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## Toward a Green Future: Environmental and Conservation Career Opportunities

**E**nvironmental careers are one of the fastest growing sectors in the job market due to the fact that the environment impacts nearly all aspects of our lives and the lives of plants and animals that share our environment. You can incorporate many of the things you enjoy doing in your everyday life into an environmental career. This environmental career guide is designed to help you find an environmental career that complements both your in-school and out-of-school interests by providing you with information on the specific environmental careers that are available and tips on matching your skills and interests with those careers.

### What Is an Environmental Career?

A common theme that runs through all environmental careers is the protection and conservation of our environment. As we learn more about how human activities affect the environment, we see an increased need for professionals who help mitigate the negative effects of these activities. Environmental careers are not just those involved in working in wilderness areas or national parks. Today, you can combine your love of the environment with practically any academic discipline in any professional field. Environmental professionals can be found in science, education, policy, law, activism, journalism and many other disciplines. Furthermore, environmental protection is an important agenda for most businesses and industries. Companies look to environmental engineers and planners to reduce their impact on the environment and to help them comply with environmental protection laws.

### Activities to Help Students Plan a Career Path Developing a Career Strategy

With so many environmental career choices available, the selection process can seem daunting. To help you identify career areas that might be interesting, look first at career options, list your basic interests and then see how your interests match to career options.

Take a look at the careers listed to see what excites you. Research the job titles and profiles of professions working in these careers. The careers are listed according to the subjects you study in school:

- English and Communications
- Math and Engineering
- Science and Computer Science
- Social Studies and Law

Many of these careers fit into more than one subject area. The careers grouped and listed below provide a variety and breadth of job titles in each of the subject areas, however the list is not intended to be comprehensive. To learn more about green jobs, conduct research on organizations and interview professionals or organizations focused on your areas of interest. In some cases, an internship may be a great way to determine whether or not the career path you have chosen is the right one for you. We can promote a green future regardless of the path chosen through the commercial sector, public service or a non-profit organization.

## English and Communications

Increasing people's knowledge and awareness about the environment requires effective English and communications skills. People use these skills to effectively convey environmental issues that are important to public health and conservation. These careers get the word to others. If you are interested in communicating environmental issues clearly and accurately to technical and non-technical people, sharing information with others, interviewing people, planning educational programs, writing news articles and public speaking for television, radio, and newspapers, then a career as an environmental journalist, educator, or activist might be right for you. These careers:

- Educate and information people about environmental issues and the ways to weigh various sides of a matter to make informed and responsible decisions
- Involve critical thinking, problem solving and effective decision-making skills
- Motivate others to take responsible actions on environmental issues

### Examples of English, Communications and the Arts Careers

Activism Specialist	Interior Designer
Artist	Librarian
Author	Marketing Specialist/Manager
College Professor	Museum Curator
Communications Specialist /Director	Non-profit Development Director
Community Organizer	Park Ranger
Community Public Relations Coordinator	Philosopher
Community Relations Coordinator	Photographer
Entrepreneur	Product Designer
Environment, Health and Safety Director	Public Administrator
Environmental Communications Specialist	Rangeland Specialist/ Manager
Environmental Conflict Manager	Recreation Administrator
Environmental Educator	Restoration Ecologist
Environmental Journalist	Risk Assessor/Manager
Exhibit Designer	Salesperson/Sales Manager
Filmmaker	Schoolteacher
Florist	Technical Environmental Writer
Fund Raiser	Trainer/Training Coordinator
Governmental Affairs Manager	

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### Math and Engineering

Today there is a growing demand for environmental information. Politicians and policymakers require information on the quality of the air and water we breathe; conservations need to know the minimum area for planning a national park; and environmental engineers need information on the latest technology for pollution prevention and so on.

An important activity in working in the environmental field is solving problems. Trout in the stream are found dying. The problem is that the stream where the trout live is being polluted. How can the death of more trout be prevented and pollution stopped? This is the kind of problem many environmental professionals face. Critical thinking, analysis and problem-solving skills are required to design an effective solution to this and other problems they face in their careers. An education in mathematics provides for a greater understanding of people, ideas and the natural world.

Math and engineering are required to determine this information as well as to effectively understand and convey this information to others.

