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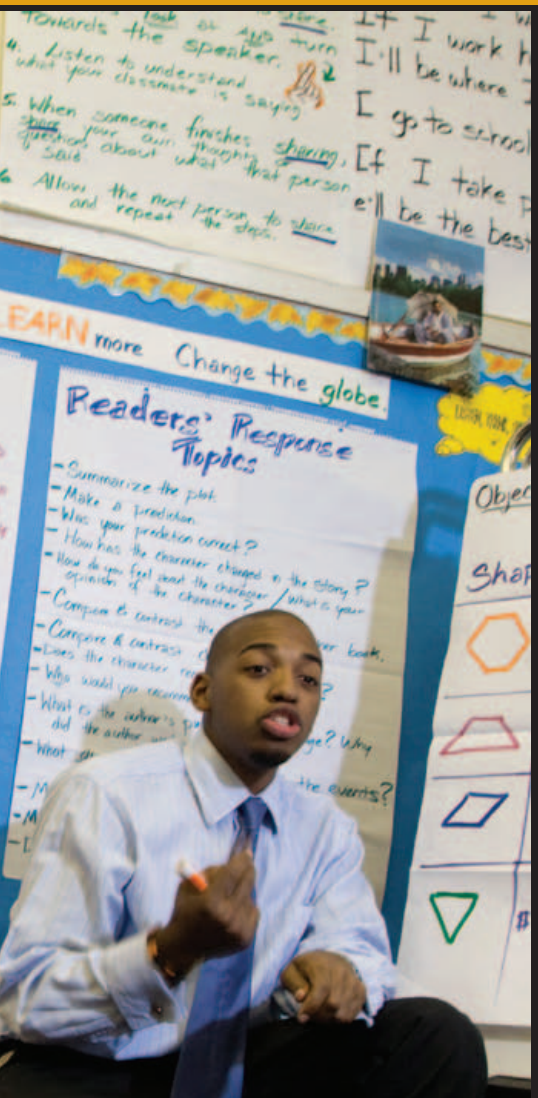

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Occupational Outlook Quarterly

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Serving, learning, and earning:

National Guard photo by Prentice Martin-Bowen

An overview of three organizations

Photo courtesy of Peace Corps/Kyrgyz Republic

A traditional, full-time job isn't the only way to work. And opting for an alternative often yields benefits beyond work experience.

Numerous organizations promote personal and professional development through service. These organizations train participants to address the needs of a community, either in the United States or abroad. By overcoming challenges during service, participants develop leadership, perseverance, and other desirable work-related skills. Educational benefits, alumni support, and other perks add to the appeal of these organizations.

This article highlights three such organizations: Teach for America, the National Guard, and the Peace Corps. An overview of each describes the organization, what its participants do, what kind of benefits the organization offers, and how candidates can apply. Sources of additional information are provided at the end.

Photo courtesy of Teach for America

Teach for America

The nonprofit organization Teach for America works to improve educational opportunities for children and young adults in low-income communities across the United States. Students in these areas are often less successful academically than their counterparts in other communities—and Teach for America wants to eliminate that disparity. "We believe that regardless of where a child is born, he or she deserves an excellent education," says Carrie James, national communications director of Teach for America in Boston, Massachusetts. "A child's ZIP Code should not determine his or her educational opportunities."

Teach for America participants, called corps members, teach for 2 years in a low-income community. Most corps members are not certified teachers prior to joining the organization, but by the end of their service, all corps members become certified teachers.

Since 1990, more than 32,000 corps members have completed Teach for America service. This fall, about 9,300 corps members will teach in 43 regions nationwide. The largest placement regions are in the Mississippi Delta and the inner cities of New York, Houston, and New Orleans.

What corps members do

Teach for America corps members teach students in pre-kindergarten through high school. Their day-to-day tasks are similar to those of other teachers: They prepare lesson plans, choose instruction methods appropriate for their students, assign homework, administer and grade tests, and assess student progress.

But corps members' approaches to instruction often focus specifically on the Teach for America goal of educational equity. For example, corps member Jennifer Obiaya wants her elementary-school science students in Harlem, New York, not just to learn but to already be thinking about college. She refers to her students as "scholars," to her classroom as "Harvard Discovery Lab," and to each class's grade by the year in which the students will graduate from college.

Obiaya also challenges her students with a tough curriculum. Her first-grade class recently studied simple aerodynamics. "I am always thinking of ways to make the material

Dennis Vilorio

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as rigorous and easy to understand as possible," she says.

Teach for America encourages corps members to immerse themselves in their school's community. The members' goal is to inspire students, families, other teachers, and the community at large to become advocates for better education. "It's critical to engage families and the community in each child's education," says Victor Wakefield, a Teach for America alumnus in Durham, North Carolina.

Corps members are also encouraged to get to know students and their families. Involving them in the educational process helps corps members assist each student. For example, Obiaya joins students for breakfast on school days, so students see her as a friend as well as a teacher. "Spending time in an environment other than the structured classroom has been a great way for me to build strong relationships with them," she says.

Training

Teach for America trainees complete an intensive, 5-week teacher training program prior to placement in a community. During this summer program, trainees learn the basic skills they need to become effective teachers. Training includes instruction in teaching methods, observing and assisting seasoned teachers, and preparing lesson plans.

Trainees also teach summer school. This classroom experience exposes trainees to the challenges of teaching early in their preparation, when they still have close support from the staff. Each trainee is then paired with an experienced mentor, who will observe him or her in the classroom and offer suggestions throughout the 2-year commitment.

After being accepted to Teach for America, corps members apply to open teaching positions in their community. Public school teachers must meet state requirements for teaching qualifications, which, for corps members, often means pursuing alternative paths to credentialing. Most states require that corps members take graduate coursework during their service and that they pass a test or have a certain number of credits in a specific subject.

Teach for America provides different programs to help corps members meet their state's requirements by the end of their service. For example, if a state requires that teachers have a master's degree in education, all corps members who lack one will attend an affordable graduate program at a university partnered with Teach for America. While in school, corps members work concurrently as

Teach for America corps members build strong relationships with their students.

Photo courtesy of Teach for America

Corps members strive to involve their students' families in the classroom.

teachers. Corps members must for pay for testing, certification, and any other requirements, but Teach for America offers some financial help. Financial benefits are discussed in the following section.

Corps members continue to receive training and support after placement. In regional meetings, members can share their experiences with other members; for example, they can discuss successful teaching methods or ways to adjust to living in a particular community. Teach for America also provides an online hub where corps members can share lesson plans and resources.

What benefits are offered

Teach for America offers financial, educational, and professional benefits to corps members during and after their service.

In addition to the benefits Teach for America provides, corps members receive a compensation package paid for by the school district in which they are placed. This compensation includes the same salary and employment benefits offered to other new teachers in the region. According to Teach for America, salaries range from $30,000 to $51,500, depending on the region and its cost of living; on average, corps members earn $38,000. Other benefits also vary but usually include medical, dental, and vision care; life insurance; and a pension plan.

Financial. During summer training, Teach for America covers housing, food, and transportation costs. After placement, Teach for America offers transitional funding, currently between $1,000 and $6,000, to help corps members with relocation, travel, and teacher testing and certification expenses. Funding may be in the form of a grant or a no-interest loan and is based on financial need and relocation costs.

During their 2-year commitment, corps members can delay repayment on their federal student loans. This loan forbearance, available through AmeriCorps, also covers the interest that accrues during that period.

Educational. As a founding member of AmeriCorps, Teach for America makes its corps members eligible for the Segal AmeriCorps Education Award for each completed year of service. Totaling about $11,100 over 2 years, this award may be used to repay student loans or finance educational expenses, such as teacher certification, incurred during or after service. Corps members are eligible for the education award as long as they haven't already received it for service in AmeriCorps.

Teach for America partners with more than 200 universities to provide a variety of educational aid to corps members who want to earn a master's degree while teaching or who plan to return to graduate school after completing their teaching commitment. Benefits

Photo courtesy of Teach for America

Teach for America seeks to improve education in low-income communities throughout the United States.

range from application fee waivers to annual scholarships of up to $30,000.

Professional. For many corps members, Teach for America provides an excellent introduction to careers in education; in fact, 67 percent continue to work in education. Some continue to teach in the same school district or work as administrators. Others teach elsewhere, sometimes joining nonprofits or charter schools.

Wakefield and another alumnus, April Goble, expected to apply to law school after their Teach for America experience and to become lawyers. Instead, both are still committed to education. Wakefield is now a Teach for America recruitment director, and Goble is executive director of KIPP Chicago, part of a national network of public charter schools in low-income communities.

Obiaya, too, plans to remain in education: "I found my calling," she says. She begins working this fall as an assistant principal at the school where she served in Teach for America.

Because so many alumni remain in education—sometimes at the same school—they are a valuable resource for current corps members seeking additional support, advice, and networking opportunities. Teach for America provides other professional development support, such as information sessions and career fairs. These events can help corps members market their skills and find job openings.

Corps members also often remain close to the people they meet in Teach for America, and those contacts prove valuable, too. "I learned a lot from my fellow corps members," says Goble. "Those relationships have blossomed over the years and become a nice support system."

Corps members pick up practical skills from their Teach for America experience that they can apply to future jobs. "I learned to look at things from others' perspectives," says Obiaya, "always assuming the best in them." Corps members also say they learn to communicate better and to cope with challenges more effectively.

