

CSP E-Lesson 2, Fall 2008

Words of Wisdom: "As a financial analyst, my job changes with the economy. Ten years ago, I helped my clients expand their businesses. Now, the economy is slowing, and I am more concerned with helping them cut costs and conserve money."

Steve Goodyear, 26, Financial Analyst, Phoenix, AZ



The Future Is Coming!

The job you are training for today may not exist in five or ten years. Some of the skills you are learning will be outdated in the future, and you'll have to retrain, probably several times in your life. Why?

Changes in society and in the economy will require new types of work. New jobs with strange titles will appear. As an example, the "green" movement is a social trend that has to do with protecting the environment. This trend is creating new jobs with titles such as Intelligent Materials Scientist, Reclamation Engineer, Sustainability Consultant, Solar Technician, Recycling Administrator and many more.

Being "work ready" in the future will require you to (1) follow economic conditions (2) study trends in your career pathway, and (3) take advanced courses to build your skills

To reach the highest levels of success, you must learn about the new jobs and skills that will be demanded. For example, in the construction pathway today, carpenters laugh when people think all they do is hammer a nail straight. Carpenters at the top of their profession study the impact of buildings on the environment, learn about environmentally-friendly building materials and concentrate on making buildings energy efficient.

Concern about the environment is a major trend affecting careers and required skills of the future. Following are two more trends expected to affect the kind of jobs that will be available to you.

1. A large section of the American population is growing older and living longer. What careers will be affected by this trend? _____

2. The U.S. is expected to continue producing more services and fewer manufactured goods. What careers will be affected positively by this trend? _____

Battle of the Century - Your Paycheck vs. the Economy

"I know you're disappointed Tyler, but, believe me, I'm doing you a favor," says Tyler's father as he pulls into the used car lot where they will leave the family SUV to be sold.

Tyler's parents promised him the SUV would be his after he got his driver's license, and he has dreamed about loading up his friends for ski weekends in the winter and camping trips in the summer.

"Dad, I have a part-time job, I can pay for the gas myself. You said yourself that it's hard to sell an SUV right now," pleads Tyler in a last-minute effort to save the car.

"When we first talked about giving you the SUV, Tyler, fuel was reasonable, but that's no longer true. You do the math. How much of your paycheck would fuel take?"

As Tyler is finding out, rising prices will affect his lifestyle, his job, and his paycheck, today and in the future. Now, when he hears new reports about the economy, he has a personal interest in listening.

How much of Tyler's pay would he spend on fuel for the trips he wants to take in the SUV?

- Tyler's SUV travels 15 miles on one gallon of fuel.
- He travels 16 miles round trip to and from work.
- A ski trip is 210 miles round trip.
- A camping trip is 340 miles round trip.
- Fuel costs \$4.06 per gallon.
- Tyler earns \$8 per hour working 15 hours per week. After taxes, he brings home \$107 a week.

1. How many gallons of fuel will the SUV require for the following trips and how much will the fuel cost?
 - a. Travel to work three days a week _____ gallons; \$ _____ cost
 - b. Take one ski trip _____ gallons; \$ _____ cost
 - c. Go on one camping trip _____ gallons; \$ _____ cost
2. What percentage of Tyler's pay will he spend for each trip? (Hint: To calculate the percentage, divide the cost of fuel for each trip by the amount of Tyler's paycheck.)
 - A. Travel to work three days a week _____%
 - B. Take one ski trip _____%
 - C. Go on one camping trip _____%

How does the economy affect Tyler's work and personal life? _____

Why Do My French Fries Cost More?

If you think French fries cost more because employees at the fast food chains got a pay raise, guess again. French fries cost more because of the rising cost of energy in the United States and around the world. This rising energy cost will also affect your career, no matter which pathway you choose. In fact, your career pathway may be related to French fries.

Think about French fries: What industries and occupations take part in the production of French fries? How will profits and the ability to provide jobs in these industries be affected by the price of oil, gas, electricity and other production expenses?

Work on your own or with a classmate to track how a French fry makes it from the potato farm to you.