Environmental engineers make use of mathematics—developing graphs, equations and tables, analyzing data and exploring the relationships between different factors and variables—in solving environmental problems and determining feasible solutions.

#### Examples of Math and Engineering Careers

Accountant	Investment Advisor/Broker
Architect	Investor
Auditor	Landscape Architect
Business Process Designer	Mechanical Engineer
Chemical Engineer	Oil/Gas Engineer
Civil Engineer	Operations Manager
Electric Power Generation Technician	Planner
Electrical Engineer	Public Finance Specialist
Electronics Engineer	Quality Control Engineer
Energy Technician/Manager	Real Estate Developer
Ecological Engineer	Statistician
Environmental Engineer	Survey and Mapping Technician
Facilities Inspector	Transportation Planner
Finance Manager	Water/Wastewater Engineer
Institutional Purchaser	

## Science and Computer Science

Are you a naturally curious person? Do you look at a bird and wonder how it can fly? Why do elephants live in herds? What will happen if the Amazon rain forest disappears? Are you amazed by the power of nature, such as thunderstorms and hurricanes? These are questions that science seeks to answer. A scientific understanding of the world is based on asking questions and organizing experiments to answer the questions. Scientists develop theories and hypotheses on how the world works and tests the theories through inquiry, computer modeling and experimentation. A natural curiosity provides the foundation for becoming a successful scientist.

The natural world continually challenges scientists. The disciplines of biology and ecology are branches of science that seek answers to the fascinating phenomena of the natural world. Biologists and ecologists also have a love for the natural world and use their work to help protect it. Scientific inquiry is especially important in understanding species extinction, biological diversity and the relationship between humans and the environment. Scientists are therefore indispensable in planning effective conservation programs. Today there are many and various environmental careers that require a scientific and/or a computer background. Computers and computer models are instrumental in documenting scientific data. Scientists working in the environmental field combine a curiosity and love for the environment with their scientific work.

### Examples of Science and Computer Science Careers

Agricultural Extension Specialist/Engineer	Groundwater Professional
Agronomist	Hazardous Materials Handler
Air Pollution Control Technician	Horticulturist
Anthropologist	Hydrologist
Archaeologist	Information Management Specialist
Botanist	Marine Biologist
Conservation Biologist	Metrological Technician
Ecologist	Meteorologist
Entomologist	Oceanographer
Environmental Health Physician	Political Scientist
Environmentalist	Public Health Nurse
Environmental Forensic Scientist	Social Scientist
Farmer	Toxicologist
Fisheries Biologist	Veterinarian/Vet Technician
Geographer	Water Pollution Control Technician
Geographic Information Systems Specialist	Watershed Manager
Geologist	Wildlife Biologist
Graphic Designer	

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### Social Studies and Law

People are essential to the success of conservation programs. Involve people in conservation by getting them motivated and excited about saving endangered species or protecting a threatened habitat. To successfully motivate people, it is important to understand human behavior and the ways people relate to the environment. Different people will do different things. We live in a heterogeneous world with people from many cultures and diverse backgrounds. As a result, we need to be sensitive to diversity in instituting conservation programs. Understanding human behavior and culture is an important component of conservation and environmental work.

People are affected by the social, economic and political activities where they live. These considerations play a part when motivating and educating people on the importance of conservation. Many environmental careers now deal specifically with human sociality and human society. If human behaviors, cultures and diversity are interesting to you, a career oriented in these disciplines may be appropriate.

#### Examples of Social Studies and Law Careers

Animal Control Officer	Historian
Attorney	Law Enforcement/Police Officer
Building and Facilities Manager	Lobbyist
Compliance Specialist	Location Analyst
Community Service Director	Natural Resource Manager
Congressman/Congresswoman	Paralegal
Contract Administrator/Specialist	Parks and Recreation Specialist
Corporate Recycling Manager	Policy Analyst
Corporate Relations Manager	Policy Specialist/Manager
Counselor	Program Coordinator
Economist	Project Manager
Emergency Manager/First Responder	Publisher
Environmental Quality Control Specialist	School Administrator
Environmental Lawyer	Socialist/Social Worker
Firefighter	Sustainability Officer
Forester/Forester Technician	Urban/Regional Planner
Governor	Volunteer Coordinator

The groups of career and job titles shown above can all be oriented to the environment and/or conservation. Some are self-explanatory, such as park ranger, while others are not so clear and may require some research, such as policy analyst. It is up to every individual in every job to raise issues with employers to keep the environment, wildlife and conservation at the forefront of everyday life.

