

NC-NET Employability Skills Resource Toolkit

Module 7: Adaptability and Lifelong Learning

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Overview

Adaptability and lifelong learning are essential for a motivated and productive workplace. Workers must continue to learn to maintain skills, adapt to new equipment and processes, and acquire new skills to be able to become “promotable.” Learning new skills and being cross-trained in other areas helps to prevent burnout on the job and also increases the employee’s worth both within the company and if the employee seeks employment elsewhere.

Employers that provide cross-training to employees say the benefits include the following:

- Promotes employee well-being and prevents burnout
- Improves employees’ ability to handle work overflow
- Ensures emergency coverage of all positions
- Creates succession plans for employees to move up within the organization
- Ensures proper training of all employees
- Often improves the processes as new eyes bring different perspectives



In this module students are exposed to activities that help them see the value of lifelong learning and the ability to adapt to new processes, management styles, equipment, and so forth. Activities include:

- Job exploration and the creation of career genograms
- Obtaining and maintaining credentials and the benefits of belonging to professional organizations
- Preparing for career transitions
- Learning from hobbies and other informal venues
- Adapting in video games as an object lesson on adapting in the workplace
- Managing stress both on the job and in personal life

This module provides:

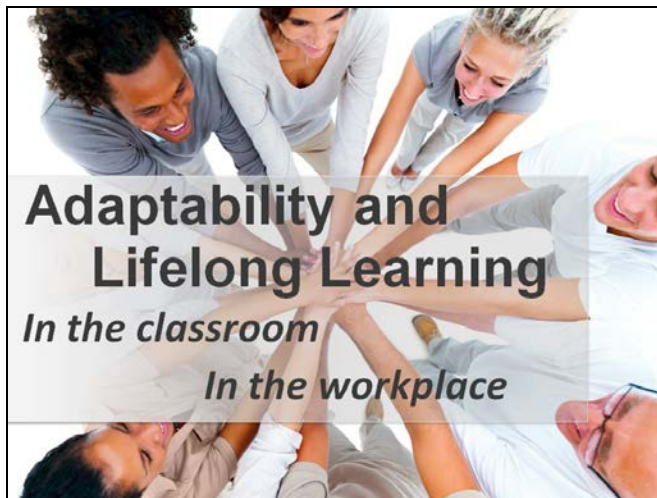
- **Instructor Presentation Materials**—A set of slides to help organize the topics for discussion and provide talking points to introduce the activities
- **Classroom Activities**—A set of activities from which to choose, requiring minimal materials and preparation, to address facets of adaptability and lifelong learning
- **Assessment Tools**—Rubrics for use by both instructor and student to assist in gauging progress throughout the course
- **Videos and Links**—A collection of links that will help both the student and instructor take advantage of the abundance of electronic resources available

Presentation Materials

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TEACHER NOTES

1



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Job Exploration

- Career surveys match
 - Activities you enjoy
 - Your personal traits
 - School subjects you like
 with career opportunities that align with your interests.

- The first activity in this module encourages students to complete one or more of the many career surveys available online, which strive to match personality traits and professional skills with the many available career areas.
- The handout available for this activity lists thousands that have profiles available at the U.S. Dept. of Labor website. Spend a few minutes with students perusing that handout or exploring the website.

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Career Genogram

- Genograms depict family relationships with symbols as shown here.
- Career genograms include family members' occupational history.
- Use a program like GenoPro.

- Ask students to interpret (guess from the context) the few symbols used in the sketch: squares are males, circles are females, "X" indicates deceased, horizontal lines indicate family members (by marriage or birth), diagonal or vertical lines indicate offspring, joined diagonal lines indicate twins (or triplets), horizontal lines joining twins indicate identical twins, dashed lines indicate adoption, crossed-out lines indicate divorce, and members at the same vertical level are in approximately the same generation. It's likely that genograms will be encountered with slightly different notations. There is a summary of genogram notations at <http://en.wikipedia.org/wiki/Genogram>

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TEACHER NOTES

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Your Career Plan

Identify:

- The “cluster” for your chosen career.
- The “career pathway” in your cluster.
- Entry-level positions in this pathway.

- Career genograms are interesting because they often suggest possible explanations for why you or your family members may be inclined to follow certain career paths. Might it be because, at your family gatherings, the topics of discussion are about the careers represented around the room?

- We suggest using a free trial version of GenoPro for this activity.

- Students may not be aware of the many career clusters other than the ones they are pursuing. You can take a moment to rattle off the names of a few others. It's a good thing that we are all different, so there are folks to fill all those important jobs that don't interest us!

- So, within the chosen cluster, students should identify a career pathway from the many available ones, and then identify an entry-level position that matches their skills and ambitions. See the next slide for more ideas about this activity.

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Your Career Plan

Identify:

- Skills and education required for these positions.
- Intermediate positions (rungs on the career ladder) leading to your chosen career.
- A career path timeline to achieve your goals.


- Students should select workplace positions that match their skills and serve as a pathway to advancement to their future goals. We hope that the entry-level position is not their final ambition.

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Credentials for Your Job

- A college degree is one kind of credential.
- Many occupations require other credentials or certifications. Can you name some?



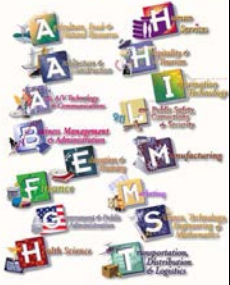
TEACHER NOTES

- Encourage students to name examples of credentials they know about, and then fill in the blanks from the following list, or additional ones from your own career area: accountants, auditors, financial planner, architect, radio operator, broadcast television engineer, structural engineer, insurance counselor, land surveyor, tax preparer, systems engineer, electrical engineer, network administrator, psychologist, veterinary assistant, chiropractor, dental assistant, doctor or nurse or therapist (of any type), medical dispatcher, emergency medical technician, paramedic, massage therapist, social worker, hypnotherapist, acupuncturist, real estate agent, investment manager, notary public, attorney or paralegal or legal secretary (of any type), emergency manager.
- Discussion questions: As a consumer, do you have more confidence in people who hold credentials? Some credentials and licenses require yearly continuing education or re-testing rather than simply a degree. Why do you think this is so?
- These questions can be used as starters for the credentialing activity in this module.

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Job Opening... Credentials Required!

- In your chosen work area, what are five careers that seem attractive to you?
- What are the licensing, certifications, and credentialing requirement for these jobs?



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TEACHER NOTES

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Job Opening... Credentials Required!



- What professional organizations support your careers of interest?
- What benefits does one get from belonging to these organizations?
- What ongoing professional development opportunities exist in these careers?

- These questions can be used as starters for the credentialing activity in this module.

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Moving Up the Career Ladder



- If you do your job well, will you automatically get promoted?
- What skills, activities and attitudes lead to promotion?
- How might a lateral move help you get the promotion?
- What kinds of educational decisions make you more promotable?

- Students probably realize that there are no automatic promotions these days. Prompt them to reflect on the questions provided. Acquiring new or advanced skills, participating in professional activities that demonstrate commitment to the career field, participating in hobbies that build skills, and demonstrating mastery of “soft skills” such as communication and dependability are the types of efforts that lead to promotion. A lateral move (e.g., to another department at the same pay grade) provides the opportunity to work in other divisions within the company and practice skills that are immediately relevant to the company.

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Career Transitions



- When the unexpected happens...what next?
- What's the long-term plan—beyond your first job at a company?
- In what ways can you build on your present skills?
- What other occupations also require your skills?



- In this activity, students should not become unduly alarmed, but they do need to consider the possibility that the unexpected could happen, and their perfect career plan might crumble. It might be unexpected catastrophe, a decision by upper management to downsize, a change in the economic situation, the unexpected arrival of a son or daughter, or maybe even retirement. Any number of things can cause our plans to change.
- Links in the activity should be explored by students.

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TEACHER NOTES

Just in Case...Planning for Career Transitions

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- Maintain a current résumé.
- Keep a file with evidence of your achievements—educational documentation, awards, recommendation letters
- Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis
- Career planning websites



- Links given in the activity should be explored by students:
 - <http://www.myskillsmyfuture.org/>
 - <http://www.careerinfonet.org/skills/>
 - <http://www.onetonline.org/search/>

Benefits from Hobbies

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- Reduce stress from other responsibilities.
- Motivation for expanded education.
- Discover your hidden talents.
- Open new social opportunities
- Improve your self-image and confidence.



- Hobbies can improve both personal well-being and academic success and provide a balance to the stress of life's responsibilities.
- Give opportunity for exploring other areas of interest, possibly leading to expanded education, training, or even a career change.
- Provide incentive and opportunity to apply or even discover one's creativity and talents, without the pressure of work expectations.
- Open up a new world of social opportunities with others who share an interest in similar hobby area(s). Such interactions often open doors for career moves through networking.
- Boost self-image and self-confidence to help find, practice, improve at, and be recognized for "something you're good at."

Consider a New Hobby

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- Find three new hobbies that might interest you.
- Find three hobbies related to your career area.
- Identify a local group practicing at least one of these hobbies.
Can you visit the group?
- Identify educational opportunities related to one of the hobby areas.



- This slide summarizes the module's hobby activity guidelines.

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TEACHER NOTES

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My Hobby and My Career



- What careers would allow you to do what you really enjoy doing?
- How do you find such a job?
- When does a hobby start to become “work”?
- How can a hobby prepare you for work?
- What role should a hobby play in a job interview?

- Prompt students to reflect on these questions and research the answers, if necessary.

15

Adaptability: A Key To Success



- In any job, workers must be able to adapt—learn new skills, get along with new employees and supervisors, work with new equipment and follow revised procedures.
- This is similar to how you must adapt to advance in video games!



- Yes, you must adapt to advance in video games. Think about it: You make it past the first few levels just fine, and then what? You must learn something new, or apply a different skill to continue to advance. So, we’re going to recognize that strategy and apply it to lifelong learning.

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The Real Purpose Here



- Yes, we’ll play some games, but...
- Step back and identify areas where you must “adapt” to advance in the game.
 - How to score points?
 - New skills required to advance?
 - New strategies required to advance?



- So, these are the questions we’d like the students to answer for the games, and then for their job/career.

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TEACHER NOTES

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Important Enough to Repeat: Adaptability is a Key To Success!



- In any job, workers must be able to adapt—learn new skills, get along with new employees and supervisors, work with new equipment and follow revised procedures.
- *How must you adapt in your workplace in order to advance?*

18

Managing Stress



- Stress is a normal part of life.
- It occurs at home, at work, and in the classroom.
- But excessive stress is **not** normal and **not** healthy.
- Holmes and Rahe Stress Scale:
Do you have enough stress to make you ill?
- The Resiliency Quiz: Are you a “resilient survivor?”

- This activity directs students to take a couple of quick quizzes online that provide a score as an indicator of their stress level and their ability to cope. Of course, the results are 1) only as reliable as the input, and 2) generalized based on population averages (not able to reflect an individual’s unusual psychological makeup or circumstances). Students should be directed not to take these results too seriously, but maybe to start thinking about their lives. Instructors can use the results as a discussion starter about stress and resiliency.
- Students may approach instructors privately with concerns following the discussion on stress. Please be prepared to give students appropriate referrals to services provided by the campus and the community.
- <http://www.brainyquote.com/quotes/quotes/m/mahatmagan133995.html>

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Keep Adapting, Keep Learning



*Live as if you were to die tomorrow.
Learn as if you were to live forever.*

Mahatma Gandhi

Teaching Resources

ACTIVITIES

The following activities are examples of activities that can be completed in class to emphasize, teach, and practice *Adaptability and Lifelong Learning*. The activities can be used as included in this resource, or they may be adapted and tailored to fit the specific courses being taught. Suggestions for tailoring the activities precede each activity with examples from several different subject areas/career pathways. The suggested modifications are provided as examples for instructors with ideas of how they might tailor the activity to fit with the content they are already teaching.

ACTIVITY: JOB EXPLORATION AND GENOGRAMS

Instructor Preparation

This activity is primarily aimed at students who have not already completed one or more career survey instruments. However, the optional career genogram may interest others.

