“The main thing I tell the kids is to study hard, do their best, and stay in school. I also tell them not to ever give up on their dream if it is something that they really want to do in life. Rejection and failure [are] likely, but persistence can pay off in the end.”

Astronaut Don Thomas
“If you wish to achieve worthwhile things in your personal and career life, you must become a worthwhile person in your own self-development.”

Brian Tracy, self-help author and motivational speaker

Quick Write

Write down three jobs you can picture yourself doing over your lifetime that you believe would be satisfying, rewarding, and fun. You should think of them as possible careers. Make changes to your list as you think about the topics discussed throughout this chapter.

Selecting and Charting a Career Path

You want a good career—one that’s fulfilling, rewarding, and enjoyable—almost everyone does. After all, you’ll probably spend 8 to 10 hours a day or more on the job. That’s two-thirds of your waking hours!

Finding the right career isn’t easy. If you want to have a career that will carry you through life, finding your passion will be crucial. Remember what the first lesson in financial planning told you. The concepts of success and fulfillment aren’t satisfied necessarily by just making a lot of money.

Finding your passion for life’s work is a combination of research, self-discovery, and creating a career path, which is a sequence of rigorous academic and career or technical courses leading to an associate’s degree, baccalaureate degree and beyond, or an industry-recognized certificate and/or license.

This lesson will cover some aspects of how to research careers. The next lesson will explain more about self-discovery. The final lesson of the chapter will look into pathways toward your career goals.

As a young person, you would be making a wise move to start now in doing some early research to seek your own needs and wants in a career. The results may give you a great source of satisfaction and contentment later in life. Your research should take into account some self-discovery about what makes you tick. It’s not so much a question of analyzing strengths and weaknesses as it is about developing those strengths you do
have to be successful at what you love to do. Finally, as you chart your path forward, remember that there will always be someone willing to tell you how to work within your limitations, emphasizing your weaknesses. However, instead of thinking about limitations that have you looking downward, why not think about possibilities? Possibilities are what will push you upward.

Limitations are a way out. Possibilities are a way in. That’s how to think about a good path to a rewarding career. You can always do a job eight hours a day that gets you a paycheck. Alternatively, you can work many more hours on a career you love, and find many rewards in doing so!

The way to a good career starts with knowledge. Good grades are an important first step. The world is now more competitive and more technical than it has ever been. Most highly skilled occupations now require a greater understanding of science and math. The Bureau of Labor Statistics reported that the growth of high-paying jobs between now and 2020 will favor those in technical and medical fields, almost all of which require a substantial level of science and math education. Even those jobs requiring only a high school diploma are becoming more technical and require some knowledge in these subjects.

College graduation and a job probably seem a long way off right now. However, this is the time to figure out the direction you want to take and how to get there. This doesn’t mean that you’ll be stuck forever with the decision you make now. Most people change their life goals several times as they get older. The average person undergoes several career changes in a lifetime.

Decisions you make now are still very important. If you can develop an idea of the direction you want your life to take, it will help you focus. This will improve your ability to succeed in school and in life.
Careers Versus Jobs

Though often used interchangeably, the words career and job have different meanings. The difference is one of attitude and lifestyle. A job is work you do to make a living. A career is much more. A career is a chosen field of work that has the potential for continuous growth and advancement by incorporating your interests, values, skills, and strengths to provide long-term fulfillment.

If you have a career, you are willing to put in some extra effort to get ahead—go back to school, take training programs offered by your employer, or work extra hours so you can do your job better. Having a career means having a plan to get more skilled at your job as time goes on. Careers offer opportunities for advancement.

A career often involves five or six positions, perhaps in several industries. Each position has a different level of responsibility and difficulty, as well as salary. In each step, you’ll have an opportunity to apply your increased experience.

Studs Terkel’s book, Working, written decades ago, has held true right on through to the most recent annual surveys by US News and World Report and Gallup, which show that more than half of all American workers are dissatisfied with their jobs. Maybe it’s because that’s all they are—jobs.

Jobs are positions in which employees perform specific duties within designated hours for specific pay. Generally, these duties are similar from one day to the next. A job generally provides a basic living. It pays for food and shelter. It may not give you a chance to improve your lifestyle or afford many luxuries.

With respect to jobs and careers, what counts is not where you start but what you do once you’ve started. As an example, at age 16 you might get a job bussing tables at a local restaurant. If you like it, you may decide to make your career in the food industry. Over your working life, you could move on to a succession of positions as a short-order cook, assistant chef, head chef, and manager. You might one day own your own restaurant. These positions all fit the definition of a career. They do not have to be within the same company. They do not always require a college degree. Each does, however, require more training and a higher level of performance. The experience gained in one job helps prepare you for the succeeding position. At some point, you can say that you have a career.