How to apply

Teach for America applicants must be U.S. citizens or legal permanent residents and have a bachelor's degree with a grade-point average of at least 2.5 on a 4.0 scale. Applicants submit materials—including personal and academic information, a resume, and a letter of intent—online. Supplemental documentation, such as transcripts and proof of citizenship, is required later.

After submitting an online application, select candidates are first interviewed over the phone. Candidates who move to the next step undergo a day-long, in-person interview in which they are challenged to show their strengths and skills through group activities, discussions, and creation of sample lesson plans. Letters of recommendation and another interview are required of candidates whose applications continue to advance.

The application process takes 3 months to complete, and selection is competitive. Of about 48,000 applicants in 2011, a total of 5,200—about 11 percent—were selected. Most corps members chosen (about 80 percent) were undergraduates completing their degree; 14 percent were professionals, and

6 percent were graduate students. A degree in a subject that is in high demand, such as math or science, can help candidates stand out.

Candidates may express a preference for their assignment during the application process, but placement depends more on the needs of the organization than on personal desire. That doesn't seem to be a problem for most applicants. "Across the country, interest in Teach for America is incredibly strong," Wakefield says. "We hope to become an enduring American institution."

National Guard

The National Guard is a corps of part-time troops in air and ground units that is organized and operates at the state level. However, its citizen soldiers and airmen, called Guardmembers, may serve in both federal and state capacities. At the federal level, under the direction of the U.S. President, they help protect the nation's borders, curtail drug trafficking, train foreign forces, and perform combat operations. At the state level, under the direction of the governor, members respond to national emergencies and provide security, evacuation, and reconstruction assistance.

Guardmembers generally serve for 8 years in a combination of active and reserve duty. Those with previous military experience often serve 1 to 3 years in drilling status (training with their units 1 weekend per month and 2 weeks per year) and the remaining years in the Individual Ready Reserves (periodic check-in, but no drilling, required). Most Guardmembers serve 6 years in drilling status followed by 2 years in the Individual Ready Reserves. Under rare circumstances, Army National Guardmembers can serve fewer years of active and more of reserve duty.

The Army National Guard dates back to colonial militias in 1636, but the Air National Guard, part of the U.S. Air Force, was not established until 1947. Today, there are about 3 times more soldiers than airmen in the National Guard—for a total force of more than 467,000 Guardmembers.

What Guardmembers do

Whether at home or abroad, members of the National Guard work to protect state or national interests. Troops must be prepared for rapid response to a variety of situations, and their organization and training reflect this versatility. They routinely drill and train to maintain their preparedness. "We train and train to be ready just in case we are needed," says Robert Smith, a staff sergeant in the Idaho National Guard.

Photo courtesy of the California National Guard

Members of the National Guard serve in both country and state missions.

National Guard photo by Chris Durney

Training teaches Guardmembers what they need to know to perform on the field and in their specific duties.

States organize Guardmembers into units, usually by region and career field. Along with learning basic combat tactics, members learn a specific occupation. "There are over 150 specialties," says Jason Gibson, a lieutenant colonel at the National Guard Bureau in Arlington, Virginia, "but what you do depends on your skills and what the state needs." Among the occupational specialties are medical logistics specialist, translator, avionic mechanic, and cook.

National Guard officers have leadership responsibilities in addition to their other duties. For example, Rick Mercer enrolled in ROTC (Reserve Officers' Training Corps) as a college student and joined the Indiana National Guard as an aviation officer after earning his degree. Mercer flew helicopters, sometimes responding to natural disasters, such as floods and wildfires. In addition, he led a 120-person unit that provided support to flight missions.

Guardmembers pursue other activities when they are not in training or on missions. Many work in a civilian job or attend college. Others find full-time employment with the National Guard in positions ranging from administration to recruiting. "Serving in the National Guard lets you enjoy the civilian lifestyle while receiving the benefits of military service," says Mercer.

However, not all of Guardmembers' work keeps them close to home. Deployments mean travel for duty that spans weeks or months. Missions inside the United States typically last between 15 and 60 days but depend on the emergency and type of support needed. For example, the National Guard has provided long-term support in response to Hurricane Katrina.

International deployments, on the other hand, last at least 12 months. The National Guard's overseas deployment plan calls for units to mobilize once every 5 years, but the actual frequency of deployment varies by unit and by members' occupational specialty.

Training

Before joining their units, trainees must have completed several months of training in two stages: basic and specialty. Basic training lasts about 9 weeks and fully prepares trainees to serve as regular soldiers or airmen. Specialty training prepares trainees to perform their National Guard occupations. Length of training varies from about 1 month to 1 year, depending on the occupation.

Basic training includes instruction in military traditions, physical fitness, and field exercises. Trainees improve their leadership ability and self-discipline as they develop the skills they need. Specialty training includes

intensive, hands-on instruction in the occupational specialty selected. At the end of specialty training, trainees become full Guardmembers.

Training is challenging, says Smith: "The days are long and full of constant physical exertion." But those challenges are designed to build teamwork and help Guardmembers develop personally and professionally. "Training does not ask you to grow," Smith says. "It requires you to grow."

For the duration of their commitment, Guardmembers attend monthly drills and annual training to maintain readiness for deployment—whether for national or state duty. In addition to periodically qualifying on weapons use, for example, Guardmembers might also attend or give presentations on topics ranging from air rescue to property protection.

What benefits are offered

Many people are aware that the National Guard provides financial and educational benefits, but they may not think about other rewards. "The National Guard has a lot of fine things to offer and demands leadership from you," Smith says. "Because of the structure, training, and accountability, people get management experience at a young age. How many other 24-year-olds are in charge of a half dozen people?"

At the state level, Guardmembers' benefits vary. At the federal level, benefits include those that help them in performing their service, such as medical care while on active duty. Other benefits are similar to those enjoyed by military personnel, including discounted shopping at commissary stores worldwide, low-cost life insurance, and access to military retirement plans.

Financial. The National Guard provides a paycheck and meal and housing allowances to members when they are activated or work full time in a National Guard job; it also pays members for completing required monthly drills and annual trainings. Wages vary and are based on rank, occupation, education level, and type of duty. In 2011, for the lowest ranking enlisted private, wages begin at about $1,400 per month for active duty, $180 for monthly weekend drills, and $630 for annual 2-week training.

College graduates can join the National Guard at a higher rank and perform more specialized jobs than a high school graduate. The increased rank and responsibilities also mean increased pay. For example, second lieutenants, the entry-level rank for officers, currently earn wages beginning at about $2,800 per month for active duty, $370 for monthly weekend drills, and $1,300 for annual 2-week training.

Guardmembers also earn incentives for performing certain jobs or recruiting new members. For example, members who have the skills to qualify for difficult assignments, such as intelligence analysis or Special Forces duty, can earn an additional $5,000. And Guardmembers who recruit others can earn bonuses of up to $7,500, depending on the rank of the recruit.

After 6 years of service, members are eligible to apply for home loans guaranteed by the U.S. Department of Veterans Affairs. These loans eliminate the requirements for a

The National Guard often responds to emergencies, such as wildfires and floods.

National Guard photo by Jason Boyd

When deployed abroad, Guardmembers may fill a variety of roles, from combatants to trainers.

down payment and private mortgage insurance for homes up to a certain value.

Educational. The National Guard offers educational incentives and benefits that make college affordable—or even free—for members. And a college degree can help members climb in rank and find a civilian job. "We challenge our members to better themselves," says Gibson. The National Guard offers preparatory courses and tutoring for the GED and college-entrance exams.

During their service, members also receive educational benefits from the G.I. Bill, Federal Tuition Assistance, and the Student Loan Repayment Program. For example, the G.I. Bill provides a monthly stipend of up to $333, Federal Tuition Assistance covers as much as $4,500 of tuition annually, and the Student Loan Repayment Program repays up to $7,500 of student loans per year after each year of service.

Professional. Every Guardmember learns occupational skills, many of which are directly transferable to the civilian workforce. For example, air traffic controllers in the National Guard can work for the Federal Aviation Administration as civilian air traffic controllers if they meet job qualifications. But even occupations that have no direct civilian counterpart, such as those in infantry and artillery, equip Guardmembers with relevant job skills, such as discipline and the ability to work in teams.

In fact, Guardmembers often cite opportunities for skills and leadership training among the most valuable benefits they gained from their service. "The National Guard opened a lot of doors for me," says ROTC alumnus and Guardmember Mercer. "It paid for me to go to college, made me focus, and trained me as a pilot and engineer." It also gave him a career. Mercer, now a major, has worked full time for the National Guard since 2002.

The National Guard recognizes exceptional effort with awards that help Guardmembers advance in rank, leading to additional responsibilities and better wages. Enlisted Guardmembers may also be promoted through Officer Candidate School, which provides the same leadership and military training as ROTC. For example, Smith first enlisted as a mental health specialist but, after completing Officer Candidate School, is now an education incentive officer.

Under certain circumstances, Guardmembers interested in working for the federal government after discharge may be eligible for veterans' preference, enhancing their prospects in applying for some federal jobs. But the only Guardmembers eligible for this hiring preference are those who have deployed overseas or who became disabled in the line of duty.

How to apply

To join the National Guard, prospective members must be U.S. citizens or legal permanent residents and at least 17 years old. The maximum age for most enlistees is 35 for the Army National Guard and 39 for the Air National Guard. Some states also require enlistees to have at least a high school diploma or equivalent.