Everyone has different preferences and different personal goals. Many career surveys exist that can help students describe themselves, identify the subjects they like and dislike, the activities in which they do well and those they do poorly. These surveys attempt to mechanically summarize the responses and reveal which career clusters might be a match for students' interests and capabilities. Even if they completed a career survey several years ago, it will be helpful for them to complete one again. It will provide insight about areas of strengths and weakness and how those align with today's career opportunities.

An optional part of this activity asks students to consider the careers in their family. We all inherit more than just genes from our parents and close family members; we are also influenced by observing their conversations, hobbies, extracurricular activities, travels, and other interests and activities. A career genogram tracing one's family tree (back to grandparents or farther, if desired) examines the careers that each family member pursued. Creating a career genogram can be personally rewarding and help students examine the competencies and strengths obtained from their family, as it might impact their own career search.

Objectives

Students will:

1. Complete one or more career-choice survey instrument.
2. Complete a career genogram (a family tree of career paths; requires some outside research information by the student about their family history).

Materials

- Internet access to career survey instruments or interest inventories.
- Internet access to career exploration websites.
- Handouts 1 and 2
- Optional: Student's own family tree information, including occupational history.

Activity Guidelines

In the first part of this activity, students should visit any one of several career planning websites (see the Web Links section of this module) to complete a survey, and then compare the results with fellow students (at instructor's discretion). It would be interesting for students to complete survey instruments from more than one site and compare those results.

When completing the surveys, it's important to answer the questions honestly. Trying to answer the questions in a contrived or anticipated way will produce confusing results.

Most of the surveys suggest career paths that align with the results and some of these suggestions surprise students. Direct them to speculate about those surprising careers.

- Why did the survey suggest ____ (an unexpected career)?
- Which of the suggested careers would require additional education, preparation, certifications, etc.?

Handout 1 provides an exhaustive list of careers, taken from the US Department of Labor sponsored web-site (<http://www.careerinfonet.org>), grouped by career clusters. Focusing on the cluster for the career area chosen can be very enlightening.

Once students have an indication of an interesting career choice, they can explore those careers further at the U. S. Department of Labor supported website, <http://www.careerinfonet.org/Explore/>. The Career and Cluster Videos link, <http://www.careeronestop.org/Videos/default.aspx>, provides access to over 500 videos that explore occupations across all 16 career clusters.

Career Genogram

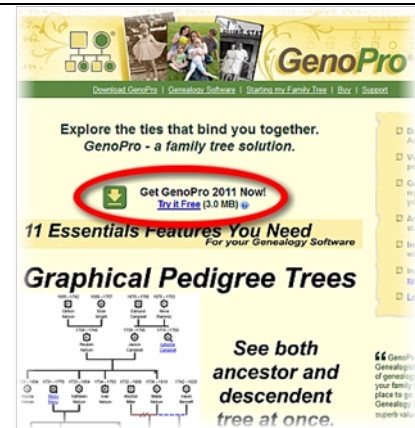
For the second part of this activity, direct students to complete a career genogram—a family tree of their family’s occupational history. A career genogram is designed to help students understand the educational and occupational choices made by past and present family members and to provide insight into their own perspectives on educational and career goals.

Ask students to start with the history of their grandparents. (They can go further back if family information is available.) After completing the genogram (see **Handout 2**), students should discuss it with at least one other student to gain additional insights. Then, using the suggested analysis questions on **Handout 2**, students should write a short paper (1-5 pages) summarizing the trends in their family and the influences that family members might have had on one another. The focus of this assignment should be on the student’s family, not themselves.

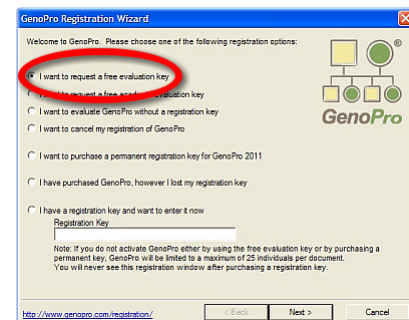
The pictorial representations known as genograms can be created from scratch using basic shapes available through most word processors organization chart tools, basic drawing programs, or by just drawing and labeling the shapes and lines by hand. The resulting product needs to be neat and easy to read.

There is a free trial genealogy program available from <https://www.genopro.com/> that can be used to make genograms quickly. Go to the GenoPro website, click the “Try it Free” button, save the download file, and install it. With the registration wizard, apply and receive a free registration key which is good for a few weeks of trial use—adequate for this activity.

Get trial version at **GenoPro.com**



Click “Try It Free” link.



Request a Free Registration Key

Handout 1—Occupational Profiles from U.S. Department of Labor, by Cluster

Architecture and Engineering

Aerospace Engineering and Operations Technicians
Aerospace Engineers
Agricultural Engineers
Architects, Except Landscape and Naval
Architectural and Civil Drafters
Biomedical Engineers
Cartographers and Photogrammetrists
Chemical Engineers
Civil Engineering Technicians
Civil Engineers
Computer Hardware Engineers
Drafters, All Other
Electrical Engineers
Electrical and Electronics Drafters
Electrical and Electronics Engineering Technicians
Electro-Mechanical Technicians
Electronics Engineers, Except Computer
Engineering Technicians, Except Drafters, All Other
Engineers, All Other
Environmental Engineering Technicians
Environmental Engineers
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors
Industrial Engineering Technicians
Industrial Engineers
Landscape Architects
Marine Engineers and Naval Architects
Materials Engineers
Mechanical Drafters
Mechanical Engineering Technicians
Mechanical Engineers
Mining and Geological Engineers, Including Mining Safety Engineers
Nuclear Engineers
Petroleum Engineers
Surveying and Mapping Technicians
Surveyors

Arts, Design, Entertainment, Sports, and Media

Actors
Art Directors
Artists and Related Workers, All Other
Athletes and Sports Competitors

Audio and Video Equipment Technicians
Broadcast News Analysts
Broadcast Technicians
Camera Operators, Television, Video, and Motion Picture
Choreographers
Coaches and Scouts
Commercial and Industrial Designers
Craft Artists
Dancers
Designers, All Other
Editors
Entertainers and Performers, Sports and Related Workers, All Other
Fashion Designers
Film and Video Editors
Fine Artists, Including Painters, Sculptors, and Illustrators
Floral Designers
Graphic Designers
Interior Designers
Interpreters and Translators
Media and Communication Equipment Workers, All Other
Media and Communication Workers, All Other
Merchandise Displayers and Window Trimmers
Multimedia Artists and Animators
Music Directors and Composers
Musicians and Singers
Photographers
Producers and Directors
Public Address System and Other Announcers
Public Relations Specialists
Radio Operators
Radio and Television Announcers
Reporters and Correspondents
Set and Exhibit Designers
Sound Engineering Technicians
Technical Writers
Umpires, Referees, and Other Sports Officials
Writers and Authors

Building and Grounds Cleaning and Maintenance

Building Cleaning Workers, All Other
First-Line Supervisors of Housekeeping and Janitorial Workers

First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers
 Grounds Maintenance Workers, All Other
 Janitors and Cleaners, Except Maids and Housekeeping Cleaners
 Landscaping and Groundskeeping Workers
 Maids and Housekeeping Cleaners
 Pest Control Workers
 Pesticide Handlers, Sprayers, and Applicators, Vegetation
 Tree Trimmers and Pruners
 Business and Financial Operations
 Accountants and Auditors
 Agents and Business Managers of Artists, Performers, and Athletes
 Appraisers and Assessors of Real Estate
 Budget Analysts
 Business Operations Specialists, All Other
 Buyers and Purchasing Agents, Farm Products
 Claims Adjusters, Examiners, and Investigators
 Compensation, Benefits, and Job Analysis Specialists
 Compliance Officers
 Cost Estimators
 Credit Analysts
 Credit Counselors
 Farm Labor Contractors
 Financial Analysts
 Financial Examiners
 Financial Specialists, All Other
 Fundraisers
 Human Resources Specialists
 Insurance Appraisers, Auto Damage
 Insurance Underwriters
 Labor Relations Specialists
 Loan Officers
 Logisticians
 Management Analysts
 Market Research Analysts and Marketing Specialists
 Meeting, Convention, and Event Planners
 Personal Financial Advisors
 Purchasing Agents, Except Wholesale, Retail, and Farm Products
 Tax Examiners and Collectors, and Revenue Agents
 Tax Preparers
 Training and Development Specialists
 Wholesale and Retail Buyers, Except Farm Products

Community and Social Service

Child, Family, and School Social Workers
 Clergy
 Community Health Workers
 Community and Social Service Specialists, All Other
 Counselors, All Other
 Directors, Religious Activities and Education
 Educational, Guidance, School, and Vocational Counselors
 Health Educators
 Healthcare Social Workers
 Marriage and Family Therapists
 Mental Health Counselors
 Mental Health and Substance Abuse Social Workers
 Probation Officers and Correctional Treatment Specialists
 Rehabilitation Counselors
 Religious Workers, All Other
 Social Workers, All Other
 Social and Human Service Assistants
 Substance Abuse and Behavioral Disorder Counselors

Computer and Mathematical

Actuaries
 Computer Network Architects
 Computer Network Support Specialists
 Computer Occupations, All Other
 Computer Programmers
 Computer Systems Analysts
 Computer User Support Specialists
 Computer and Information Research Scientists
 Database Administrators
 Information Security Analysts
 Mathematical Science Occupations, All Other
 Mathematical Technicians
 Mathematicians
 Network and Computer Systems Administrators
 Operations Research Analysts
 Software Developers, Applications
 Software Developers, Systems Software
 Statisticians
 Web Developers

Construction and Extraction

Boilermakers
 Brickmasons and Blockmasons
 Carpenters

Carpet Installers
 Cement Masons and Concrete Finishers
 Construction Laborers
 Construction and Building Inspectors
 Construction and Related Workers, All Other
 Continuous Mining Machine Operators
 Derrick Operators, Oil and Gas
 Drywall and Ceiling Tile Installers
 Earth Drillers, Except Oil and Gas
 Electricians
 Elevator Installers and Repairers
 Explosives Workers, Ordnance Handling Experts,
 and Blasters
 Extraction Workers, All Other
 Fence Erectors
 First-Line Supervisors of Construction Trades and
 Extraction Workers
 Floor Layers, Except Carpet, Wood, and Hard Tiles
 Floor Sanders and Finishers
 Glaziers
 Hazardous Materials Removal Workers
 Helpers, Construction Trades, All Other
 Helpers--Brickmasons, Blockmasons,
 Stonemasons, and Tile and Marble Setters
 Helpers--Carpenters
 Helpers--Electricians
 Helpers--Extraction Workers
 Helpers--Painters, Paperhangers, Plasterers, and
 Stucco Masons
 Helpers--Pipelayers, Plumbers, Pipefitters, and
 Steamfitters
 Helpers--Roofers
 Highway Maintenance Workers
 Insulation Workers, Floor, Ceiling, and Wall
 Insulation Workers, Mechanical
 Mine Cutting and Channeling Machine Operators
 Mining Machine Operators, All Other
 Operating Engineers and Other Construction
 Equipment Operators
 Painters, Construction and Maintenance
 Paperhangers
 Paving, Surfacing, and Tamping Equipment
 Operators
 Pile-Driver Operators
 Pipelayers
 Plasterers and Stucco Masons
 Plumbers, Pipefitters, and Steamfitters
 Rail-Track Laying and Maintenance Equipment
 Operators
 Reinforcing Iron and Rebar Workers

Rock Splitters, Quarry
 Roof Bolters, Mining
 Roofers
 Rotary Drill Operators, Oil and Gas
 Roustabouts, Oil and Gas
 Segmental Pavers
 Septic Tank Servicers and Sewer Pipe Cleaners
 Service Unit Operators, Oil, Gas, and Mining
 Sheet Metal Workers
 Solar Photovoltaic Installers
 Stonemasons
 Structural Iron and Steel Workers
 Tapers
 Terrazzo Workers and Finishers
 Tile and Marble Setters