“To love what you do and feel that it matters—how could anything be more fun?”

Katherine Graham, publisher, Washington Post

Courtesy of Jurgen Frank/Corbis Images
You may also enter the job market bussing tables and not turn that job into a career step. You may move on to be a gas station attendant, then a cashier, then something else. Over 40 years of working life, you may hold many jobs but none of these jobs would prepare you directly for your next job. Each position is unrelated to the next. At the end of 40 years, you would have held a series of jobs, but you would not have had a career.

Most careers offer better salaries over time as you gain more experience. However, while money is an important factor in selecting a job or career, it is not the only consideration.

Career or job: The choice is up to you. If you choose a career, your only limits will be how much you are willing and able to learn, how much authority and responsibility you want, and what lifestyle changes you wish to strive for. If you choose to have a series of jobs, you will provide for your daily needs, but your ability to advance will be more limited.

Find something that you enjoy. Work doesn’t have to be boring! And if you find something you like to do, you’ll probably do it well. That’s a good recipe for success in the workplace.

So who knows what you’ll do? Whatever it is, try to think about possibilities, not limits. That’s how a career is built. When you think in terms of limitations over 40 years of a working life, there is a point at which finding your passion and a good career can be lost. For many, it means a 40-year working life of no more than only a series of jobs held, and not much fulfillment.

**Tim McGraw’s Success Story**

Tim McGraw, popular country music recording star, has sold 40 million CDs and won three Grammy Awards. He failed so badly in his first few attempts at selling his singles that he was told to give up his dream of becoming a country singer. A well-known producer told him, “You’ll never make it, son. Go home and find yourself a job.” McGraw didn’t take the advice.
In Chapter 1, you were asked to create a financial plan. You should now extend that plan. As you read this lesson, try to develop a clear statement in your plan about how you intend to spend your working life to build financial and personal security.

Listing a series of jobs will do very little to provide for your long-term financial security. But a career goal will allow you to build a level of satisfaction you achieve from that career. It will also provide for how to achieve increased responsibility and monetary rewards. Just remember that money isn’t the only thing to consider in choosing a career. You are limited only by how much you are willing and able to learn, how much authority and responsibility you want, and what lifestyle you wish for yourself and your family.

Doing work you like is important not only because it releases you from possible boredom but it allows you to do a job well. When you do a job well, you can see the difference. If you do a job well often enough, you will build a career. Better still, you will build a reputation. A solid reputation allows you satisfaction and peace of mind.

**Training Versus Education**

As you prepare for any career, you’ll need both education and training. Although people sometimes use these two words interchangeably, they have different meanings.

**Education** involves *broad-based learning*. When you earn a college degree, you sample many fields of knowledge, and then concentrate on one specific field. Because of its broad basis, education prepares you for a variety of career possibilities.

**Training** has a narrower focus. It *prepares you to perform a function that requires a specific set of skills*. Training can prepare you, for example, to work on jet engines or (computer repair—to replace aircraft radios).

Different careers need people with different mixes of education and training. But it’s not an “either/or” situation. Even the most highly educated people need training, and even entry-level trainees need some education.

**Career Options**

Many possible career options lie ahead of you. The path you take will influence the amount of education you will need and the experience you must gain to prepare for your chosen career. Among your options are working in the private sector; working for the federal, state, or local government (including as a teacher); or serving in the military.

Each option provides employment in a fascinating variety of fields. Some will require a high school diploma; others might demand years of postgraduate university study.
Currently a large number of Americans are aging. The retirement of many millions of baby-boomers has opened up many opportunities in the next decade. At about the time you graduate from high school you may find many new career options available to you. Check the latest trends from the US Department of Labor’s Bureau of Labor Statistics. In Tables 3.1 and 3.2, you’ll see that between now and 2020, there will be a huge growth in available jobs and careers, especially in medical technologies and health sciences.