To begin the application process, prospective enlistees should contact a National Guard recruiter. Applicants who have not already taken the Armed Services Vocational Aptitude Battery (ASVAB) will be required to do so. The ASVAB measures knowledge and ability in areas such as science, math, and reading comprehension. Results are used to help determine a Guardmember's occupation by matching vocational aptitudes, interests, and preferences with available openings.

Prospective National Guard officers have stricter requirements. To be accepted into an officer program, Guardmembers must have at least 90 college credit hours, although they may begin officer training if they have 60 hours. To receive an officer commission, Guardmembers must have at least a bachelor's degree. Furthermore, they must demonstrate leadership through extracurricular, volunteer, or work activities; obtain a security clearance; and score at least 110 out of 200 on the ASVAB.

After submitting an application, prospective members must pass both a physical fitness test and a criminal background check. Major crimes and violations that reflect poorly on character, such as public intoxication, will eliminate applicants from consideration. "We are looking for good citizens to build a quality force," says Gibson.

Completing the application process does not obligate applicants; prior to the swearing-in, they may walk away at any time. That changes with the Oath of Enlistment or, for officers, the Oath of Office, by which applicants commit to the Guard.

The application process for joining the National Guard takes between 2 weeks and several months to complete, depending on the time of year and the availability of training spots. Most National Guard members join shortly after they graduate from high school, but about 19 percent have completed some college courses or have earned a bachelor's degree.

Peace Corps

The Peace Corps is a federal agency established to promote global friendship. This organization aims to help developing countries meet their needs for trained workers and to foster greater understanding between Americans and people in other countries.

Peace Corps participants, called volunteers, are of diverse backgrounds, experience, and ages. They live and work in a foreign country for 27 months. Volunteers' skills, along with host-country requests, determine assignment in a specific program, such as education, business development, and agriculture.

Established in 1961, Peace Corps has about 200,000 alumni who have served in 139 countries worldwide. Today, there are more than 8,600 volunteers in 76 countries.

What volunteers do

By immersing themselves in their host country's culture, volunteers help communities meet a variety of needs—from conducting

Photo courtesy of Peace Corps/Tonga

Peace Corps volunteers often use demonstrations and activities to train community members.

life-skills training for youths to improving accounting practices in a cooperative. Volunteers' job duties vary, based on the projects they're assigned. Most projects involve working with local members of the community to promote sustainable development.

Many volunteers create secondary projects to complement their primary assignment. During her first year of service in Malawi, for example, Sara Lane worked on many small projects. As an environmental volunteer, she taught a group of beekeepers to make beeswax candles and helped start and operate a mushroom cultivation business and several tree nurseries. But she has also taught journalism and communication classes at various educational camps. And her favorite secondary project has been teaching English to a small group of community members.

Larger projects and greater successes are more likely in the second year of service. Emily Nicasio, for example, supervised the construction of an aqueduct to provide clean water to her village in the Dominican Republic. She surveyed the spring, designed the aqueduct system, created a budget, solicited funding, and managed eight work brigades. After more than a year of work, Nicasio and her community celebrated the completion of the aqueduct together.

Peace Corps volunteers face a variety of challenges throughout their service, from homesickness to occasional community disinterest. But many volunteers say that their most difficult adjustment is to the host country's culture. Communication styles, strictly defined gender roles, and a casual attitude about time are among the cultural differences.

At the same time, however, volunteers often say that their interactions with the community prove to be the most enduring and personally rewarding part of the Peace Corps experience. "I miss the camaraderie, sense of community, and people stopping by to say hello or play dominoes," Nicasio says of village life. "By the time I left, we were all family."

The Peace Corps encourages volunteers to work with community members.

Photo courtesy of Peace Corps/Panama

Training

Before joining their communities, Peace Corps trainees generally receive 3 months of intensive preparation in their host country. They attend classes taught by host-country residents and other members of the Peace Corps staff. Subjects include host-country language, culture, and instruction tailored to trainees' specific programs. Technical training may include hands-on application; teacher trainees, for example, briefly practice teaching under the guidance of more-experienced volunteers.

For part of the training, depending on country and program assignments, trainees live with host families. The family helps the trainee learn about the community and adjust to the culture, language, and food. Depending on the country's training schedule, trainees might visit a current volunteer or a few villages to get a sense of where they would like to serve and potential projects that they would like to undertake. At the conclusion of training, every trainee must pass a language proficiency test to be sworn in as a Peace Corps volunteer.

Photo courtesy of Peace Corps/Morocco

Volunteers become a part of the community, learn the local culture and language, and share American culture.

Volunteers continue to receive training during their service. In-service training may include workshops for improving language skills, presentations on technical instruction, and updates by Peace Corps staff about newsworthy events. This training provides volunteers with an opportunity to brush up on their knowledge and to receive support for their efforts. For example, volunteers may discuss ideas and then seek help on a project from other volunteers who can provide additional expertise or assistance.

In-service training also allows volunteers to reconnect with friends from their initial training whose villages may be located far from their own. Because volunteers face similar emotional highs and lows at predictable times in their service, volunteers act as a support network for each other.

What benefits are offered

The Peace Corps covers all expenses related to training and service, including a monthly living allowance and comprehensive health and dental care. "The Peace Corps' medical coverage was the best health insurance I've ever had," says Jodi Hammer, Peace Corps Career Center Coordinator in Washington, D.C. "You will be well taken care of."

Volunteers who fulfill their commitment receive a number of post-service benefits, such as fellowships for graduate study and special eligibility for federal jobs.

Financial. Although volunteers do not receive a salary, they do receive a monthly stipend for lodging, travel, and other living expenses. "The living allowance is paltry by U.S. standards," says Hammer, "but it's comparable with what the locals earn." Most volunteers have little difficulty covering their day-to-day expenses with the living allowance.

Volunteers who have federal student loan debt can defer their payments for the duration of Peace Corps service. These loans, however, still continue to accrue interest. Additionally, Peace Corps service cancels a portion of Perkins student loans: For each of the first 2 years of service, 15 percent of the loan is cancelled. If volunteers choose to extend their service, 20 percent of the loan is cancelled in each of a third and fourth year.

Volunteers also receive a post-service readjustment allowance, currently $275 for every month they spend in the host country—a total of $7,425 for volunteers who successfully complete the entire 27 months of training and service. Volunteers who have ongoing financial obligations may choose to receive a portion of the readjustment allowance upon completion of each month of service.

Educational. Volunteers can earn a graduate degree while serving. To receive this benefit, volunteers must apply and be accepted separately to both Peace Corps and a Master's International program, available at more than

Photo courtesy of Peace Corps/Philippines

Volunteers help their community meet its needs, from agriculture production to HIV/AIDS education.

80 participating universities. Students first complete 1 year of university coursework, at their own expense. They then earn college credit for their Peace Corps service. After service, they complete any remaining academic requirements, such as a thesis.

Volunteers who successfully complete 2 years of service also earn lifetime eligibility for the Paul D. Coverdell Fellows Program. This program combines graduate studies with a degree-related internship in a low-income community in the United States or its territories. For example, a business fellowship might require the returned volunteer to intern at a community development nonprofit. The program provides stipends and reduced tuition at more than 60 participating universities.

Professional. In addition to gaining technical and language proficiencies, volunteers develop other skills—such as cultural sensitivity, flexibility, and patience—that transfer well to the working world. "You experience incredible personal and professional growth in just 2 years," says Lane. "You would have to work for years to learn those same skills at other jobs in the United States."

The demands of Peace Corps service force volunteers to adjust to their host country's culture and to overcome setbacks, which are a common part of Peace Corps life. But coping with these demands can drive a volunteer's growth. For example, volunteers frequently develop communication, leadership, management, diplomatic, and organizational skills. "You learn so much about yourself and how to work with people," says Nicasio.

Upon returning to the United States, volunteers find that many of the skills and experiences gained during Peace Corps service are useful in their professional lives. For example, Peace Corps service often serves as a steppingstone to a career with the federal government, international agencies, or nonprofit organizations. Returning Peace Corps volunteers have 1 year of enhanced eligibility for federal government jobs, which can streamline the federal hiring process.

Former volunteers can tap into the vast network of Peace Corps alumni for support and career advice. Networking resources include online discussion boards and the Hotline, an online bulletin published twice a month advertising jobs for former volunteers.

The Peace Corps also organizes career fairs to help former volunteers network with employers and practice jobseeking skills, such as interviewing and resume writing. "I met fantastic people," says Nicasio of her visit to a career fair, "and learned how to make my story relevant to the audience."

How to apply

To become a Peace Corps volunteer, applicants must be U.S. citizens and at least 18 years old. There is no upper age limit to Peace Corps service. The application process starts with submission of an online application. Required materials include three references, two essays, and other documentation, such as a resume and college transcripts. Legal and medical clearances are also needed.

Peace Corps recruiters interview qualified candidates to assess a candidate's skills and suitability for service. The recruiter considers qualities such as determination, adaptability, and proven commitment to community service.

Although specific requirements are few, the Peace Corps selection process is competitive. In 2010, for example, only about one-third of nearly 14,000 applicants were selected. An undergraduate degree is not required, but having one—or having a high-demand specialty, such as animal husbandry—may improve an applicant's chances. Ninety percent of Peace Corps volunteers have at least a bachelor's degree; 11 percent have, or are completing, a graduate degree.