Education, Training, and Library

Adult Basic and Secondary Education and Literacy
 Teachers and Instructors
 Agricultural Sciences Teachers, Postsecondary
 Anthropology and Archeology Teachers,
 Postsecondary
 Architecture Teachers, Postsecondary
 Archivists
 Area, Ethnic, and Cultural Studies Teachers,
 Postsecondary
 Art, Drama, and Music Teachers, Postsecondary
 Atmospheric, Earth, Marine, and Space Sciences
 Teachers, Postsecondary
 Audio-Visual and Multimedia Collections
 Specialists
 Biological Science Teachers, Postsecondary
 Business Teachers, Postsecondary
 Career/Technical Education Teachers, Middle
 School
 Career/Technical Education Teachers, Secondary
 School
 Chemistry Teachers, Postsecondary
 Communications Teachers, Postsecondary
 Computer Science Teachers, Postsecondary
 Criminal Justice and Law Enforcement Teachers,
 Postsecondary
 Curators
 Economics Teachers, Postsecondary
 Education Teachers, Postsecondary
 Education, Training, and Library Workers, All
 Other
 Elementary School Teachers, Except Special
 Education
 Engineering Teachers, Postsecondary

English Language and Literature Teachers,
 Postsecondary
 Environmental Science Teachers, Postsecondary
 Farm and Home Management Advisors
 Foreign Language and Literature Teachers,
 Postsecondary
 Forestry and Conservation Science Teachers,
 Postsecondary
 Geography Teachers, Postsecondary
 Graduate Teaching Assistants
 Health Specialties Teachers, Postsecondary
 History Teachers, Postsecondary
 Home Economics Teachers, Postsecondary
 Instructional Coordinators
 Kindergarten Teachers, Except Special Education
 Law Teachers, Postsecondary
 Librarians
 Library Science Teachers, Postsecondary
 Library Technicians
 Mathematical Science Teachers, Postsecondary
 Middle School Teachers, Except Special and
 Career/Technical Education
 Museum Technicians and Conservators
 Nursing Instructors and Teachers, Postsecondary
 Philosophy and Religion Teachers, Postsecondary
 Physics Teachers, Postsecondary
 Political Science Teachers, Postsecondary
 Postsecondary Teachers, All Other
 Preschool Teachers, Except Special Education
 Psychology Teachers, Postsecondary
 Recreation and Fitness Studies Teachers,
 Postsecondary
 Secondary School Teachers, Except Special and
 Career/Technical Education
 Self-Enrichment Education Teachers
 Social Sciences Teachers, Postsecondary, All Other
 Social Work Teachers, Postsecondary
 Sociology Teachers, Postsecondary
 Special Education Teachers, All Other
 Special Education Teachers, Kindergarten and
 Elementary School
 Special Education Teachers, Middle School
 Special Education Teachers, Preschool
 Special Education Teachers, Secondary School
 Teacher Assistants
 Teachers and Instructors, All Other
 Vocational Education Teachers, Postsecondary

Farming, Fishing, and Forestry

Agricultural Equipment Operators
 Agricultural Inspectors
 Agricultural Workers, All Other
 Animal Breeders
 Fallers
 Farmworkers and Laborers, Crop, Nursery, and
 Greenhouse
 Farmworkers, Farm, Ranch, and Aquacultural
 Animals
 First-Line Supervisors of Farming, Fishing, and
 Forestry Workers
 Fishers and Related Fishing Workers
 Forest and Conservation Workers
 Graders and Sorters, Agricultural Products
 Hunters and Trappers
 Log Graders and Scalers
 Logging Equipment Operators
 Logging Workers, All Other

Food Preparation and Serving Related

Bartenders
 Chefs and Head Cooks
 Combined Food Preparation and Serving Workers,
 Including Fast Food
 Cooks, All Other
 Cooks, Fast Food
 Cooks, Institution and Cafeteria
 Cooks, Private Household
 Cooks, Restaurant
 Cooks, Short Order
 Counter Attendants, Cafeteria, Food Concession,
 and Coffee Shop
 Dining Room and Cafeteria Attendants and
 Bartender Helpers
 Dishwashers
 First-Line Supervisors of Food Preparation and
 Serving Workers
 Food Preparation Workers
 Food Preparation and Serving Related Workers,
 All Other
 Food Servers, Nonrestaurant
 Hosts and Hostesses, Restaurant, Lounge, and
 Coffee Shop
 Waiters and Waitresses

Healthcare Practitioners and Technical

Anesthesiologists
 Athletic Trainers
 Audiologists

Cardiovascular Technologists and Technicians
 Chiropractors
 Dental Hygienists
 Dentists, All Other Specialists
 Dentists, General
 Diagnostic Medical Sonographers
 Dietetic Technicians
 Dietitians and Nutritionists
 Emergency Medical Technicians and Paramedics
 Exercise Physiologists
 Family and General Practitioners
 Genetic Counselors
 Health Diagnosing and Treating Practitioners, All Other
 Health Technologists and Technicians, All Other
 Healthcare Practitioners and Technical Workers, All Other
 Hearing Aid Specialists
 Internists, General
 Licensed Practical and Licensed Vocational Nurses
 Magnetic Resonance Imaging Technologists
 Medical Records and Health Information Technicians
 Medical and Clinical Laboratory Technicians
 Medical and Clinical Laboratory Technologists
 Nuclear Medicine Technologists
 Nurse Anesthetists
 Nurse Midwives
 Nurse Practitioners
 Obstetricians and Gynecologists
 Occupational Health and Safety Specialists
 Occupational Health and Safety Technicians
 Occupational Therapists
 Ophthalmic Medical Technicians
 Opticians, Dispensing
 Optometrists
 Oral and Maxillofacial Surgeons
 Orthodontists
 Orthotists and Prosthetists
 Pediatricians, General
 Pharmacists
 Pharmacy Technicians
 Physical Therapists
 Physician Assistants
 Physicians and Surgeons, All Other
 Podiatrists
 Prosthodontists
 Psychiatric Technicians
 Psychiatrists
 Radiation Therapists

Radiologic Technologists
 Recreational Therapists
 Registered Nurses
 Respiratory Therapists
 Respiratory Therapy Technicians
 Speech-Language Pathologists
 Surgeons
 Surgical Technologists
 Therapists, All Other
 Veterinarians
 Veterinary Technologists and Technicians

Healthcare Support

Dental Assistants
 Healthcare Support Workers, All Other
 Home Health Aides
 Massage Therapists
 Medical Assistants
 Medical Equipment Preparers
 Medical Transcriptionists
 Nursing Assistants
 Occupational Therapy Aides
 Occupational Therapy Assistants
 Orderlies
 Pharmacy Aides
 Phlebotomists
 Physical Therapist Aides
 Physical Therapist Assistants
 Psychiatric Aides
 Veterinary Assistants and Laboratory Animal Caretakers

Installation, Maintenance, and Repair

Aircraft Mechanics and Service Technicians
 Automotive Body and Related Repairers
 Automotive Glass Installers and Repairers
 Automotive Service Technicians and Mechanics
 Avionics Technicians
 Bicycle Repairers
 Bus and Truck Mechanics and Diesel Engine Specialists
 Camera and Photographic Equipment Repairers
 Coin, Vending, and Amusement Machine Servicers and Repairers
 Commercial Divers
 Computer, Automated Teller, and Office Machine Repairers
 Control and Valve Installers and Repairers, Except Mechanical Door
 Electric Motor, Power Tool, and Related Repairers

Electrical Power-Line Installers and Repairers
 Electrical and Electronics Installers and Repairers,
 Transportation Equipment
 Electrical and Electronics Repairers, Commercial
 and Industrial Equipment
 Electrical and Electronics Repairers, Powerhouse,
 Substation, and Relay
 Electronic Equipment Installers and Repairers,
 Motor Vehicles
 Electronic Home Entertainment Equipment
 Installers and Repairers
 Fabric Menders, Except Garment
 Farm Equipment Mechanics and Service
 Technicians
 First-Line Supervisors of Mechanics, Installers, and
 Repairers
 Heating, Air Conditioning, and Refrigeration
 Mechanics and Installers
 Helpers--Installation, Maintenance, and Repair
 Workers
 Home Appliance Repairers
 Industrial Machinery Mechanics
 Installation, Maintenance, and Repair Workers, All
 Other
 Locksmiths and Safe Repairers
 Maintenance Workers, Machinery
 Maintenance and Repair Workers, General
 Manufactured Building and Mobile Home
 Installers
 Mechanical Door Repairers
 Medical Equipment Repairers
 Millwrights
 Mobile Heavy Equipment Mechanics, Except
 Engines
 Motorboat Mechanics and Service Technicians
 Motorcycle Mechanics
 Musical Instrument Repairers and Tuners
 Outdoor Power Equipment and Other Small
 Engine Mechanics
 Precision Instrument and Equipment Repairers, All
 Other
 Radio, Cellular, and Tower Equipment Installers
 and Repairers
 Rail Car Repairers
 Recreational Vehicle Service Technicians
 Refractory Materials Repairers, Except
 Brickmasons
 Riggers
 Security and Fire Alarm Systems Installers
 Signal and Track Switch Repairers

Telecommunications Equipment Installers and
 Repairers, Except Line Installers
 Telecommunications Line Installers and Repairers
 Tire Repairers and Changers
 Watch Repairers
 Wind Turbine Service Technicians

Legal

Administrative Law Judges, Adjudicators, and
 Hearing Officers
 Arbitrators, Mediators, and Conciliators
 Court Reporters
 Judges, Magistrate Judges, and Magistrates
 Judicial Law Clerks
 Lawyers
 Legal Support Workers, All Other
 Paralegals and Legal Assistants
 Title Examiners, Abstractors, and Searchers

Life, Physical, and Social Science

Agricultural and Food Science Technicians
 Animal Scientists
 Anthropologists and Archeologists
 Astronomers
 Atmospheric and Space Scientists
 Biochemists and Biophysicists
 Biological Scientists, All Other
 Biological Technicians
 Chemical Technicians
 Chemists
 Clinical, Counseling, and School Psychologists
 Conservation Scientists
 Economists
 Environmental Science and Protection
 Technicians, Including Health
 Environmental Scientists and Specialists, Including
 Health
 Epidemiologists
 Food Scientists and Technologists
 Forensic Science Technicians
 Forest and Conservation Technicians
 Foresters
 Geographers
 Geological and Petroleum Technicians
 Geoscientists, Except Hydrologists and
 Geographers
 Historians
 Hydrologists
 Industrial-Organizational Psychologists
 Life Scientists, All Other

Life, Physical, and Social Science Technicians, All Other
 Materials Scientists
 Medical Scientists, Except Epidemiologists
 Microbiologists
 Nuclear Technicians
 Physical Scientists, All Other
 Physicists
 Political Scientists
 Psychologists, All Other
 Social Science Research Assistants
 Social Scientists and Related Workers, All Other
 Sociologists
 Soil and Plant Scientists
 Survey Researchers
 Urban and Regional Planners
 Zoologists and Wildlife Biologists

Management

Administrative Services Managers
 Advertising and Promotions Managers
 Architectural and Engineering Managers
 Chief Executives
 Compensation and Benefits Managers
 Computer and Information Systems Managers
 Construction Managers
 Education Administrators, All Other
 Education Administrators, Elementary and Secondary School
 Education Administrators, Postsecondary
 Education Administrators, Preschool and Childcare Center/Program
 Emergency Management Directors
 Farmers, Ranchers, and Other Agricultural Managers
 Financial Managers
 Food Service Managers
 Funeral Service Managers
 Gaming Managers
 General and Operations Managers
 Human Resources Managers
 Industrial Production Managers
 Legislators
 Lodging Managers
 Managers, All Other
 Marketing Managers
 Medical and Health Services Managers
 Natural Sciences Managers
 Postmasters and Mail Superintendents

Property, Real Estate, and Community Association Managers
 Public Relations and Fundraising Managers
 Purchasing Managers
 Sales Managers
 Social and Community Service Managers
 Training and Development Managers
 Transportation, Storage, and Distribution Managers