**Table 3.1 The 20 Fastest Growing Occupations in the United States Requiring at Least a High School Diploma, Through 2020**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Percentage Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical engineers</td>
<td>+61.7%</td>
</tr>
<tr>
<td>Veterinary technicians/technologists</td>
<td>+52.0%</td>
</tr>
<tr>
<td>Reinforcing iron and rebar workers</td>
<td>+48.6%</td>
</tr>
<tr>
<td>Physical therapist assistants</td>
<td>+45.7%</td>
</tr>
<tr>
<td>Helpers—pipe layers, plumbers, pipefitters and steamfitters</td>
<td>+45.4%</td>
</tr>
<tr>
<td>Meeting, convention, event planners</td>
<td>+43.7%</td>
</tr>
<tr>
<td>Diagnostic medical sonographers</td>
<td>+43.5%</td>
</tr>
<tr>
<td>Occupational therapist assistants</td>
<td>+43.3%</td>
</tr>
<tr>
<td>Physical therapist aides</td>
<td>+43.1%</td>
</tr>
<tr>
<td>Glaziers</td>
<td>+42.4%</td>
</tr>
<tr>
<td>Interpreters and translators</td>
<td>+42.2%</td>
</tr>
<tr>
<td>Medical secretaries</td>
<td>+41.3%</td>
</tr>
<tr>
<td>Marketing research specialists and analysts</td>
<td>+41.2%</td>
</tr>
<tr>
<td>Marriage and family therapists</td>
<td>+41.2%</td>
</tr>
<tr>
<td>Brick and block masons</td>
<td>+40.5%</td>
</tr>
<tr>
<td>Physical therapists</td>
<td>+39.0%</td>
</tr>
<tr>
<td>Dental hygienists</td>
<td>+37.7%</td>
</tr>
<tr>
<td>Audiologists</td>
<td>+36.8%</td>
</tr>
<tr>
<td>Health educators</td>
<td>+36.5%</td>
</tr>
<tr>
<td>Stonemasons</td>
<td>+36.5%</td>
</tr>
</tbody>
</table>

Some fields are expected to lose jobs, and you’ll want to know which ones they are. Table 3.3 shows some of these. Economic sectors lose jobs because of technological advances or changes in business practices, among other factors. For example, machines now enable farmers to produce more food with fewer people. At the same time, larger farms are constantly absorbing smaller ones. As a result, there are fewer and fewer jobs for farmers and ranchers.

### CHAPTER 3  Career Opportunities
Table 3.3 The 20 Occupations with the Largest Numerical Declines, Through 2020 (all education levels)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers, ranchers, and other agricultural managers</td>
<td>−96,100</td>
</tr>
<tr>
<td>US Postal Service mail sorters, processors and processing machine operators</td>
<td>−68,900</td>
</tr>
<tr>
<td>Sewing machine operators</td>
<td>−42,100</td>
</tr>
<tr>
<td>US Postal Service mail carriers</td>
<td>−38,100</td>
</tr>
<tr>
<td>Switchboard operators, including answering service</td>
<td>−33,200</td>
</tr>
<tr>
<td>Postal Service clerks</td>
<td>−31,600</td>
</tr>
<tr>
<td>Cooks, fast food</td>
<td>−19,100</td>
</tr>
<tr>
<td>Miscellaneous agricultural workers</td>
<td>−19,100</td>
</tr>
<tr>
<td>Data entry keyers</td>
<td>−15,900</td>
</tr>
<tr>
<td>Word processors and typists</td>
<td>−13,200</td>
</tr>
<tr>
<td>Door-to-door sales, news and street vendors and related workers</td>
<td>−11,500</td>
</tr>
<tr>
<td>Food service managers</td>
<td>−10,600</td>
</tr>
<tr>
<td>Electrical and electronic equipment assemblers</td>
<td>−10,400</td>
</tr>
<tr>
<td>File clerks</td>
<td>−8,800</td>
</tr>
<tr>
<td>Prepress technicians and workers</td>
<td>−8,100</td>
</tr>
<tr>
<td>Computer operators</td>
<td>−7,400</td>
</tr>
<tr>
<td>Postmasters and mail superintendents</td>
<td>−6,800</td>
</tr>
<tr>
<td>Office machine operators, except computer</td>
<td>−6,800</td>
</tr>
<tr>
<td>Pressers, textile, garment, and related materials</td>
<td>−6,800</td>
</tr>
<tr>
<td>Floral designers and petroleum pump system and refinery operators and gaugers (tie)</td>
<td>−6,200</td>
</tr>
</tbody>
</table>

Source: [http://www.bls.gov/news.release/ecopro.t08.htm](http://www.bls.gov/news.release/ecopro.t08.htm)

Farming, by the numbers, may not look attractive. But as population growth continues, food producing will still be very important. Thus, if you have the desire to be a farmer, there will always be a need. Not only that, but by increasing your knowledge of farming, you may find yourself creating a path toward working in agribusiness. Or, by going back to school you may decide to learn about the science of agriculture as another pathway to advance in your working career.