The application process takes between 9 and 12 months to complete. Many applicants seek to join immediately after college, but the Peace Corps also attracts midcareer professionals and retirees. "The Peace Corps values the knowledge and expertise that these older volunteers provide," says Hammer.

Candidates can express a placement preference on the application and during the interview, but the Peace Corps' priority is to send volunteers where they are needed most—not where they would most like to go. Remaining flexible greatly increases the chances for success in both placement and service. "Wherever you go, you make the experience," says Hammer. "Embrace whatever may come."

For more information

Teach for America, the National Guard, and the Peace Corps provide a chance to serve others while learning valuable job and life skills and earning benefits. Other organizations offer similar opportunities, including some that provide benefits comparable to those described in this article. For example, AmeriCorps participants serve throughout the United States with community, nonprofit, and government agencies; its members also earn financial, educational, and professional benefits. See **www.americorps.gov**.

In addition, workers in high-demand or public service occupations may receive incentives to serve areas of the country in need of their expertise. For example, student loan forgiveness is available to teachers, lawyers, and some healthcare workers who commit to serving in low-income or remote communities. For a list of Federal Perkins Loan cancellations by service or condition, visit Federal Student Aid online at: **www.studentaid.ed.gov/PORTALSWebApp/students/english/PerkinsLoanCancellation_DischargeSummChart.jsp**. A guide to loan forgiveness is also available at: **www.finaid.org/loans/forgiveness.phtml**.

To learn more about Teach for America, contact its national office:

315 W. 36th St., 7th Floor
New York, NY 10018
Toll free: 1 (800) 832-1230
admissions@teachforamerica.org
www.teachforamerica.org

To learn more about serving in the National Guard, contact:

National Guard Bureau
1411 Jefferson Davis Hwy.
Arlington, VA 22202
Toll free: 1 (800) GO-GUARD (464-8273)
www.nationalguard.com

And to learn more about the Peace Corps, contact:

Paul D. Coverdell Peace Corps Headquarters
1111 20th St. NW.
Washington, DC 20526
Toll free: 1 (800) 424-8580
www.peacecorps.gov

Medical physicists and health physicists: Radiation occupations

Did you know that physicists help save lives? Physicists aren't found only in lecture halls and laboratories. Some use their knowledge of physics principles to work in medicine and health.

Physics is the study of matter and energy and the ways in which the two interact. Some physicists use their expertise in physics to focus on radiation. These specialists, called medical physicists and health physicists, work to help people or protect the environment. Medical physicists work with physicians, assisting patients who need imaging technology and radiation treatment in hospitals and other medical facilities. Health physicists protect people or the environment from the potential hazards of radiation in a variety of settings.

Keep reading to learn more about these two types of physicists. The first section describes what medical physicists and health physicists do on the job. The second section provides information about employment and wages. And the third section covers skills, training, and certification. Sources for finding more information are at the end of the article.

Physicists at work in medicine and health

Physicists devise theories and conduct research to further the knowledge of matter and energy. This knowledge may be used in practical applications, such as developing new technologies. Typically, physicists specialize in a particular subfield of physics, and some physicists combine physics with other disciplines in their work.

Medical physicists and health physicists are two such specialists who combine physics with other disciplines. Because of their training in physics and human biology, medical physicists and health physicists understand radiation and its effects on the human body. Additionally, health physicists have expertise in how radiation interacts with the environment. The ways in which both of these types of physicists apply their disciplines are described below.

Medical physicists

Medical physicists combine an understanding of physics, specifically as it concerns radiation, with an understanding of human biology. They are involved in the diagnosis and treatment of patients, as well as in research and education.

Medical physicists are concerned with the safe and effective use of radiological procedures—the application of radiation to the human body. These procedures are used to prevent, diagnose, and treat disease. Examples include medical-imaging technologies, such as X rays, and radiation therapy, in which radiation is used to kill malignant cancer cells.

The application of radiation to the human body entails risk. For example, radiation that is used to kill cancer cells can damage healthy cells, too. Medical physicists, working with other healthcare professionals, ensure the safety and effectiveness of radiological

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procedures by verifying the appropriate type, dosage, and application of radiation to the body.

Physicists who help in medicine may be employed at a hospital or other healthcare facility or in a solo or group practice for practitioner-clients. Medical physicists employed by a healthcare facility perform different types of work depending on the facility's size and on the number of physicists on staff. A smaller facility may require physicists to work in a wider range of activities.

Medical physicists most commonly work in one of three areas: diagnostic radiology, radiotherapy, and nuclear medicine. Other medical physicists focus on research, teaching, or consulting.

Diagnostic radiology. Medical physicists involved in patient diagnosis are concerned with technologies, such as magnetic resonance imaging (MRI), that produce images of the body's internal structure. These technologies allow physicians to see abnormalities and to monitor various processes, such as blood flow. The medical physicist's role is to ensure that such technologies are used both safely and effectively.

Medical physicists are often responsible for the equipment used in medical imaging. This might include testing, managing inventory, and supervising the maintenance, repair, and calibration of equipment. Additionally, medical physicists are responsible for ensuring that the technologists who operate medical imaging equipment follow proper safety precautions and procedures. And to ensure that medical images show clearly what is being evaluated, these workers also review the quality of the images.

Along with assisting in diagnosis, medical physicists involved in medical imaging may help physicians in the treatment of disease. For example, some medical physicists might use imaging technologies to guide neurosurgeons during brain surgery.

Therapeutic radiology. Most medical physicists work in therapeutic radiology, also called radiation oncology. Therapeutic radiology is the process of treating cancer by projecting high-energy radiation at targeted cancer cells to shrink and eliminate tumors. In this area, medical physicists work as part of an oncology team that implements a treatment plan.

Medical physicists review plans developed by dosimetrists, workers who calculate the amount of radiation to be used in treatment. Physicists verify that the treatment plans are safe and effective, based on their knowledge of physics and human biology.

Like medical physicists involved in imaging, those involved in treatment oversee the safe application of radiation. Duties include confirming that machinery is calibrated

correctly and delivering the correct dosage of radiation. Additionally, medical physicists make sure that the patient is placed—and remains—in the proper position.

Nuclear medicine. Nuclear medicine is used for both imaging and treatment after patients have received small amounts of radioactive materials—called radiopharmaceuticals—whether orally, intravenously, or by inhalation. In imaging, special cameras detect the radiopharmaceuticals and display information based on biological changes that occur when disease is present. In treatment, radiopharmaceuticals act specifically on the area being treated.

As part of a nuclear medical team that includes physicians and technicians, medical physicists evaluate the physical aspects of nuclear medical applications. Medical physicists use their knowledge of the possible effects of radiation on patients and medical personnel to develop accurate estimates for the lowest effective dosage. These physicists may also have expertise in interpreting images and in analyzing data produced during administration of nuclear medical procedures.

Other areas. Medical physicists may also participate in medical research, teach or train medical professionals, or work as consultants.

As researchers, medical physicists concentrate in one of a variety of areas, including issues related to radioactivity, medical applications of computers, and developing imaging equipment and technologies. As educators, medical physicists instruct or train other medical physicists, medical students, and other healthcare workers who treat cancer. As consultants, medical physicists might participate in any of these activities or advise clients about issues related to medical physics.

Health physicists

Health physicists help protect people and the environment by ensuring that hospitals, nuclear power plants, and other industries use radiation safely. They may also work as instructors or train others in radiation safety. Like medical physicists, health physicists understand radiation, how it can affect the human body and the environment, and what doses of radiation are dangerous.

What health physicists do is determined, in large part, by where they work.

Hospitals. At hospitals and other medical facilities, health physicists help to protect workers, patients, and visitors by ensuring that facilities using radiation sources are doing so safely. These health physicists are responsible for evaluating radiation safety procedures, monitoring possible radiation exposure, and ensuring that the facility complies with government regulations on radiation safety.

Nuclear power plants. A health physicist at a nuclear power reactor may regularly review data related to radiation levels. These health physicists also analyze laboratory results to make sure that the reactor is operating safely and complying with federal regulations.

Other responsibilities include choosing and maintaining equipment used to detect radiation and to protect workers and the environment from excessive amounts of radiation. These physicists may help to train workers or supervise technicians, chemists, or others working at the reactor. Additionally, these health physicists may also write emergency plans and respond to radiation accidents.

Industry. Health physicists who do environmental work might help decontaminate areas affected by radioactivity. Their duties may include collecting environmental samples and analyzing the samples in a laboratory to detect radioactivity.

Health physicists also work for regulatory agencies that help to establish rules for the manufacture, use, and disposal of radioactive materials. In occupational safety, health physicists ensure that employers follow safety requirements. Researchers study how radiation affects matter to establish radiation-protection standards and to aid in designing radiation-detection equipment.

Education. Some health physicists teach. Colleges and universities hire health physicists to instruct people or perform research or both. Health physicists may train other health physicists, medical personnel, nuclear plant workers, or others who need to understand the risks of radiation exposure—and how to prevent excessive amounts.

Employment and wages

The U.S. Bureau of Labor Statistics (BLS) does not collect employment and wage data for medical physicists and health physicists specifically. However, BLS collects employment and wage data for physicists as a whole. According to that data, in May 2010, there were about 16,860 physicists employed nationwide—and they had a median annual wage of $106,370. That's considerably higher than the median annual wage of $33,840 that BLS data show for workers across all occupations in May 2010.