Office and Administrative Support

Bill and Account Collectors
 Billing and Posting Clerks
 Bookkeeping, Accounting, and Auditing Clerks
 Brokerage Clerks
 Cargo and Freight Agents
 Communications Equipment Operators, All Other
 Computer Operators
 Correspondence Clerks
 Couriers and Messengers
 Court, Municipal, and License Clerks
 Credit Authorizers, Checkers, and Clerks
 Customer Service Representatives
 Data Entry Keyers
 Desktop Publishers
 Dispatchers, Except Police, Fire, and Ambulance
 Eligibility Interviewers, Government Programs
 Executive Secretaries and Executive Administrative Assistants
 File Clerks
 Financial Clerks, All Other
 First-Line Supervisors of Office and Administrative Support Workers
 Gaming Cage Workers
 Hotel, Motel, and Resort Desk Clerks
 Human Resources Assistants, Except Payroll and Timekeeping
 Information and Record Clerks, All Other
 Insurance Claims and Policy Processing Clerks
 Interviewers, Except Eligibility and Loan
 Legal Secretaries
 Library Assistants, Clerical
 Loan Interviewers and Clerks
 Mail Clerks and Mail Machine Operators, Except Postal Service
 Medical Secretaries
 Meter Readers, Utilities
 New Accounts Clerks
 Office Clerks, General
 Office Machine Operators, Except Computer

Office and Administrative Support Workers, All Other
 Order Clerks
 Payroll and Timekeeping Clerks
 Police, Fire, and Ambulance Dispatchers
 Postal Service Clerks
 Postal Service Mail Carriers
 Postal Service Mail Sorters, Processors, and Processing Machine Operators
 Procurement Clerks
 Production, Planning, and Expediting Clerks
 Proofreaders and Copy Markers
 Receptionists and Information Clerks
 Reservation and Transportation Ticket Agents and Travel Clerks
 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
 Shipping, Receiving, and Traffic Clerks
 Statistical Assistants
 Stock Clerks and Order Fillers
 Switchboard Operators, Including Answering Service
 Telephone Operators
 Tellers
 Weighers, Measurers, Checkers, and Samplers, Recordkeeping

Word Processors and Typists

Personal Care and Service
 Amusement and Recreation Attendants
 Animal Trainers
 Baggage Porters and Bellhops
 Barbers
 Childcare Workers
 Concierges
 Costume Attendants
 Embalmers
 Entertainment Attendants and Related Workers, All Other
 First-Line Supervisors of Personal Service Workers
 Fitness Trainers and Aerobics Instructors
 Funeral Attendants
 Gaming Dealers
 Gaming Service Workers, All Other
 Gaming Supervisors
 Gaming and Sports Book Writers and Runners
 Hairdressers, Hairstylists, and Cosmetologists
 Locker Room, Coatroom, and Dressing Room Attendants
 Makeup Artists, Theatrical and Performance

Manicurists and Pedicurists
 Morticians, Undertakers, and Funeral Directors
 Motion Picture Projectionists
 Nonfarm Animal Caretakers
 Personal Care Aides
 Personal Care and Service Workers, All Other
 Recreation Workers
 Residential Advisors
 Shampooers
 Skincare Specialists
 Slot Supervisors
 Tour Guides and Escorts
 Travel Guides
 Ushers, Lobby Attendants, and Ticket Takers

Production

Adhesive Bonding Machine Operators and Tenders
 Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
 Assemblers and Fabricators, All Other
 Bakers
 Butchers and Meat Cutters
 Cabinetmakers and Bench Carpenters
 Chemical Equipment Operators and Tenders
 Chemical Plant and System Operators
 Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders
 Coating, Painting, and Spraying Machine Setters, Operators, and Tenders
 Coil Winders, Tapers, and Finishers
 Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
 Computer-Controlled Machine Tool Operators, Metal and Plastic
 Cooling and Freezing Equipment Operators and Tenders
 Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders
 Cutters and Trimmers, Hand
 Cutting and Slicing Machine Setters, Operators, and Tenders
 Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic
 Dental Laboratory Technicians
 Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic
 Electrical and Electronic Equipment Assemblers
 Electromechanical Equipment Assemblers
 Engine and Other Machine Assemblers

Etchers and Engravers
 Extruding and Drawing Machine Setters,
 Operators, and Tenders, Metal and Plastic
 Extruding and Forming Machine Setters,
 Operators, and Tenders, Synthetic and Glass
 Fibers
 Extruding, Forming, Pressing, and Compacting
 Machine Setters, Operators, and Tenders
 Fabric and Apparel Patternmakers
 Fiberglass Laminators and Fabricators
 First-Line Supervisors of Production and Operating
 Workers
 Food Batchmakers
 Food Cooking Machine Operators and Tenders
 Food Processing Workers, All Other
 Food and Tobacco Roasting, Baking, and Drying
 Machine Operators and Tenders
 Forging Machine Setters, Operators, and Tenders,
 Metal and Plastic
 Foundry Mold and Coremakers
 Furnace, Kiln, Oven, Drier, and Kettle Operators
 and Tenders
 Furniture Finishers
 Gas Plant Operators
 Grinding and Polishing Workers, Hand
 Grinding, Lapping, Polishing, and Buffing Machine
 Tool Setters, Operators, and Tenders, Metal and
 Plastic
 Heat Treating Equipment Setters, Operators, and
 Tenders, Metal and Plastic
 Helpers--Production Workers
 Inspectors, Testers, Sorters, Samplers, and
 Weighers
 Jewelers and Precious Stone and Metal Workers
 Lathe and Turning Machine Tool Setters,
 Operators, and Tenders, Metal and Plastic
 Laundry and Dry-Cleaning Workers
 Layout Workers, Metal and Plastic
 Machinists
 Meat, Poultry, and Fish Cutters and Trimmers
 Medical Appliance Technicians
 Metal Workers and Plastic Workers, All Other
 Metal-Refining Furnace Operators and Tenders
 Milling and Planing Machine Setters, Operators,
 and Tenders, Metal and Plastic
 Mixing and Blending Machine Setters, Operators,
 and Tenders
 Model Makers, Metal and Plastic
 Model Makers, Wood

Molders, Shapers, and Casters, Except Metal and
 Plastic
 Molding, Coremaking, and Casting Machine
 Setters, Operators, and Tenders, Metal and
 Plastic
 Multiple Machine Tool Setters, Operators, and
 Tenders, Metal and Plastic
 Nuclear Power Reactor Operators
 Ophthalmic Laboratory Technicians
 Packaging and Filling Machine Operators and
 Tenders
 Painters, Transportation Equipment
 Painting, Coating, and Decorating Workers
 Paper Goods Machine Setters, Operators, and
 Tenders
 Patternmakers, Metal and Plastic
 Patternmakers, Wood
 Petroleum Pump System Operators, Refinery
 Operators, and Gaugers
 Photographic Process Workers and Processing
 Machine Operators
 Plant and System Operators, All Other
 Plating and Coating Machine Setters, Operators,
 and Tenders, Metal and Plastic
 Pourers and Casters, Metal
 Power Distributors and Dispatchers
 Power Plant Operators
 Prepress Technicians and Workers
 Pressers, Textile, Garment, and Related Materials
 Print Binding and Finishing Workers
 Printing Press Operators
 Production Workers, All Other
 Rolling Machine Setters, Operators, and Tenders,
 Metal and Plastic
 Sawing Machine Setters, Operators, and Tenders,
 Wood
 Semiconductor Processors
 Separating, Filtering, Clarifying, Precipitating, and
 Still Machine Setters, Operators, and Tenders
 Sewers, Hand
 Sewing Machine Operators
 Shoe Machine Operators and Tenders
 Shoe and Leather Workers and Repairers
 Slaughterers and Meat Packers
 Stationary Engineers and Boiler Operators
 Structural Metal Fabricators and Fitters
 Tailors, Dressmakers, and Custom Sewers
 Team Assemblers
 Textile Bleaching and Dyeing Machine Operators
 and Tenders

Textile Cutting Machine Setters, Operators, and Tenders
 Textile Knitting and Weaving Machine Setters, Operators, and Tenders
 Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders
 Textile, Apparel, and Furnishings Workers, All Other
 Timing Device Assemblers and Adjusters
 Tire Builders
 Tool Grinders, Filers, and Sharpeners
 Tool and Die Makers
 Upholsterers
 Water and Wastewater Treatment Plant and System Operators
 Welders, Cutters, Solderers, and Brazers
 Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders
 Woodworkers, All Other
 Woodworking Machine Setters, Operators, and Tenders, Except Sawing

Protective Service

Animal Control Workers
 Bailiffs
 Correctional Officers and Jailers
 Crossing Guards
 Detectives and Criminal Investigators
 Fire Inspectors and Investigators
 Firefighters
 First-Line Supervisors of Correctional Officers
 First-Line Supervisors of Fire Fighting and Prevention Workers
 First-Line Supervisors of Police and Detectives
 First-Line Supervisors of Protective Service Workers, All Other
 Fish and Game Wardens
 Forest Fire Inspectors and Prevention Specialists
 Gaming Surveillance Officers and Gaming Investigators
 Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers
 Parking Enforcement Workers
 Police and Sheriff's Patrol Officers
 Private Detectives and Investigators
 Protective Service Workers, All Other
 Security Guards
 Transit and Railroad Police
 Transportation Security Screeners

Sales and Related

Advertising Sales Agents
 Cashiers
 Counter and Rental Clerks
 Demonstrators and Product Promoters
 Door-to-Door Sales Workers, News and Street Vendors, and Related Workers
 First-Line Supervisors of Non-Retail Sales Workers
 First-Line Supervisors of Retail Sales Workers
 Gaming Change Persons and Booth Cashiers
 Insurance Sales Agents
 Models
 Parts Salespersons
 Real Estate Brokers
 Real Estate Sales Agents
 Retail Salespersons
 Sales Engineers
 Sales Representatives, Services, All Other
 Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
 Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
 Sales and Related Workers, All Other
 Securities, Commodities, and Financial Services Sales Agents
 Telemarketers
 Travel Agents

Transportation and Material Moving

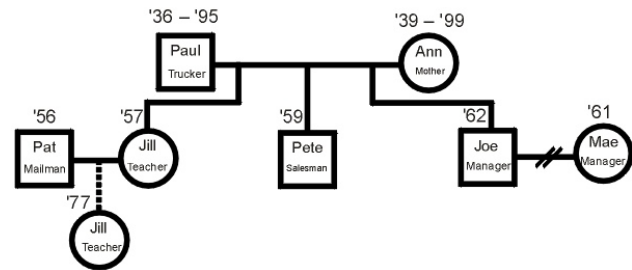
Air Traffic Controllers
 Aircraft Cargo Handling Supervisors
 Airfield Operations Specialists
 Airline Pilots, Copilots, and Flight Engineers
 Ambulance Drivers and Attendants, Except Emergency Medical Technicians
 Automotive and Watercraft Service Attendants
 Bridge and Lock Tenders
 Bus Drivers, School or Special Client
 Bus Drivers, Transit and Intercity
 Captains, Mates, and Pilots of Water Vessels
 Cleaners of Vehicles and Equipment
 Commercial Pilots
 Conveyor Operators and Tenders
 Crane and Tower Operators
 Dredge Operators
 Driver/Sales Workers
 Excavating and Loading Machine and Dragline Operators

First-Line Supervisors of Helpers, Laborers, and
Material Movers, Hand
First-Line Supervisors of Transportation and
Material-Moving Machine and Vehicle Operators
Flight Attendants
Gas Compressor and Gas Pumping Station
Operators
Heavy and Tractor-Trailer Truck Drivers
Hoist and Winch Operators
Industrial Truck and Tractor Operators
Laborers and Freight, Stock, and Material Movers,
Hand
Light Truck or Delivery Services Drivers
Loading Machine Operators, Underground Mining
Locomotive Engineers
Locomotive Firers
Machine Feeders and Offbearers
Material Moving Workers, All Other
Mine Shuttle Car Operators
Motor Vehicle Operators, All Other
Motorboat Operators
Packers and Packagers, Hand
Parking Lot Attendants
Pump Operators, Except Wellhead Pumps
Rail Transportation Workers, All Other
Rail Yard Engineers, Dinkey Operators, and
Hostlers
Railroad Brake, Signal, and Switch Operators
Railroad Conductors and Yardmasters
Refuse and Recyclable Material Collectors
Sailors and Marine Oilers
Ship Engineers
Subway and Streetcar Operators
Tank Car, Truck, and Ship Loaders
Taxi Drivers and Chauffeurs
Traffic Technicians
Transportation Attendants, Except Flight
Attendants
Transportation Inspectors
Transportation Workers, All Other
Wellhead Pumps

Handout 2—Genogram Analysis

Some basics of genograms:

- Circles represent women, squares represent men.
- Link marriages with horizontal lines; offspring with vertical lines; twins with diagonal lines.
- Solid lines denote direct family relationships; dashed lines indicate adoptions.
- Slashes through a line indicate a divorce.
- Subsequent marriage/partnerships are indicated by a line connected to the other side of a person.
- Deaths are shown by an “X” in the circle or square, with the death year written beside the birth year. Showing a pair of years implies the person is deceased.
- Relevant information is written in or near each individual’s shape, such as:
 - Name
 - Birth year (and death year, if applicable)
 - Highest education level
 - Occupations, skills, talents
 - Optional: Vocational attitudes and values



Using the completed genogram, a student should reflect on each family member’s attitudes by completing sentences like the following (or others provided by the instructor) for each person:

1. The kind of work I like to do is...
2. Money is ...
3. To be successful means ...
4. To be a good person means ...
5. My advice to you about work is ...