**LESSON 1** Researching Careers
In the end, however, statistics are just statistics. Be aware of them, but don’t give them too much weight. Consider all the types of positions that interest you, regardless of overall employment prospects in that field. Try to understand what draws you to these particular jobs. If you are drawn to a career that seems to have a bleak future, maybe you’ll be the one who changes that future for the better!

In any event, achieving a high school diploma should be your first priority. A diploma will get you the biggest percentage jump in your potential earnings—82 percent more than if you drop out. According to a recent study by Georgetown University’s Center on Education and the Workforce, earnings become even greater for those who have a bachelor’s degree or higher.

The growing technical job market makes it necessary for most Americans to have at least some collegiate experience. A postsecondary certificate or an associate’s degree will help you earn above the median income for the nation as a whole. Postsecondary education, according to the researchers, “is no longer the preferred pathway to middle-class jobs—it is…the only pathway.” So think of your future this way. Creating a fulfilling career will require continued study—finding postsecondary education and training opportunities wherever and whenever possible.

By 2018, almost 47 million job openings will be created. Almost 14 million will be new jobs. Thirty-three million more jobs will be established to replace workers who are retiring. About 63 percent of these jobs will require people who have at least some college education. The other third will require workers with a high school diploma or less. Those jobs will be most certainly on the low end of the wage scale.

**Career Examples**

**Computer Animation**

Computer animation has been a growing field because of advances in computer technologies that have eliminated most mechanical functions. Sketches and illustrations are now enhanced by computers, which have made it easier to produce animated characters and scenes.

*The Payoff:* Movie and television studios, advertising, Internet, and multimedia firms now pay top dollar for technology-savvy animators. There is work in both two-dimensional (cartoons, for example) and three-dimensional animation.

*Courtesy of Ton Koene/Alamy*
How You Prepare for a Career: Your talents should be in the arts, with a background in painting and drawing, enhanced by a creative mind.

What You Need: A bachelor’s degree in art, computer animation, or graphics is ideal for this kind of work.

Customer Service Representatives

Customer service representatives have become extremely important in recent years. Retail consumers became increasingly unhappy with customer call centers being run from other countries. So many companies are bringing more of these jobs back to the states.

Customer service representatives answer questions about products or services and handle or resolve complaints. They communicate with customers by telephone; by e-mail, fax, US mail, or in person. Some customer service representatives handle general questions and complaints. Others specialize in a particular area. Some customer service professionals have important titles, like account manager. These professionals are often found at advertising agencies. They often handle accounts worth millions of dollars.

The Payoff: This field will grow much faster than the average. More than 2.25 million people work in customer service. The number will be more than 3.25 million by 2020. These jobs will cover the entire range from the lowest to highest levels in responsibilities and pay.

How You Prepare for a Career: High school courses in computers, English, or business can help you prepare for a career in customer service. Good communications skills with people are important at all levels in customer relations. Your state employment service offices can provide information about job opportunities for customer service representatives.

What You Need: Most customer service representative jobs until recently required only a high school diploma. But employers are now demanding more skills. So many jobs are requiring at least an associate’s degree. You need basic-to-intermediate computer knowledge and have good interpersonal skills. Some positions require as high as a master’s degree in marketing or business, like account representatives who handle big clients or a large volume of customers.
Veterinary Technicians and Technologists

Veterinary technicians and technologists are expected to grow rapidly in number through 2020. These assistants to veterinarians do very important tasks. They do lab tests to help treat and diagnose disease in animals. They prepare vaccines and serums to prevent disease. They take tissue and blood samples and they do urinalysis and blood counts. They assist a veterinarian during surgical and dental procedures. They also clean and sterilize instruments, and maintain equipment and machines.

The Payoff: While not particularly high-paying, these jobs often offer a lot of personal satisfaction. If you love animals and enjoy taking care of them you will do well in these jobs. The ability to understand problems, communicate with customers and be sensitive to their needs is very important. These professionals make around $30,000 per year on average. There are 80,000 people working in these positions within the United States. That number will grow by more than 20 percent from 2010–2020.

How You Prepare for a Career: You need some knowledge of plants and animals. If you are good in chemistry and can handle administrative details, those are important. Being able to use word processing to manage files, records, and forms is very helpful, too.

What You Need: You will likely need at least some college, such as an associate’s degree. This is a field where the love of animals often overshadows issues of how much money can be made.