Data available from industry organizations provide employment and wage estimates for both occupations, but these data may not be precise. For example, the Health Physics Society estimates that there are more than 6,500 people working in health physics in the United States, a number that may include technicians and others in addition to health physicists.

Skills, training, and certification

Both medical physicists and health physicists usually need at least a master's degree in a subject that demonstrates solid understanding of general physics. Generally, the more specialized their work, the more education they need. Jobs that are primarily technical usually have fewer training requirements.

In addition to knowing physics, medical physicists and health physicists must understand the effects of radiation on the human body. Knowledge of other disciplines is also required.

Other requirements for medical physicists and health physicists differ. For example, some states require licensing. And employers require all medical physicists and some health physicists to be certified.

Medical physicists

Medical physicists need to know biology, physiology, chemistry, and electronics. And

because medical physicists work with physicians and other medical staff, they should have good interpersonal skills.

Minimum educational requirements for medical physicist jobs usually include either a master's degree or doctorate in physics, medical physics, or a related field. This is usually preceded by an undergraduate degree in physics, although some students' bachelor's degrees are in other natural sciences or engineering. After obtaining a graduate degree, medical physicists complete a residency traineeship or a postdoctoral program at a hospital for 2 years.

Some states require licensing of medical physicists, and all employers require certification. Certification requirements vary by specialty but usually involve some combination of education, experience, and testing. Specific requirements are available from professional medical physicist organizations.

Health physicists

Health physicists must learn biology, chemistry, and electronics, along with mathematics and statistics, biochemistry, and genetics. Depending on where they work, health physicists may need knowledge in other areas, such as air and water sampling techniques or medical and industrial uses of radiation. Health physicists should also have strong analytical and communication skills.

Most health physicists have at least a master's degree, but not all jobs in professional health physics require one. Relevant studies may be in health physics or in another scientific or engineering field that offers opportunities for gaining practical experience in radiation safety.

Not all employers require health physicists to be certified. But some employers, such as nuclear utilities, may either prefer or require certification for hiring health physicists.

For more information

The *Occupational Outlook Handbook* describes physicists in its profile "Physicists and Astronomers." The *Handbook* is available in libraries and career centers or online at **www.bls.gov/ooh**.

For information about medical physics and medical physicists, contact:

American Association of Physicists in Medicine
One Physics Ellipse
College Park, MD 20740
(301) 209-3350
2011.aapm@aapm.org
www.aapm.org

For information about the medical physicist certification, contact the following organizations:

American Board of Medical Physics
P.O. Box 487
Barker, TX 77413
(281) 944-9482
abmpexdir@comcast.net
www.abmpexam.com

American Board of Radiology
5441 E. Williams Blvd.
Suite 200
Tucson AZ 85711
(520) 790-2900
www.theabr.org

American Board of Science in Nuclear Medicine
3000 Spout Run Pkwy.
D-401
Arlington, VA 22201
(571) 814-0227
absnm.hq@gmail.com
www.snm.org/absnm

For information about health physics and health physicists, contact:

Health Physics Society
1313 Dolley Madison Blvd.
Suite 402
McLean, VA 22101
(703) 790-1745
hps@burkinc.com
www.hps.org

And for information on the certification of health physicists, see the American Board of Health Physics website at **www.hps1.org/aahp/boardweb/abhphome.html**.

Grab bag

Plan your future with My Next Move

Are you interested in exploring your career options but aren't sure how to go about it? Check out My Next Move, an online tool that offers a variety of user-friendly ways to browse more than 900 occupations.

The website, created by the National Center for O*NET Development for the U.S. Department of Labor's Employment and Training Administration, lets you choose one of several search methods. If you have a general idea of what you want to do or have a "dream career," then search by keyword. If you know that you want to work in a particular industry, such as education, then search by industry. And if you aren't sure what you want to do, you can answer questions about your preferences—such as working in a biology lab or managing a clothing store. Your online responses will help you to identify your career interests. You can also browse for careers by choosing among occupations that are projected to grow, are part of the "green" economy, or include a registered apprenticeship.

Whether you search or browse, you'll get a list of occupations to explore. Clicking on an occupation brings up a one-page profile summarizing key information—such as the knowledge, skills, abilities, personality, and education you need to do the job. The occupational profile also includes job outlook and has links to local salary data and job banks to search for available positions.

Start your online career search at **www.mynextmove.org**.

Physics for females

Some girls who read "Medical physicists and health physicists: Radiation occupations," elsewhere in this issue of the *Quarterly*, might like the idea of a career in physics. Free resources available from the American Physical Society can help set young women's physics careers in motion.

The society's "Physics in Your Future" booklet is designed for girls in middle and high school. It describes the work of 15 women who use physics to solve medical mysteries, discover planets, research new materials, and more. Other resources include a "Women in Physics 2010" slideshow that highlights the work of women in the field of physics; information about physics-related scholarships, fellowships, and internship opportunities; and links to sources that encourage the professional development of women in physics.

To access the resources or to download or order publications, visit the society's Women in Physics website at **www.womeninphysics.org**. Or, contact the society by writing Deanna Ratnikova, Women and Education Programs Administrator, Education and Diversity Department, One Physics Ellipse, College Park, MD 20740; by calling (301) 209-3231; or by emailing *women@aps.org*.

Encouraging study in critical languages

Proficiency in certain foreign languages is critical to the defense, diplomacy, and security of the United States. Yet relatively few U.S. students study the languages that are spoken in many strategically important areas—such as the Middle East, China, and Russia. To encourage high school and college students to learn the languages of these regions, several federal programs provide scholarships and other funding.

For example, through the National Security Language Initiative for Youth, high school students live with host families abroad and learn Arabic, Chinese, Hindi, Korean, Persian, Russian, or Turkish. Students choose a language program for the summer, semester, or full academic year. Most expenses are covered, including travel to and from the host country, room and board, tuition, and health benefits. Participants must be U.S. citizens, 15 to 18 years old, and have a grade-point average of 2.5 or above. For more information, visit the program website, **www.nsliforyouth.org**; call toll-free, 1 (866) 790-2086; or email *nsliy@americancouncils.org.*

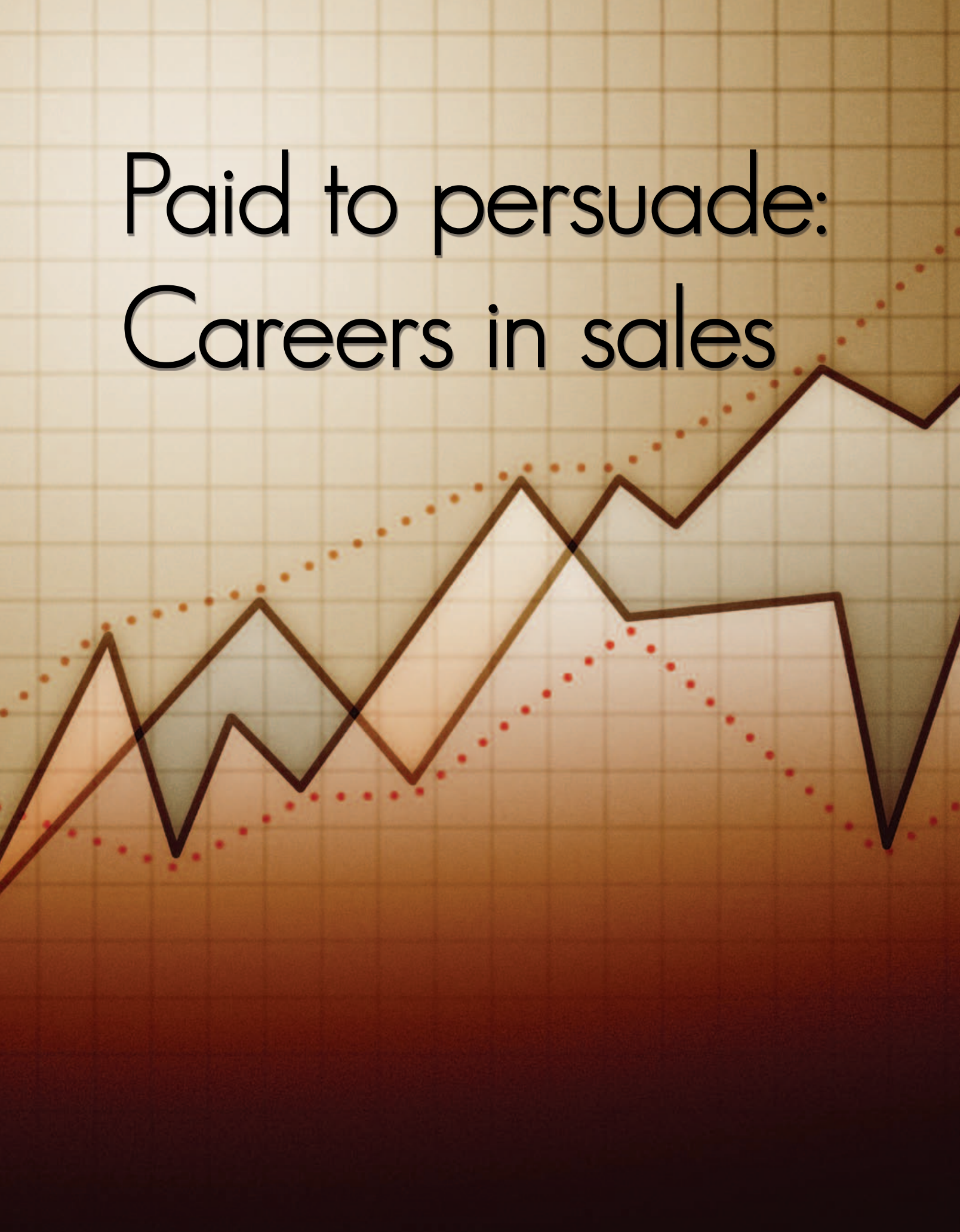
Undergraduate and graduate students may apply for scholarships for intensive study of critical languages overseas through the U.S. Department of State's Bureau of Educational and Cultural Affairs. Critical Language Scholarship institutes provide intensive language study and structured cultural enrichment opportunities for 13 critical languages. These institutes are for 7 to 10 weeks each summer in 15 countries. Applicants must be U.S. citizens, at least 18 years old, and currently enrolled in a U.S. undergraduate or graduate degree program. For full eligibility requirements and more information, visit online at **www.clscholarship.org**, call (202) 633-5005, or email *cls@caorc.org.*

