



# **Job Ready Middle Grades Curriculum Modules**

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**June, 1999**

# JobReady Middle Grades Curriculum Modules



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## **JobReady Modules**

JobReady is a School-to-Work initiative designed to support career choice and job preparation for K-12 students in North Carolina. These modules are designed specifically for middle grades preservice teachers to acquaint them with the program and to give them specific lesson plans that implement JobReady goals and objectives. The first two goals address specific information explaining the concepts of the JobReady program including job shadowing and skill standards. The third goal includes specific middle grades lesson plans that incorporate two types of JobReady connections. First, every lesson has specific *Career Connections* that can be made as the lesson is taught. For example, a math lesson may incorporate skills that engineers might use in their everyday work. The second JobReady connection is referenced in the lesson plans as *JobReadiness Connections*. These are characteristics that employers seek when hiring employees. For example, the willingness to work as a team is a high priority in today's job market. Lessons that incorporate cooperative learning activities support the development of this skill in the students. Each lesson plan references one or more of these characteristics. In addition to the JobReady connections, all lessons are specifically written so that they can be adapted to grades 6 through 8.

These modules were written by two middle school teachers, Martha Heine and Diana Wallace, and Deborah Fauble, a part time faculty member at UNCW. The modules were edited by Deborah Sherrill, a lecturer at UNCW, and Edith Skipper, a recent UNCW graduate.

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June, 1999

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## **Goal 1**

**The preservice teachers will develop an understanding of the basic principles of JobReady.**

## Job Ready Introduction

**Subject Connection:** All

**Career Connection:** All

**Concepts/ Overview:** Job Ready is the name given to North Carolina's school-to-work system. As a result of the School-to-Work Opportunities Act, North Carolina received a \$30 million, five-year grant in 1995 to implement JobReady, which ensures that every student has a clearly identifiable, accessible and attractive career pathway into the workplace.

**Objectives:**

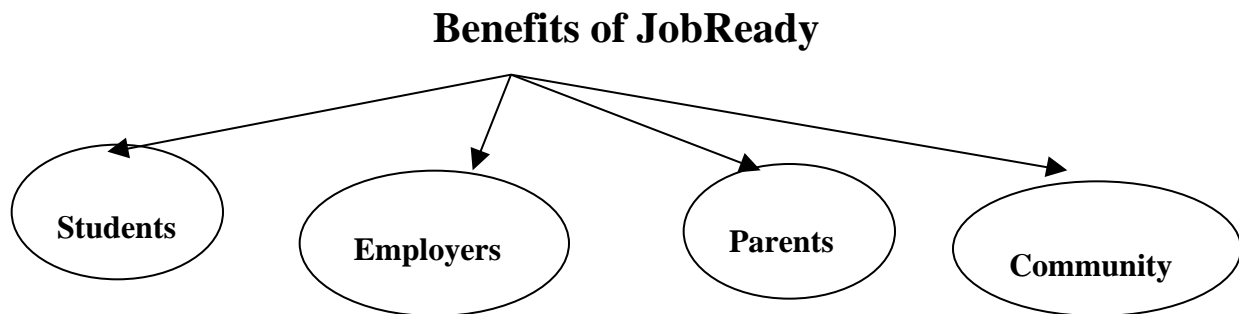
- 1.1 Preservice teachers will identify the basic concepts of JobReady.
- 1.3 Preservice teachers will recognize the importance of collaboration in the implementation of JobReady within schools.

**Materials:**

- Copy of JobReady Overview
- Copy of benefits to students, employers, parents, and community

**Procedures:**

1. Read and discuss the overview handout with students. Students should be able to explain the concept of JobReady and who and what are included in the program.
2. Draw a concept map with the following categories:



3. Have students predict the benefits of JobReady for each category. Share overhead of benefits from JobReady handout. Have students compare their answers and discuss.
4. In small groups, have students take their predictions, and create a flow chart depicting the collaboration necessary among the four groups to implement a successful JobReady program in a middle school. Have each group share ideas and make a class flow chart incorporating ideas from each group.

## **JobReady Benefits**

### **Benefit to the student:**

- Higher expectation of achievement supported by a more rigorous curriculum
- Learning focused on career pathway
- Contextual (applied) learning with higher retention rate
- Work experience related to career goal before graduation
- Increased self-confidence; success at school and work
- Better understanding of connection between school and world of work
- Increased options for educational and occupational success

### **Benefit to the employer:**

- Better prepared and trained workforce
- Participation in broad-based business/education partnership
- Reduce retraining costs

### **Benefit to the parents:**

- Students have expanded exposure to career opportunities
- Cost effective means for attaining student's career goal

### **Benefit to community:**

- Stimulated local economy
- Skilled workers for existing and emerging occupations
- Reduced unemployment
- Improved quality of life in the community
- Support for local economic development and educational reform efforts

# **JobReady**

## ***North Carolina School-to-Work Transition System***

### **What Is JobReady?**

-North Carolina's system for ensuring that all high school students have a clearly identifiable, accessible and attractive career pathway into the workplace

### **Who is Included?**

-All students: College Prep and TechPrep, academically talented, technologically gifted, students with disabilities, and low achieving students

### **What is Included?**

-Comprehensive career information and guidance beginning in elementary school and continuing through postsecondary  
-Selection of a career major and courses to support the competencies needed for the major  
-High expectations for all students with emphasis on academic rigor  
-Work-based learning through experiences such as: shadowing, a career major internship, cooperative education, career academy, school based enterprise, apprenticeship

## Twelve Career Clusters

**Subject Connection:** All

**Career Connection:** All

**Concepts/ Overview:** Students in the JobReady system will study a curriculum that requires them not only to read, write and use numbers but also to work in teams, solve challenging problems, and communicate clearly. Career Majors, which integrate these academic and technical skills, will constitute the centerpiece of the high school JobReady system. Career Majors are based on broad occupational areas, rather than specific industry clusters. This focus allows flexibility within each major to accommodate a greater number of students and a wider range of work-based experiences.

**Objective:** 1.2 Preservice teachers will identify the 12 career clusters of JobReady.

**Materials:** Handout of 12 Career Clusters

**Procedures:**

1. Distribute the handout of 12 career clusters.
2. Have students in groups develop a list of jobs that might fall under each career cluster. Have them try to keep in mind their own economic region and student population.
3. Share the ideas. Discuss what academic courses are needed for the various careers.

## **12 Career Clusters**

1. Arts and Humanities
2. Environmental Sciences
3. Biotechnology
4. Health and Medical Care
5. Business and Marketing
6. Manufacturing Technology
7. Construction Technology
8. Human Services
9. Electronics
10. Telecommunications
11. Engineering Technology
12. Travel & Tourism I



## Skill Standards

**Subject Connection:** All

**Career Connection:** All

**Concepts/ Overview:** *Skill Standards* - To ensure that North Carolina's workforce is meeting the education and training needs of the employer community, JobReady will create a system of employer-driven skill standards. The standards will be developed by business-led partnerships that include workers, other labor representatives, community college and secondary school educators, and assessment experts. Standards form the communication link between business and schools. They ensure that students have the competencies identified by employers as critical for success. The Governor will create a Workforce Proficiency Board that is closely linked to the work of the National Skill Standards Board. The Board, with a majority of members from the private sector, will be named by the Governor.

**Objective:** 1.4 Students will demonstrate high levels of performance on tasks and meet occupational skill standards

**Materials:** Copy of Skill Standards that employers look for in employees  
Copy of Qualities Employers Look for in Employees

**Procedures:**

1. Begin with a T chart and have the students brainstorm what skills employers look for when hiring. Also have them consider what characteristics employers expect once an employee is hired.
2. Pass out Skill Standards handout and assess their answers. Using these standards, have them reflect on jobs they have held in the past and what the expectations may be for future employment opportunities.
3. Have each student do a self-assessment of his or her own employment strengths and weaknesses and identify one area that could be developed further.
4. Have them list strategies that would enable them to develop this area.
5. Have them relate the skill standards to the professional expectations they will encounter in their own field experience.

## **Skills Standards Identification**

Looking for work is selling a product. A successful job search is a sales and marketing campaign. The most effective job seekers use sales techniques in their job search to set themselves apart from the competition. The sooner you apply sales strategies to your job search the sooner you will begin to see results in your search for employment. To successfully sell a product a salesperson must first know exactly what that product can do. The same is true for your job search. Employers do not just want to know where you have been and what your job titles were. They want to know what you can do. If you were looking to purchase a product that would cost you thousands of dollars annually you too would want to know what it can do.

Consider a major purchase you made or are planning to make: a car, appliances, a computer or stereo equipment. If you are a smart consumer you will shop around. You ask questions. You want to know exactly what each product can do and what sets it apart from the competition. It is the salesperson's job to convince you that their product is the best. If they are unfamiliar with the product, or are not sold on the product themselves, there is little hope they will be able to sell you. This is why salespeople spend many hours learning their products. This is also why you need to invest time in identifying your skills.

### **Skills are the performance specifications of your product - you.**

The average person has between 500 and 800 skills. You need to identify those skills that are the most attractive to potential employers. Many people have a hard time identifying their skills, because we often define skills too narrowly. Do not think of a skill as something that requires years of formal education and experience to develop. A skill is anything you can do right now!

### **Job Skills**

Job skills are those skills specific to a job or occupation. A secretary, for example, might be skilled in typing, word processing, filing, answering telephones and company correspondence. An accountant might list accounts receivable, accounts payable, payroll, taxes, using a 10-key and computer accounting programs. A salesperson might include customer service, record keeping, order processing, inventory management, billing and product displays. Ultimately, job skills need to be stated in specific terms. For example, computer skills should be identified by the specific programs used.

Job skills are important to employers for obvious reasons. They are the specific skills employers look for in a candidate. Job skills do not always come from employment. You may have also developed job skills through education, hobbies, community activities and life experiences.

### **Self-Management Skills**

These are skills you use day to day to get along with others or to survive. They are the skills that make you unique. Sincerity, reliability, tactfulness, patience, flexibility, timeliness, or tolerance are all examples of self management skills. Employers look for these skills to determine how a candidate will fit into the organization. How a person will "fit in" is an important consideration for employers.

## **Transferable Skills**

Many skills can transfer from one job or occupation to another. For most job seekers it is very unlikely they will find a job that is identical to their previous employment. Therefore, it is critical for a successful job seeker to carefully evaluate how their skills transfer into other opportunities.

## **Duties**

Many people have trouble distinguishing between their duties and skills. Duties are the basic functions of an activity, while skills are the tools to accomplish those functions. Duties or functions are a part of any organized activity whether it is employment, volunteer work or hobbies.

**A simple example is the management of a lemonade stand. The basic duties might include production, marketing, distribution and financial management. There are many skills needed to accomplish these functions, including: mixing, measuring, planning, sales, customer service, writing, cash handling, record keeping, maintenance, dependability, accuracy and motivation. This list of skills could go on and on.**

Writing out the duties or functions of an activity first can be a useful way to begin identifying skills. When presenting your skills to an employer it is best to tie them to specific activities.

## **Accomplishments**

An effective salesperson will not only describe the specifications of a product; they will promote its performance. They will also note examples of success and customer satisfaction. Your accomplishments are your record of success. Along with where and when, employers want to know how you used those skills. They want to hear how you excelled in your performance. Accomplishments can be the edge that sets you apart from the competition.