Dental Assistants

Dental assistants, like many other professionals in the health care industry, will be in great demand over the coming decade. There are about 300,000 dental assistants currently, and by 2020, the need will be for 400,000. Dental assistants are important to a dentist’s work. Assistants examine and treat patients, mostly doing cleanings and scaling. But they also make patients more comfortable before dental procedures and treatments. They also do X-rays, interpreting them for the dentist when needed. They update patients’ dental records. Assistants also prepare the trays of instruments and instruct patients on postoperative and general oral health.

The Payoff: Dental assistants make, on average, about $33,500 per year, and the work is usually stable.

What You Need: As a dental assistant, you may learn skills on the job. Nevertheless, you may be required to enroll in a dental-assisting program at a community college, trade school, technical institute. Some are trained through the armed forces. Some college is usually a prerequisite for these positions, but more important are: skills in communicating effectively with patients and with dentists; listening attentively—hearing what people are saying about their conditions; being service oriented—finding ways to help people; and perceptiveness—being aware of others’ reactions, and being understanding.

Meeting, Convention, and Event Planners

Meeting, convention, and event planners will be among the most-in-demand professions over the next decade. You need to be highly organized to succeed as a planner. You must coordinate the activities of a staff, convention personnel, caterers, and clients to prepare for group meetings, events, or conventions. Your major skills should include communicating, problem-solving, good judgment, and time management. You will juggle many details as a planner to assure a smooth-running event.

The Payoff: An experienced event planner can easily earn $50,000 per year. The field will grow by almost 44 percent through 2020.

How You Prepare for a Career: Some know-how in sales and marketing is helpful. If you are good at presenting, promoting, and selling services, you are headed for success. Skill in managing money, an ability to work with consumers, and understanding how to provide quality service is also important to be a successful meeting planner.

What You Need: Courses in high school English and communications should be followed by postsecondary courses in marketing, public relations, or business. A bachelor’s degree is the primary path to a career in these fields.

Cybersecurity

Cybersecurity is growing faster than most careers. Protecting the public, and in some cases the nation, from computer-related threats requires special skills. If you choose this field, you would protect the data and systems connected to the Internet. There are some in the field who work to secure large networks. Others develop software security programs.

The Payoff: You can make a career in information security without a college degree. But the higher paying jobs go to those who have more advanced education. Annual salaries can range from $70,000 to more than $100,000, depending on your skills, where you want to work, and the kind of industry you choose.
How You Prepare for a Career: Understanding computers is important. You can pick up enough knowledge to do computer jobs that pay very well without a degree. Some have earned an unrelated academic degree to one in computers. However, they found that their knowledge of computers allowed them to switch careers altogether into cybersecurity. Many switch to careers in information security because they are patriotic. They feel they are contributing to the safety of our nation.

Independent computer schools no longer dominate the training of computer and network security people. Many traditional colleges and universities are reacting to the post–9/11 era by using government grants to create advanced education programs.

What You Need: This is a field that can be very sophisticated. Often, a bachelor’s or advanced degree is required. Many workers still learn their skills on the job or in classes offered by schools that offer certificates. Be careful of on-line sources that make promises that can’t be kept. Before you enroll and pay any fees, check out any organization’s accreditation status.

Interpreters and Translators

Interpreters and translators are another group of professionals needed in the coming decade. As an interpreter, you can work with oral or sign language. As a translator, you can take something written in one language and translate it into another. You could edit and revise translated materials. You might also rewrite material into different languages. You might be required to listen to a speaker’s statement and then prepare a translation using electronic listening systems. If you become a tour guide, you may have to be multi-lingual.

The Payoff: You can earn over $43,000 per year as a professional, and there is opportunity for advancement. The 51,000 now employed in these positions is expected to grow to almost 75,000 by 2020.
How You Prepare for a Career: Good grades in English and in one or more foreign languages will help prepare you for these opportunities. Strong reading, oral and writing skills are important for a career.

What You Need: Education requirements differ quite a bit. About one-fourth of the jobs require associate’s degrees, another fourth require advanced or professional degrees. Another 16 percent require bachelor’s degrees. There is a wide variety of organizations and geographic locations in which you can work. You can work with tour companies and educational organizations. You might work at the US State Department, National Security Agency, or in an international association.

Brick or Block Masons
If you like the construction industry, one of the better paying, more specialized jobs is a brick or block mason. This is a field expecting to grow by more than 40 percent over the next several years. Masons lay and bind building materials, such as brick, structural tile, concrete block, cinder block, and other materials to construct or repair walls, partitions, arches, sewers, and other kinds of structures.