Another funding source for critical language study is the National Security Education Program of the U.S. Department of Defense. To prepare undergraduate and graduate students for future federal service, this program provides training in less commonly studied languages, including Hindi, Swahili, and Urdu. It offers scholarships and fellowships for overseas study through Boren Awards and intensive language study coupled with overseas language instruction for undergraduates through the Language Flagship program. Award requirements and amounts vary, but recipients must commit to work

for the federal government for 1 year. Training initiatives include scholarships, fellowships, and instructional programs. For more information, visit online at **www.nsep.gov/initiatives**; write to the National Security Education Program, P.O. Box 20010, Arlington, VA 22219; call (703) 696-1991; or email *nsep@nsep.gov.*

Those are not the only federal scholarships and programs available for critical language study. For example, additional funding is provided for Gilman Scholarship recipients studying in countries where critical languages are spoken; students applying for the Fulbright U.S. Student Program may also apply for a Critical Language Enhancement Award for up to 6 months of intensive critical language training; and the ROTC Language and Culture program promotes critical language education, study abroad, and intercultural dialogue opportunities for ROTC (Reserve Officer Training Corps) college students. To explore additional opportunities in critical language studies, visit **www.iie.org** (search "critical language") or **www.state.gov/youthandeducation**.

Paid to persuade: Careers in sales



Here's an offer you might not want to miss: The chance to learn more about a career in sales.

Workers who make a living in sales are paid to persuade others to buy goods and services. Just about anything, from apricots to zip-line tours, needs an intermediary to move from producer to buyer. That go-between person is the sales worker.

Sales jobs are numerous. In May 2010, there were over 13 million wage and salary sales workers in the United States, according to the U.S. Bureau of Labor Statistics (BLS). Not all sales occupations are high paying. But for some of these workers, sales is a lucrative, lifelong career.

This article describes seven sales occupations with annual wages that were higher than the May 2010 national median of $33,840. And BLS expects job growth to be average or faster than average in each of the occupations through 2018, resulting in many jobs.

Keep reading to learn more about sales careers, including how to start one of your own. The next few pages describe the occupations. The section that follows discusses pros and cons of sales work and the skills needed for success in it. A final section provides advice on how to begin a sales career. Sources for more information are listed at the end. (And for information about sales career scams, see the box on page 32.)

Career options in persuasion

Sales careers provide options for people with diverse interests, strengths, and experience. If science is your passion, for example, then working as a sales representative for technical and scientific products could be a good match. If you have strong skills in math, you might have an aptitude for selling financial services. And if you have work experience in construction, you might do well selling building materials and supplies.

Whatever you sell, you'll likely identify new sources of business and develop customer

relationships. Specific tasks vary by position but might include making cold calls, researching potential clients, attending trade shows, giving sales presentations, negotiating contracts, and preparing sales reports.

Table 1 on the next page gives the May 2010 employment and wage data for selected sales occupations from the BLS Occupational Employment Statistics program. In addition to median annual wages—the point at which half of all workers earn more and half earn less—the table has wages for low-earning (10th percentile) and high-earning (90th percentile) workers in each occupation. The wage data include sales commissions, which are often a major part of sales workers' pay.

As the data show, median annual wages of these sales workers varied considerably, from $40,030 for real estate sales agents to $87,390 for sales engineers. Wages within an occupation differ, too, depending on workers' skills and experience levels, as well as on the specific products or services that they sell.

Data for self-employed workers, mentioned throughout the text that follows, are from the BLS Current Population Survey.

Elka Maria Torpey

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Table 1: Employment and wages of selected sales occupations, May 2010

Occupation	Employment	Annual wage		
		10th percentile	Median	90th percentile
Sales representatives, wholesale and manufacturing, except technical and scientific products	1,367,210	$26,970	$52,440	$108,750
Sales representatives, services, all other	531,410	25,690	50,620	106,460
Sales representatives, wholesale and manufacturing, technical and scientific products	381,080	36,740	73,710	144,420
Insurance sales agents	318,800	25,940	46,770	115,340
Securities, commodities, and financial services sales agents	276,290	31,330	70,190	≥166,400
Real estate sales agents	153,740	20,460	40,030	95,220
Advertising sales agents	145,160	22,780	45,350	96,040
Sales engineers	66,060	51,940	87,390	146,580
Real estate brokers	41,210	25,550	54,910	161,820

NOTE: The percentile wage estimate is the value of a wage below which a certain percent of workers fall. The median wage is the 50th percentile wage estimate: 50 percent of workers earn less than the median, and 50 percent of workers earn more than the median.

Technical and scientific product sales representatives visit doctors' offices and other businesses to promote products.

Product sales representatives

Product sales representatives sell goods for wholesalers and manufacturers. They usually sell to businesses, not to individual consumers. Some product sales representatives sell goods for more than one company or product line; others work for only one company or specialize in selling a particular type of good. About 5 percent were self-employed in 2010.

These workers sell a variety of products, from raw materials to finished goods, and work in many different industries. There are two separate categories of product sales representatives: those who sell technical and scientific products and those who sell all other types of products.

Sales representatives for technical and scientific products. These sales workers sell or promote prescription drugs, medical devices, computer equipment, and other technical or scientific products.

A technical or scientific background is often necessary for these workers to

understand customers' needs and to explain how a product works. As a result, many wholesale and manufacturing technical and scientific product sales representatives must have expertise about the products they sell. This usually means they need a bachelor's degree in a related subject, such as biology, chemistry, computer science, or engineering.

Product sales representatives, all other. With more than 1.3 million workers in May 2010, all other product sales representatives—known officially as sales representatives, wholesale and manufacturing, except technical and scientific products—is the largest of the occupations discussed in this article. These workers sell many different products, including groceries, home furnishings, and motor vehicle parts.

Table 2 shows which industries are the largest employers of workers in this occupation. In addition to jobs in these industries, however, more than 600,000 jobs are spread across other diverse industries.

Educational backgrounds for workers can be as varied as the products that they sell. Some have a high school diploma; others have a bachelor's or higher degree. Like technical and scientific product sales representatives, these workers must know a lot about their products and about the needs of their customers.

Services sales representatives

Sales workers who sell services to businesses and individuals are known as services sales representatives. Three types of services sales representatives are described below: advertising sales agents; insurance sales agents; and securities, commodities, and financial services sales agents. Other examples include workers who sell travel, telecommunications, and consulting services.

Advertising sales agents. Also called advertising sales representatives, advertising sales agents sell or solicit advertising on television and radio stations, in newspapers and magazines, and on websites. They also help to place advertising on billboards, in direct mail materials, on social media sites, and in other advertising venues.

These workers explain to customers which types of advertising are best for promoting a particular business, product, or service. Some sales agents work for media representative

Table 2: Employment and wages of sales representatives, wholesale and manufacturing, except technical and scientific products, by industry, May 2010

Industry	Employment	Median annual wage
Wholesale electronic markets and agents and brokers	223,510	$58,810
Machinery equipment and supplies merchant wholesalers	101,570	50,760
Grocery and related product merchant wholesalers	92,010	49,660
Professional and commercial equipment and supplies merchant wholesalers	57,010	52,380
Hardware and plumbing and heating equipment and supplies merchant wholesalers	46,890	47,930
Electrical and electronic goods merchant wholesalers	44,680	51,440
Beer, wine, and distilled alcoholic beverage merchant wholesalers	43,390	47,200
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	35,930	46,480
Lumber and other construction materials merchant wholesalers	35,780	49,730
Management of companies and enterprises	26,570	57,310

firms, which sell advertising slots for media companies; others are employed directly by media outlets, such as newspapers, magazines, and radio stations. About 5 percent of these workers were self-employed in 2010.

A high school diploma may be enough to gain an entry-level position as an advertising sales agent, but some employers prefer to hire workers who have a bachelor's degree. About half of all advertising sales agents—including both experienced workers and new hires—have a college degree.

Insurance sales agents. Insurance sales agents sell insurance policies and other financial services to businesses and individuals.

Some of these agents specialize in a particular type of insurance, such as life or health insurance, although many sell a variety of policy types. Agents might represent one insurance company or multiple companies. Qualified agents may also sell other financial services. About 15 percent of workers were self-employed in 2010.

Insurance sales agents may qualify for entry-level positions with a high school diploma and sales or other work experience. However, many companies prefer that their sales agents have a bachelor's degree, especially in business or a related field. In addition to a college degree, work experience can also be important. Some agents, for example, start out as customer service representatives or in other positions at an insurance company.