## **Qualities an Employer Looks for When Hiring**

- Attendance
- Punctuality
- Enthusiasm
- Cooperation
- Maturity
- Accuracy
- Problem-solving Skills
- Organizational Skills
- Interpersonal Skills
- Openness -- Shares Experience and Ideas
- Discretion and Loyalty to Employer -- Doesn't Criticize Past or Present Employers
- Versatility --Skilled in More Than One Area
- Conscientious -- Committed to Doing the Best Job Possible
- Considerate and Helpful
- Positive Attitude Toward Work
- Positive Work Record and Evaluations
- Ability to Quickly Grasp and Do the Work Assigned, Requesting Assistance as needed
- Ability to Get Along with Supervisor, Co-workers and the Public
- Leadership Ability
- Willingness to Accept Responsibility and Extra Work Assignments
- Well-motivated... Innovative... Self-starter
- Ability to Plan and Think Ahead
- Ability to Communicate Listening, Speaking, Writing Skills
- Reading, Writing and Computing Skills Necessary to Do the Job
- Willingness to Follow Company Policies and Procedures
- Willingness to Work with Others as a Team

## **Goal 2**

**The preservice teachers will learn  
the importance of work-based learning.**

## Other Career Options for Teachers

**Subject Connection:** All

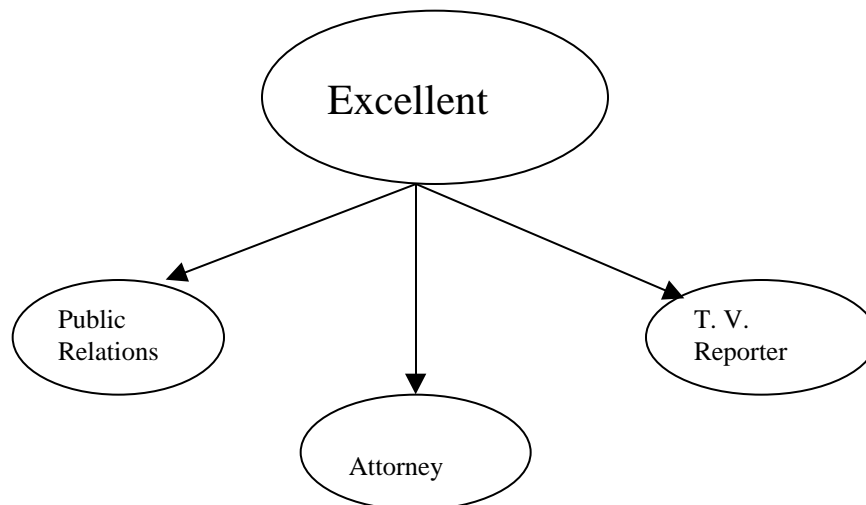
**Career Connection:** Teaching licensure candidates

**Concepts/ Overview:** Today's teachers must be proficient in a myriad of areas. Not only must they must have extensive content knowledge, but they must, maintain accurate records and anecdotal notes, be effective communicators with parents and students, collaborate and make site based decisions concerning their learning communities...the list is endless. What other careers are available to professional with these skills?

**Objective:** 2.1 Students will explore the career options for individuals with teaching licensure.

**Materials:** Handout of employment opportunities for teachers

- Procedures:**
1. Have students list the various skills one needs to have to be an effective teacher.
  2. Give out handout of employment opportunities for teachers.
  3. Divide class into groups. Assign each group a job and have them determine the employment skills needed for the job and then compare these skills to those of teachers as listed in step one.
  4. Have students make a content map of skills demonstrated by exemplary teachers. Include other possible jobs that also require those same skills.



## Education

Teachers can have great impact on the social, personal, and intellectual development of individuals. Their influence stems from a love of learning; a talent for awakening students to new modes of thinking; an understanding of the human development process; and professional skills. Teachers must have the ability to communicate, inspire trust and confidence, and motivate students, as well as understand their educational and emotional needs. They also should be organized, dependable, patient, and creative. A general description of teacher work activities includes: planning courses; instructing students; evaluating student performance; supervising student activities; performing administrative duties; advising students; interacting with faculty, parents, employers; and keeping up with developments in the field.

Teachers can be found in almost every sector of society, and they instruct a wide range of topics. While specific course requirements vary among disciplines, most teachers will fulfill the academic requirements for a major in a chosen field; be literate in the history, philosophy, psychology, sociology and methodology of education; and have developed initial teaching skills through supervised clinical experiences. Although certification is required for public school teachers (K-12) in all 50 states, some states offer alternative teacher certification programs to attract otherwise qualified persons into the field. Aspiring teachers who need certification may also enter programs that grant a master's degree in education, as well as certification. Most college and university faculty are in four academic ranks: professor, associate professor, assistant professor, and instructor. Four-year colleges and universities generally hire doctoral degree holders for full-time, tenure track positions but may hire a master's degree holders for doctoral candidates for certain disciplines, such as the arts, or for part time and temporary positions.

## Employment Information

Examples of Job Titles for Education Majors:

Some of these jobs require beyond the bachelor's degree; some of them rely upon the liberal arts component of the education major.

### Related Career Titles for Education Majors

Adult Ed. Teacher	Educational Resource Coordinator	Media Center Specialist	Student Admissions Administrator
Alumni Relations Coordinator	Educational Therapist	Missionary Worker	Student Affairs Administrator
Athletic Coach	Elementary School Teacher	Physical Education Instructor	Student Personnel Administrator
Athletic Director	Employee Training Instructor	Preschool Administrator	Teacher, Adventure/Outdoor Education
Child Life Specialist	Financial Aid Counselor	Registrar/ Admissions Director	Teacher, Handicapped Students
Curriculum Specialist	Grant Writer	Religious Institution Education Coordinator	Teacher, Industrial Arts
Day Care Administrator	Guidance Counselor	Resource Teacher	Training Specialist

Education Management Specialist	Historic Site Administrator	School Psychologist	Tutor
Educational Materials Sales Representative	Instructor, College/University	Secondary School Teacher	Vocational Rehabilitation Counselor
Education and Training Administrator	Kindergarten Teacher	Social Services Volunteer (Vista/Americorps)	
Educational Administrator	Librarian	Speech Pathologist	
Educational Researcher	Library Consultant	Special Education Administrator	

### **Some Employers of Education Majors:**

Business and Industry  
 Camps  
 Churches  
 Colleges and Universities  
 Community Centers  
 Educational Publishers  
 Hospitals  
 Libraries  
 Non Profits  
 Public and Private Schools  
 State and Federal Government  
 Youth Services

### **Education Web Sites**

\*Metalink

Public Schools of North Carolina Info Web\*

<http://www.dpi.state.nc.us/>

National Teachers' Association\*

<http://www.nea.org/>

Information about Careers in Education\*

<http://www.flash.net/~career30edu.htm#Education.General>

Riley Guide to Career Planning\*

<http://www.dbm.com/jobguide/careers.html#career>

American Federation of Teachers\*

<http://www.aft.org/index.htm>

Yahoo! Ed Links\*

<http://www.yahoo.com/Education>  
<http://www.yahoo.com/Education/Organizations/Professional/>

Education Homepage\*

<http://www.columbia.edu/%7Eess31/Education/>

Teachers Helping Teachers\*

<http://www.pacificnet.net/~mandel/>

Teachers Edition Online\*

<http://www.teachnet.com>

Galaxy Professionals Guide to Information\*

<http://galaxy.einet.net/galaxy/Social-Sciences/Education.html>

US Department of Education\*

<http://www.ed.gov/>

American Education Research Association\*

<http://www.aera.net/>

Insite Professional Organizations\*

<http://curry.edschool.virginia.edu/insite/ORGANIZE>

Education and Social Work Links\*

<http://www.uhs.berkeley.edu/CareerLibrary/links/header.cfm?FIELD=7>

All US School Districts\*

<http://www.Jobweb.org/search/schools/>

Internet Resources for Education\*

<http://www.lib.auburn.edu/socsci/docs/education.html>

Education Resources On Line\*

<http://www.educ.iastate.edu/students/eronline/>

Resources of Education Societies\*

[http://www.lib.uwaterloo.ca/society/education\\_soc.html](http://www.lib.uwaterloo.ca/society/education_soc.html)

Excellence in Teaching: A Teacher's Guide to Fellowships and Awards / BET

<http://info.doe.mass.edu/doedocs/tgfas6.html>

Associations Related to Education\*

<http://curry.edschool.virginia.edu/curry/resources/library/associations.html>

Project Connect

<http://careers.soemadison.wisc.edu/projcon.htm>

Education Jobs Page

<http://www.nationjob.com/education>

Web66: A K-12 World Wide Web Project

<http://web66.coled.umn.edu/>

Troops to Teachers

<http://www.troops.org/>

American College Personnel Association\*

<http://www.acpa.nche.edu>

Teacher Certification Requirements, State by State

<http://www.academploy.com/certif.cfm>

Academic Employment Network

<http://www.academploy.com/>

International Teaching Links

<http://jobsmart.org/electra/question/intl.htm>

Links for ESL/EFL Jobs

<http://www.aitech.ac.jp/iteslj/Links/Jobs.html>

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<http://ww.uncwil.edu/ed/>

Jobs for Kids Like... Various Subjects

Complete info about salaries, what they do, etc. Teacher information also.

[\*\*http://stats.bls.gov/k12/html/edu\\_over.htm\*\*](http://stats.bls.gov/k12/html/edu_over.htm)

## Prior Work Experience

**Subject Connection:** All

**Career Connection:** All

**Job Readiness Connections:** All

**Concepts/ Overview:** Prior to entering a School of Education, most students have had employment in other areas; others continue to hold full or part-time jobs while they pursue their education. What characteristics of exemplary job performance did they notice? How are these related to their work as a teaching professional? What did they learn about various job skills?

**Objective:** 2.2 Students will demonstrate appropriate work habits in at least one non-school setting prior to program completion.

**Materials:** Handout of Exemplary Job Performance Characteristics  
Handout of Personal Assessment Continuum  
Overhead of Qualities Employers Look for in Employees

**Procedures:**

1. Have students make a time line of all the jobs they have held.
2. In each job, have them name the person who contributed the most to the work environment and tell why.
3. Chart these on an overhead of the handout. Discuss the characteristics that determine exemplary job performance.
4. As a class, decide on the most important characteristics and have each student design a personal continuum rating themselves from Exemplary to Needs Improvement.
5. Using Qualities Employers look For in Employers overhead, have students compare their list.

## **Qualities an Employer Looks for When Hiring**

- Attendance
- Punctuality
- Enthusiasm
- Cooperation
- Maturity
- Accuracy
- Problem-solving Skills
- Organizational Skills
- Interpersonal Skills
- Openness -- Shares Experience and Ideas
- Discretion and Loyalty to Employer -- Doesn't Criticize Past or Present Employers
- Versatility --Skilled in More Than One Area
- Conscientious -- Committed to Doing the Best Job Possible
- Considerate and Helpful
- Positive Attitude Toward Work
- Positive Work Record and Evaluations
- Ability to Quickly Grasp and Do the Work Assigned, Requesting Assistance as needed
- Ability to Get Along with Supervisor, Co-workers and the Public
- Leadership Ability
- Willingness to Accept Responsibility and Extra Work Assignments
- Well-motivated... Innovative... Self-starter
- Ability to Plan and Think Ahead
- Ability to Communicate Listening, Speaking, Writing Skills
- Reading, Writing and Computing Skills Necessary to Do the Job
- Willingness to Follow Company Policies and Procedures
- Willingness to Work with Others as a Team



# Personal Assessment Continuum

Characteristic

Needs Improvement

Exemplary

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1 2 3 4 5 6 7 8 9 10

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1 2 3 4 5 6 7 8 9 10

## Job Site Visits

**Subject Connections:** All

**Career Connections:** All

**Job Readiness Connections:** All

**Concepts/ Overview:** An important component of the JobReady program is job shadowing for students. Students in grades 8-10 can actually shadow a person on the job in a career of interest to them to gain a fuller understanding of the position. Likewise, teachers are given a similar opportunity to job shadow. A science teacher might take a summer and actually find out first hand what skills it takes to be a chemist in a local industry. This helps the teacher prepare an authentic curriculum, one in which the students are given justifiable reasons for their learning.

**Objective:** 2.3 Students will identify business-defined occupational skill standards by visiting job sites and talking with business and industry representatives.

**Materials:** Handout of careers open to educators

**Procedures:**

1. From the Career Services handout, have students choose a job site to visit for a three-hour period.
2. In groups, have them generate a list of academic applications they might expect to see in their particular job site. For example, if they are visiting a bank, they might expect to see math, technology, prediction, reading, etc.
3. Have them make a checklist to take with them to their job site visit of these academic applications. Also have them make a list of questions to ask the employees/employers they are shadowing.
4. When they return, have them compare the list they made of characteristics of exemplary job performance and/or skill standards lists and the job performance they observed during their visit. How do they relate? Have them share the answers to the questions they asked the employees/employers.

## Job Shadowing Presentations

**Subject Connection:** All

**Career Connection:** All

**Job Readiness Connections:** All

**Concepts/ Overview:** Sharing and disseminating the information gathered during the job shadowing is an integral part of the program. This lesson gives the preservice teachers an opportunity to hear what others learned during their job shadowing experiences as well as providing them with a useful plan that they can later share with their middle school classes.

**Objective:** 2.4 Students will demonstrate understanding of the concepts of work-based learning through job shadowing.

**Materials:** None (Student generated)

**Procedures:**

1. Students present their findings from their job shadowing experiences to the class.
2. They may choose from one of the following formats:
  - a. PowerPoint presentation
  - b. Video presentation
  - c. Create a brochure
  - d. Poster/ Collage
3. Give students a copy of their middle grades NC Standard Course of Study. This may be accessed by going to the North Carolina Department of Public Instruction web site.  
The web address is as follows:  
[http://www.dpi.state.nc.us/Curriculum/Front\\_Matter/text2.htm](http://www.dpi.state.nc.us/Curriculum/Front_Matter/text2.htm)
4. Have them match up the skills stated during the presentations to the objectives in their fields of study.

