

Core Subjects and Your Career

Subject	Why is it important for careers?	What careers require the subject?
English	<p>How English relates to careers You may think English classes only relate to a few occupations, such as writing or editing. But every job requires workers to understand instructions quickly and to explain problems to supervisors and other workers. Good communication is essential for most occupations, even those that require little interaction with others. A problem cited by employers of engineers, for example, is that some technically competent workers are unable to explain what they are doing, to understand or explain what their part of a project is, or to relate their task to what others are doing. Many occupations require frequent communication. Sales workers must be able to speak effectively both on the telephone and in person to present their company's products well. Lawyers and managers need to express themselves clearly and to analyze large amounts of information to be successful. Health care workers must be able to understand their patients' questions and concerns and to make patients understand how to maintain their health. Psychologists and psychiatrists must be able to listen and communicate effectively.</p>	<p>Actors, directors, and producers Administrative services managers Adult education teachers Agricultural scientists Biological and medical scientists Chemists Engineering, science, and computer systems managers Foresters and conservation scientists Geologists and geophysicists Government chief executives and legislators Lawyers and judges Librarians Management analysts and consultants Manufacturers' and wholesale sales representatives Marketing, advertising, and public relations managers Meteorologists Optometrists Pharmacists Physician assistants Physicians Physicists and astronomers Podiatrists Psychologists Public relations specialists Radio and television announcers and newscasters Reporters and correspondents School teachers, kindergarten, elementary, and secondary Social scientists</p>

		<p>Social workers Special education teachers Speech-language pathologists and audiologists Urban and regional planners Veterinarians Writers and editors Bank tellers Busdrivers Cashiers Correctional officers Counter and rental clerks Court reporters, medical transcriptionists, and stenographers Dispatchers Flight attendants Funeral directors General office clerks Homemaker-home health aides Hotel and motel desk clerks Interviewing and new accounts clerks Loan clerks and credit authorizers, checkers, and clerks Nursing aides and psychiatric aides Occupational therapy assistants and aides Physical and corrective therapy assistants and aides Postal clerks and mail carriers Prepress workers Preschool teachers and child care workers Proofreaders Receptionists Reservation and transportation ticket agents and travel clerks Routing and receiving clerks Service representatives</p>
--	--	--

		<p>Taxidrivers and chauffeurs Telephone operators Title searchers Typesetters Typists, work processors, and data entry keyers Visual artists</p>
<p>Math</p>	<p>Math skills help us cope with today’s complex world. We use math to carry out everyday tasks such as balancing a checkbook, shopping for groceries, cooking, and creating a personal budget. Other important skills we learn from studying math include problem solving, analysis, and estimating. And math knowledge is essential for earning a living in many occupations, including most higherpaying occupations. There are about 15,500 mathematicians employed in the United States, but millions of workers have jobs in which mathematics is a necessary part. In fact, almost all jobs require at least some understanding of basic mathematics. For example, carpenters must be able to measure lengths and angles when installing wood trim. Machinists need to understand and manipulate angles and dimensions. Loan officers must determine applicants’ debt-equity ratios before approving mortgage applications. And math skills are required for any science, engineering, computer, and technical occupation. Math is also an important part of a well-rounded education. Most high schools require students to take at least 2 years of math to graduate. And most colleges require some proficiency in math for all applicants, regardless of their intended majors.</p>	<p>Actuaries Agricultural scientists Architects Biological and medical scientists Chemists Computer scientists, computer engineers, and systems analysts Economists and marketing research analysts Engineering, science, and data processing managers Engineers Foresters and conservation scientists Geologists, geophysicists, and oceanographers Mathematicians Mathematics teachers (secondary school and college) Meteorologists Operations research analysts Physicists and astronomers Social scientists Statisticians Accountants and auditors Administrative services managers Aircraft pilots Budget analysts Chiropractors College and university faculty (nonmathematics)</p>

		Computer programmers Construction and building inspectors Construction contractors and managers Cost estimators Dentists Dispensing opticians Drafters Education administrators Engineering technicians Farmers and farm managers Financial managers General managers and top executives Government chief executives and legislators Industrial production managers Insurance agents and brokers Insurance underwriters Loan officers and counselors Management analysts and consultants Optometrists Pharmacists Physician assistants Physicians Podiatrists Psychologists Real estate agents, brokers, and appraisers Respiratory therapists School teachers, kindergarten, elementary, and secondary Science technicians Securities and financial services sales representatives Special education teachers Surveyors and mapping scientists Urban and regional planners Veterinarians Air traffic controllers
--	--	---

		<p>Aircraft mechanics, including engine specialists Automobile mechanics Automotive body repairers Blue collar worker supervisors Boilermakers Broadcast technicians Carpenters Concrete masons and terrazzo workers Diesel mechanics Dietitians and nutritionists Electric power generating plant operators and power distributors and dispatchers Electricians Electronic equipment repairers Elevator installers and repairers Farm equipment mechanics Funeral directors General maintenance mechanics Heating, air-conditioning, and refrigeration technicians Industrial machinery repairers Inspectors, testers, and graders Jewelers Landscape architects Machinists and tool programmers Millwrights Mobile heavy equipment mechanics Motorcycle, boat, and small-engine repairers Ophthalmic laboratory technicians Photographers and camera operators Purchasers and buyers</p>
--	--	--