Finally, ask them the following questions about their genograms:

1. What was easy or difficult about this task?
2. How would you describe your family’s educational experience?
3. How would you describe your family’s work experience?
4. What patterns of occupations/skills/attitudes do you see?
5. What behaviors and attitudes were reinforced for males? Females?
6. How do your education/career aspirations fit in with your family history in these areas?
7. What was your family’s message regarding your career choice?
8. Do any family members have unfulfilled goals, aspirations, or fantasies?
9. What, if any, *should’s* or *ought to’s* did you find?
10. Do you see anything that helps you better understand yourself or a family member?
11. What surprises did you discover?
12. Is there a family member or close friend/mentor you most want to emulate? What draws you to that person/career?
13. If you become what these people want you to become, will you be happy?
14. What values/interests/attitudes do you seem to have “inherited” from your family?

Group Reflection Questions

This activity is designed to increase a student's career awareness. During this activity, many students will encounter new job titles and careers that they have never before considered. Encourage students to do a quick internet search of those job titles and identify the typical aptitudes of the job, educational requirements, geographic limitations, financial pros and cons, and so forth, for one or two new occupations.

- What five new job titles in your preferred career area did you discover that you weren't familiar with before doing this activity?
- Which ones offer the most exciting opportunities?
- Which job title did you need to research to understand what it was?

If this is a student's first career genogram, they are likely to see patterns not considered before. They should learn that many attitudes, aptitudes, and even abilities can be transmitted from relatives, especially their parents.

- With how many (if any) of your past and present relatives do you share a common interest in a hobby or career?
- What is a common thread that seems to weave through past generations and have an impact on the types of careers chosen?
- How possible is it to break out of the pattern of your past family members' typical career choices? What would you have to do differently?

Encourage students to share with each other the career areas that seem to weave through their relatives and families. Be sure that students understand that career surveys and genograms should not be perceived as limiting career choices. Instead, genograms can help reveal the job characteristics they might look for in a satisfying career.

ACTIVITY: OBTAINING AND MAINTAINING CREDENTIALS

Instructor Preparation

An increasing number of jobs today require college degrees. A degree, however, isn't the only kind of credential required. Begin this activity by asking students to think about credentials that people they know might have. Examples might be: My doctor and dentist have diplomas on their office walls that show they graduated from medical or dental school and show any specialty areas and honors that they achieved. The person who cuts my hair has a framed license at his work station that shows he is licensed by the state. My uncle has a commercial license to drive semis to transport goods across the country. My friend's mom is a journeyman electrician. My brother has top level security clearance.

In this activity, students will learn about different types of credentials that may be available in their chosen career pathway and the requirements for obtaining and maintaining those professional credentials. Examinations and/or demonstration of skill competency may be required. To get a sense of the range of credentialing available, have students visit the following sites or sites that are immediately relevant to their career interests. Keep in mind that while many professional and industrial organizations offer industry certifications, actual licensure may be determined on a state-by-state basis.

- National Council of State Boards of Nursing <https://www.ncsbn.org/nclex.htm>
- Cisco (IT) certifications <http://www.cisco.com/web/learning/certifications/index.html>
- North Carolina Department of Agriculture and Consumer Services (agriculture license and permit information) <http://www.ncagr.gov/hm/license.htm>
- North Carolina Department of Public Instruction (teaching licenses) <http://www.dpi.state.nc.us/licensure/>

In career and technical education classes, students will probably have already chosen a career cluster, but students in academic classes may still be undecided. Allow students to choose career clusters and career pathways within the clusters that interest them for this activity.

Objectives

Students will:

1. Choose a career cluster and identify three to five possible careers in that cluster.
2. Examine and list the licensing, certification, and credentialing requirements at the national, state, and local levels for obtaining and maintaining compliance with industry requirements.
3. Describe the benefits to an employee of membership in a professional organization.
4. To plan for continuing education and training, examine requirements for career advancement.
5. Research professional development opportunities needed to stay current on relevant trends and information within the cluster.

Materials

- Computers with internet access
- Handout—Sixteen Career Clusters and Their Pathways

- *North Carolina Careers: Career Clusters Guide* available at http://www.nccommunitycolleges.edu/sites/default/files/pa-news-files/2015_nc_career_clusters_guide_web_0.pdf (The document is rather long so you may want to print only a few copies of each of the pathways rather than the entire guide. Another option is to allow students to view the cluster that interests them online.)

Activity Guidelines

Begin this activity by asking students what credentials are and what it means to have credentials. Discuss different types of credentials and the fact that some are required and others are voluntary.

- Have students select a career cluster and pathway(s) from the handout, *Sixteen Career Clusters and Their Pathways*.
- Refer them to the *North Carolina Careers: Career Clusters Guide* or to the handout, *Occupational Profiles from U. S. Department of Labor by Cluster*, from the previous activity in this module, and ask them to identify 3-5 specific careers in the career pathway(s) selected.
- For each of the careers, have students identify:
 - the entry-level requirements for the job;
 - credentials required at the national, state, and local levels to maintain compliance with industry requirements;
 - additional voluntary certifications or specializations;
 - occupational regulatory agencies or organizations; and
 - requirements for maintaining the credentials (e.g. requirements for continuing education, acceptability of online coursework).
- For each of the careers students identified above, ask them to research and list professional organizations available for employees in that field. They should visit the website for at least one of the organizations to find the benefits of belonging to that organization.
 - Does the organization provide credentials of any type?
 - Does it publish a journal?
 - Does it offer online classes or workshops to provide training on specific topics related to the career?
 - Does it have local, state, regional, or national meetings or conferences?
 - How much does it cost to become a member of the organization?
 - What are the requirements for membership?

Group Reflection Questions

Discuss the following questions with your students:

- Do you have a credential of any kind that is necessary for a current job or that was necessary for a previous job? What is it? What were the requirements to obtain it? How often do you need to be recertified? How is that done?
- As a consumer, do credentials give you more confidence in the people who hold them?
- Many credentials and licenses require continuing education and/or retesting to maintain the credential as opposed to simply having a diploma which shows completion of a given course of study. Why do you think this is so?
- If working in a field that offers voluntary credentials, would you seek to obtain the credential? Why?

Handout—Sixteen Career Clusters and Their Pathways

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The sixteen Career Clusters provide an organizing tool for schools, small learning communities, academies, and magnet schools

Agriculture, Food &

Natural Resources

- Food Products and Processing Systems
- Plant Systems
- Animal Systems
- Power, Structural & Technical Systems
- Natural Resources Systems
- Environmental Service Systems
- Agribusiness Systems

Architecture and Construction

- Design/Pre-Construction
- Construction
- Maintenance/Operations

Arts, Audio/Video Technology and Communications

- Audio and Video Technology and Film
- Printing Technology
- Visual Arts
- Performing Arts
- Journalism and Broadcasting
- Telecommunications

Business Management and Administration

- General Management
- Business Information Management
- Human Resources Management
- Operations Management
- Administrative Support

Education and Training

- Administration and Administrative Support
- Professional Support Services
- Teaching/Training

Finance

- Securities and Investments
- Business Finance
- Accounting
- Insurance
- Banking Services

Government and Public Administration

- Governance
- National Security
- Foreign Service
- Planning
- Revenue and Taxation
- Regulation
- Public Management and Administration

Health Science

- Therapeutic Services
- Diagnostic Services
- Health Informatics
- Support Services
- Biotechnology Research and Development

Hospitality and Tourism

- Restaurants and Food/Beverage Services
- Lodging
- Travel and Tourism
- Recreation, Amusements and Attractions

Human Services

- Early Childhood Development and Services
- Counseling and Mental Health Services
- Family and Community Services
- Personal Care Services
- Consumer Services

Information Technology

- Network Systems
- Information Support and Services
- Web and Digital Communications
- Programming and Software Development

Law, Public Safety, Corrections and Security

- Correction Services
- Emergency and Fire Management Services
- Security and Protective Services
- Law Enforcement Services
- Legal Services

Manufacturing

- Production
- Manufacturing Production Process Development
- Maintenance, Installation and Repair
- Quality Assurance
- Logistics and Inventory Control
- Health, Safety and Environmental Assurance

Marketing

- Marketing Management
- Professional Sales
- Merchandising
- Marketing Communications
- Marketing Research

Science, Technology,

Engineering and Mathematics

- Engineering and Technology
- Science and Math

Transportation, Distribution and Logistics

- Transportation Operations
- Logistics Planning and Management Services
- Warehousing and Distribution Center Operations
- Facility and Mobile Equipment Maintenance
- Transportation Systems/Infrastructure Planning, Management and Regulation
- Health, Safety and Environmental Management
- Sales and Service

ACTIVITY: PREPARING FOR CAREER TRANSITIONS

Instructor Preparation

Many times people prepare for a first job by going to school or obtaining credentials, but don't plan beyond that first job. They may have no plan for moving ahead in a career or what to do if that job ceases to be available or they are unable to work at that job. Many may think that having a job automatically leads to having more responsibility and increased wages over time. This lesson discusses the need to prepare for career transitions.

For most people an entry-level job is not the ultimate goal. In the first part of this activity students will plot a possible career path from where they are currently, whether already in the workforce or not yet working, to a first job in the chosen career cluster. They will learn to plan for advancement and will recognize characteristics noticed by managers when considering promotion of current employees. Finally, students will learn that although life sometimes throws a roadblock in the way to the chosen career, they can still find a satisfying career using skills and knowledge they already possess.

The last section of this lesson may be the most important. When an individual has worked hard preparing for his or her dream job and done everything "right," it can be difficult to deal with roadblocks and detours. Consider an athlete whose dream job is to be successful in professional sports. What will he/she do when, after a successful rookie year in the pros, he/she is severely injured in an accident and can never play that sport again? How might that athlete find a job where knowledge of the game and skills can be used? Ask students what careers might be open to that person. Perhaps it is in team management, as a sportscaster or sports reporter, or maybe even as a coach. For any of these alternate careers, the former athlete may have a knowledge or skills gap and need to look for ways to overcome that gap before transitioning to a new position.

Sometimes people are laid off when the company they work for is sold, goes out of business, or the entire industry experiences a downsizing because of economic conditions. What are some options for workers who have lost jobs?

Other times career choices change voluntarily because something else becomes more important. Perhaps an employee gets married and has a child. Her current job requires being away from home much of the year but she wants to spend more time at home. This scenario might apply to those who work for a cruise line, do research in distant countries, have dangerous jobs that put them in life-threatening situations, or work on pipelines and offshore oil derricks. Being away from home (or in danger) may put a strain on a marriage and missing out on watching a child grow up may feel like too much of a sacrifice to continue in that line of work. Where could she turn to find other satisfying work that makes use of her skills and knowledge and also allows her to work closer to home? Again, have students brainstorm alternate careers where the person could use similar skills and knowledge. For example, the person working for the cruise line might be able to find a job in the corporate offices that would allow him to continue to work in a hospitality and tourism related career while staying at a home base and traveling less often. Depending on his position on the cruise ship, he could also transition to other hospitality and tourism jobs or, if part of the crew operating the ship, into other engineering-type jobs. Workers on pipelines or oil derricks might find work at refineries, power stations, or public utilities.