## **Lesson Plan Rationale**

The following lesson plans represent each academic core taught in middle school-science, social studies, math, and language arts- as well as one integrated unit that incorporates them all into one. The lesson plans were designed to have a twofold JobReady purpose. First, each lesson has a career connection that can be used to add purpose and meaning to the lesson for the students. The academic skills used in each lesson are identified with academic skills professionals use in their work everyday. For example, in the math lesson "Probability: The Study of Chance", teachers can point out to students that the skills involved in this lesson are the same skills a statistician, an engineer, or a meteorologist might use. By weaving this information into a lesson, not only does a teacher give purpose to the learning, but also introduces career choices students might not have thought of previously.

The second JobReady purpose for each of these lesson plans addresses the more affective skills that students need to develop to become an effective part of the work force. Qualities employers look for when hiring an employee such as problem solving, interpersonal, and leadership skills are all connected to the specific lesson plans. For example, in the social studies lesson "Where Shall We Build Our Business," students must use problem-solving skills as well as demonstrate motivation and innovation. By specifically identifying these skills as part of the everyday instruction, teachers can reinforce and build on these strengths in their students.

The integrated unit is built around the premise that famous inventors and discoverers all share common desirable traits that led to their success. Students begin with reading about a person of interest to them, then are asked to make connections between events in the life of their person and skills and characteristics that person possesses. Hopefully, the students will draw parallels between their own lives and those of the people about whom they have researched.

In university methods courses, each lesson can be modeled to demonstrate to preservice teachers how JobReady can easily be incorporated into their everyday curriculum, adding an extra relevance to their lessons for them and their students.

## **Goal 3 - Math**

**Preservice teachers will demonstrate  
the ability to integrate classroom  
and on-the-job instruction.**

## Using Math Everywhere

**Subject Connections:** Math

**Career Connections:** All

**Job Readiness Connections:** Accuracy, Organizational skills, Interpersonal skills, Openness-Shares experience and ideas

**Concepts/Overviews:** Math is used everyday by everyone! This lesson demonstrates how necessary math skills are in daily life – on the job and off, as students record their math use and interview an adult about his or her math use.

### Objectives:

**Students will be able to:**

1. Observe and record their contact with and use of math skills and concepts in daily life.
2. Students will assess the use of math in a variety of job settings.

**Materials:** Handouts (personal log sheet, interview record sheet) and transparency or chart paper

### Procedures:

#### Day 1

1. The teacher will read The Math Curse, by Jon Scieszka to demonstrate to students the pervasiveness of math in everyday life. Brainstorm ways math impacts daily life of students and record on overhead transparency or chart paper.
2. Connect the book to part one of this project, the personal log, using questions on top of handout to spark discussion. Direct students to keep a log of their own math use for 24 hours. Complete log.

#### Day 2

3. Have the students share their math use logs in groups of four. Suggest that they look for common patterns and follow up with a brief whole group discussion. Ask, "What have you noticed about the way you use math in your life?" Find out how other people use math. Hand out the second sheet and instruct students to conduct a brief interview with an employed adult. Set a reasonable deadline for completion, perhaps three days.

#### Day 3

4. Share and discuss interview results. You may want to ask these questions:
  - What are some of the ways math is used on the job?
  - What are some of the ways math is used when we are not working?
  - How do these encounters with math compare or relate to the ways you used math on the day you kept your log?
  - What math skills might you still need to develop to be successful in an occupation you might choose?

Name \_\_\_\_\_

## Project – Using Math Everywhere

Do you use math? Of course you do! You use math every day, you just don't think about it. Anytime you use numbers you are using math.

### A. HOW DO YOU USE MATH?

For a period of 24 hours record your use of numbers and math. Remember, time and money are math.

Date: \_\_\_\_\_

#### **BEFORE SCHOOL**

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#### **MORNING – AT SCHOOL**

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#### **LUNCH**

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#### **AFTERNOON – AT SCHOOL**

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#### **AFTER SCHOOL**

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## **B. HOW PEOPLE USE MATH**

**Spend about 10 to 15 minutes with an adult. Ask them to help you FILL out this questionnaire.**

**The person I interviewed was a      MALE                      FEMALE**

**OCCUPATION:**

**PLACE OF EMPLOYMENT:**

**Ask the adult:**

**1. HOW DO YOU USE MATH IN YOUR JOB?**

**2. HOW DO YOU USE MATH WHEN YOU ARE NOT WORKING?**

**3. WHY DO YOU THINK IT IS IMPORTANT FOR YOUNG PEOPLE TO LEARN MATH?**

**4. HOW MIGHT YOUR JOB CHANGE IN THE NEXT 10 YEARS?**

## **Probability: The Study of Chance**

### **How fair is the "Rock, Scissors, Paper" game?**

**Subject Connections**                      Mathematics, Arithmetic, Probability

**Career Connections:**                      Statistician, Engineer, Meteorologist

**Job Readiness Connections:**      Accuracy, Cooperation, Interpersonal Skills

**Concepts/Overview :** The theory of probability is an important branch of mathematics with many practical applications in the physical, medical, biological, and social sciences. An understanding of this theory is essential to understand weather reports, medical findings, political doings, and the state lotteries. Students have many misconceptions about probability situations. The purpose of this activity is to help students learn the basic principles of probability.

**Objectives:**

- Students will be able to:**
1. Conduct an experiment
  2. Determine if a game is "fair"
  3. Collect data (table)
  4. Interpret data ( range, mode, median)
  5. Display data (line graph)
  6. Conduct analysis of game ( tree diagram)
  7. State and apply the definition of probability

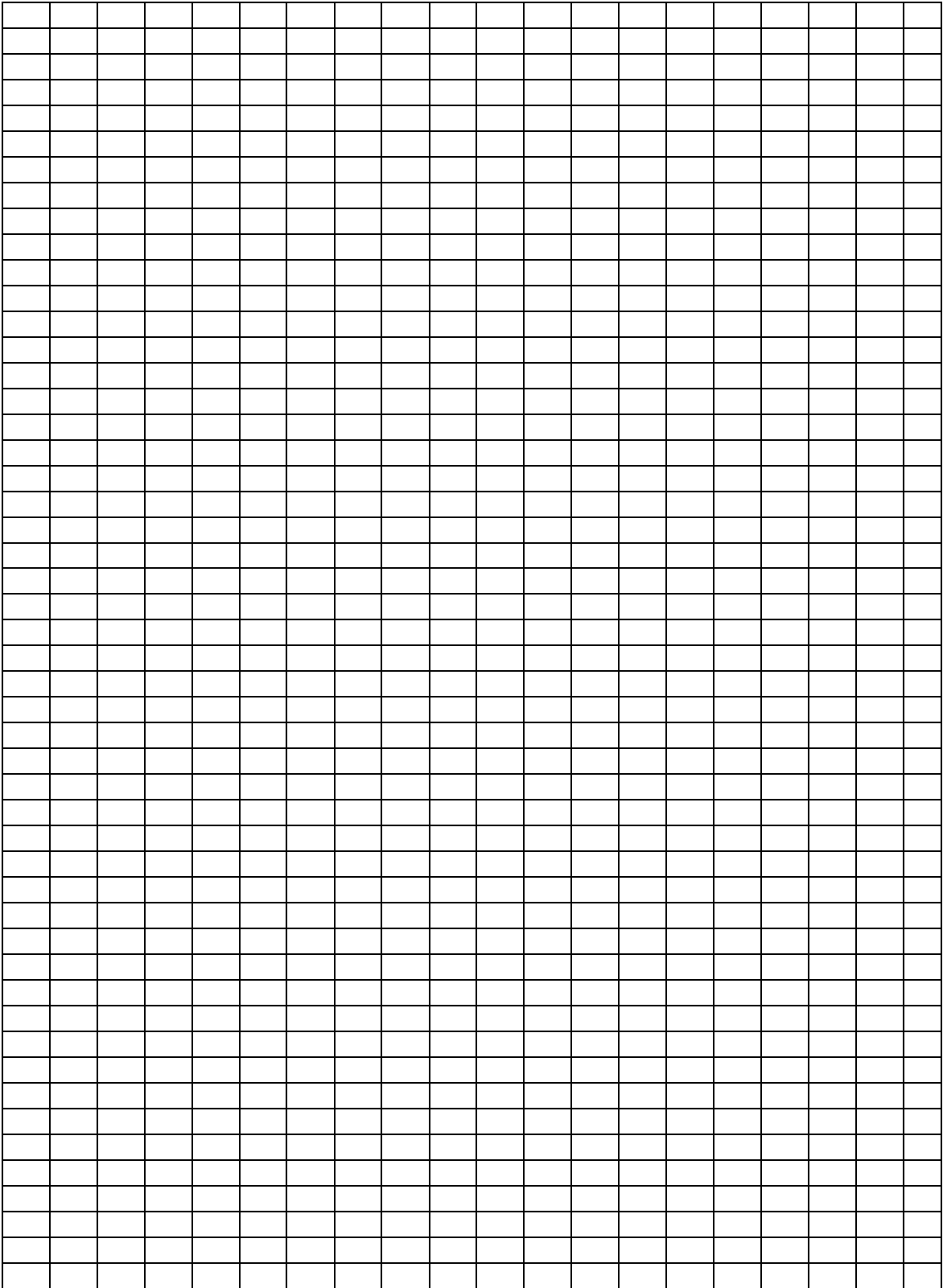
**Materials:**                                      overhead grid

- Procedures:**
1. Introduce activity with a demonstration of game: rock, scissors, paper.
  2. Divide class into pairs (player A and player B) and have them play the game 18 times.
  3. Use overhead graph grid to graph the wins of player A in red (how many A players won one game, two games etc.)  
Do the same for all B players in a different color.
  4. Help students determine range, mode and mean for each set of data. Compare the results.
  5. Do a tree diagram to determine the possible outcomes.

6. Answer the following questions to determine if the game is fair.
  - a. How many outcomes does game have? (9)
  - b. Label each possible outcome on tree diagram as to win for A, B or tie.
  - c. Count wins for A (3)
  - d. Find probability A will win in any round  $\frac{3}{9} = \frac{1}{3}$ .  
Explain what probability means. (Favorable Outcomes/ Possible Outcomes)
  - e. Count wins for B (3)
  - f. Find probability B will win in any round  $\frac{3}{9}$
  - g. Is game fair? Do both players have an equal probability of winning in any round? (yes)
7. Compare the mathematical model with what happened when the students played the game.

**Extensions:**

1. Use this as an introduction to a unit on probability.
2. Follow-up with discussion about how probability is used in world.
3. Play game again using 3 students. Using the following rules:
  - A wins if all 3 hands are same.
  - B wins if all 3 hands are different.
  - C wins if 2 hands are same.There will be 27 outcomes this time. 3 to the third power.  $3 \times 3 \times 3 = 27$ .



## Free Standing Structure

**Subject Connection:** Math, physical science, communication skills

**Career Connection:** Architecture, drafting, supply services, construction

**Job Readiness Connection:** Cooperation, Problem-solving, Organizational skills, Ability to plan and think ahead

**Concept/Overview:** Students will work in cooperative groups to plan and build a freestanding structure. The task is to build the tallest possible structure, using specified materials, while spending the least amount of money on materials.

**Objective:** Students will identify and demonstrate job readiness skills as they build a freestanding structure.

**Materials:** Scissors, rulers, protractors, large white paper, straws, straight pins, paper clips, masking tape, and handouts.

### Procedures:

#### Day 1

1. Put students in groups of two. Give them scissors, 10 straws, 6 pins, 10 inches of masking tape, and 10 paper clips. Tell students they have ten minutes to work with these materials to create some type of structure.
2. After ten minutes have students stop working and report on their experiences. Discuss what they learned about using these materials.
3. Give students the Cost of Materials list and the Structure Calculations outline on the overhead. Have students find the cost of their structure.

#### Cost of Materials

Straws	\$1.00 each
Paper clips	\$0.20 each
Straight pins	\$0.10 each
Masking tape	\$0.10 per inch

#### Structure Calculations

Pins x \$0.10	=	_____
Paper clips x \$0.20	=	_____
Straws x \$1.00	=	_____
In. masking tape x \$0.10	=	_____

4. Put students in groups of four. Introduce project with a handout of the proposal sheet. (It might be nice to have a copy of a blueprint available for students to look at.)
5. Group planning time. (Large white paper, rulers, protractors.) Students need to name their construction company. They need to create a design for their structure on the large white paper. They also need to develop a proposed materials list based on their prior experience.