The Payoff: The average income for brick and block masons is about $47,000 per year. A good masonry worker can command a pretty good income and have work stability as the demand continues to grow in this field.

How to Prepare for a Career: Having skill with tools is very helpful, as well as the ability to work quickly. Being precise and neat with use of materials is important. A year or two working as a helper is beneficial, as is the completion of a recognized apprenticeship program.

What You Need: More than half the jobs do not normally require a high school diploma. However, if you want to get into better-paying and supervisory positions, the education and training requirements go up. A recognized apprenticeship program is important for career preparation. You’ll find apprenticeships in bricklaying for masonry, construction, firebrick and refractory tile, and other related areas.

Teachers
Teachers will be needed at almost every level from preschool through college. High school teachers, especially, will be needed between now and 2020. The number of positions, according to estimates, will grow by more than 410,000 in that time. Elementary school teacher positions will grow by almost 250,000. The same demand is expected for middle school teachers. Postsecondary-level teaching positions will jump by 300,000.

The Payoff: At the postsecondary level, you can easily earn $60,000. Because there’s such a big need, a career will be not only rewarding but can contribute to a very critical national need. Middle school and elementary school teachers now make close to $52,000 a year, on average, and high school teachers, slightly more.

LESSON 1 Researching Careers
How to Prepare for a Career: Mastering core subjects in high school will prepare you well for teaching. College courses in understanding and handling the group dynamics of a classroom are part of the preparation. You will need to learn how to work with individual personalities and problems of students. Being a good observer of your own teachers will help you understand how classes are organized. You’ll learn how to be creative in passing on knowledge. You will also see that safety and security issues are part of the teaching experience.

What You Need: For postsecondary teachers, most need a PhD. Fewer than 25 percent of the positions require a master’s instead of a doctorate. At the high school level and below, the majority of teachers have master’s degrees and some have bachelor’s degrees with significant other professional training.

Physical Therapists

Physical therapy is growing because there are many older baby boomers needing help with injuries, muscular ailments, and flexibility. The profession is also growing because of returning military service members from the wars in Iraq and Afghanistan. Many service members lost limbs or had other serious injuries requiring therapy to help them improve their quality of life. Much of this therapy will require a long-term commitment to these veterans.

The Payoff: Therapists are highly trained and paid. About half have master’s degrees, and the rest are split pretty evenly between doctorates and bachelor’s degrees. A $70,000 income is average for a therapist. Physical therapy assistants can be paid well, too, into the upper 40-thousands. Physical therapy aides, while the demand for them is high also, are not formally trained, and make about half as much money as an assistant.

How to Prepare for a Career: A hospital is the best place to volunteer some time to learn some basics. However, opportunities are everywhere, including health centers, sports facilities, and nursing homes. Therapists work with a variety of assistants and aides because the patient load can become very heavy. Physical therapy assistants are important to the therapist because they are trained to assist in the development of treatment plans, to carry out routine functions, document the progress of treatment, and modify specific treatments within the scope of treatment plans established by a physical therapist. Generally,
this requires formal education, at least an associate’s degree. Aides, meanwhile, do not have as much responsibility, working under the close supervision of a physical therapist or physical therapy assistant. Aides perform only delegated or routine tasks in specific situations. Usually, these include preparing the patient and the treatment area.

*What You Need:* Almost 150 colleges offer a four-year degree in physical therapy. Many offer advanced degrees. To practice, you have to pass a state examination. As a physical therapy assistant, a bachelor’s degree is better to have in terms of responsibility and pay. But it can be a rewarding experience to be able to work with patients and see them make progress to a better quality of life.

**Telecommunications Engineering Specialists**

Telecommunications engineering specialists is another big growth area. Within these positions, you might design or configure voice, video, and data communications systems, and possibly supervise installation and post-installation service and maintenance. Also, you may be installing software, configuring modems, and setting up cables and networks.

*The Payoff:* Salaries are very good for skilled specialists in telecommunications. Not quite 300,000 people work in these fields now, but by 2020, there will be a need for almost 500,000. Currently, salaries are about $75,000 per year.

*How to Prepare for a Career:* An ability in electronics and computers, the ability to use tools, and a good understanding of science and math are good starting points.

*What You Need:* No degree or license is needed to become a technician. But some significant study of computer systems networking and telecommunications is important.

**Some Other Noteworthy Careers on the Rise**

Registered nurses (RNs) are already in short supply. The need for them will be even greater over the next decade. As many as 700,000 new RNs will be needed to provide medical care. RNs are the closest link between patient and doctor. They carry a lot of responsibility. They care for ill, injured, convalescent, or disabled patients. They provide advice to patients on maintaining health and preventing disease.