### Planning a Career Path

Now you can begin to evaluate your own interests and skills with the careers in mind. Look at the qualifications and education necessary for the careers that seem interesting. With so many environmental career choices available, the selection process can appear daunting. After looking at career options, conducting individual research and thinking about your own experience, you can match your skills and interests with those lists for specific careers. This questionnaire will help narrow and prioritize your options. There are additional tools on websites that can take you further in the analysis process as you work toward your preferences.

Use the questionnaire below to help prioritize your skills and interests. Think about your skills and interests on the basis of your experience in school, clubs and at home. Examples include outdoor skills, first aid, writing, public speaking, sports and computers.

Rank each of the items below using the following scale:

- 1=Strong interest or highly skilled
- 2=Interested or skilled
- 3=Some interest or basic skills
- 4=Mild interest or minimal skills
- 5=No interest or no skills

**A. Workplace Environment:** How and where do you want to work? Feel free to add your own.

_____ I want to work with people	_____ I want to work with _____
_____ I want to work independently	_____
_____ I want to work as part of a team	_____ I want to work with _____
_____ I want to work outside	_____
_____ I want to work with children	_____ I want to work _____
_____ I want to work with adults	_____
_____ I want to work with disadvantaged or handicapped children/adults	_____ I want to work _____
	_____

**B. Interests:** Some of the activities you may be involved in with an environmental career are listed below. Rank each item to prioritize your interests.

_____ Research/analysis	_____ Work outdoors
_____ Writing	_____ Work with my hands
_____ Publicity	_____ Politics
_____ Science	_____ Fundraising
_____ Lobbying	_____ Law
_____ Activism	_____ Computers
_____ Education/teaching	

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**C. Skills:** Some skills that may be important in working in an environmental career are listed below. Rank each item to prioritize your skills.

- |   |   |
|---|---|
| _____ Writing   | _____ Managing people such as store clerk                                   |
| _____ Research  | _____ Computer/Internet such as word processing, web page design, etc.      |
| _____ Public speaking   | _____ Art/drawing   |
| _____ Teaching  | _____ Working with animals or plants  |
| _____ Outdoor skills such as backpacking, canoeing, etc.                          | _____ Working with children such as summer camp counselor, babysitter, etc. |
| _____ Environmental education skills, such as knowledge of biology, ecology, etc. | _____ Construction such as carpentry, wood working, etc.                    |
| _____ Fundraising   |   |

**D. Lifestyle:** An important consideration in looking at a career is the lifestyle attached to it. Some examples are listed below. Rank each item and add some of your own.

- |  |   |
|--|---|
| _____ I want to live near the wilderness                               | _____ I want a job with minimal responsibility      |
| _____ I want to have a house and a car                                 | _____ I want a job with a possibility for promotion |
| _____ I only want to work 40 hours per week                            | _____ I want to make at least \$_____ per year.     |
| _____ I am willing to work more than 40 hours per week                 | _____ I want to work with _____                     |
| _____ I want flexible work hours                                       | _____ I want a job that _____                       |
| _____ I want to work for the government                                | _____ I want a job _____                            |
| _____ I want to work for a large corporation                           | _____ I want to have _____                          |
| _____ I want to work for a non-profit or non-governmental organization | _____ I want to work _____                          |
| _____ I want a job with lots of responsibility                         |   |

This questionnaire was adapted from Rick Curtis, Outdoor Action Program 1997, Princeton University.

Once you have prioritized your interests, use the ranked items to compare your skills and interests with those of particular careers. For example, if you like being outdoors and working with people, an environmental field guide takes groups of people through wilderness areas while educating them about the area's natural history, local flora and fauna. If you like being outdoors but prefer to work alone, a park ranger works to protect wilderness areas and may spend many days out in the wild far from other people.