Students must submit their design and materials list to the proper authority (TEACHER) to secure a building permit.

### **Day 2**

6. Give students their building permits and their proposed materials.  
Groups will also need scissors, protractors, and rulers.
7. Allow each group approximately 40 minutes to build a structure.
8. Have students clean up their building sites.
9. After structures are built, give each group a copy of Freestanding Structure Building Review (handout). All members of the group should work together to answer the questions and do the calculations. **THIS WORK SHOULD BE TURNED IN TO THE TEACHER.**
10. Tour the building sites. (Allow about 10 minutes for each group to circulate and look at the other groups' structures.)
11. FOLLOW UP: Plus/Delta chart of activity. (Discusses the pluses and what needs to be changed.)

# PROPOSAL

NAME OF COMPANY \_\_\_\_\_

NAME OF STRUCTURE \_\_\_\_\_

## PROPOSED STRUCTURE CALCULATIONS

\_\_\_\_\_ pins x \$0.10 = \_\_\_\_\_

\_\_\_\_\_ paper clips x \$0.20 = \_\_\_\_\_

\_\_\_\_\_ straws x \$1.00 = \_\_\_\_\_

\_\_\_\_\_ in. masking tape x \$0.10 = \_\_\_\_\_

PROJECTED COST OF STRUCTURE: \_\_\_\_\_

SIGNATURES \_\_\_\_\_

# FREESTANDING STRUCTURE BUILDING REVIEW

**WORK AS A GROUP TO ANSWER THESE QUESTIONS:**

1. What was the most difficult part of building the freestanding structure?
  
  
  
  
  
  
  
  
  
  
2. What problems, if any, did you have to solve?
  
  
  
  
  
  
  
  
  
  
3. What changes in your original design, if any, did you make after beginning construction?
  
  
  
  
  
  
  
  
  
  
4. What real-life job readiness skills have you demonstrated as you completed this project?

5. Final Structure Calculations:
- |                                 |   |       |
|---------------------------------|---|-------|
| _____ pins x \$0.10             | = | _____ |
| _____ paper clips x \$0.20      | = | _____ |
| _____ straws x \$1.00           | = | _____ |
| _____ in. masking tape x \$0.10 | = | _____ |

Height of Structure \_\_\_\_\_ inches

Final Cost of Structure: \$ \_\_\_\_\_

Cost per vertical inch: \$ \_\_\_\_\_

## Let's Go Catalog Shopping

**Subject Connections:** Math and Social Studies

**Career Connections:** Clerical, Purchasing

**Job Readiness Connections:** Accuracy, Ability to plan and think ahead, reading, writing, and computing skills

**Concepts/Overview:** The teacher may establish a scenario for ordering a variety of items from an assortment of catalogs: Christmas shopping for family members, spending birthday money, buying clothing and supplies for a trip to a specified location. The students will accurately fill out an order form for their purchases.

**Objectives:**

**Students will be able to:**

1. Students will learn to accurately complete a catalog order form.

**Materials:** A selection of catalogs (maybe obtained from students or parents) and the Catalog Order Form hand out

**Procedures:**

1. The teacher sets scenario and assigns a specific money to be spent. (Suggested: Amount for \$200 - \$300.)
2. Using an overhead transparency of the order form, the teacher will present the requirements for completing the form accurately. The terminology on the form and the related catalog's organization should also be explained.
3. The students will complete an individual order form using the catalogs provided.
4. Before turning in the order form assignment, the students should exchange papers and check the forms for accuracy.

## CATALOG ORDER FORM

CATALOG NAME: \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE: \_\_\_\_\_ ZIP \_\_\_\_\_

DAYTIME PHONE NO. ( ) \_\_\_\_\_

PAGE NO.	ITEM NO.	QUANTITY	DESCRIPTION	SIZE	PRICE EACH	TOTAL EACH

TOTAL FOR MERCHANDISE \_\_\_\_\_  
 TAX (Where applicable) \_\_\_\_\_  
 DELIVERY CHARGES \_\_\_\_\_  
 ORDER TOTAL \_\_\_\_\_

DELIVERY CHARGES

Merchandise

TOTAL \_\_\_\_\_ ADD

Up to \$25.00	\$4.95
\$25.01 - \$50.00	\$6.50
\$50.01 - \$75.00	\$7.95
\$75.01 - \$100.00	\$8.50
\$100.01 - \$125.00	\$9.95
\$125.01 - \$150.00	\$10.50
Over \$150.00	\$11.99

## **Goal 3 – Language Arts**

**Preservice teachers will demonstrate  
the ability to integrate classroom  
and on-the-job instruction.**

## Professionalism

**Subject Connections:** English, Vocational Education

**Career Connections:** All

**Job Readiness Connections:** All

**Concepts/ Overview:** This lesson expresses the importance and main points of professionalism in the working world. It will also give students an idea of what is expected from them after graduation.

**Objectives:**

**Students will be able to:**

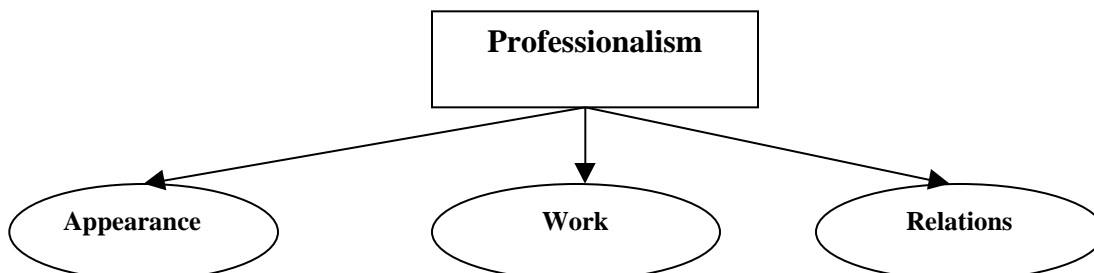
1. Identify the three major parts of professionalism.
2. Identify proper dress for different occupations.
3. Explain why neat work is important.
4. Explain the importance of effective communication in a business relationship.

**Materials:** Overhead, visuals  
3-in. x 5-in. note cards  
Hand-Outs, information map

**Procedure:**

1. Create a visual (overhead, magazine pictures, etc.) with at least two pictures on each of worker dressed professionally for their occupation (example. an office worker and a construction worker).
2. Put each picture up for approximately 1 minute. Have explanatory words about each picture. Call on students and write down their answers. Ask the question, "What is the same about these people?" Answer: They are both dressed professionally for their occupation.
3. There are three main points to professionalism:

Appearance  
Work  
Relations



4. Create a handout that provides an information map of professionalism. In the middle of the page write the word PROFESSIONALISM, then draw three branches for Work, Appearance, and Relations. From each of these branches, you will write words that explain each of the three topics and attach them to the appropriate topics as you discuss them with the class. Start with Appearance. Have students brainstorm ideas on what professional appearance is (e.g., clean, neat clothing; avoiding extremes in hair length, make-up, etc.)
5. The next item is Work. (E.g., neat, orderly, completed on time, what the boss asked for, etc.)

The third item is Relations.(E.g., pleasant, easy to talk to, good listener, etc.)

6. After brainstorming go back and discuss the generally important points that were made and ask if there are questions. If there are, discuss them as well. Have students write down the brainstormed ideas as well.
7. Activity time--create 3-in. x 5-in. cards that have some professional and unprofessional actions or dress on them (scuffed shoes, blue jeans, chipped fingernail polish, long, ungroomed hair, big clunky boots with a business suit, stretch pants, leather pants, yelling at a co-workers, chewing gum, untucked shirt, etc.). Pass out two cards to each student. Then present several situations (e.g., applying for a job as a waiter, applying for a job as a landscaper, giving a business presentation, helping customers in a retail atmosphere, etc.), and have the students hold up the cards that are professional and then the ones that are unprofessional in that situation.

## RESUME WRITING

**Subject Connections:** Language Arts

**Career Connections:** All

**Job Readiness Connections:** Positive work record, Ability to communicate writing skills, Versatility--Skilled in more than one area

**Concepts/Overviews:** This exercise will prepare students for the job market by introducing them to the need and use for resumes and cover letters.

**Objectives:**

**Students will be able to:**

1. Identify their skills, strengths and record them in the resume format.
2. Complete a resume.

**Materials:** Resume worksheet

**Procedures:**

1. Explain why we have resumes.
2. Brainstorm categories that you might find on a resume. Teacher may need to provide direct questioning to elicit appropriate categories.
3. From the list of categories, determine a final set that will become part of everyone's resume. (skill, educational background, related experiences, work experiences, biographical information, and hobbies) Ask students what they are good at, what visual or performing arts they have participated in, what they enjoy doing.
4. Have students fill out resume worksheets as a rough draft, peer edit with a friend, then have them word process their final copies. (Note: Most word processing programs have formats built in for resumes that they could use to design their final product.)
5. Share copies of resumes.

# RESUME WORKSHEET

Heading \_\_\_\_\_

First Name, Middle Initial, Last Name

\_\_\_\_\_  
Street Address, Apt. Number, City, State, Zip

\_\_\_\_\_  
Area Code, Telephone Number

Objective \_\_\_\_\_

\_\_\_\_\_  
Name the position you are seeking.

Education \_\_\_\_\_

\_\_\_\_\_  
Year completed    Award    School's Name    City, State  
List two or three courses which would impress an employer.

Skills \_\_\_\_\_

\_\_\_\_\_  
Name the first skill needed for your occupation and give an  
example of how you have used it.

\_\_\_\_\_  
Name the second skill needed for your occupation and give an  
example of how you have used it.

Work History \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

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Dates of employment, duration, title, employer, job description,  
three or four responsibilities

Honors & \_\_\_\_\_

Awards \_\_\_\_\_

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Clubs & \_\_\_\_\_

Organizations \_\_\_\_\_

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Hobbies \_\_\_\_\_

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## Fetch

**Subject Connections:** Language Arts, Social Studies

**Career Connections:** Archeology, College Professor

**Job Readiness Connections:** Willing to accept responsibility, Ability to get along with supervisor, Maturity, Punctuality

**Concepts/ Overview:** This short story narrates an unusual job interview between a student and his professor. It offers an opportunity to discuss desirable character traits and emphasizes necessary reading skills.

### Objectives:

**Students will be able to:**

1. Identify desirable character employee traits
2. Engage in the active reading skills of connecting, reviewing, predicting, and evaluating the text

### Materials:

A class set of the short story "Fetch!" by Robb White (from *Literature and Language 7*)  
An overhead of "Active Reading"

### Procedures:

1. Ask students if they have ever had any experience playing with a dog? How does a dog behave?
2. Pass out copies of "Fetch". Briefly show "Active Reading" overhead and introduce active reading strategies.
3. Begin reading story together, model use of active reading strategies, then allow students to complete the story independently, making notes on their copies as they read.
4. After reading, have students share the active reading strategies they used. Ask:
  - a. What questions did you ask yourself as you read this story?
  - b. What prediction did you make as you read?
  - c. What were they based on? How accurate were your predictions?
  - d. What qualities was Professor Werner looking for in this "interview"? Why?
  - e. Do you think George demonstrated his fitness for the job the Professor offered? Why or why not?
  - f. What other qualities might be valuable on this job?

## **Fetch!**

Robb White

The last thing George Dixon expected, or wanted, to meet in an apartment on the seventeenth floor was this enormous Great Dane with an old tennis ball in his mouth. When Professor Werner called, "Come on in," and George opened the door, the only thing that greeted him was that dog, who knocked him back against the wall.

"Play with the dog, Dixon. I'll be out in a minute," the professor said from somewhere back in the apartment.

With that dog you did what that dog wanted you to do:  
Throw the ball so he could go galloping around and bring it back to you.

George had a lot more on his mind than playing with a dog. Six of his friends in Werner's archeology class already had been interviewed for the job and been turned down. Now it was his turn and he wanted to rehearse his speech, but this dog was jumping all over him and the furniture, dropping the drool soaked ball on his best pants.

Then the idea came and George took the shiny ball and held it up. "OK, Fido, you're so smart, go get this one."

Instead of throwing the ball, George rolled it gently across the floor and, with great satisfaction, watched it roll under a low chest placed beneath an open window.

The Great Dane bounded across the room, his tail knocking a vase of flowers off a table.

The dog did not stop, nor even slow down.

