. Summit Marshall, MO	Ms. Juanita Dametz	886-7177	Yes	20	7-9	Yes
e	Arrow Street Marshall, MO	Mr. Gerald Stone	886-7411	Yes	15-20	1-12	Yes
	Hughesville, MO	Mr. Don Scott	826-7556	Possibly	____	____	No
riety Store	218 S. Ohio Sedalia, MO	Mr. Bill Stratton	826-5270	Yes	20	7-12	Possibly
	200 Industrial Drive Sedalia, MO	Ms. Maxine Griggs	826-8510	Possibly	____	K-12	Possibly
ger	305 N. State Fair Blvd. Sedalia, MO	Mr. Jerry Jones	826-4975 (home)	Possibly	____	K-12	Yes
e	623 E. 2nd Sedalia, MO	Mrs. Vitula	826-5040	Yes	Small	6-12	Possibly
Cosmetics	120 S. Ohio Sedalia, MO	Ms. Sandra Boul	826-6430	Yes	____	11-16	Yes
	Weather Department Whiteman AFB	Captain Koczur Lt. Kowa	563-5511	Yes	60	7-12	Yes
	Cole Camp, MO	Mr. Ed Schnakenberg	668-3231	Yes	6-8	9-10	Possibly
	Lincoln, MO	Mr. Joe McKnight	547-3621	No	____	____	Yes
	Lincoln, MO	Mr. Clarence Frisch	547-3318	Yes	4	9-12	No
	1817 W. Broadway Columbia, MO	Mr. Vic Ohman	445-8441	Yes	20	11-16	No

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAK
Division of E. T.	415 E. Fifth Sedalia, MO	Mr. [illegible] Giles	826-9184	Yes	25	11-12	Yes
Pacific Railroad	210 N. 13th St. Sedalia, MO	Mr. D. M. Tutke	314-2944	Yes	Arr.	7-12	Possi
State Bank	917 S. Limit Sedalia, MO	Mr. William Claycomb	826-1213	Yes	20-25	7-12	Yes
State Fair	Box 111 Sedalia, MO	Ms. Myrna Ragar	826-0570	Yes	30	3-7	Possi
Valley College	Marshall, MO	Mr. Ed Leslie	886-6924	No	____	9-12	Yes
aners	Warsaw, MO	Mr. Richard Kingma	438-5831	Yes	20	K-12	No
icle Registration ureau	State Fair Shopping Center, Sedalia, MO	Mr. Fred Kraft	826-3316	Possibly	____	6-12	Possi
uiter	602 S. Ohio Sedalia, MO	Mr. Charles Davidson	827-0471	Possibly	Any	7-12	Yes
	SFCC Sedalia, MO	Ms. Cindy Henke Ms. Sandy Meyer	826-7100	Yes	30	K-12	Yes
Garage	2809 E. 12th Sedalia, MO	Mr. Keith Ollison	826-4077	Possibly	Small	8-12	Yes
ckline	Cole Camp, MO	Mr. Pete Otten	668-3112	No	____	7-12	Yes
s Donuts	122 S. Ohio Sedalia, MO	Mr. Jake Sarigusa	826-6170	Possibly	____	K-12	Possib
Stephens Modeling School	4638 Nichols Parkway Kansas City, MO	Ms. Patricia Stevens	531-5866	Yes	6-	7-12	Yes
a Bottling Co.	Sedalia, MO	Mr. W. C. Ream	826-8144	Yes	30	4-9	Possib
unty Ambulance	626 E. Fifth Sedalia, MO	Mr. Joe Wasson	826-5316	Yes	10-15		Possib

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
y	700 S. Limit Sedalia, MO	Mr. Bill McWhirt	826-2431	Possibly	____	6-12	Yes
	La Monte, MO	Rev. Jerry Jones	347-5557	No	____	7-12	Yes
ring	16th & Missouri Pacific Spur, Sedalia, MO	Ms. Rita Kenney	826-4660	Possibly	____	9-12	Possibl
	La Monte, MO	Ms. Bernice Wing	347-5407	No	____	K-12	Yes
	405 E. Fifth Sedalia, MO	Mr. Roy Hinton	826-8887	Yes	25-30	4-9	Possibl
Writing	Sedalia Democrat Sedalia, MO	Mr. Jack Schicht	826-1000	Yes	____	7-12	Yes
Shop	501 N. Park Sedalia, MO	Mr. Bill Utz	826-2126	Yes	1-10	8-12	No
& TV	Lincoln, MO	Mr. Rainbow	547-3317	Yes	4	9-12	No
	3501 W. Broadway Sedalia, MO	Mr. Darrell Olsen	826-8400	Yes	15	5-12	Possibly
gency	S. Highway 65 Sedalia, MO	Mr. Gerald Hancock	827-1016	Possibly	____	6-12	Yes
es	3400 Broadway Sedalia, MO	Mr. Tom Ryan	827-3770	Yes	60	K-12	Yes
	Rural Route Smithton, MO	Mr. Rudy Rehmer Mr. Jeff Rehmer	343-5668	Yes	15-20	K-12	Possibly
n, Inc.	Warsaw, MO	Ms. Elcise Atkins	438-5111	Yes	8-10	9-12	Possibly
	Sixth & Ohio Sedalia, MO	Mr. Mallory	826-6920	Yes	20	K-9	Possibly
hop	R. R. #2 Sedalia, MO	Mr. Rick Geer	826-1157	Yes	25-30	7-12	No