Insurance sales agents need a license from the state in which they work. Licensure requirements vary by state. Workers who offer other financial services must meet the licensure requirements of securities, commodities, and financial services sales representatives.

Securities, commodities, and financial services sales agents. These agents sell securities—such as stocks, bonds, and mutual funds—and commodities to individuals or businesses. They also sell financial services, such as portfolio management, and advise customers about these products and general financial market conditions. Others trade securities or commodities in investment and trading firms. Specific job titles vary and include stock broker, investment banker, and financial representative. Nearly 10 percent of these workers were self-employed in 2010.

Part of an insurance sales agent's job is explaining policy options to clients.

Most positions require that entry-level workers have a bachelor's degree, often in business or a related field. Some workers have a master's degree in business administration. Securities, commodities, and financial services sales agents must be licensed. In most states, workers must have been an employee of a registered securities firm for at least 4 months and must pass written exams to become licensed. On-the-job training, including preparation for these exams, is often provided by employers. Specialty licenses may be required for some positions.

Other salespeople

Some sales workers don't fit into either of the above categories. Among them are real estate brokers and sales agents and sales engineers.

Real estate brokers and sales agents. Real estate brokers and sales agents help clients sell, buy, or rent property. Both are experts on local real estate markets. They research and show properties that will best fit prospective buyers' or renters' needs. They also meet with property owners to obtain listings of properties to put on the market. In addition, they assist buyers or sellers with tasks such as running title searches, negotiating prices, and scheduling property inspections. Workers might specialize in a particular type of property, such as residential or commercial real estate.

Although similar, real estate brokers and sales agents are slightly different. Real estate brokers are licensed to operate their own real estate firm. Real estate sales agents, on the other hand, often work as independent contractors for brokers, receiving a portion of the commission earned on each sale. More than one-fourth of all brokers and agents were self-employed in 2010.

Real estate brokers and agents must be at least 18 years old and have a high school diploma. Some firms prefer to hire workers who have a college degree. Many real estate agents start as sales trainees in a brokerage firm, learning on the job from more experienced agents.

Real estate agents show properties to prospective buyers.

Both real estate brokers and sales agents need a state license: either a broker's license or an agent's license. Licensure requirements vary by state but often include a pre-license education course and passage of a written exam. To qualify for licensure, brokers must have previously worked as real estate agents.

Sales engineers. Sales engineers provide technical expertise and support for the installation and use of industrial equipment. Sales engineers might sell highly technical goods or services and install, configure, or help to customize products to fit customers' needs. Because of the small number of workers in this occupation, self-employment data are not available from BLS.

These workers usually need a bachelor's degree in engineering or a related field. Many work as engineers before beginning a sales career, an experience that gives them a better understanding of the products and services they later sell.

Selling points for a career in sales

In many ways, sales work is about building relationships. Sales workers must be excellent

communicators with an ability to develop a strong rapport with customers. They become experts on the product or service they promote so they can explain its benefits to potential buyers. Sales workers are also skilled listeners who ask questions to better understand their customers' needs and preferences.

The best salespeople are good at networking, which helps them develop new customer leads. Persuasiveness and negotiation skills are also essential in sales work.

Self-motivation, persistence, and self-confidence are key to a sales worker's success. Rejection is a reality of sales jobs, so sales workers should have enough confidence that they become comfortable dealing with it.

Sales work can be competitive—and stressful. Some workers must meet sales quotas to keep their jobs. And because many work on commission, usually earning a base salary and a percentage of total sales, limited selling means limited income.

Work schedules are irregular in many sales jobs, often requiring nonstandard hours or work on weekends. Some jobs, especially those with sales territories covering a broad geographic region, include significant travel.

But sales workers often have flexibility in their jobs that other workers do not. Some sales workers are self-employed or work as independent contractors, which allows them a certain amount of freedom to determine when and how they do their jobs. Even those who work for a company usually are free to schedule their own sales calls and appointments, leave the office as necessary, or perform some duties from home.

In addition, wages of the sales occupations described in this article are often much higher than the median for all occupations. And top performers sometimes make more than $100,000 per year. Wages generally increase with experience, as is true in any occupation. But sales workers' pay is typically based on how much they sell, so high performance leads to high earnings in sales more quickly than in many other occupations.

Sales workers might also receive incentives, such as bonuses or company-paid trips, for meeting or exceeding target sales levels. Other perks can include a company car, cell phone, and expense account. And positions in sales provide good experience for workers hoping to move into management.

Close the deal: Setting up a sales career

Many of the sales jobs discussed in this article are not entry-level positions, and workers often need sales experience before being hired. But gaining experience and getting a job are both matters of planning and persuasion, skills that all good sales workers need.

Gaining experience

One of the best ways to start a sales career is to work with a company that offers training for new sales representatives or agents. You

Internships are an excellent way to gain sales experience.

can research companies to find out which ones offer the best opportunities for new workers.

Students can start preparing for a sales career in high school or college. Many schools offer courses in sales-related subjects, such as business and marketing. And some student organizations focus on helping members learn about sales, selling techniques, and building a network.

Getting an internship or entry-level job with a company of interest while still in school is a great way to make contacts and gain experience—and could lead to a job after graduation. Product sales representatives, for example, might test their selling skills and learn more about a company's products by first working in telemarketing or customer service. Securities and commodities sales agents frequently intern with a company during college. Career placement offices or academic departments often keep internship listings; other resources, such as organizations' websites, also describe opportunities.

There are other ways to gain sales experience. Some companies provide training to people who demonstrate certain aptitudes or skills. A prospective employer might look for candidates who have ambition, for example, or whose backgrounds relate to the products or services they will sell.

Many employers want workers who can sell to other businesses. For these sales positions, workers might start in inside sales—jobs that do not involve leaving the office—perhaps by helping to develop leads for the sales representatives who meet with prospective customers offsite.

Not every entry-level sales position is the same. Certain industries and employers may have fewer requirements than others and are, therefore, easier for launching a career. These jobs, which are usually lower paying or less prestigious, may provide good training and might lead to better opportunities in the future.

Getting a job

Think of your sales-job search as a sales campaign, with the companies who will pay for your services as potential buyers. Your best chances for success will require you to test your sales skills: Research opportunities, network, and sell your services as a future sales worker.

Networking is essential for success in sales.

Research. Many sales jobs, especially in business-to-business sales, are with companies that most people don't think about or encounter on a regular basis. You can learn about some of these lesser known companies by looking through industry or business-to-business directories, available in many public libraries. Local yellow pages can also help you identify companies that might need sales representatives. And rankings, such as the best companies to sell for, work for, or launch a career with, might give you additional ideas for leads.

Check out company websites, help-wanted advertisements, and online job boards to learn about specific openings. Some sites specialize in sales careers or in a particular industry sector. But often, the most successful approach to getting a job is to tap a network of personal contacts.

Warning: Sales job scams

When you're looking for a sales job, beware of scams: jobs that promise to help you get rich quick. Remember, if something sounds too good to be true, it probably is. Most sales workers put in considerable time and effort, gaining years of experience before they reach a high-level income.

Before applying for a sweet-sounding position, check out the legitimacy of the company offering the job. If you have concerns, contact or visit the websites of your local Better Business Bureau, consumer protection agency, and state attorney general's office to see if complaints have been made against the company.

And be cautious about paying someone for a job or for information about a job. Legitimate employment agencies may charge for placement services, but some scammers charge fees to place jobseekers with a company in which no job exists. Others sell information about jobs that is available elsewhere for free.

Some sales-related job scams require you to pay a fee and then recruit others to pay similar fees (pyramid schemes); others dupe jobseekers into working for free or for very little money (cattle-call scams or some commission-only jobs).

Always verify that a company is legitimate before revealing personal information, such as your Social Security number.

Network. As a future sales worker, you could have a distinct advantage in the job hunt: Networking, a skill you will use in your job, is also essential for landing a position.

Networking happens in many ways, whether through in-person contact, social media, professional associations, or other means. Talk to people you know who already work in sales and ask them for advice on starting a sales career. Set up informational interviews with people who work in an occupation or industry that interests you to ask them about the work, job requirements, and other aspects of a sales career.

Online discussion boards also offer a chance to interact with sales professionals and others interested in the field. And job or career fairs are a good place to connect with prospective employers.

Sell. Every time you communicate with someone in the business world, you have an opportunity to showcase the communication skills that will help make you a good sales worker. Use your resume, cover letter, interview, and thank-you letter to show prospective employers that you can sell a product or service—which, in this case, is you.

Study sales techniques and common interview questions for sales jobs. For example, some employers might assess your sales ability by saying during the interview, "Sell me this pen." Go into an interview prepared with extensive information about the company, its products and services, the names of key decision makers, and recent industry trends. Hone your presentation skills and prove your sales acumen to future employers, and you might buy into a rewarding career.

For more information

This article gives an overview of selected high-wage sales occupations. Other sales occupations—such as counter and rental clerks, parts salespersons, and retail sales workers—may provide opportunities to develop people skills and an understanding of business that are required of more skilled sales workers.

All these and hundreds of other occupations are described in detail in the *Occupational Outlook Handbook*. The *Handbook* is available online at **www.bls.gov/ooh** and in print in many public libraries, high school

and college career counseling offices, and job centers.

