**Careers in Biology**

In general, there are several career paths you can follow as a biologist, including:

*Research:* Research biologists study the natural world, using the latest scientific tools and techniques in both laboratory settings and the natural environment, to understand how living systems work. Many work in exotic locations around the world, and what they discover increases our understanding of biology and may be put to practical use to find solutions to specific problems. Learn more about how biological research helps to inform societal issues on the AIBS Website [actionbioscience.org](http://www.actionbioscience.org/). Learn more about the wide variety of research interests by visiting the websites of [AIBS Member Societies and Organizations](https://www.aibs.org/about-aibs/mso.html).

*Health care:* Biologists may develop public health campaigns to defeat illnesses such as tuberculosis, AIDS, cancer, and heart disease. Others work to prevent the spread of rare, deadly diseases, such as the now infamous Ebola virus. Veterinarians tend to sick and injured animals, and doctors, dentists, nurses, and other health care professionals maintain the general health and well being of their patients. Many of these careers require additional education and training past undergraduate college, but these positions are usually in high demand both in the US and abroad. Additionally, biologists in the health care field can choose to work for organizations like the Peace Corps and Doctors Without Borders, which help bring much-needed health care services to less developed and/or war-impacted regions.

*Environmental management and conservation:* Biologists in management and conservation careers are interested in solving environmental problems and conserving the natural world for future generations. Park rangers protect state and national parks, help preserve their natural resources, and educate the general public. Zoo and aquarium biologists carry out endangered species recovery programs and serve as a vital education conduit to the general public. In addition, management and conservation biologists often work with members of a community such as landowners and special interest groups to develop and implement management plans. Other potential employment opportunities may exist with state/federal natural resource agencies, not-for-profit conservation organizations, private ecological consulting firms, or wildlife rehabilitation centers.

*Education:* Life science educators enjoy working with people and encouraging them to learn new things, whether in a classroom, a research lab, the field, or a museum. You can gain insight into what biology education professionals are working toward and achieving by visiting the [AIBS Education Programs](http://www.aibs.org/education/) Office, where you will find updates on institutional reform efforts, information on new and exciting ways of teaching biological concepts, and novel resources for biology classroom education. You can also learn about how biology professionals are connecting with each other to advance the public understanding of science by visiting the [COPUS website](http://www.copusproject.org/).

*Colleges and universities:*Professors and lecturers teach introductory and advanced biology courses. They may also mentor students with projects and direct research programs. Many biology faculty at colleges and universities engage in their own research and serve as reviewers or editors for scientific journal publications, members of working groups and advisory boards, and as part of research collaborations with scientists from other institutions.

*Primary and secondary schools:* Teaching younger students requires a general knowledge of science and skill at working with different kinds of learners. High school teachers often specialize in biology and teach other courses of personal interest. There is a high demand for educators that are trained in biological sciences and have strong backgrounds in K-12 education, classroom management, and primary/secondary school administration.

*Science museums, zoos, aquariums, parks, and nature centers:* Educators in these settings may design exhibits and educational programs, in addition to teaching special classes or leading tours and nature hikes. Often, these professionals serve as an organization’s “front line” and are responsible for communicating complex biological information to the public, writing grant proposals to fund new programs and exhibits, and working with community partners to leverage resources and gain exposure on local and national levels.

*Other directions in biological careers:* There are many careers for biologists who want to combine their scientific training with interests in other fields. Here are some examples:

*Biotechnology:*Biologists apply scientific principles to develop and enhance products, tools, and technological advances in fields such as agriculture, food science, and medicine. Scientists in this field may work in genetic engineering, pharmaceutical development, or medical technologies (such as nanomedicine), or as a lab technician or technologist. You can learn more about biotechnology opportunities and issues by visiting [actionbioscience.org Biotechnology](http://www.actionbioscience.org/biotechnology/) and reading new articles, particularly those sponsored by the partnership between AIBS and the Northwest Association for Biomedical Research (NWABR).

*Forensic science:* Forensic biologists work with police departments and other law enforcement agencies using scientific methods to discover and process evidence that can be used to solve crimes. Biologists in forensic science often choose a specialty, such as forensic odontology, forensic anthropology, crime scene examination, or—with additional education and training—medical examiner.

*Politics and policy:* Science advisors work with lawmakers to create new legislation on topics such as biomedical research and environmental protection. Their input is essential, ensuring that decisions are based upon solid science. Professional biologists can serve as policy advocates for scientific organizations or non-profits, political advisors at the state or national level, or even as a representative serving on a political committee or working group. You can learn more about the interface between biology and politics by visiting the [AIBS Public Policy Office](http://www.aibs.org/public-policy/), where you can find information on current legislative initiatives and how to advocate for science and research policy, as well as sign up to receive AIBS Action Alerts to help express your opinions on biology issues to political decisionmakers. You can also visit [actionbioscience.org Science Policy](http://www.actionbioscience.org/policy/)for detailed information about scientific collections, science education, and more.

*Business and industry:* Biologists work with drug companies and providers of scientific products and services to research and test new products. They may also work in sales, marketing, and public relations positions.

*Economics:*Trained professionals work with the government and other organizations to study and address the economic impacts of biological issues, such as species extinctions, forest protection, and environmental pollution. Biologists may also study the impacts of socio-economics on humans, environmental economics (an economic analysis of the environment with a focus on preserving natural capital), or ecological economics (the study of how human economies and natural ecosystems are linked in time and space).

*Mathematics:* Biologists in fields such as bioinformatics and computational biology apply mathematical techniques to solve biological problems, such as modeling ecosystem processes and gene sequencing. Mathematical and theoretical biology are two recent scientific fields that use mathematical representations and tools to both understand and model biological processes in other research areas, including cell biology, biotechnology, and ecosystem dynamics.

*Science writing and communication:* Journalists and writers with a science background inform the general public about relevant and emerging biological issues. Biologists with excellent writing and communication skills can be employed by high-profile journals—such as Nature and Science—as well as online magazines and science blogs or print/media networks (e.g., Discovery and National Geographic).

*Art:* All of the illustrations in your biology textbook, as well as in newspaper and magazine science articles, were created by talented artists with a thorough understanding of biology. Individuals in this field may be employed by magazines and journals (e.g., Scientific American), museums and aquaria, hospitals and medical training centers, or even state and local government agencies.