With sudden horror, George watched him leap from the floor. He cleared the top of the chest and went on, stretched out, flying. Outside a gentle rain was lit by the streetlights far below. The enormous dog sailed out into the rainy darkness. For what seemed a century to George the body of the dog seemed to float in the air. Then it slowly sank out of sight, falling down through the rain. The Great Dane did not make a sound as he fell toward the pavement seventeen stories down.

For a moment, George just sat there, paralyzed with agony for the dog. Then he was on his feet running, looking only at the open, dark and empty window.

Something grabbed his arm, stopping him in mid-stride and spinning him around.

"Come on!" Professor Werner said. "I'm late for an appointment so we'll talk in the elevator."

"Wait!" George begged, trying to pull his arm free. "Come on!" the professor ordered, yanking him to the door.

"No! Wait!" George said, but the professor pulled him out of the room and locked the door.

Without a word Werner dragged George to the elevator, shoved him into it, and then pushed the button for the lobby.

It was only after the elevator began to sink that George really understood the enormity of the thing. In his mind's eye he could still see that beautiful dog sailing out into the darkness and, in his body, almost feel the long, dreadful fall. Some of the windows the dog would fall past would have lights in them; some would be dark. The pavement would be wet with rain.

Gradually George realized that the professor had been talking to him all the time. They were going to dig in a remote cave in Kurdistan. They might find gold artifacts of inestimable value. There might be clues to the missing chapters in the history of the human race.

George couldn't listen to him, couldn't pay attention.

That great dog, with the ball in his mouth, leaping so happily around that room. Those huge, soft eyes asking him to throw the ball again. The dirty trick he had pulled.

The professor kept talking and talking. It would be rugged in Kurdistan, and dangerous. They would explore a cave with a deep hole in the floor, perhaps a thousand feet deep. A hole down which some prehistoric man may have fallen 50,000 years ago.

The dog had fallen now tonight.

Slowly, as the elevator dial went past ten and nine and eight, George tried to erase the picture of that dog and to think about himself: this job he wanted so badly, this interview on which everything depended.

Had it been his fault? A dog had made a mistake and leaped out an open window. Had that been his fault? Was he to blame for that? Did he have to admit it?

Should he lose this job because of a dog? George realized slowly that the professor had been asking him a direct question.

The elevator dial read three.

"Dixon," the professor asked again, "what's your definition of courage?" It took all his mental strength to force his mind to pay attention. "Courage, sir? Er. Courage? I guess it's doing the right thing when you don't have to. Even though no one is watching. Nobody saw anything."

Werner laughed. "That's a definition I'd never thought of. But it's not bad. Anyway, this expedition you and I are going on is going to take a lot of it."

You and I. That's what he'd said. You and I.

People would be standing in the rain now, looking down at that beautiful dog lying crushed on the wet pavement.

The elevator stopped and the doors slid silently open.

As Werner started out, George pushed the CLOSE DOORS button and then turned and put both hands on Werner's shoulders, pushing him back against the wall.

"I killed you dog," George said. Werner stared at him.

"I was playing with him. Throwing the ball. He went out the window. Just out. Into the rain."

Werner said nothing as he pushed George's hands aside and then walked to the front of the elevator and pushed the seventeen button.

The elevator going up made no sound at all and Werner stood in silence with his back to George.

"He was a beautiful dog," George said. "I'm sorry." Werner said nothing as the doors opened and he stepped out. Without looking at George or waiting for him, he walked down the silent corridor, unlocked the door, reached in and turned on the lights and then, at last, turned and waited for George.

Feeling sick, and seeing again that dark, open window, George walked slowly into the room.

A great, moving weight struck him from behind, knocking him down flat on his face.

For a moment he just wanted to lie there, his face down on the carpet, his body waiting for more of the attack he knew he deserved.

Then something gently nudged him and he turned. There was the Great Dane with that soggy tennis ball in his mouth, his tail flailing, knocking things off a table.

"It was a mean thing to do to you, Dixon," Werner said. "But I need to know the sort of man I'm taking on this dangerous expedition."

George put his arms around the dog's neck and then got to his feet.

"There's a balcony outside that window," Werner said, smiling. "And this mutt just loves to show off."

## *Active Reading*

**Remember to use the following strategies when you read.**

***Questioning*** Ask yourself questions about things that confuse you.

- Why is he so angry?
- Why doesn't she tell someone?
- What does that word mean?
- Why is everyone acting so strangely?

***Connecting*** Does what you are reading remind you of something else?

- I'm a lot like that character.
- Something like that once happened to me.
- I would hate to be in that situation!
- This reminds me of a movie I saw.
- I know someone just like that.

***Predicting*** Stop occasionally and guess what might happen next.

- If they open the door, something terrible will happen!
- They're fighting now, but I'll bet they end up to be best friends.
- The author wants me to think that she is guilty, but I don't believe it.

***Reviewing*** Stop once in a while to determine what you know, what you think you know, and what has changed about what you thought you knew.

- This character is too selfish to care about anyone else.
- The story tells us that things aren't always what they seem.
- I could tell from the first paragraph that this is a sci-fi book.
- I thought he was the bad guy. Now I'm not so sure.

***Evaluating*** Make judgments about what you are reading.

- I like the way the author describes the mother.
- The neighbor is really mean!
- The ending was ridiculous!
- She shouldn't act so bossy.

## Career Explorations

**Subject Connections:** Language Arts, Math

**Career Connections:** All

**Job Readiness Connections:** Ability to Communicate, Organizational Skills Positive attitude about work

**Literature Connection:** The Weirdo by Theodore Taylor

**Concepts/ Overview:** Students investigate various professions through research and demonstrate their findings using oral presentations, written classified ads, and bar graphs. This is an excellent connection to the young adult novel The Weirdo by Theodore Taylor. The sample job list is taken from jobs included in the novel.

### Objectives:

**Students will be able to:**

1. Assess employment options
2. Research career information through the use of the internet, encyclopedias, interviews, or letters
3. Demonstrate oral presentation skills
4. Analyze salary information through the use of graphing
5. Compare the salary and educational requirements for various careers

**Materials:**

- Sample list of possible careers
- Graphing paper and markers
- Oral presentations rubric

**Procedures:**

1. Students pick a career from a teacher/student generated list.
2. Students research their chosen career finding answers to the questions below and any questions of their own they might generate.
  - a. Describe the nature of your work
  - b. What education is required for the job?
  - c. What is the average starting salary for the job?
  - d. What is the job outlook for the future?

3. Have students complete the following activities after their research:
  - a. Develop an oral presentation of not more than five minutes that will acquaint other students with this career. Be sure to cover the four research questions in your presentation. Dress for the presentation as a person in this career would when going to work.
  - b. Prepare a "help wanted" advertisement for the position. Post these on the bulletin board in the classroom.
  - c. In groups of four or five, prepare a bar graph depicting the jobs and salaries. Prepare a similar graph depicting jobs and educational requirements.
  - d. Share results with the class. Discuss the implications of the education required for these positions with the courses they may need to take in high school.

## Presentation Evaluation

Use the rubric below to rate yourself on each of the criteria for an effective presentation. Remember that your presentation should include the following key ideas.

- Nature of the work
- Education required for the job
- Average salary
- Job outlook.

A rating of one (1) indicates that this area still needs work, and a rating of five (5) indicates that you did an excellent job with that criteria.

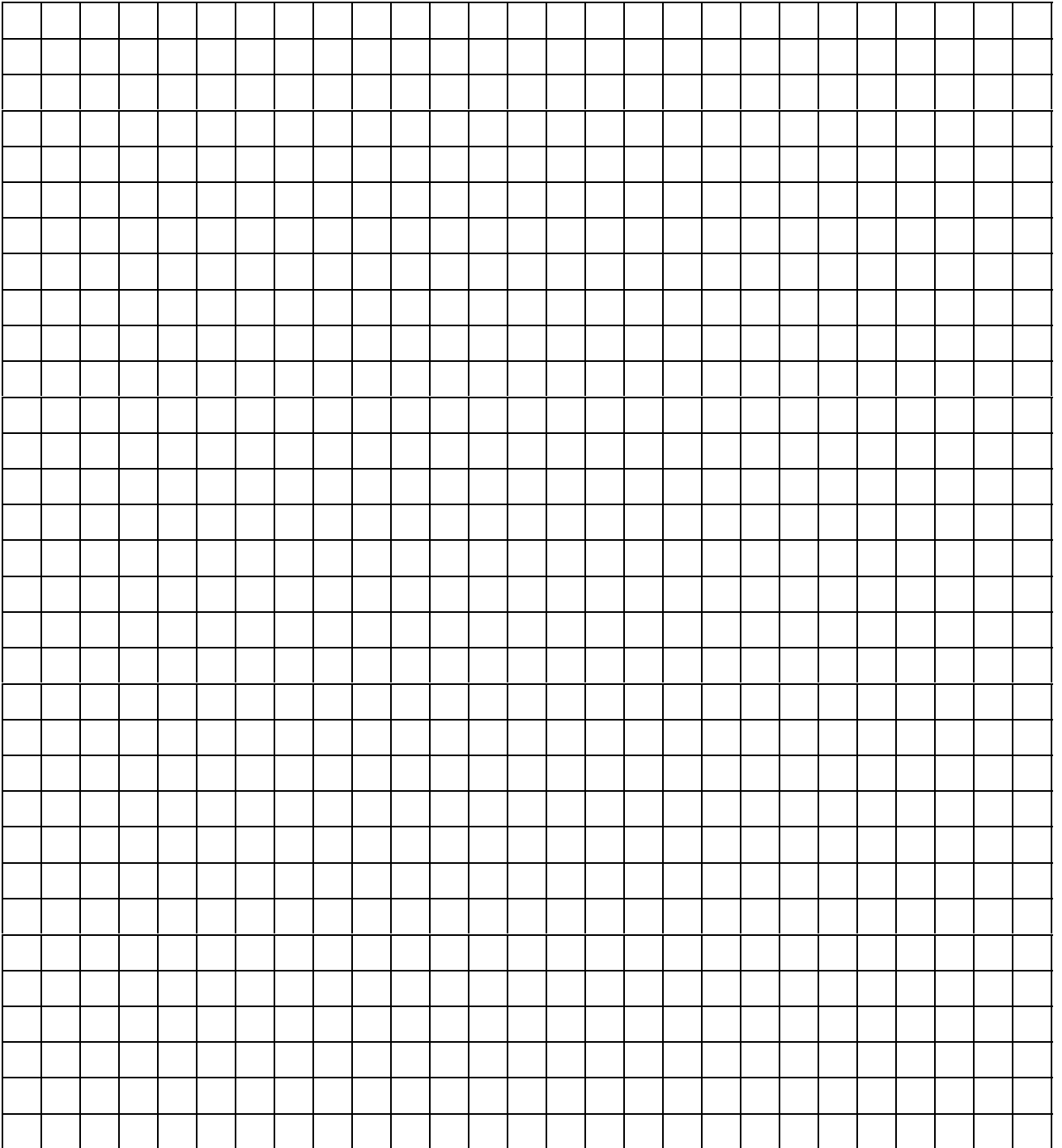
## Presentation Rubric

Name:	1	2	3	4	5
Date:					
I introduced myself, the project, and the main ideas.					
I presented all of the key ideas in a logical, sequential order.					
I used facts and details to support the main ideas.					
I gave regular summaries of the information throughout the presentation and made smooth transitions to the next idea.					
I included the audience in the presentation.					
I used costumes/products/visual aids to make the presentation more interesting.					
I used natural body and hand movements and gestures.					
I maintained/sustained eye contact with the audience and looked at all areas of the classroom.					
My voice was clear, well paced, and loud enough to be heard by everyone in the class.					
In my summary, I included all of the main ideas.					

## Sample List of Careers

<b>Accountant</b>	<b>Archeologist</b>	<b>Artist</b>
<b>Attorney</b>	<b>Biologist</b>	<b>Child Care Worker</b>
<b>Coach</b>	<b>Computer Program</b>	<b>Conservationist</b>
<b>Conservationist</b>	<b>Construction worker</b>	<b>Contractor</b>
<b>Dietitian</b>	<b>Doctor</b>	<b>Electrician</b>
<b>Electrician</b>	<b>Engineer</b>	<b>Farmer</b>
<b>Fisherman</b>	<b>Food Service Worker</b>	<b>Game Warden</b>
<b>Geologist</b>	<b>Highway Worker</b>	<b>House painter</b>
<b>Hypnotist</b>	<b>Insurance agent</b>	<b>Law Enforcement</b>
<b>Librarian</b>	<b>Lumbering</b>	<b>Military</b>
<b>Musician</b>	<b>Photographer</b>	<b>Pilot</b>
<b>Plastic Surgeon</b>	<b>Politician</b>	<b>Psychiatrist</b>
<b>Railroading</b>	<b>Reporter</b>	<b>Retail/Marketing</b>
<b>School bus driver</b>	<b>Scientist</b>	<b>Seamstress</b>
<b>Singer</b>	<b>Spillwayman</b>	<b>Stockbroker</b>
<b>Taxidermist</b>	<b>Teacher</b>	<b>Telephone lineman</b>
<b>Truck driver</b>	<b>Truck farmer</b>	<b>Veterinarian</b>
<b>Waitress</b>	<b>Wrestler</b>	<b>Writer</b>

## Jobs and Education





## **Green Collar Careers \***

You've heard about white collar workers and you've heard about blue collar workers, but have you ever heard of green collar workers?