Finally, some people retire from their primary career and decide they still want or need to work. Many may choose something in a totally different career cluster or something that is part-time or has more flexible hours. They may be motivated to give back something to their community or to help others be successful. Some may become teachers or instructors. Some may become consultants or start a small business. Discuss the benefits of remaining productive after retirement with your students.

Objectives

Students will:

1. Create a career path to a desired career.
2. Investigate what it will take to advance to that career.
3. Investigate alternative career paths for which their knowledge and skills equip them.

Materials

- Internet with computer access
- Student handout

Activity Guidelines

Distribute the handout describing the assignment(s). If there is not time for students to complete all of the activities, indicate which ones they should complete.

- Discuss the information provided in the instructor preparation section with students and describe what they will be doing in this activity.
- Have students take a closer look at their desired career goals and outline how they might achieve them. They can use whatever resources they find on the internet and/or the career pathways handout from the earlier activity in this module.
- Allow students to research what it takes to advance in a position and why simply doing a job well is not enough to earn a promotion.
- Finally, have students investigate transitioning from one career to another.

Group Reflection Questions

Discuss the following questions with students.

- Do you know of anyone who has lost a job or has changed careers for any reason? Without using names, how did they handle the situation? Do you think that they handled it well or do you think they struggled? What other alternatives might they have tried?
- Have you ever thought about what you might do if your dream job was not available to you? What are some alternate career paths you might follow?
- Why do you think that just doing excellent work in completing your job duties won't automatically win you a promotion? What other characteristics contribute to consideration for promotion?

Handout

Part 1: Create a Career Plan

Very seldom is a first job the one you want for the rest of your life. In this activity, you will identify your dream job and then create a plan for getting to that dream job. Using online career information and career cluster guides such as the North Carolina Careers: Career Cluster Guide

(http://www.nccommunitycolleges.edu/sites/default/files/pa-news-files/2015_nc_career_clusters_guide_web_0.pdf) outline a plan for reaching your dream job. Complete the following steps:

- Identify your desired career and identify the career cluster in which it falls.
- Identify career pathway within the cluster in which the career falls.
- Identify entry-level positions in the career clusters/pathways. What skills and education must you possess to obtain those positions? Choose one to begin your pathway. If you are already working at a job within your career pathway, list the positions that you have held leading to where you are now.
- Identify at least three intermediate jobs between the entry level and desired positions that are logical transitions. List requirements for each of these jobs. Estimate how long you will need to remain at each job to gain the experience, knowledge, and skills required to move to the next position. Also list the requirements for your dream position.
- Draw a career path timeline plotting approximate dates to move to each position. On a separate page describe how to obtain the additional training, credentials, experience for the next position while still at a lower position.
- Share your plan with other students. Ask for suggestions to improve your plan or for alternative ideas. Review other students' plans to see if there is something that they may not have thought of or have left out of their plan.

Part 2: Preparing for Promotions

Promotions are not necessarily automatic. Doing an assigned job well does not necessarily mean you will move up in the company. In this part of the activity, research ways to become noticed (in a good way) that might help you progress in your organization.

- Go online and search for “earning a promotion,” or similar terms, and find numerous articles on things you can do to become more “promotable” in the eyes of an employer. Read at least three articles and list the advice from each article briefly. Combine with suggestions from articles researched by others in your class to get a master list of key suggestions. Tally how many different sources suggested the same strategy. When at your job, keep those suggestions in mind to advance career goals and plans.
- Research and define lateral move and lateral promotion. What are the advantages and disadvantages of each?

Part 3: Dealing with Career Roadblocks—What do I do when life happens?

Sometimes we are faced with life situations that require changing our career goals. Examples might include:

- Changes in family situations such as marriage, divorce, meeting childrens' needs, or caring for aging or ill parents or other loved ones
- Personal health issues or disabling injuries, and certain medical conditions that preclude working in a chosen field
- Economic downturns that create widespread layoffs, company failures, and so forth, resulting in job loss

These situations may require you to change career goals or at least put them on hold until a situation changes. A sudden job loss is particularly devastating. This part of the activity will help you identify ways to deal with job transitions and/or reentry into the workplace.

Be prepared. Maintain a current résumé and update it at least yearly. In addition, maintain a file with articles, letters, and other tangible evidence of achievements, commendations, and documentation of education or continuing education and other credentials. If something happens and you need to apply for a job immediately, you will have available all of the information needed to complete applications and create a portfolio.

Another action to take when you need or want to change jobs is to complete a SWOT Analysis to identify Strengths, Weaknesses, Opportunities, and Threats. These are useful in planning job transitions. Many career search tools ask for this information when trying to match your existing knowledge, experience and skills to the requirements of available jobs.

The following activities are intended to help you identify resources that are available to help in career transitions:

- If you have never completed a SWOT analysis, read about them and use the provided template to prepare one for yourself at http://www.mindtools.com/pages/article/newTMC_05_1.htm.
- Another resource is O*NET, which matches job descriptions and task lists to current occupations and identifies jobs that use similar skills. This may also identify possible gaps between your current skill set and that of other occupations. An example is found at <http://www.myskillsmyfuture.org/>. Choose one of the jobs from your career plan and enter into the database. Look at the resulting list of careers that use similar skill sets. Choose one of those careers and look at the gap analysis to identify what you might need to do to close the gaps and become qualified for that position. In a class discussion, or with a partner, discuss what was appealing about the career options given and what aspects would give you the most problems.
- A more general skills profiler such as <http://www.careerinfo.net/org/skills/default.aspx?nodeid=20> allows searching based on skills or previous job tasks.
- Outline a plan to prepare for unexpected roadblocks in a career choice. Share with the class or in a small group. As others describe their plans, adopt some of their good ideas to incorporate into your plan.
- Identify additional ways to find out about different jobs and get career counseling, e.g. career fairs, career centers at colleges, government agencies, employment centers, headhunters, networking, classified ads, and online recruitment resources. List pros and cons of the services, whether they are fee-based or free, what services are provided, the area/region served, and any other information that might be useful to a job seeker.

ACTIVITY: LEARNING FROM HOBBIES

Instructor Preparation

Hobbies can improve both personal well-being and academic success. Few will dispute the health benefits that hobbies can impart, as they provide a balance to the stress typically coming from one's family, career, and other responsibilities of life. But potential academic and career benefits are often overlooked.

Among the many benefits from hobbies, they:

- Give opportunity for exploring other areas of interest, possibly leading to expanded education, training, or even a career change.
- Provide incentive and opportunity to apply or even discover one's creativity and talents, without the pressure of work expectations.
- Open up a new world of social opportunities with others who share an interest in similar hobby area(s). Such interactions often open doors for career moves or promotions.
- Boost self-image and self-confidence to help find, practice, improve, and be recognized for "something you're good at."

Hobbies can play an important role in almost any career area.

- In an Animal Husbandry course, for example, there would probably be a high percentage of students who are attracted to gardening and outdoor activities. They will likely be interested in occupations associated with the Agriculture, Food, and Natural resources cluster.
- Students in a Java Programming course are likely intrigued and interested in computers and electronics. They may be attracted to careers in the Information Technology or Science, Technology, Engineering, and Mathematics clusters.
- If using this activity in a Hospitality and Tourism course, the students may be attracted to careers involving geography, languages, and socially engaging occupations. They may find part-time jobs at amusement parks, summer camping grounds, local parks and recreation agencies, or cruise ships appealing.

Objectives

Students will:

1. Identify at least one extra-curricular area of interest (hobby) requiring some skill or training that is related to their identified career interest area.
2. Identify learning opportunities associated with one or more hobbies.
3. Select and research a hobby and report to the class one or more new facts or features of a hobby.

Materials

- Handout—List of Hobbies
- Computer with Internet for research

Activity Guidelines

Distribute the handout included with this activity that lists over 300 hobbies. Direct each student to scan this list (or add to it if they observe a notable omission) and perform the following tasks.

1. **New hobbies.** Find at least three hobbies that are new to you and might be of interest. For each of these new hobbies:
 - a. Search the internet to learn what the hobby entails.
 - b. Write a paragraph or two that describes the hobby.
 - c. Find and include one or two photos, videos, or illustrations that convey the interest participants have in this hobby. You could use these in a brief presentation.
4. **Career-related hobbies.** Identify three hobbies related to your preferred career area. For each hobby selected:
 - a. Identify the knowledge, skills, or training required to begin this hobby, and what skills would likely be gained by participating in it.
 - b. Describe what sort of individual would typically be found practicing such a hobby. For some hobbies, this list could be very narrow; for others it might be very broad (anyone can join).
 - c. Describe the benefits you might expect to gain by being involved in each of the three hobbies.
 - d. Identify the type(s) of equipment required to participate in this hobby. For example, rollerblading requires a pair of rollerblades; bird-watching requires a pair of binoculars, and so forth.
 - e. Estimate the entry cost and the annual cost to continue in this hobby. (An approximate range of values" is sufficient, i.e., is the start-up cost \$10 or \$100 or \$1000?)
5. **OPTIONAL: Local interest.** For one of the three career-related hobbies chosen, find a local group practicing this hobby. If possible, meet with the group, introduce yourself to an online hobbyists' forum, or attend a regularly scheduled meeting to learn about a) the typical activities this group , b) the jobs of some of the group, and how this hobby relates to their occupations, and c) the requirements (if any) for becoming part of the group. Report your findings to the class.
6. For one of the three career-related hobbies chosen, identify two or more educational opportunities in your area that could be used to improve skills and knowledge related to that hobby. Consider such things as night courses, online courses from colleges or universities, online tutorials and videos, mentors or master teachers, classes provided by clubs or organizations, conferences, journals and training manuals, .
7. **OPTIONAL:** Deliver a 5- to 10-minute entertaining presentation for your fellow students about your findings for one of the hobbies you selected. Try to include the answers to the above assigned questions, but also include some photos or videos to better convey the excitement surrounding this hobby.

Handout—List of Hobbies

Acting	Bus spotting	Engraving
Agriculture show	Business card collecting	Equestrianism
Air sports	Butterfly collecting/watching	Falconry
Aircraft spotting	Cake making and decorating	Fantasy football
Amateur astronomy	Calendar collecting	Fencing
Amateur geology	Camera collecting	Figure skating
Amateur radio	Camping	Film making
Amateur theatre	Candle-making	Fishing
Animal breeding	Canning	Fishkeeping
Antique collecting	Canoeing	Floral arranging
Antiquing furniture	Casting (miniatures)	Fly fishing
Antiquities	CB radio	Fly tying (for fly fishing)
Aquarium	Chainmail making	Footbag
Archery	Cheerleading	Fossil hunting/collecting
Arrowhead collecting	Chess	Fountain pen collecting
Art collecting	Classic video game collecting	Four wheeling
Astrology	Climbing	Free running
Astronomy	Clock collecting	Gaming
Astrophotography	Coaster collecting	Gardening (flowers)
Audiophilia	Coin collecting	Gardening (food)
Automobile racing	College football	Genealogy
Backpacking	Color guard	Geocaching
Badminton	Coloring	Ghosthunting
Baking	Comic book collecting	Glass blowing
Ballet dancing	Computer programming	Go karts
Band (music)	Cooking	Gold panning
Barbecue and grilling	Creative writing	Golfing
Baseball/softball	Cricket	Gun collecting
Basket weaving	Crochet	Gunsmithing
Basketball	Currency collecting	Gymnastics
Baton twirling	Cycling	Handball
Beadwork and beading	Dance	Hang gliding
Beekeeping	Darkroom	Herpetoculture
Belly dancing	Darts	Hiking
Billiards	Decoupage	Home automation
Bird watching	Dioramas	Home brewing
Blacksmithing	Dioramas (make)	Home movies
Board sports	Disc golf	Home theatre
Body building	Diving	Hooping
Bonsai	Dog breeding	Horse riding
Book collecting	Dog sport	Hot air ballooning
Book making	Dog training	Hothouse gardening
Bottle collecting	Doll making	Hummel collecting
Bottles and can collecting	Dollhouses (make)	Hunting (game animals)
Bouldering	Drawing	Hydroponics
Bowling	Driving	Ice hockey
Boxing	Electronics	Inline skating
Bridge	Element collecting	Insect collecting
Building circuits	Embroidery	Jewelry making
Bungee jumping	Enamels	Jigsaw puzzles