For job postings and a list of member associations related to product sales representatives, contact:

Manufacturers' Representatives Educational Research Foundation
8329 Cole St.
Arvada, CO 80005
(303) 463-1801
certify@mrerf.org
www.mrerf.org

For a list of state departments of insurance, which provide licensing information for insurance sales agents, contact:

National Association of Insurance Commissioners
444 N. Capitol St., NW
Suite 701
Washington, DC 20001
(202) 471-3990
reslib@naic.org
www.naic.org/state_web_map.htm

For licensing requirements and other career information about securities, commodities, and financial services sales agents, contact:

Financial Industry Regulatory Authority
1735 K St.
Washington, DC 20006
(301) 590-6500
www.finra.org

For career information on real estate sales agents and brokers, including licensing requirements and lists of approved education providers, contact your state real estate commission or other regulatory body, a list of which is available from:

The Association of Real Estate License Law Officials
8361 S. Sangre de Cristo Rd.
Suite 250
Littleton, CO 80127
(334) 260-2928
mailbox@arello.org
www.arello.org/resources/regulators.cfm

Finally, to learn more about how to conduct a targeted job search, see "Focused jobseeking: A measured approach to looking for work" in the Spring 2011 issue of the *Quarterly*, online at **www.bls.gov/ooq/2011/spring/art01.htm**.

You're a *what*?

Genetic counselor

John Mullins

By the time many parents see Brenda Finucane, all they want is an explanation for their child's puzzling problems. It's Brenda's job to give parents that explanation and help them move forward.

Brenda is a genetic counselor in Elwyn, Pennsylvania. Her job is to inform clients about genetic disorders and help them to understand and manage the disorder. Many families have struggled with a child's problem for a long time, and Brenda helps give a name to some of their concerns. "For a lot of families," she says, "it can really be a big relief to finally have an answer."

One of Brenda's areas of expertise is in a disorder called fragile X syndrome. This condition can result in physical, intellectual, emotional, or behavioral problems—and is a common cause of some disorders, such as autism.

Like nearly all genetic counselors, Brenda begins work on each case by meeting with clients and gathering medical and other information. She uses this information to construct a "pedigree," a specialized family tree. The pedigree is a health history of an individual's biological family and includes detailed information ranging from family members' inherited conditions, such as blindness and deafness, to their ages and causes of death.

A pedigree assists genetic counselors in mapping genetic patterns within the family. For example, Brenda might encounter a child whose genetic testing for autism has confirmed fragile X syndrome as the cause, and the mother has been identified as a carrier. The pedigree shows that a maternal aunt has a child with special needs, another maternal aunt is being treated for infertility, and the maternal grandfather is suffering from Parkinson's disease. All of these can be attributed to the fragile X gene.

Brenda's role in such cases is multifaceted. First, she must translate the complex scientific concepts involved into language that the client can understand. Second, she must share the news with the client—sometimes the most difficult part of her job. "Often, families are hoping something will go away," she says, "and I have to tell them that it won't."

Finally, Brenda helps the client understand how to deal with the condition. As Brenda says, "We help families adapt to the information they get from us." For example, a parent might feel guilty about being the carrier of a genetic condition. Brenda helps the parent adapt emotionally, assuring him or her that guilt is a common reaction and explaining that our genetic makeup is not something we can control.

In explaining a child's genetic condition, Brenda also makes parents aware of how the condition may progress, including its medical, educational, and psychological ramifications. She then directs clients to other resources, such as support organizations and healthcare or educational specialists, for more assistance.

Genetic conditions have implications for the extended family, but the information often is too complex for the client to explain. A genetic counselor might write a letter summarizing the condition to help clients share this information with other family members.

When it first emerged about 50 years ago, genetic counseling focused primarily on prenatal testing to detect genetic conditions.

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But counseling services have evolved to keep pace with a greater knowledge of genetics and wider application of genetic diagnostic testing.

Today, there are several types of genetic counselors, and their expertise covers thousands of genetic conditions and spans the entire human life cycle. Genetic counselors work in a variety of specializations, such as cancer counseling, prenatal counseling, or pediatrics—Brenda's specialty. And some counselors develop specific areas of expertise, as Brenda has with fragile X.

The U.S. Bureau of Labor Statistics does not have data on employment or wages for genetic counselors. According to the American Board of Genetic Counseling, however, there are roughly 2,400 certified genetic counselors in the United States. And they earn a median annual salary of about $63,000, according to data from the National Society of Genetic Counselors.

Genetic counselors must have a master's degree in genetic counseling from a program accredited by American Board of Genetic Counseling. There are currently 30 of these master's programs nationwide, and admission to them usually requires completion of significant undergraduate coursework in biological science. The programs combine scientific aspects of genetics with counseling study and take about 2 years to finish. In addition, most employers require certification, and some states require licensure.

Most genetic counselors work in medical offices and hospitals. Brenda, however, works for a nonprofit organization that helps people who have developmental disabilities. She travels around the country to provide consultations in schools, developing behavioral and educational plans for students with fragile X and other genetic syndromes. She also handles most of her own administrative tasks, such as scheduling and billing.

All genetic counselors need science knowledge and interpersonal skills. That blend was what first appealed to Brenda, and that appeal has lasted more than 25 years. "I love the science, but I didn't want to work in a lab," she says. "Genetic counseling allows me to combine my lifelong interest in science with the opportunity to interact with families affected by genetic disease."

Brenda Finucane, left, often consults with other genetic counselors.

Photo courtesy of Genetic Services at Elwyn

OOChart

Finishing high school leads to better employment prospects

Recent data from the U.S. Bureau of Labor Statistics (BLS) suggest that students who drop out of high school are more likely than high school graduates to be unemployed or to not participate in the labor force.

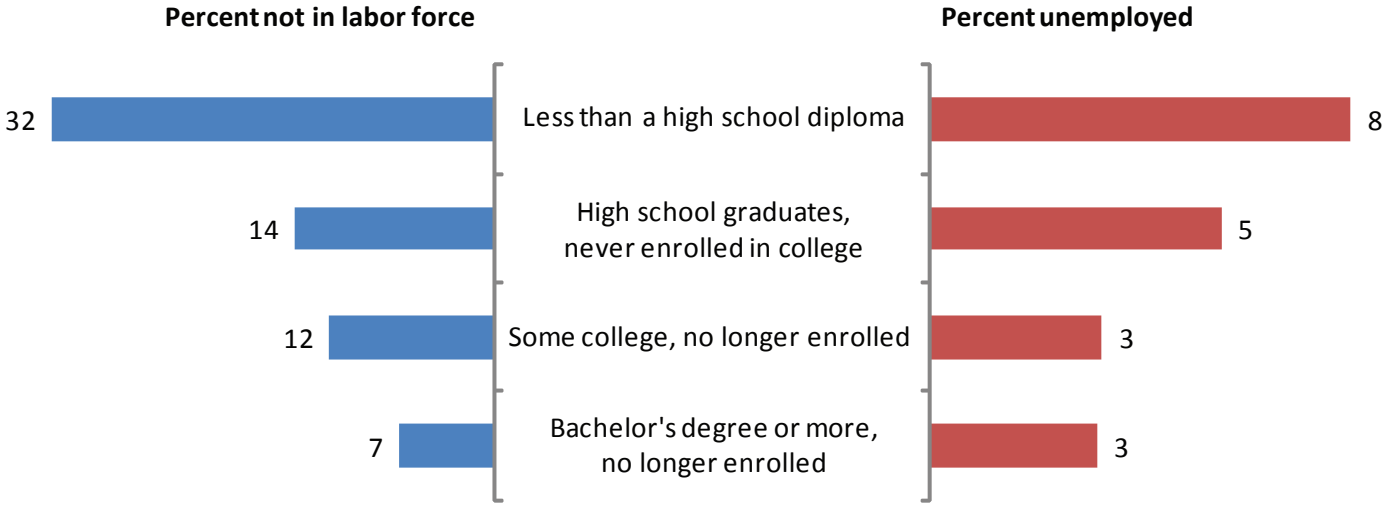
As the chart shows, 8 percent of individuals who hadn't graduated from high school were unemployed during the October when they were age 23. This compares with 5 percent of high school graduates who had never attended college and 3 percent of high school graduates who had attended college but had not earned a bachelor's degree. Among those who had earned a bachelor's degree, 3 percent were unemployed during the October when they were age 23.

The relationship between education and labor force participation is even more pronounced. Thirty-two percent of high school dropouts were not in the labor force—that is, neither working nor looking for work—during the October when they were age 23. That's more than twice the proportion of high school graduates who were not in the labor force at age 23. And only 7 percent of college graduates were not participating in the labor force.

These data come from the BLS National Longitudinal Survey of Youth 1997, which has surveyed the same group of respondents annually since 1997. Survey results are representative of all U.S. men and women born between the years 1980 and 1984 and living in the United States when the survey began. Respondents were age 23 in October during the years 2003 to 2008.

Recent data also show respondents' degree attainment, past employment experiences, and more. For details, visit online at **www.bls.gov/nls/nlsy97.htm**; write to the BLS National Longitudinal Survey Program, 2 Massachusetts Ave., NE, Suite 4945, Washington, DC 20212; call (202) 691-7410; or email *nls_info@bls.gov*.

Percent of young adults* unemployed or not in the labor force, by education, 2003–08



*Respondents were not enrolled in school in the October of the year when they were 23 years of age.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Paid to persuade: Careers in sales

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