Green may be the "in color" for the twenty-first century. "Green collar worker" is the term coined by Nicholas Basta, author of several books on environmental careers. He calls green collar workers those professionals who work in jobs with the earth in mind.

A scientist testing stream water, a courtroom lawyer defending the environment, an engineer designing a water treatment plant, and a sanitation worker collecting garbage are all green collar workers.

A green collar worker may work inside in an office, a laboratory, or a classroom; or outside in a park or forest, on a boat, maybe even up on a smokestack. The training needed for a green collar job may be as little as a high school education, or as much as several advanced degrees. Some jobs are very quiet and peaceful, such as surveying plants in a wetland environment. Others may be controversial, such as selecting a place for a hazardous waste incinerator. But all green collar jobs offer workers a special opportunity – combining their special skills with a personal commitment to the environment – to solve real and urgent problems. This combination can lead to a high level of job satisfaction. With the current emphasis on the environment, green collar jobs also offer opportunities for good pay and rapid career advancement.

Environmental jobs are usually not based on a single area of science or technology. Instead, they draw on biology, chemistry, physics, geology, ecology, engineering, meteorology, hydrology, agricultural sciences, and health sciences. Many require data-processing and computer skills. And since environmental problems impact people's health and the environment where they live, the ability to work with people is important.

Let's look at just a few of the green collar jobs right here in North Carolina.

### **Environmental Protection**

An engineer working in state government helps industries find ways to reduce the production of hazardous wastes. In her spare time, she dresses as a clown and teaches children about recycling, while entertaining them with clown antics.

A biologist working for a nuclear plant collects water samples from the cooling pond to make sure the plants and animals in the pond are healthy.

A chemist working for a private consulting firm analyzes samples from the stack of an incinerator to make sure that the air pollution control equipment is working properly.

A sanitation worker removes aluminum cans, steel cans, glass, and plastics from the garbage. Recycling these materials recovers valuable resources and saves scarce landfill space.

### **Natural Resources Management**

A forest ranger designs “talking tree trails” in state forests so that school children can hear the trees “talk” about wise forest management.

A fisheries biologist at a university marine laboratory studies the life history of fish so that regulations can be developed to prevent “overfishing.” His work helps ensure that there will be plenty of fish in the future.

A park ranger plans an outdoor recreation program for a state park. The planned activities will allow visitors to enjoy the park without endangering the plants and animals there.

### **Planning and Communications**

A city planner develops a very successful program for collection and proper disposal of household hazardous wastes in her community. Then she writes a “how to” book so that other communities can conduct the program.

A producer makes educational films about North Carolina’s unique environment and about things students can do to protect the environment.

An environment educator creates posters, books, games, and activities to show students that learning about the environment is fun.

A television reporter specializes in news and feature stories about environmental problems in North Carolina.

### **Examples of Other Career Opportunities**

Attorneys specializing in environmental law

Industrial hygienists

Waste management specialists

Agricultural specialists

Physicians, especially occupational medicine

Nurses

Public health educators

Laboratory technicians and analysts

Public participation coordinators

Data processors

Scientists such as nuclear physicists, geologist, hydrogeologists, ecologists,  
toxicologists, radiological hygienists

Economists

Engineers (environmental, nuclear, structural, chemical)

## **Potential Employment Settings**

The potential employment settings for a “green collar” career are almost as varied as the job opportunities. Some of these settings include: universities; community colleges; public health education centers; federal, state and local government; consulting firms; waste management companies; industry; nonprofit organizations; nuclear utilities; analytical laboratories; and more.

## **For More Information**

The environmental field is full of challenges and opportunities. In certain areas, such as environmental protection, there is a shortage of workers. For those with “green” interests, green collar job prospects are bright. If you want to learn more about environmental careers, the following books are suggested:

The CEIP Fund. 1989. The Complete Guide to Environmental Careers. Washington, D.C.: Island Press.

Nicholas Basta. 1991. The Environmental Career Guide: Job Opportunities With the Earth in Mind. New York: John Wiley & Sons, Inc.

Nicholas Basta. 1992. Environmental Jobs for Scientists and Engineers. New York: John Wiley & Sons, Inc.

David J. Warner. 1992. Environmental Careers: A Practical Guide to Opportunities in the 90s. Boca Raton, Florida: Lewis Publishers, Inc.

Information is also available from the Office of Environmental Education, N.C. Department of Environment, Health and Natural Resources, P.O. Box 27687, Raleigh, NC 27611-7687; (919) 733-0711.

Adapted from an article in Careers Choices in North Carolina, Number 9, 1992-1993, published by the North Carolina State Occupational Information Coordinating Committee.

## **Goal 3 – Science**

**Preservice teachers will demonstrate  
the ability to integrate classroom  
and on-the-job instruction.**

## Probing

**Subject Connections:** Science, Language Arts

**Career Connections:** Archaeology, Oceanography, Medical Technology, Physics and Chemistry, Space Careers

**Job Readiness Connections:** Cooperation, Problem solving, Accuracy,

**Concepts/Overview:** Students will use play-dough and an assortment of hard objects to create a model which will be explored with the use of a probe.

**Objectives:**

**Students will be able to:**

1. Follow directions to create a model using play-dough and hard objects.
2. Draw a map of the internal structure of their model.
3. Use a probe to determine the internal structure of a different model using inferential thinking.

**Materials:** Play-dough or modeling clay (commercial or homemade), assortment of small hard objects (coins, nails, keys, paper clips, etc.), waxed paper and toothpicks.

**Procedure:**

1. Divide class into groups of four.
2. Discuss with the class the fact that scientists are often faced with the problem of studying things that they can't see. In many cases they use a probe to allow them to "see" and make sense of unseen things. Scientists use what they do know and what they see happening to make inferences and draw conclusions.
3. Discuss the objectives of the lesson with the students.
4. Give out the play-dough. Students need to make two 4-inch pancakes about 1/2 inch thick on the wax paper.
5. Teacher goes from group to group allowing selection of an assortment of three or four items to be placed on the first layer of play-dough.
6. The group needs to draw a map of the arrangement of their objects before covering them with the second layer of play-dough. They give this map to the teacher to use as reference. Groups need to identify their map with their model.

7. Teacher collects all the models and redistributes them to groups of students. Students will use a toothpick probe to explore the model to determine the nature and arrangement of unseen objects. (A list of possible objects should be posted for reference.)
8. Teacher should give each group only one toothpick and model the appropriate procedure for probing - only using a straight in and out motion. **NO SCRATCHING AROUND!!**
9. As probing proceeds, students will need to draw a map of their findings.
10. When all groups have completed their maps, teacher passes out the original maps for comparison.
11. Each group will evaluate themselves for accuracy and professionalism in the probing process. This could be in the form of a paragraph by each individual in the group.

## A Packaging Problem

- Subject Connections:** Science, Language Arts
- Career Connections:** Engineering, Design, Packaging
- Job Readiness Connections:** Problem solving skills, Cooperation, Interpersonal skills, Versatility, Willingness to work with others in a team.

**Concepts/Overview:** Students will design and construct a container to hold ten marbles. They will then test their design and improve it based on test results. A written report will explain each student's "Marble Box Reasoning."

### Objectives:

- Students will be able to:**
1. Demonstrate visual thinking as they design and construct a container to hold ten marbles.
  2. Write an expository paper explaining the reasoning behind their choice of containers.

**Materials:** Handout, plain paper, graph paper, lined paper, tag board, pencils, glue, tape, scissors, rulers, ten marbles per group.

### Procedures:

1. Divide the class into groups of four.
2. Pass out one marble to each group; ask them to think about how they might design a package for ten marbles of the same size. Suggest that they measure the marble in any way they wish. Collect the marbles and put them in a central location for the students to reference.
3. Let the students experiment by drawing and or building containers to find the design they think works best. As they work, students can verify whether their container will actually hold ten marbles.
4. After selecting a design, students can make their container and test it.
5. Students will write individual expository papers telling why they chose their container's shape and size. They may wish to use sketches of the container.

6. Display marble containers so students can study them and discuss their decision making and problem solving process. Ask them:
  - How did you decide on your design?
  - What were the most important considerations in your design choice?
  - What problems did you encounter?
  - What similarities and differences do you see among the containers?

Source: Puddle Questions, Grade 7  
Creative Publications  
1300 Villa Street  
Mountain View, CA 94041-1197

## Moon Survival

<b>Subject Connections:</b>	Science and Social Studies
<b>Career Connections:</b>	Astronaut, engineer, technical support person
<b>Job Readiness Connections:</b>	Problem solving, Willingness to work with others in a team, Ability to plan and think ahead, Conscientious
<b>Objectives: Students will be able to:</b>	<ol style="list-style-type: none"><li>1. Apply critical thinking skills and to make a group decision.</li><li>2. Develop collaborative skills in the decision making process.</li></ol>
<b>Materials:</b>	<ol style="list-style-type: none"><li>1. Handout ( student and teacher)</li><li>2. Chart paper and markers</li></ol>
<b>Procedures:</b>	<ol style="list-style-type: none"><li>1. Give out handout to students.</li><li>2. Divide into groups.</li><li>3. Have students prioritize all of the items; then write the <i>five</i> most important items on chart paper.</li><li>4. Let each group designate a reporter to report and give justification for their group's five most important survival items.</li><li>5. After all of the groups have reported their recommendations, the teacher will share the official NASA ranking.</li></ol>

## MOON SURVIVAL

Instructions: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, however, your ship was forced to land at a spot some 200 miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200 mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important, and so on through number 15, the least important.

- \_\_\_ Box of matches
- \_\_\_ Food concentrate
- \_\_\_ 50 feet of nylon rope
- \_\_\_ Parachute silk
- \_\_\_ Portable heating unit
- \_\_\_ Two .45 caliber pistols
- \_\_\_ One case dehydrated Pet milk
- \_\_\_ Two 100-pound tanks of oxygen
- \_\_\_ Stellar map (of the moon's surface)
- \_\_\_ Life raft
- \_\_\_ Magnetic compass
- \_\_\_ 5 gallons of water
- \_\_\_ Signal flares
- \_\_\_ First aid kit containing injection needle
- \_\_\_ Solar-powered FM receiver-transmitter

### NASA's RANKING

- |    |                                       |  |
|----|---------------------------------------|--|
| 15 | Box of matches                        | No oxygen to sustain the flame                               |
| 4  | Food concentrate                      | Good food source, efficient                                  |
| 6  | 50 feet of nylon rope                 | Useful in scaling cliffs, tying together the injured         |
| 8  | Parachute silk                        | Will provide protection from sun's rays                      |
| 13 | Portable heating unit                 | Useless on dark side, not needed on lighted side             |
| 11 | Two .45 caliber pistols               | Possible means of propulsion                                 |
| 12 | One case dehydrated Pet milk          | Bulky duplication of food concentrate                        |
| 1  | Two 100 lb. Tanks of oxygen           | Most pressing need   |
| 3  | Stellar map (moon's surface)          | Primary means of navigation                                  |
| 9  | Life raft                             | CO2 bottle in raft may be used for propulsion                |
| 14 | Magnetic compass                      | Magnetic field on moon is not polarized, worthless           |
| 2  | 5 gallons of water                    | Replacement for high water loss on light side                |
| 10 | Signal flares                         | Distress signal when mother ship sighted                     |
| 7  | First aid kit with injection needle   | For injecting vitamins, special aperture in suit mother ship |
| 5  | Solar powered FM receiver-transmitter | Talk to mother ship, FM needs short range, line of sight     |

## **Goal 3 – Social Studies**

**Preservice teachers will demonstrate  
the ability to integrate classroom  
and on-the-job instruction.**

# Travel Agency

**Subjects:** Social Science, Geography

**Career Connections:** Travel Agent, Tour Guide, Public Relations

**Job Readiness Connections:** Problem Solving, Organizing, Ability to plan and think ahead

**Concepts/Overviews:** The geographic theme of place considers the characteristics that make one location on the Earth different from another. Place includes physical characteristics such as natural features, plants, animals, and weather. It also includes human characteristics such as language, philosophy, architecture, music, and customs. To help students focus on place characteristics, turn them into travel agents for highly discriminating clients.