	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
acturing Co.	16th & Lamine Sedalia, MO	Mr. Jim Houchen	826-6600	Yes	15	4-12	Yes
acturing Co.	Miller's Park Plaza Sedalia, MO	Ms. Nyra Price	827-3860	No	___	___	Yes
ner	72 N. Jefferson Marshall, MO	Mr. Bob Rose	886-2002	Yes	15-20	7-12	Yes
	Thompson Hills Shopping Center, Sedalia, MO	Mr. Paul Stoehr	826-0737	Possibly	___	6-12	Possibl
Cleaning	Route 1 Smithton, MO	Mr. Harley Reed	343-5324	Possibly	___	4-12	Possibl
ium	P.O. Box 1969 Kansas City, MO 64416	Ms. Joanne Snow	921-8000	Yes (fee)	Any	K-12	Possibl
thers	Marshall, MO	Mr. Casey Kotoweiz	886-7340	No	___	7-12	Yes
thers	214 S. Ohio Sedalia, MO	Mr. Bob Johnson	826-5154	Yes	1-10	8-12	No
elry	East Highway 7 Marshall, MO	Mr. Scott	438-5700	No	___	___	Possibl
	110 W. Third Sedalia, MO	Mr. Finis Galloway	826-6500	Yes	10	7-12	Yes
Legal ting & Fischer	110 E. 5th Sedalia, MO	Ms. Nancy Capps	826-8112	Possibly	___	6-12	Yes
lege	RFD #2 Sedalia, MO	Mrs. Janice Daleen	826-7065	Possibly	___	K-12	Possibl
dag	N. Highway 65 & Grand Sedalia, MO	Mr. Larry Bock	827-3920	Yes	25	K-6	Yes
puter Servi	210 E. 7th Sedalia, MO	Mr. Larry McRoy Ms. [illegible]	827-1990	Yes	10-15	9-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Sedalia Council on Drugs	Sedalia, MO	Dr. John Owen	826-8833	No	___	7-12	Yes
Sedalia Democrat-Capital	700 S. Massachusetts Sedalia, MO	Mr. Don Keller	826-1000	Yes	15	K-16	No
Sedalia Fire Dept.	211 S. Kentucky Sedalia, MO	Mr. Jabas	826-8044	Yes	___	K-12	Possibl
Sedalia Implement Co.	2205 S. Limit Sedalia, MO	Mr. John Joy	826-0466	Yes	15-25	7-12	Yes
Sedalia Memorial Airport	East Highway 50 Sedalia, MO	Mr. James Addas	826-9796	Yes	Small	K-14	Possibl
Sedalia Police Department	3rd & Osage Sedalia, MO	Mr. Bill Miller	826-0214	Yes	10-15	1-14	Yes
Sedalia School of Hairdressing	116 S. Ohio Sedalia, MO	Ms. Fran Nash	827-1270	Yes	25	4-12	Possibl
Sedalia Water Department	111 W. Fourth Sedalia, MO	Mr. C. H. Taylor	826-1234	Yes	15	6-12	Possibl
Sheriff's Department	Warsaw, MO	Mr. Bob Breshears	438-5252	No	___	___	Possibl
Shinn Oil Company	RFD 3 Warsaw, MO	Mr. Paul Shinn	438-5013	Possibly	___	___	Possibl
Sho-Me Stables	Mo. State Fair Downs Sedalia, MO	Ms. Elaine Knight	827-2243	Yes	5-10	K-12	Yes
Smithton Fire Department	Smithton, MO	Mr. Lennie Semkin	343-5482	Possibly	___	K-12	Possibl
Sound Shop	1716 W. Ninth Sedalia, MO	Mr. Al Reese	827-2223	Yes	20	K-12	Yes
Southwestern Bell Telephone	220 E. 5th Street Sedalia, MO	Mr. Bob Johnson	826-9800	Yes	25	K-12	Yes
Southwestern Bell Telephone	600 St. Louis Springfield, MO	Ms. Beverly Beerendzen	417-836-2545	Possibly	___	K-12	Possibl