Jogging	Pinball	Stained glass
Journaling/writing	Poetry reading	Stamp collecting
Judo	Portraiture photos	Stop motion animation
Juggling	Postcard collecting	Storm spotting/chasing
Karaoke	Poster collecting	Storytelling
Kart racing	Pottery	Surfing
Kayaking	Programming	Swimming
Knapping	Puppet theatre	Sword collecting
Knife collecting	Quilting	Table football
Knitting	Racquetball	Table tennis
Lapidary	Radio-controlled airplanes	Tai chi
Leaf collecting and pressing	Radio-controlled boats	Target shooting
Leather crafting	Radio-controlled cars	Taxidermy
Machining	Radio-controlled helicopters	Telescope making
Magic and sleight of hand	Radio-controlled racing	Tennis
Map (make)	Rafting/canoeing	Terrariums
Martial arts	Reading	Tie dyeing
Matchbox collecting	Record collecting	Tombstone rubbing
Memorabilia collecting	Reenactment (wars)	Tour skating
Metal detecting/treasure hunting	Restoring antiques	Toy collecting
Meteorology	Robotics	Travel
Microscopy	Rock climbing	Treasure hunting
Mineral collecting	Rock stacking	Urban exploration
Miniature figure collecting	Rocks & mineral collecting	Vehicle restoration
Model aircraft	Roller derby	Videophilia (home theater)
Model figures	Roller skating	Vintage collecting
Model railroads	Rugby league football	Vivariums
Model rocketry	Running	Volleyball
Model ships	Sailing	Walking sticks (making)
Model train collecting	Sand castle building	Walking sticks collecting
Mountain biking	Scale model collecting	Water sports
Mountain climbing	Scrapbooking	Weaving
Movie collecting	Scuba diving	Wine collecting
Music composing	Sculling or rowing	Wine tasting
Musical instrument (learn/play)	Sculpting	Wire jewelry making
Musical instrument (make)	Seaglass collecting	Wood carving
Musical work collecting	Seashell collecting	Woodworking
Nature walking	Sewing	Writing
Nordic skating	Shadow boxes	Yoyoing
Orchid raising	Ship in a bottle (making)	
Organic gardening	Shortwave listening	
Origami	Singing	
Paintball	Skateboarding	
Painting and drawing	Skiing	
Paper (make)	Skydiving	
Paper dioramas (tatebanko)	Slot-car racing	
Paper models	Snorkeling	
Performing arts	Snow globe collecting	
Petal collecting and pressing	Soapmaking	
Photography (by kite, aircraft)	Speed skating	
Photography (general)	Spelunking	
Photography (nature)	Sports card collecting	
	Squash	

Group Reflection Questions

The goals of this activity include exposing students to the idea that career choices can and should include doing things they enjoy. What a person does in their spare time can be a good indicator of the skills and aptitudes they possess. Other activities in this module can help identify aptitudes, if students can't readily name them.

Hobbies are usually a rich opportunity for learning, primarily because they provide many motivations to learn more. For example, if you want to fly that radio-controlled airplane without crashing it, you must learn a about the aerodynamics of flight. To complete a collection of sea-glass, you must research exotic locations on the internet from which the glass originated. Or, to advance in a rodeo competition, you must learn about the care, handling, and training of horses.

Engage students in some reflection over this activity by asking questions like:

- What careers would allow you to do what you enjoy doing?
- Is it possible to have a job doing what you actually like to do? How do you find those jobs?
- When does a hobby start to become work?
- How can a hobby prepare you for work?
- What sort of role should your hobby play in a job interview with a prospective employer?

Although it's possible for some group-think to occur, causing several students to choose the same hobby from the list, it is more likely that the diversity of students will manifest itself in a refreshing way.

After choosing from the list, students need access to some research tools (i.e., the Internet or library resources). Give students the opportunity to share what they've learned from their hobby research. Encourage signs of identifying something they enjoy that will promote lifelong learning in their own lives.

Finally, it should be noted that hobbies require time. So, while this activity encourages students to research these hobbies, they should not feel guilty if there's "just not enough spare time now for a hobby." There may need to be a limit or even postpone the interest in a hobby until later in life.

ACTIVITY: ADAPTING IN VIDEO GAMES

Instructor Preparation

There is a meaningful debate about the value of video games in teaching and learning. Almost everyone has played a computer game and tried to improve his or her score. The way to improve is to learn what the game requires and *adapt* your playing style. Most players aren't aware of that neurological response occurring; they just try to get better at the game.

In this activity, students will become aware of adaptation and will examine it through two simple (and easily available) video games. The use of fun games will spark a discussion about the need to adapt to a changing world environment—more specifically, a changing workplace environment. Anyone in the workplace for more than five years will testify to the need for personal change to keep pace with the advancing technology, laws, management, and demands of the economy. Generally, those that can adapt stay ahead—in the game and in the workforce.

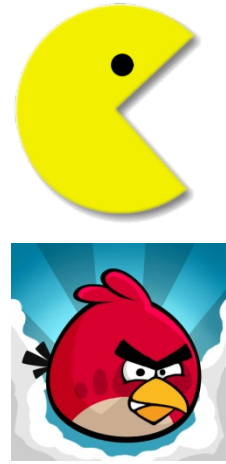
Adaptability is applicable to any career area. To keep the focus of this activity on careers (and not just the video games), the instructor should first introduce the concept of adaptability and return to it later during the activity wrap-up. Start by suggesting a typical career path for workers, pointing out the need for learning new skills and strategies through on-the-job training, education and certifications, and work as an apprentice under a mentor or journeyman. Another key to adaptability may include willingness to relocate.

- In most construction trade areas, the entry-level employee works under a master craftsman to learn the “tricks of the trade” while also learning good management practices. Additional engineering education and certificates may promote eventual advancement to site manager. Ambitious workers may one day own their own construction business.
- In education, a student who enjoys tutoring others may recognize his or her aptitude for teaching, complete a degree, and earn a teaching certificate. Experience, demonstrated leadership skills, and additional coursework may lead to department chair or administrative positions.
- In transportation fields, a worker may qualify, train, and earn certification to drive a truck or bus or work as a railroad engineer. Further education and experience may lead to supervisor and upper management positions.

Objectives

Students will:

1. Identify how adapting one's playing skills and strategies in a video game enables advancement.
2. Give examples of how adapting work methods in a selected career area enables greater success and advancement.



Materials

- Computer/tablet video games or smartphone apps:
 - 1) PacMan (or similar very simple game)
 - 2) Angry Birds
- Computer, tablet, or smartphone to play above games

Activity Guidelines

Admittedly, this activity will be popular with students, if only for the fact that they get to play games in class. After students have enjoyed a few minutes of each game, make it clear that there really is a goal for this activity: to identify areas where the game requires them to adapt to a new skill in order to advance to the next levels and earn greater rewards.

This activity uses two games that should be readily obtainable for either the computer/tablet (via website) or a smartphone as an app. We are not implying an endorsement of the manufacturers of any device, programs, or their content. We are simply using the games and equipment to meet the goals stated above. By following the general guidelines below, there should be little or no need for technical support.

Overall Guidelines

All games include audio. If available, everyone can use headphones or ear buds. Alternatively, players can lower the speaker volume to a reasonable level to avoid noise overload in the computer lab or classroom.

Although most students will want to be in control and play the game, students may need to work in pairs. They may take turns at two roles—player and note-taker. Expect each team to need a short orientation time (5 minutes), after which there should be a set time limit (15-20 minutes) for playing each game and making some notes, as described below. Allow at least 10 minutes for class discussion at the conclusion of the activity.

Simple Game

Start with a simple game that's been around since almost the first graphical computer: *PacMan*TM. Simply search the web for “online pacman” and you'll uncover dozens of links to working versions. For our purposes, any of them will suffice.

Here are a few Flash versions:

http://www.thepacmanwebsite.com/media/pacman_flash/

<http://www.learn4good.com/games/pacman/pacman.htm>

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



The last link also includes several other vintage arcade games (e.g., *Frogger*TM), and a History tab that may be interesting to some students.

For the iPad, there is a free version, *PacMan-Lite*:

<https://itunes.apple.com/us/app/pac-man-lite/id293778748>

Challenging Game

For a more modern and challenging game, we'll use the popular *AngryBirds*[™] (<http://www.angrybirds.com/>). Many of your students may be experts at this game. That's great! After the novices are ready to give up on the entry-levels of the game, the experts can demonstrate and explain how to succeed at the advanced levels.

The Real Activity

The game play (and competition among students to get high scores) may seem to take center stage, but the educational goal of this activity is to identify aspects of adapting that are required in the game. For either game, one can learn the basics, employing basic eye-hand coordination, and enjoy the entry-level play. But advancement to the higher scoring levels requires adapting by learning new skills and strategies. What are those new skills and strategies? On the activity handout, ask students to list at least five new skills and five new strategies that are needed to advance in each game and to prepare to briefly discuss them. Challenge students to write down items that are not obvious.

Group Reflection Questions

This activity strives to demonstrate adaptation using a couple of simple video games. The early games like *PacMan*[™] required minimal adapting, so students may even struggle to complete their list of five new skills and strategies. However, modern games like *AngryBirds*[™] are very intricate and well-produced. They challenge gamers because they require a high level of adaptation of skills and strategies to advance and earn high scores.

In real life, there are yet many more facets of adaptation that will determine a person's success. The message to take away from this activity is that to move beyond the beginning level of any task, successful people must adapt and learn new skills and strategies. Some players are able to adapt very readily; consequently, they will usually advance relatively quickly. Those that cannot adapt, or only with great effort, must be satisfied with the entry level of play for longer periods of time.

Discuss questions like the following with the class:

- Describe various ways you had to adapt to advance in *PacMan*[™]. In *AngryBirds*[™]. Did you find any clever tricks to use in the games?
- How is adaptability an important life skill?
- Consider an entry-level job at a fast-food restaurant. How might you be expected to adapt to advance up the ladder at that business? (Hint: contrast the job expectations of the entry-level worker with the shift supervisor.)
- Now consider an entry level job at _____ (insert an occupation linked to your course area). Again, how might you be expected to adapt to advance up the ladder in that field?
- What kinds of activities bridge the gap between entry-level employment and the next level?

Handout—"Adapting" in Video Games

Simple Game: _____ (name of game)

How to score points: _____

New skills required to advance: _____

New strategies required to advance: _____

Complex Game: _____ (name of game)

How to score points: _____

New skills required to advance: _____

New strategies required to advance: _____

ACTIVITY: MANAGING STRESS

Instructor Preparation

Some workplace stress is normal, but excessive stress can interfere with ability to focus and be productive and impact physical and mental health. In this lesson students will explore stress, its causes, its effects on the individual, methods for reducing stress, and the concept of resilience.

To begin this module, have students discuss things that cause stress in their lives. Don't discount any answers because factors affect individuals differently. Then focus the discussion on job stress. There might be generic stressors common to many jobs, such as a boss or coworker who is difficult to get along with, fear of a layoff, difficulty in meeting quotas, or a work space that is crowded, noisy, or otherwise less than satisfactory. Other jobs might be physically stressful, such as working outside and dealing with weather extremes, in dangerous environments, in enclosed spaces, on high rises, or in war zones. Discuss stress that might be career specific.

Accounting: Tax time is a very hectic time of year when an accountant is preparing numerous tax returns that benefit the customer and also must be accurate and follow the latest IRS guidelines.

Human Services: People who work with victims of abuse, whether child, spouse, or the elderly, need to be able to leave the situations they may be exposed to at work and not carry that burden when they are not at work. They need to focus on helping the client and not the terrible things that have happened to that person.

Public Safety: Emergency workers, police officers, and firefighters encounter periodic stress. Each time they are called out they may be walking into a crime in progress, a burning building that might include storage of flammable or explosive materials, a car wreck with injuries, or trapped people unable to help themselves—such as small children and babies, the elderly, or the infirm.

Wrap up the initial discussion of stress by asking students how they deal with stress or protect themselves from the effects of stress. Identify places in the community where people who are suffering from stress-related conditions such as anxiety, depression, or PTSD can get professional help. Remind students that this lesson is about awareness and examines normal workday stress; it is not as a lesson on the diagnosis and treatment of stress-related conditions. If anyone has deeper issues they need to seek professional help. Provide a resource list to all students.