- Objectives:**
1. To identify places around the world that have specific physical and/or main characteristics.
  2. To select one or more travel sites based on place characteristics.
  3. To create itineraries for travelers visiting selected sites.

**Materials:** Handout and reference materials

- Procedures:**
1. Ask students why people travel and how they select a destination. Help students conclude that travelers generally choose a destination based on something they want to see or do. Point out that the physical and human characteristics of a place determine its suitability as a travel destination.

Explain that in this activity students will act as travel agents to identify places that meet specific requirements to satisfy discriminating travelers. The travel agents will select a suitable destination for each traveler, as well as create a travel itinerary.

2. Introduce the ten travelers by calling on volunteers to read aloud the descriptions on the investigation worksheet. Allow each student to choose one of the travelers or assign a traveler to small groups or pairs of students.
3. Have students organize their search for travel destinations. Discuss the steps involved in selecting sites.

4. After students have identified possible travel sites, ask what criteria they will use to select a destination for their traveler. Explain that they must be able to justify their selection based on the place characteristics specified by their client.
5. Have students find the locations and prepare a travel itinerary. You may specify the information to be included or have the class decide on a format for the itinerary. Suggested topics include a brief description of the place or places, the travel route, forms of transportation, type of clothing needed (based on climate and/or activities), and so on.
6. Informal Assessment: Have students share their travel itineraries with the rest of the class. Determine how well they have met the objectives of this task.

Have students demonstrated an understanding of place by selecting locations that match their travelers' needs? Do the itineraries present interesting trips for their travelers?



**Step 4** Review the information on your chart and choose the perfect travel destination for your client. Remember, your client is paying for your services and will expect you to provide reasons for your location selection.

**Step 5** Create a travel itinerary for your client. Write a description of the destination, plan the travel route, and advise the traveler regarding suitable clothing, currency, language, and so on.

### **Clients of the Travel Agency**

1. Marvella Toocool has lots of time and money. She is mostly interested in impressing her friends with souvenirs from the world's great cities.
2. Yodelay Heehu is an experienced mountain climber who is interested in studying flowers of the alpine tundra.
3. Sandy Lens is a photojournalist who wants to film desert animals in their natural habitat.
4. Huckle Berryfin is an adventurer who seeks a river expedition. No sightseeing tours for this river rat! He wants to explore the wilderness.
5. Oldy Botgoodie is an anthropologist who specializes in the traditional music of indigenous peoples. He wants to record samples for his extensive music library.
6. Howlo Canyugo is a scuba diver who wishes to explore coral reefs. He has already visited Australia's Great Barrier Reef. Where else can he go?
7. Sally Mander is a herpetologist who spends her annual vacation studying the world's reptiles and amphibians. This year she wants to concentrate on tropical frogs.
8. Ryda Rail loves trains. Her dream vacation will be spent viewing spectacular scenery from the window of a moving passenger coach.
9. Susie Serfsup is a champion surfer who grew up in Hawaii. She wants to catch the waves in another part of the world.
10. Lynen Pole is a retired business person who spends his time fishing. He wants to hook a marlin or a sailfish and have a replica made to hang in his den.

## The World on a String

**Subject Connections:** Social Science, Social Studies, Geography

**Career Connections:** Business Owner, Import/Exporter, Environmental Scientist

**Job Readiness Connections:** Reading, writing and computing skills necessary to do the job, Ability to communicate

**Concepts/ Overview:** This is a total group lesson using the themes of geography to illustrate the interdependence of countries. Group discussion and an activity are used to teach the objective.

**Materials:** String, atlases, almanacs, encyclopedias

**Objectives:**

**Students will be able to:**

1. Define the terms import and export
2. Consider the problems that environmental issues have on the exporting of goods and products from one country to another.

**Procedures:**

1. Anticipatory set-Ask the students to check the labels on their shirts/blouses to see where they are from. Discuss the definitions of *exporting* and *importing*. This lesson is a three-day lesson. This is an overview of each day's activities.
2. Assign each student a country. Using atlases, almanacs, and encyclopedias in CD or book form, students research and select five goods produced in their country.
3. Trade Market Day. Simulating the world market place, each student must find two countries to import from and two countries to export to. At day's end, students must register their trade partners and goods with the teacher.
4. World web is created. Give students paper strip naming an exported product and country it goes to, as they form a circle in the middle of the room. Give a student a ball of yarn. While holding onto one end of the string, the student tosses the ball to a trading partner (from previous day's list). This continues until all students are holding a spot on the string.

After the web is created, ask students to think of some type of environmental/physical problem that would affect the exporting or importing of goods from one place to another. Use one of their examples and ask one student to step two steps back while still holding on

to the string. (This will represent tension in trade relations.) Ask students to raise hands if they can feel the tension in the string. Ask them what the tension represents. Guide discussions to reinforce the interdependence of trading countries.

**Evaluation:**

Ask students what *import* and *export* mean. Share with partners. Ask them to think of an example of a country that imports and exports and what goods are used. Tell them to think of a reason why trade would break down. Share with partners. While students are sharing, walk around and listen to the discussions going on to evaluate the class's understanding.

*Example of a list of trading partners:*

<b>COUNTRY FROM:</b>	<b>The World On a String EXPORT</b>	<b>COUNTRY TO:</b>
1. USA	Corn	England
2. England	Sugar beets	Malaysia
3. Malaysia	Rubber	France
4. France	Wine	South Africa
5. South Africa	Diamonds	Canada
6. Canada	Flax	Brazil
7. Brazil	Coffee	West Germany
8. West Germany	Coal	Italy
9. Italy	Shoes-Leathers	Australia
10. Australia	Bauxite	China
11. China	Pork bellies	Mexico
12. Mexico	Pineapples	Saudi Arabia
13. Saudi Arabia	Petroleum	Japan
14. Japan	Televisions	Denmark
15. Denmark	Furniture	Ireland
16. Ireland	Lace	Spain
17. Spain	Olive oil	Panama
18. Panama	Hats	Poland
19. Poland	Oats	India
20. India	Rope	New Zealand
21. New Zealand	Lamb	Turkey
22. Turkey	Cigars	Afghanistan
23. Afghanistan	Clothing	Mongolia
24. Mongolia	Copper	Korea
25. Korea	Sport shoes	Haiti
26. Haiti	Jewelry	Portugal
27. Portugal	Sardines	Czechoslovakia
28. Czechoslovakia	Bauxite	Burma
29. Burma	Peanuts	Egypt
30. Egypt	Pottery	USA

## Where Shall We Build Our Business?

**Subject Connections:** Social Studies

**Career Connections:** Business Management, Real Estate Developer, Personnel

**Job Readiness Connections:** Problem solving skills, organizational skills, decision making

**Concepts/ Overview:** Students will use maps and text to make an educated decision about a proposed business venture.

**Objectives:**

**Students will be able to:** Interpret data from their social studies text and other resources to make an informed decision about the location of a new business.

**Materials:**

Social studies text  
Internet, PC Globe, or other resources  
Markers, rulers, paper, Post it notes

**Procedures:**

1. Arrange students in pairs.
2. Have students locate and mark map in their textbook. Be sure they have a political map and physical map: population density, climate, and resources data is also needed, but may be available though the index rather than on maps.
3. Say: "You are the owners of a business of your choice. You wish to open a branch in the one of the countries in your text. Using the data presented in your text or other resource materials, choose a suitable location for your business."

4. Tell students to choose three possible locations. Make a chart comparing the three locations, using the following areas of comparison.
- Availability and cost of land
  - Presence of workers with necessary skills
  - Is there a market for this business?
  - Availability of raw materials or resources

Students will work together to decide which of the three potential locations would be best for their business. After deciding, have them design a "Coming Soon" sign advertising their new business.

	<b>Country</b>	<b>Country</b>	<b>Country</b>
<b>Availability/ Cost of land</b>			
<b>Presence of workers with necessary skills</b>			
<b>Marketability of product</b>			
<b>Availability of raw materials or resources</b>			

## Analyzing News Media

**Subject Connections:** Social Studies, Language Arts

**Career Connections:** Journalism and Media Careers

**Job Readiness Skills:** Ability to communicate listening, reading, and writing, Accuracy

**Concepts/ Overview:** Journalist and others in media careers influence the way we think about and respond to world and national events. Students will learn how to think critically about the news and other information they hear or read.

**Objectives:**

**Students will be able to:**

1. Analyze news articles to determine whether or not the facts can be verified.
2. Identify the presence of bias in information

**Materials:**

Colored highlighters or pencils  
Class set of current newspapers  
Overhead of analysis questions  
Overhead of sample news article

**Procedures:**

1. Model critical reading/thinking process with class, using a short, current news article on the overhead. Look for sources of information. Underline facts that CAN be verified in one color. Underline facts that CANNOT be verified in another color. Identify evidence of bias in the news article and discuss how to recognize bias.
2. Give student pairs a newspaper and set of colored pencils or highlighters. Have them select an article of current interest locally or nationally. Working together, students should identify the source(s) of information in their article. They then should identify verifiable and unverifiable facts and analyze the article for evidence of bias.
3. Partners will discuss and write responses to the questions on the overhead transparency.

## **News Article Questions**

- 1. What point is the article trying to make?**
- 2. Is the article reported from the scene or secondhand?**
- 3. Does the article reflect bias? How can you tell?**
- 4. Is only one side of the issue presented?**

## **Goal 3 – Integrated Unit**

**Preservice teachers will demonstrate  
the ability to integrate classroom  
and on-the-job instruction.**

## Make an Inventor Book Report

**Subject Connections:** Language Arts, Social Studies, Science

**Career Connections:** All

**Job Readiness Connections:** Leadership Abilities, Enthusiasm, Versatility, Conscientious, Maturity, Organizational Skills, Well-motivated, Positive Attitude

**Concepts/ Overview:** By reading a biography of an inventor or scientist, the students will analyze the obstacles that the subject overcame in his/her life. When the students have finished recording their information, they will compare the qualities of the inventors with the qualities employers are seeking in employees today. This plan must follow the students' completion of their book.

### Objectives:

**Students will be able to:**

1. Identify positive and negative events in the life of the subject of their biography.
2. Connect the subject's reaction to these events to qualities that employers look for in employees

### Materials:

A piece of white paper for each student  
"Make an Inventor" directions  
"Make an Inventor" example

### Procedures:

1. Begin with a journal asking students to write three positive experiences they have had and three negative experiences they have had. Ask them what strategies they used to rebound from the negative experiences.
2. Explain that their book report assignment will ask them to do a similar analysis of the person they read about.
3. Hand out the directions for "Make an Inventor". Prepare an example ahead of time to show the class.  
Read directions aloud and explain the procedure.
4. On the left side of their person, the students will list the negative events that occurred along with the approximate dates they happened. On the right side of their person, the students will list the positive events that occurred along with the approximate dates they happened.

5. On the inside of the jacket, on their person's chest, the students should list the positive qualities their person exhibited. For example, in a biography of Rosa Parks, the students might write "perseverance, integrity, courage".
6. Have students share their people in small groups, comparing the lives and characteristics of the people about whom they have read.

## **Inventors/Scientists Positive/Negative Graph**

**Subject Connections:** Language Arts, Social Studies, Science

**Career Connections:** All

**Job Readiness Connections:** All

**Concepts/ Overview:** Using the book reports made in the previous lesson, students make connections between successful traits of famous people and the traits employers are looking for in employees.