		Sheetmetal workers Stationary engineers Tool-and-die makers Water and wastewater treatment plant operators Welders, cutters, and welding machine operators Bank tellers Billing clerks and billing machine operators Bindery workers Bookkeeping, accounting, and auditing clerks Bricklayers and stonemasons Brokerage clerks and statement clerks Cashiers Counter and rental clerks Drywall workers and lathers Glaziers Interviewing and new accounts clerks Library assistants and bookmobile drivers Loan clerks and credit authorizers, checkers, and clerks Manufacturers' and wholesale sales representatives Medical assistants Metalworking and plastic-working machine operators Order clerks Payroll and timekeeping clerks Plasterers Postal clerks and mail carriers Precision assemblers Prepress workers Printing press operators Private detectives and investigators Reservation and
--	--	--

		transportation ticket agents and travel clerks Roofers Secretaries Stock clerks Structural and reinforcing ironworkers Taxidriviers and chauffeurs Teacher aides Tilesetters Traffic, shipping, and receiving clerks
Science	<p>Studying science helps us understand the discoveries that affect our daily lives. Every time we use a telephone, television, or computer, we are using a product of science. We use our knowledge of science when making decisions about our health and diet. Even common hobbies, such as cooking, gardening, and photography, rely on scientific principles. By studying science, we learn how the universe works; we learn to observe, classify, measure, predict, interpret, and communicate data; and we develop the ability to think logically and solve problems. The skills and knowledge that come from studying science are important in many occupations. There are almost 400,000 scientists employed in the United States, but 21 million workers use science on the job. For example, mechanics use scientific procedures when repairing or testing equipment. Physical therapists use biology and physics to rehabilitate patients. Journalists use scientific knowledge when writing about technology, health, or the environment. And scientific problem solving skills are necessary for most computer occupations. Science courses are also important if you want an advanced education. College admissions officers often favor individuals who have taken science classes. Many colleges require at least 2 years of high school science courses, regardless of your intended major. If you want to be admitted into scientific and technical programs, you will probably need 3 or 4 years of high school science.</p>	Agricultural scientists Architects Archivists and curators Biological and medical scientists Chemists Chiropractors Computer scientists, computer engineers, and systems analysts Dentists Engineering, science, and computer systems managers Engineers Forensic scientists Foresters and conservation scientists Geologists and geophysicists Landscape architects Meteorologists Optometrists Pharmacists Physical therapists Physician assistants Physicians Physicists and astronomers Podiatrists Respiratory therapists Teachers, secondary and college (sciences) Veterinarians

		<p>Aircraft mechanics, including engine specialists Aircraft pilots Broadcast technicians Cardiovascular technologists and technicians Clinical laboratory technologists and technicians College and university faculty Construction and building inspectors Construction contractors and managers Dental hygienists Dental laboratory technicians Dietitians and nutritionists Dispensing opticians Drafters Electroneurodiagnostic technologists Emergency medical technicians Engineering technicians (all specialties) Health information technicians Health services managers Licensed practical nurses Nuclear medicine technologists Occupational therapists Occupational therapy assistants and aides Photographers and camera operators Physical therapists Psychologists Radiologic technologists Recreational therapists Registered nurses Respiratory therapists Science technicians Electronic semiconductor processors</p>
--	--	--

		<p>Speech-language pathologists and audiologists Surgical technologists Surveyors and mapping scientists Automotive body repairers Automotive mechanics Barbers and cosmetologists Boilermakers Chefs, cooks, and other kitchen workers Dental assistants Diesel mechanics Electricians Electronic equipment repairers Elevator installers and repairers Farm equipment mechanics Farmers and farm managers Firefighting occupations Fishers, hunters, and trappers Funeral directors General maintenance mechanics Heating, air-conditioning, and refrigeration technicians Home appliance and power tool repairers Industrial machinery repairers Jewelers Landscaping, groundskeeping, nursery, greenhouse, and lawn service occupations Machinists and tool programmers Medical assistants Millwrights Mobile heavy equipment mechanics Motorcycle, boat, and small-engine mechanics Nursing aides and psychiatric</p>
--	--	--

		aides Ophthalmic laboratory technicians Pest controllers Pharmacy technicians Photographic process workers Physical and corrective therapy assistants Plumbers and pipefitters Prepress workers Printing press operators Stationary engineers Structural and reinforcing iron workers Tool-and-die makers Urban and regional planners Vending machine servicers and repairers Water and wastewater treatment plant operators Water transportation occupations Welders, cutters, and welding machine operators
--	--	---

Attributions To:

Occupational Outlook Quarterly. (1999). Core Subjects and Your Career. Retrieved from

<https://www.bls.gov/careeroutlook/1999/Summer/art03.pdf>