Objectives

Students will:

1. Identify stressors in their lives.
2. Identify stressors that are job related.
3. Identify ways to reduce stress and build resiliency.

Materials

- Computers with Internet access.
- Instructor-prepared list of local resources for dealing with stress-related conditions such as depression.

Activity Guidelines

Students should complete the Holmes and Rahe Stress Scale and the resiliency quiz individually to identify stress levels in their lives and determine how well they cope with stress.

- Have students take the Holmes and Rahe Stress Scale at http://www.mindtools.com/pages/article/newTCS_82.htm.
- Have students take the resiliency quiz at <http://resiliencyquiz.com/index.shtml>.
- Have students look at various websites that discuss ways of dealing with stress. Ask them to list things that reduce stress and increase resilience. Compile a class list. Ask students to mark things they already do, choose several things that they don't do or could do better, and make a plan for incorporating at least one of those into their lives.

Group Reflection Questions

After students have had time to complete the stress and resiliency assessments individually, come together as a class and discuss the following questions.

- Scales like the Holmes and Rahe Stress Scale don't include tragedies such as 9-11 destruction, the Boston Marathon bombings, massive accidents, natural disasters, and war. How would you rate them on the scale?
- Whom do you know that is a highly resilient person? Which characteristics of that person do you think make him or her more resilient?
- Why is resilience and the ability to handle stress needed for job success and fulfillment?
- What is the effect of employees with low resilience and high stress on the workplace as a whole?
- What are some things companies might do to help reduce stress for their employees?
- What are things you can do to reduce stress in your life?

Assessment Tools/Strategies

This section includes specific strategies and instruments for assessing students' knowledge, skills, and attitudes in regard to the activities included in *Adaptability and Lifelong Learning*.

RUBRICS

Rubrics are valuable assessment tools. Students should be provided with the rubric by which they will be assessed before an activity begins so they will understand the performance expectations. When time permits, students can contribute to the rubrics by brainstorming with the instructor about what a quality behavior or product looks like. For example, before assigning a team project to research a topic and prepare a group presentation, ask students to describe what behaviors the ideal team would demonstrate as they work together to complete the assignment and what elements need to be included in it. A rubric on adaptability might ask students to assess the degree to which they have researched a stress-relief concept and put it into practice. Prompt students with specific components. Then have them describe a poor performance. These will be the descriptions of the characteristics for the highest and lowest ends of the Likert scale for each performance criteria. Instructors should add any required attributes to the rubric if the students do not come up with them on their own. Rubrics for assessing student understanding of adaptability and lifelong learning are included in this section.

- The first rubric for instructor use lists desired attributes of *Adaptability and Lifelong Learning* to be observed and includes spaces where the instructor can adapt the rubric for a specific activity, project or career field by inserting additional criteria.
- The second and third rubrics are for self-rating use by students. The students indicate the degree to which they think they are performing each attribute. They can periodically return to the rubric to reassess and determine whether they are improving those skills.
- The final rubric is the most complex. The student completes a rubric by providing examples of satisfactory or exemplary performance of the tasks/behaviors listed. Then the student meets with the instructor or peer observer and compares his/her reflections with their instructor's or peers' observations and formulates an action plan for improving attitudes, behaviors, or skills.

This type of rubric most resembles the type of assessment an employee might receive on the job. It is also the most time consuming. Ideally, this rubric would be used at least three times during a course:

- At the beginning of the course, to get a baseline and to give students suggestions for specific actions they might take to improve their performance,
- At the midpoint of the course, to check progress and refine the recommendations for improvement, and
- At the end of the course, to assess the progress made over the duration of the course. Additional suggestions can be made for students' continued growth beyond the end of the course.

RUBRICS FOR INSTRUCTOR ASSESSMENT

Outcomes from Adaptability and Lifelong Learning – Successful workers in any career area must be able to adapt to changing workplace environments, skill requirements, and the interpersonal communication styles of fellow employees and supervisors. Any number of events may necessitate a career change, so workers in any career area must be alert to alternative career possibilities. Below are some outcomes to consider for this module. Feel free to edit this list to reflect course-related careers. The student is able to:

Complete a career-survey and identify at least three possible career matches.	1 2 3 4 5
Enter the data to create a career genogram depicting at least two generations.	1 2 3 4 5
Create a career path for a desired career cluster.	1 2 3 4 5
Identify the requirements to advance from entry-level to a chosen career goal.	1 2 3 4 5
List several alternative career paths that fit the student's knowledge and skills.	1 2 3 4 5
Identify several careers related to a specified career cluster.	1 2 3 4 5
Identify the credentialing requirements, both general and specific, for one career.	1 2 3 4 5
Distinguish between voluntary and mandatory credentialing requirements.	1 2 3 4 5
Identify the professional organization(s) associated with a specified career area.	1 2 3 4 5
Identify the continuing education requirements, if any, for maintaining certification or licensing in a given career.	1 2 3 4 5
Identify the key publications and websites associated with a chosen career area (for the purpose of staying current in one's field).	1 2 3 4 5
Explain the connection (not necessarily a work-skill relationship) between a student's choice of hobby and selected career area.	1 2 3 4 5
List at least three skills or aptitudes that must be learned to participate in a chosen hobby.	1 2 3 4 5
Describe or demonstrate the skills to advance past the entry-level of a computer game.	1 2 3 4 5
Identify five significant stressors common in 1) daily life and 2) the workplace.	1 2 3 4 5
List five strategies for reducing stress and building resiliency.	1 2 3 4 5
	1 2 3 4 5

5	Always	Excellent
4	Most of the Time	Good
3	Sometimes	Adequate
2	Occasionally	Fair
1	Never	Poor or None

RUBRIC FOR SELF-ASSESSING ADAPTABILITY AND LIFELONG LEARNING SKILLS

Use this instrument throughout the course to self-monitor your adaptability and lifelong learning knowledge and skills. Note: It is fairly common to overrate your skills during the initial assessment. You may rate yourself a bit lower as you get feedback from others and discover the complexities of each attribute. By the end of the course you should see improvements in your ratings if you focus on improving the quality and depth of your work rather than primarily on getting the assignment completed.

Objective: Your career choices should reflect your own personal skills and abilities.

Essential Attribute	I	II	III	IV
The results of my career survey match my personality, skills, and abilities.	Seldom	Sometimes	Usually	Consistently
	----- ----- ----- -----			
I can see the impact of my family's history and environments on my aptitudes, attitudes, and career choices.	Seldom	Sometimes	Usually	Consistently
	----- ----- ----- -----			
I annually check my progress toward my career goals (education, skills training, certifications).	Seldom	Sometimes	Usually	Consistently
	----- ----- ----- -----			
	Seldom	Sometimes	Usually	Consistently
	----- ----- ----- -----			

Objective: Your skills and abilities can change: they can deteriorate, improve, or expand.

Essential Attribute	I	II	III	IV
I am learning the skills needed to practice and be conversant in a certain hobby.	Seldom	Sometimes	Usually	Consistently

I am acquiring the tools and/or materials necessary for a certain hobby.	Seldom	Sometimes	Usually	Consistently

I am becoming more proficient and efficient in my work-related skills.	Seldom	Occasionally	Often	Consistently

I am applying strategies for reducing stress in my daily life and my work life.	Seldom	Sometimes	Usually	Consistently

I keep current in my field by reading, meetings, maintaining certifications, and supporting related organization(s).	Seldom	Sometimes	Usually	Consistently

	Seldom	Sometimes	Usually	Consistently

RUBRIC FOR ASSESSING ADAPTABILITY AND LIFELONG LEARNING SKILLS

Outcome: A worker should consider his/her abilities and aptitudes to choose and maintain a career. In an ever-changing world, that means adapting to evolving technologies and resolving many sources of stress.

Performance Criteria		
Reflection Reflect on your actions during class or at a workplace and identify examples of when you:		Personal Plan Based on your examples and the feedback of your instructor or peers, describe the steps you might take to continue or improve your adaptability and lifelong learning.
Used a career survey to consider career choices.	Example: Peer/instructor review: <div> <div>Do not agree</div> <div>Strongly agree</div> <div> </div> </div>	Steps:
Applied a hobby-learned skill to the workplace or job training environment.	Example: Peer/instructor review: <div> <div>Do not agree</div> <div>Strongly agree</div> <div> </div> </div>	Steps:
Over time, demonstrated improvements in proficiency and efficiency with career-related skills.	Example: Peer/instructor review: <div> <div>Do not agree</div> <div>Strongly agree</div> <div> </div> </div>	Steps:
Sought help in learning a new skill.	Example: Peer/instructor review: <div> <div>Do not agree</div> <div>Strongly agree</div> <div> </div> </div>	Steps:

Performance Criteria		
Reflection Reflect on your actions during class or at a workplace and identify examples of when you:		Personal Plan Based on your examples and the feedback of your instructor or peers, describe the steps you might take to continue or improve your adaptability and lifelong learning.
Volunteered to assist or comfort an overwhelmed coworker or supervisor.	Example: Peer/instructor review: <div style="display: flex; justify-content: space-between; align-items: center;"> Do not agree Strongly agree </div> <div style="text-align: center; margin-top: 5px;"> 1 2 3 4 </div>	Steps:

Peer comments and suggestions:

Instructor comments:

Videos and Weblinks

VIDEOS

The following is an annotated list of videos that are available at the links provided. You may choose to use these in class to give additional background on Adapting and Lifelong Learning, as discussion starters, or as examples of effective or ineffective communications.

<https://www.youtube.com/watch?v=Zy6YoyTcwUw> (14:33)

Thinking Forward: Adapting to a Changing Workplace, presentation by Bill Self.
Discusses adapting to address customer satisfaction.

<http://www.careeronestop.org/Videos/default.aspx>

U. S. Department of Labor supported website, with over 500 short videos that explore popular occupations across all 16 career clusters.

WEBLINKS

Here are some links relevant to this module that may be useful.

<http://www.mapyourcareer.org/construction/construction-careers.html>

Career Paths in Construction

http://www.nc-net.info/clusters_guide/career_exploration_section.pdf

Printable document that includes a career clusters survey and several valuable links for further information, as compiled by the North Carolina Department of Public Instruction (NCDPI) and the North Carolina Community College System (NCCCS).

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

Career exploration website sponsored by U. S. Department of Labor. Includes career survey instruments and short videos that explore popular careers in each of the career-clusters.

<http://www.iseek.org/careers/clusterSurvey>

Online career survey from Oklahoma Department of Career and Technical Education.

<https://www.okcareertech.org/students/career-resources/job-seeking-resources/self-assessment-and-interest-inventories>

Printable survey instrument to identify one's aptitude for a career cluster.

<http://www.123test.com/career-test/>

A visual-aptitude test, where one selects the most preferred and least preferred activity, based on sketches of career-related activities, derived from Dr. John Holland's theory of careers and vocational choice, known as Holland Codes.

<http://www.military.com/join-armed-forces/asvab>

The Armed Services Vocational Aptitude Battery (ASVAB) is a timed multi-aptitude test, given at over 14,000 schools and Military Entrance Processing Stations (MEPS) nationwide and is developed and maintained by the Department of Defense. The ASVAB can provide career information for either civilian or military occupations, and is an indicator for success in future endeavors whether one chooses to go to college, vocational school, or a military career.

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

Create a family tree using this free online tool. One can use this activity to help document the careers of family members: a career genogram.

<http://www.genopro.com/genogram/rules/>

Illustrated Genogram rules, although this gets pretty deep into some obscure possibilities.

http://www.acinet.org/certifications_new/

Certifications are examinations that test or enhance knowledge, experience, or skills in an occupation or profession. Search for certifications by keyword, industry, or occupation.

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

Designed to assist California Community College students to plan their careers, this site provides assessments, weblinks, and other information to guide students in career planning. Much of the information is generic, but job banks and some other information is California specific.

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

Provides career advice to job seekers and tools to match the right talent with the right opportunity.

<http://www.mindtools.com/index.html>

Resources to help in any career. The toolkit is particularly valuable. Contains numerous free articles and quizzes to make it worth a visit.

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

Search for related careers using skills only or skills with job tasks.