**Objectives:**

**Students will be able to:**

1. Make value judgements about the events in the person's life about whom they read
2. Compare and contrast the lives of the people and draw parallels among the inventors/scientists' lives

**Materials:**

Example of positive/negative graph  
Feature Analysis Chart  
List of "Qualities Employers Look For"

**Procedures:**

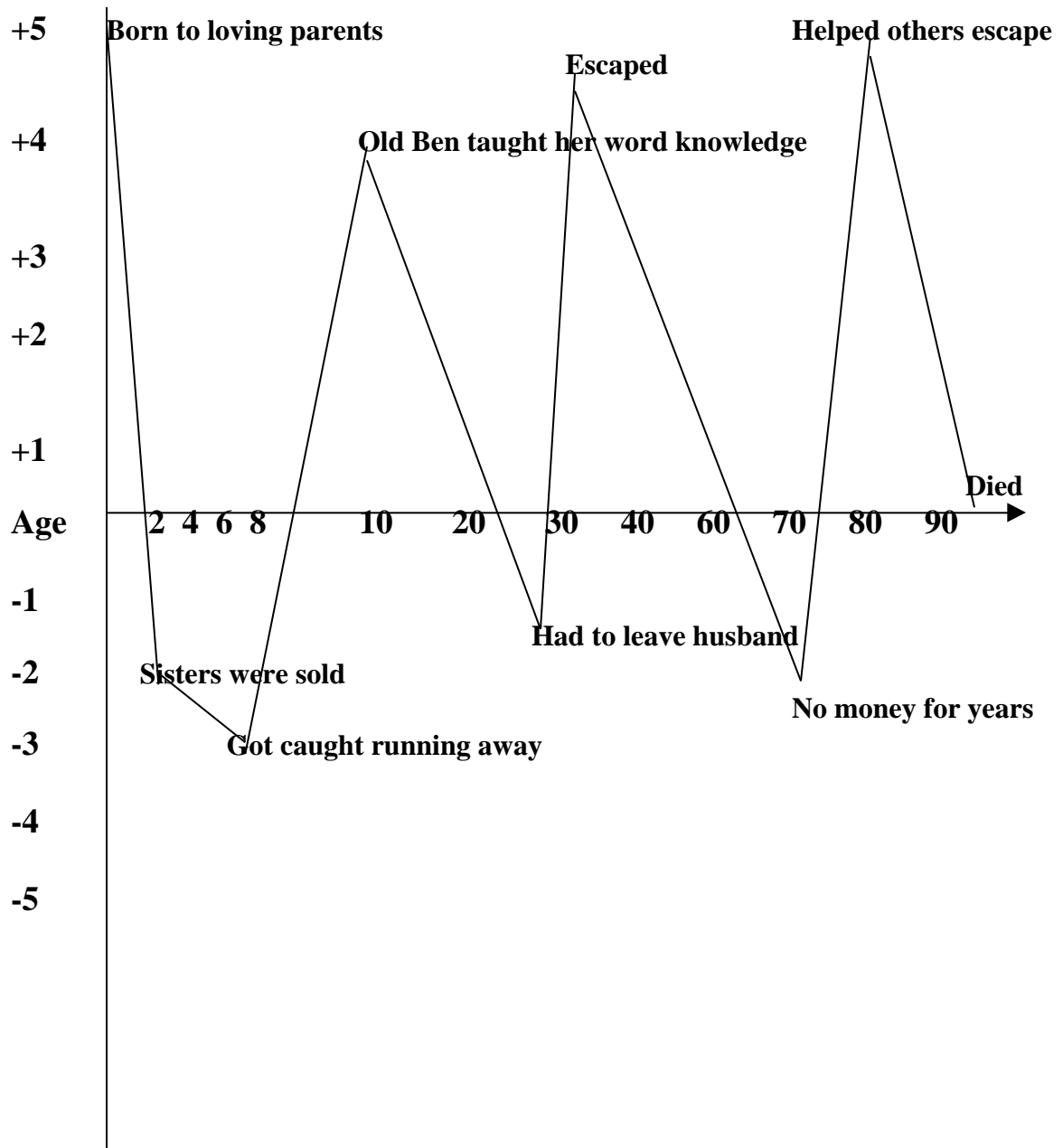
1. Using the positive and negative events detailed in their biography book reports, have students assign a value ranging from -5 to +5 for each event in the person's life.
2. Using the dates from their book reports, have students graph results in chronological order on their positive and negative axis, labeling the event and drawing a small illustration beside it.
3. Have each student answer the following questions:
  - a. What created the person's lows, internal or external forces?
  - b. How did they get out of the lows?
  - c. How did they achieve their successes, internal or external forces?
  - d. From the list of "Qualities Employers Look For", identify three qualities that your person exhibited.
4. Put students into groups and have them compare their results.
5. Discuss results and compile a class list using the Feature Analysis Chart. Post in class after it is completed.

## **Qualities an Employer Looks for When Hiring**

- Attendance
- Punctuality
- Enthusiasm
- Cooperation
- Maturity
- Accuracy
- Problem-solving Skills
- Organizational Skills
- Interpersonal Skills
- Openness -- Shares Experience and Ideas
- Discretion and Loyalty to Employer -- Doesn't Criticize Past or Present Employers
- Versatility --Skilled in More Than One Area
- Conscientious -- Committed to Doing the Best Job Possible
- Considerate and Helpful
- Positive Attitude Toward Work
- Positive Work Record and Evaluations
- Ability to Quickly Grasp and Do the Work Assigned, Requesting Assistance as Needed
- Ability to Get Along with Supervisor, Co-workers and the Public
- Leadership Ability
- Willingness to Accept Responsibility and Extra Work Assignments
- Well-motivated... Innovative... Self-starter
- Ability to Plan and Think Ahead
- Ability to Communicate Listening, Speaking, Writing Skills
- Reading, Writing and Computing Skills Necessary to Do the Job
- Willingness to Follow Company Policies and Procedures
- Willingness to Work with Others as a Team



# Positive and Negative Graph Harriet Tubman



## **Inventors: Who, What, When, Where**

**Subject Connections:** Science, Social Studies, Language Arts

**Career Connections:** All

**Job Readiness Connections:** Organizational skills, Ability to grasp and do work assigned, Self-starter, Cooperation

**Concepts/ Overview:** Using the "Make an Inventor" figures and positive/negative graphs, students share the results of their research with one another.

### **Objectives:**

**Students will be able to:**

1. Demonstrate their oral communication skills by sharing their research results with other members of the class.
2. Demonstrate note taking and data collection skills by completing charts as other group members share results

### **Materials:**

"Make an Inventor" figures  
Hand out of "Who, What, When, Where?"  
Hand out of "Where in the World?"  
World desk maps (class set)  
Movement card

### **Procedures:**

1. Place students in groups of four. Be prepared to give instructions for movement from the first group to a second and third to share information. Movement card can signal group organization.
2. In the first group, students will introduce their "Make an Inventor" to their colleagues. Each student will complete the appropriate blank on his or her chart.
3. Students will move to their second group according to predetermined plan. Each one will share his own information and the information collected at group one. Students will record on data collection sheet.
4. Students will move to their third groups, filling in any remaining blanks on data collection sheet. Working together, students will then place twenty names on their "Where in the World" handout.
5. Using the desk map, students will locate the country from which each inventor came. Point out that students will probably notice that some countries or regions produce more inventors than others. Ask them to speculate on why this is true.

6. Return the whole group and discuss:
  - a. Why do think certain countries have more inventors than others?
  - b. Did you notice when the inventions in a particular country took place? Why might this be?
  - c. Is there some special talent or characteristic that these inventors share?

# Where in the World?

On the map of the world below, locate the inventions by drawing a line to the country where the invention was made. Use the information from the table on the Time Line Research page.



## Guess Who's Coming to Dinner?

**Subject Connections:** Language Arts, Science

**Career Connections:** Hospitality, Restaurateur

**Job Readiness Connections:** Ability to plan and think ahead, Versatility, Problem solving

**Concept/ Overview:** Imagine you are in charge of the seating arrangement at a banquet honoring some of the greatest inventors that ever lived. How would you arrange the seating at the four tables?

**Objectives:**

**Students will be able to:**

1. Demonstrate critical thinking skills by selecting and justifying the arrangement of seating at a dinner party for ten inventors of their choice
2. Demonstrate decision making skills

**Materials:** Inventor's List  
Research notes on inventors

**Procedures:**

1. Ask students if they have ever been to or planned a formal dinner party such as a large family Thanksgiving celebration?
2. Ask them where the host and/or hostess sits and how they decide where to seat every one else.
3. Pass out "Guess Who's Coming to Dinner" handout and have students follow directions to create their own seating arrangement writing an explanation to accompany it.

## Guess Who's Coming to Dinner?

Choose eleven of the inventors on the list and arrange them around the dinner table. You may use one long table or two round tables. Remember to seat yourself since you are host or hostess and choose one of the inventors to be the honored guest. Make sure that you seat the honored guest to your right.

Make a sketch of your seating arrangement when you are finished.



## What's Their Line?

**Subject Connections:** All

**Career Connections:** All

**Job Readiness Connections:** Problem solving, Cooperation, Enthusiasm, Considerate and helpful

**Concepts/ Overview:** As a culmination for the research on famous inventors and scientists, students will play a game based on the old television show, "What's My Line."

**Objectives:**

**Students will be able to:**

1. Demonstrate knowledge of inventors and their lives
2. Analyze questions and reach conclusions
3. Summarize the main points of their character's life
4. Capture an audience's attention by the use of engaging introductions
5. Demonstrate their public speaking skills

**Materials:** None

**Procedures:**

1. Have students write a short lead about their famous person using writing techniques that entice interest such as anecdotes, questions, or action.
2. Have students then generate a list of four questions about their famous person's life that will be asked by the moderator. Have them write three sets of answers, one correct and two incorrect.
3. Form groups of three, one "real" inventor and two "imposters". Have the "real" inventor share the incorrect answers to his/her questions with the imposters. Have them read and study the answers before the game begins.
4. The moderator then asks the same questions of all three inventors. Classmates listen and at the end of the four questions, must guess who the real inventor is. Have them write down their guesses before the real inventor is revealed and perhaps offer a reward for the person with the most correct guesses.
5. Close with a recap of the real inventor's answers to clarify any confusion between real and fake.

# **Appendix**

<b>QUALITIES EMPLOYERS LOOK FOR WHEN HIRING</b>	<b>LESSON PLAN</b>
Attendance	I2, LA1
Punctuality	I2, LA1, LA3
Enthusiasm	I2, LA1, I1, I5
Cooperation	I2, LA1, M2, M3, S1, S2, S4, I3, I5
Maturity	I2, LA1, LA3, I1
Accuracy	I2, LA1, M1, M2, M4, S1, SS4
Problem-Solving Skills	I2, LA1, M3, S1, S2, S3, S4, SS1, SS3, I4, I5
Organizational Skills	I2, LA1, M1, M2, SS1, I1, I3
Interpersonal Skills	I2, LA1, M1, M2, S2
Openness – Shares Experiences and Ideas	I2, LA1, M1
Discretion and Loyalty to Employer	I2, LA1
Versatility – Skilled in More than one area	I2, LA1, LA2, S2, I1, I4
Conscientious	I2, LA1, S3, I1
Considerate and Helpful	I2, LA1, I5
Positive Attitude Toward Work	I2, LA1, LA4, I1
Positive Work Record and Evaluations	I2, LA1, LA2
Ability to Quickly Grasp, Do Work, and Request Assistance	I2, LA1, S4, I3
Ability to Get Along With People	I2, LA1
Leadership Ability	I2, LA1, I1
Willingness to Accept Responsibility and Extra Work	I2, LA1, LA3
Well-motivated, Innovative, Self-starter	I2, LA1, SS3, I1, I3
Ability to Communicate, Listening, Speaking, Writing Skills	I2, LA1, LA2, SS2, SS4
Reading, Writing and Computing Skills Necessary to do the Job	I2, LA1, M4, SS2
Willingness to Follow Company Policies and Procedures	I2, LA1
Willingness to Work with Others as a Team	I2, LA1, S2, S3

## **Current Social Skills Curricula on the Market Targeted at the Middle School Level**

### The Prepare Curriculum

Research Press  
2612 Mathis Ave.  
Champaign, IL 61821

### Fighting Invisible Tigers

Free Spirit Publishing, Inc.  
400 1<sup>st</sup> Ave. N., Suite 616  
Minneapolis, MN 55401

### Refusal Skills, Preventing Drug Use in Adolescents

Research Press  
2612 Mathis Ave,  
Champaign, IL 61821

### Thinking, Feeling, Behaving: An Emotional Education Curriculum for Adolescents

Timberline Press  
PO Box 70071  
Eugene, OR 97401

### ACCEPTS Social Skills Curriculum

(Walker, McConnell, Holmes, Todes, Walker, Golden, 1983)

### Cognitive-Behavioral Therapy for Impulsive Children

(Kendall and Braswell, 1985)

### Skillstreaming the Adolescent

(Goldstein, Sprakin, Gershaw, Klein, 1980)

### A Social Behavior Program for the Adolescent Student with Serious Learning Problems

(Neisgeier, 1981)

### Adolescent Curriculum for Communication and Effective Social Skills (ACCESS)

(Walker, Todis, Holmes, Horton, 1986)

### A Social Skills Program for Adolescents

(Hazel, 1989)

### Social Skills for Daily Living

(Schumaker, Hazel, Pederson, 1988)

### Social Skills on the Job

(Macro Systems, 1989)