A. Farming, in the agriculture career pathway, is the starting point for French fries. Identify five additional industries or occupations that are directly involved in the delivery of French fries to your table (transportation industry, for example) and list how they use energy. The sixteen pathways generally used to separate careers are:

Agriculture, Food & Natural Resources	Hospitality & Tourism
Architecture & Construction,	Human Services
Arts, Technology & Communication	Information Technology
Business, Management & Administration	Law, Public Safety, Corrections & Security
Education & Training	Manufacturing
Finance	Marketing, Sales & Service
Government & Public Administration	Science, Technology, Engineering & Mathematics
Health Science	Transportation, Distribution & Logistics

Industry	Career Pathway	Occupation	Use of energy
Farming	Agriculture	Field operator	To operate farm equipment

Why Do My French Fries Cost More? (Continued)

- B. Economic events that affect one business have a ripple effect on others, called an indirect involvement. You may not plan to be a potato farmer who pays for farm equipment and fuel or a truck driver who buys fuel to transport a potato from Maine to Florida. But you might work for the bank that loans money to farmers or truckers. Or you might work for the television station that runs the fast food company's French fry ads or for the company that trains new restaurant employees.

List five other industries or occupations that are indirectly involved in the production of French fries and will still be affected by the success or failure of the French fry business.

- a. Bankers who loan money to farmers and transportation companies
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

Choose one industry you listed that is directly or indirectly related to the production of French fries. What skills, abilities, and knowledge would you need in order to be work ready for this industry? _____

The Silver Lining

There is an old saying that "Every cloud has a silver lining." This saying can apply to exploding energy prices because changing energy conditions require the creation of new types of products and jobs. For example, revamped and new jobs were needed to produce the energy-reducing, funny-looking florescent light bulbs used in many homes to replace the older, incandescent energy-gulping bulbs. The "silver lining" is that workers' earn money from these new jobs to support their families and keep the U.S. economy moving forward.

- A. Here are some energy-saving products. How do you think jobs may have changed, or what new jobs do you think may have been created to make these products?

Product	Changed or New Jobs
Prius hybrid car	Hybrid car mechanics
Recycled paper and plastic products	
Low-flow toilets and shower heads	
Solar outdoor lighting	

- B. You should pay attention to the companies that are out front, ahead of economic and social trends. You might want to work for them. These companies will be the first to need workers whose skills are up to date and who have to knowledge to work on changing products. They also provide their employees with good opportunities for career growth.

Currently, forward-looking companies around the world are competing to conserve resources or develop renewable sources of energy. Ten of these companies and their products or services are shown on the next page. Match the job titles listed in Column 3 with a company and its product, technology, or service shown in Column 2.

The Silver Lining (Continued)

Company	Product, Technology, or Service	Job Title
1. ____ GE General Electric	Wind Turbines	A. Research and development chemist
2. ____ SunPower	Solar panels	B. Wind farm analyst
3. ____ PPG Industries (Pittsburgh Plate Glass)	Low E and other energy-efficient glass (Low E glass reflects heat back to its source, keeping buildings cooler or warmer as needed.)	C. (Instrument/Control/Electrical or ICE) Technician - Geysers
4. ____ Trex Inc.	Trex - 100% recycled wood products made out of recycled plastic bags and waste wood	D. Solar HVAC installation technician
5. ____ Calpine	Operates 19 geo-thermal power plants	E. Solar system designer
6. ____ Davey Resource Group	Tree care and forest management experts	F. Turbine control systems engineer
7. ____ Colorado Springs Utilities	Promotes water conservation through landscaping with plants that require no extra irrigation	G. Offshore surveyors
8. ____ Appalachian Energy	Solar heating and air conditioning system	H. Urban forester
9. ____ Garrad Hassan America	Provides consulting services for building wind farms	I. Xeriscaper (landscaper who works with plants that can live in dry areas)
10. ____ Finavera	Builds wave parks to create electricity from the strength of ocean waves	J. Certified "Green" Builder

I'm Work Ready

Every economic, political, technological or social change that eliminates existing jobs creates new jobs at the same time. The skills and knowledge required of you in order to be work ready throughout your life will depend on which new jobs are needed. For example, because of global warming, which is believed to be affected by pollution, many jobs and products that create pollution are targeted for elimination and new "cleaner" products and jobs are being created. Freon, the refrigerant known for its use in air conditioners, is one of these products.

In our own country, changing weather patterns caused by global warming have increased the frequency of hurricanes and tornadoes, and this has led to the creation of new jobs. Hurricane Katrina is responsible for new jobs related to water drainage technology and the evacuation of people. Heavy tornadoes across the country led to the development of new jobs and technologies to rebuild skyscrapers and other buildings so they can survive tornadoes.

Be on the alert for new types of jobs that will be available to you and plan for ways to keep yourself updated to perform those jobs. Think about the career you wish to pursue. What types of jobs can you imagine might be coming up in this career in the future? What skills, abilities and knowledge will you need to develop to make yourself ready to work in these jobs?