Women have traditionally filled most of these skilled positions, but more men are entering the profession, and many have proven to be very effective. RNs need a genuine sensitivity to patients’ medical problems and must communicate effectively with patients to provide them aid and comfort.
Usually an associate's degree is required for nursing. Some skills require a bachelor's degree. The hours and shifts can be long, but RNs make on the average about $65,000 a year.

Other health-related jobs in the high-growth category are dental hygienists, medical secretaries, biomedical engineers, and health educators.

**Working for the Federal Government**

The federal government is still the largest employer in the United States, some 2,630,000 people—military and civilian. It hires hundreds of thousands of people each year.

Federal jobs are found in every state and every large city, as well as in 200 countries around the world. Working for the federal government can be very fulfilling. The Office of Personnel Management (OPM) is the employment agency for the US Government. It is headquartered in Washington, DC.

OPM maintains a website (www.usajobs.opm.gov) that lists all federal jobs. When a federal department or agency has a position available, it issues a vacancy announcement. OPM posts it to the USAJobs website. The **vacancy announcement describes the skills and experience required to perform in a position.** It is usually posted with information about the job title, salary, duties, and application procedures. It also says where and when to apply. It will also list a **closing date.** This is **the cutoff point for an application,** or the date it must either reach or be mailed to the agency hiring for the position.

You can also visit this site: www.federaljobs.net/employme.htm for a listing of federal jobs and other helpful information on how to apply for federal employment.

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**success TIP**

You can find out anything you want about any job or career in which you are interested online on O*Net, like:

- A summary report on the status of the profession or occupation
- Some of the tools, tasks, technologies of each occupation
- A list of the knowledge, skills and abilities and education required
- The activities and the context of the work you would perform in that occupation or career
- An understanding of the work values required of each job

Student Educational Employment Program

The Student Educational Employment Program is a way for you to get into government work. The program offers students who finish their education on-the-job experience leading to possible full-time careers. You can be hired under this program if you are working at least half-time toward a diploma, academic or vocational certificate, or a degree.

The Student Temporary Employment Program introduces students to the work environment and teaches basic workplace skills.

The Student Career Experience Program provides experience related to your academic and career goals. Complete information on federal student employment opportunities is at: www.opm.gov/employ/students/intro.asp.

Career Factors

You’ll need to consider many factors as you decide on a career path or specific job. Table 3.4 lists some of the primary career factors that will influence your choice.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUCATION</td>
<td>Your level of formal knowledge and training. Education greatly increases your career potential.</td>
</tr>
<tr>
<td>EXPERIENCE</td>
<td>Your combined knowledge, skills, and self-confidence gained through events and activities. Experience adds to your earning potential and can come from jobs, internships, and volunteer work.</td>
</tr>
<tr>
<td>SKILLS AND TALENTS</td>
<td>Abilities you possess. Education and training enhance your abilities.</td>
</tr>
<tr>
<td>INTERESTS AND TEMPERAMENT</td>
<td>Aspects of your personality that affect the kinds of work you prefer and the settings in which you can work effectively.</td>
</tr>
<tr>
<td>JOB AVAILABILITY</td>
<td>Positions available at a given time and place that match your skills, experience, and education. Some jobs are available only in specific locations, such as large cities or company headquarters.</td>
</tr>
<tr>
<td>EARNING POTENTIAL</td>
<td>Certain professions or careers have higher earning potential than others.</td>
</tr>
<tr>
<td>PERSONAL NEEDS</td>
<td>Fringe benefits and other factors that influence job satisfaction, such as insurance, vacation, on-site child care, and sick leave.</td>
</tr>
</tbody>
</table>

LESSON 1 Researching Careers
CHAPTER 3  Career Opportunities

Career Planning and Information Sources

What is right for you? A job or a career? Will you enter the work force right out of high school, or pursue higher education? Will you join the military?

You should be constantly weighing those options, but also be willing to change if a particular direction doesn’t seem right. When you find a path that’s good for you, go for it!

Good career planning includes four tasks:

1. Evaluating your attitudes, interests, abilities, and preferences
2. Gathering information on different career options
3. Matching your interests with possible occupations
4. Taking the steps necessary to reach your career and life goals.

Later lessons in class and in this book will discuss the job-search process in detail, including writing a résumé, applying for a job, what employers are looking for, and job interviewing.

The remainder of this lesson will help you as you gather the information you’ll need for good decision-making.