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Sowers' Horses	Callis Stables Sedalia, MO	Ms. Susan Sowers	827-1778	Yes	5-10	8-12	Yes
Stan's TV	P.O. Box 656, Rt #2 Warsaw, MO	Mr. Stan Johnson	438-6859	No	1	9-12	Yes
State Fair Community College	1900 Clarendon Road Sedalia, MO	Mr. Fred Davis	826-7100	Yes Check with Betty Blackwell	5-10	9-12	Yes
State Fair Riding Academy	Route 3 Sedalia, MO	Ms. Faith Lovell	826-9767	Yes	1-5	8-12	No
State Farm Insurance	2111 W. Broadway Sedalia, MO	Mr. [illegible] Sevier	826-6088	No	___	7-12	Yes
State Representative (Former Highway Patrolman)	500 W. Fourth Sedalia, MO	Rep. Pete Stohr	826-8821	Possibly	___	4-12	Yes
State Representative	Sedalia, MO	Rep. James Matthewson	826-4696	At capital	___	K-12	Yes
Swim Pool Lifeguard	2401 W. 2nd Sedalia, MO	Ms. Diane Cordry	826-7719	Possibly	___	K-12	Yes
T & O Phosphate	Hughesville, MO	Mr. Larry Owen	826-1813	No	___	___	Possibl
Teacher Education	CMSU Warrensburg, MO	Mr. Jim Hudson	429-4111	Possibly	___	4-12	Yes
The Craft Shop	318 S. Ohio Sedalia, MO	Mrs. Bill Boatman	827-3041	Yes	15-20	5-12	Possibl
The Dog House	116 W. 16th Sedalia, MO	Mr. Antoine	827-1941	Yes	1-10	8-12	No
Third National Bank	301 S. Ohio Sedalia, MO	Mr. Bob McDonald	826-0611	Yes	30-40	6-9	Possibl
Town and Country Shoes	201 N. Missouri Sedalia, MO	Mr. Charles Rayl Mr. Ken Grott	826-4490	Yes	Small	K-12	Yes

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Tullis Hall Dairy Co.	541 E. Fifth Sedalia, MO	Mr. Funnell	826-3030	Yes	10	3-12	No
Tygart & Arth Body Shop	207 E. Belle Marshall, MO	Mr. Ray Arth	886-3033	Yes	25	7-8	Yes
Union Affiliation Building & Trades Council	1614 W. 20th Sedalia, MO	Mr. Ray Hendricks	826-7539	No	___	8-12	Yes
Unitog	Warsaw, MO	Mr. Osborne McMillen	438-5117	Yes	Arr.	7-12	No
Verl's Amoco Service	1801 W. Broadway Sedalia, MO	Mr. Verl Schnepf	827-0040	Yes	1-10	8-12	No
Veterinary	Cole Camp, MO	Dr. Taylor	668-4523	Possibly	___	___	Possibl
Veterinary Department University of Missouri	46 Connaway Annex, Cont. Education in Veterinary Medicine Columbia, MO 65201	Ms. Betsy Windish	314-882-3877	Yes	30	7-12	Possibl
Veterinary	1701 W. Main Sedalia, MO	Mr. Charles Peacock	827-2057	Possibly	___	6-12	Yes
Viebrocks Welding	Cole Camp, MO	Mr. Harold Viebrock	668-3233	Yes	___	___	No
Vogue Styles	22 Jefferson Marshall, MO	Mrs. Howell	886-6161	No	___	7-12	Yes
W-K Chevrolet Garage	Cole Camp, MO	Mr. Vern Dean	668-4421	Yes	4-6	9-12	Possibl
Walker Publishing Co.	2016 W. Main Sedalia, MO	Mr. Mark Kitch	826-8200	Yes	15	5-12	Yes
Warren Grocery	Green Ridge, MO	Mr. Warren	527-3317	Possibly	___	___	Possibl
Warsaw Auto Supply	Warsaw, MO	Mr. Stan Intelman	438-7321	Yes	Small	1-14	No
Warsaw Sewing Center	Warsaw, MO	Mr. Jerome Kelly Mr. Donald Prunty	438-6919	Yes	6	8-12	Possibl
Warsaw Veterinary Clinic	Warsaw, MO	Dr. N. V. Roff	438-7333	Yes	8	8-12	Ye

NAME	ADDRESS	CONTACT REPRESENTATIVE	TELEPHONE	FIELD TRIP	GROUP SIZE	GRADE LEVEL	GUEST SPEAKER
Weikal Cabinet Shop	2925 W. Main Sedalia, MO	Mr. Bob Weikal	827-1363	Possibly	___	K-12	Possib
Welder	Route # Sedalia, MO	Mr. Jarold Welch	826-3170	Possibly	___	8-12	Possib
Western Auto	Jefferson & Morgan Marshall, MO	Mr. Gerald Leach	886-6813	Possibly	___	7-12	Possib
Whiteman Base Exchange	Whiteman AFB Knob Noster, MO	Base Operator	563-5511				
Wilken Music	Thompson Hills Sedalia, MO	Mr. Wilken	826-9356	Yes	10	4-12	Yes
Williams Press	Cole Camp, MO	Mr. George Williams	668-4418 547-3911	Yes	4-6	9-12	Possib
Wilson's Company, Inc.	Box 3[illegible] Marshall, MO	Mr. Don Nutten	886-5522	Possibly	12	7-12	Possib
Wood & Huston Bank	27 North Street Marshall, MO	Mr. Mitchell	886-5575	Yes	25	7-9	Yes
Yeager's Cycle Sales	3001 S. Limit Sedalia, MO	Mr. Rick Yeager	826-2925	Yes	1-15	8-12	No
Yost Chevrolet	Odell Avenue Marshall, MO	Mr. Ken Yost	886-3348	No	___	7-12	Yes