Compare your ranked skills and interests against the requirements for careers that appear interesting to create an inventory of areas that need further research. Use the inventory to help identify strengths and weaknesses for places where more skills or experience could be acquired to win a specific job. Discuss with career counselors to see where volunteer opportunities or clubs may be available to develop or build skills. Talk with or interview those in careers that have the highest interest for you. The more you learn about the career, the better prepared you will be in achieving your career goals!

## Career Resources:

**Apollo Alliance** [www.apolloalliance.org/resources.php](http://www.apolloalliance.org/resources.php)

This organization is dedicated to advancing a broad strategic agenda for good jobs and energy independence.

**EPA Youth and the Environment Training and Employment Program**

[www.epa.gov/owm/mab/smcomm/youth.htm](http://www.epa.gov/owm/mab/smcomm/youth.htm)

**Outdoor Action Guide to Outdoor/Environmental Careers**

[www.princeton.edu/~oa/jobs/careeroe.html](http://www.princeton.edu/~oa/jobs/careeroe.html)

**Care2 Job Finder** <http://jobs.care2.com/>

Dubbed as world's largest listing of jobs with socially responsible companies.

**Bronx Environmental Stewardship Training** [www.ssbx.org/best.html](http://www.ssbx.org/best.html)

Free "Green Collar Jobs" training initiative model that can be replicated in other cities. This model works primarily with youth of color.

## Other resources:

**Environmental Career Opportunities. Washington, D.C.: Brubach Corp**

A biweekly newsletter that lists 200+ current jobs in environmental policy, communications and advocacy, environmental assessment, engineering, research and education in nonprofits, corporations and the government.

**National Wildlife Federation Conservation Directory** [www.nwf.org/ConservationDirectory](http://www.nwf.org/ConservationDirectory)

Lists international, national and regional organizations, agencies and officials concerned with natural resources use and management, including a summary of each body's mission and contact details.

**Ella Baker Center** [www.ellabakercenter.org](http://www.ellabakercenter.org)

**The Will Steger Foundation** [www.willstegerfoundation.org](http://www.willstegerfoundation.org) promotes change through education and advocacy

**Political Economy Research Institute** [www.peri.umass.edu](http://www.peri.umass.edu)

## Websites:

- [www.environmentalcareer.com](http://www.environmentalcareer.com) Look at this site for "cool jobs."
- [www.ecojobs.com/index.php](http://www.ecojobs.com/index.php) Large selection of careers with descriptions
- [www.myfuture.edu.au/services/default.asp?FunctionID=5021&Action=List&IndustryID=1290](http://www.myfuture.edu.au/services/default.asp?FunctionID=5021&Action=List&IndustryID=1290) Australian jobs website—up as a "fact sheet" for each industry/career.

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**More research:**

Zint, M. and M. Hanson. 2002. "Exploring environmental careers". *Environmental Science & Technology* 36(1): 22A26A.

Zint, M. and M. Hanson. 2002. "Perspectives on the environmental career development of youth: Insights from a survey of U.S. environmental educators". *Applied Environmental Education and Communication* 1: 7988.

**Books:**

*Intelligent Courage* by Michael Fraidenburg—offers interviews with environmental professionals about their experiences in the field.

Profiles include:

- Roger Contor, superintendent of North Cascades National Park
- Gloria Flora, supervisor of Lewis and Clark National Forest
- Andrea Mead Lawrence, U.S. Olympic alpine skier and environmental activist
- Bern Shanks, professor, conservationist, government advisor
- Tom Peterson, founder of Center for Climate Strategies
- Mike Dombeck, former chief of USDA Forest Service
- Phil Pister, fishery biologist
- Max Bazerman, Harvard professor of business administration
- The Directory of National Environmental Organizations. St. Paul, Minnesota: U.S. Environmental Directories, 1996.  
Lists national environmental organization that contains addresses, contacts, phone numbers and brief descriptions of their activities.
- Basta, Nicholas. *The Environmental Career Guide: Job Opportunities with the Earth in Mind.*
- The ECO Guide to Careers that Make a Difference: Environmental Work for a Sustainable World from the Environmental Careers Organization Island Press—contains profiles/conversations with experts from diverse racial and cultural backgrounds and diverse involvement in the environmental field.