Online Job Information Sources

In the Internet age, you have more information available to you than most high school students have ever had.

- *The Occupational Outlook Handbook*, the career-information resource guide cited above for the 20 fastest-growing and fastest declining occupations is produced by the US Department of Labor, and you can find it at [www.bls.gov/oco/](http://www.bls.gov/oco/).

- *The Dictionary of Occupational Titles* gives titles for thousands of jobs. It may be a good source of ideas if you are having a hard time imagining what you might do for a career. You can find it at [www.wave.net/upg/immigration/dot_index.html](http://www.wave.net/upg/immigration/dot_index.html).

Other Sources of Information

Dozens of books give career and job-seeking advice. Check out a couple of them from the library or buy a couple that look interesting and read them to compare the differences.

You also have easy access to a state or local job services office. They have updated information on jobs that are available.

Newspapers are a good source of job availabilities. The business section of your local newspaper may give you an idea of what kinds of new businesses may be opening in or moving to your area. Larger national newspapers have significant job sections, or if you subscribe online, you can get access to these job openings on your home computer.
Visit the local chamber of commerce. Attend trade shows if there are any in your area. Visit the local branch of a union if the members work in an area that interests you.

You will also hear the word “networking” a lot during your working life. Networking is the process of making contacts and building relationships that can help you obtain leads, referrals, advice, information, and support. But even in high school, this could be one of the best ways you can learn about job or career openings. Relatives or neighbors may know about potential careers. People who are working often hear about job openings before their businesses make them public. Those are people who may be able to give you a good lead to a job, that is, an inroad or route to information before it is otherwise widely known.

The most widely used form of networking now is on the Internet. Social networks such as LinkedIn and Facebook are the most popular. Generally, a social network is a website that provides a virtual community for people to share their daily activities or interests, or to widen their circle of professional acquaintances. To become a member of a social network, you go to the network web page and create an online “profile” with your personal or biographical information, pictures, and other information you choose to “post.” You can communicate with others in your network in many ways. You can offer comments in a blog, or by e-mail, instant messaging, even by audio or video.

As a career tool, you can join a professional-oriented network like LinkedIn and obtain many free services that are not available on other such sites. You can post your own resume, or profile, and connect to others who are in your area of career interest. You do this by looking for people you already know, or by reviewing company profiles that can tell you a lot about what the company or organization does, who works there, and how the organization is doing, from its career offerings to its financial status.

As with other forms of electronic communication, you should follow some guidelines about social networking. Do not allow just anyone to join your network. Know the individual or group to whom or which you decide to connect. Be careful about career or business social networks that do not offer a variety of services but charge you for your participation. Some of these “connections” could also be someone phishing, looking to steal personal information to compromise it in some way. So, always be wary of unfamiliar sources of friends and business connections.
Consumer Reports magazine has listed several cautions about social networking, things that should be avoided:

- **Using a weak password**
- **Leaving your full birth date in your profile**—This is an ideal target for identity thieves. You should change that by choosing an option to show only the month and day, or no birthday at all.
- **Failing to use privacy controls**—Almost 13 million Facebook users in 2012 said they had never set, or did not know about the site’s privacy tools. Twenty-eight percent shared all or almost all of their wall posts with an audience wider than just their friends.
- **Mentioning that you’ll be away from home**—That’s like putting a “no one’s home” sign on your door.
- **Letting search engines find you**—This can help unwanted strangers to access your page.

Finally, as you look to start your career or job search, talk with professionals and the people who visit your school during career days. If possible, attend the career days at other schools, including those at colleges and universities in your areas. Use these events to learn about the requirements for entering various occupations or professions.
Using complete sentences, answer the following questions on a sheet of paper.

1. What are some of the considerations in selecting the right career?
2. What is the difference between a job and a career? Why is a career better?
3. What is a career path? When you set a career path, does it mean you have to stick with one kind of job? Explain your answer.
4. What careers sound most appealing to you? Look to see if the career is in a fast-growth or slow-growth area. What would your strategy be to become better prepared to succeed in that career choice?
5. What qualities do you have that employers will appreciate?
6. What qualities do you think you need to develop to become more valuable to employers?

APPLYING CAREER-CHOOSING SKILLS

7. Take the list of three types of jobs you wrote for the Quick Write. Look up each job in *The Occupational Outlook Handbook*. If one or more aren’t listed there, look on O*Net, the Department of Labor site, and write down the educational qualifications and salary information. Then write a list of the advantages and disadvantages of each position and rank them in your order of preference. Which factors helped you decide the rankings?