Continue Your Exploration

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Careers in Science

- **Hands-On Lab**
- **You Are an Ecosystem**
- **Propose Your Own Path**

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Restoration Ecologist

Restoration ecology is a field that focuses on restoring freshwater, marine, and land ecosystems that have been damaged by human activity. Restoration ecologists help design solutions to problems facing ecosystems. These solutions help preserve biodiversity. Restoration ecologists may provide assistance to government agencies and to businesses.

Some jobs restoration ecologists might do include:

- controlling and removing invasive species
- helping farmers to use sustainable farming practices
- working to improve habitats for specific species
- planning and developing practices for soil or land conservation
- planning and implementing the restoration of ocean, lake, or stream shorelines

Restoration ecologists may work alone or with others, in the field or in an office. They often collect data in the field and return to an office or laboratory to analyze the data. Then they develop a solution to the biodiversity problem. They may use mapping and computer modeling to help in developing these solutions. Other science disciplines use similar methods and equipment to obtain and evaluate evidence. Accurately collecting and analyzing evidence and applying conclusions in a valid manner is the nature of science.

This restoration ecologist is collecting data to study the change in plant communities at a nature reserve in southern England.

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This landfill in New York was in operation for many decades.

Through restoration and engineering efforts, the landfill is being transformed into a park that includes wildlife habitats.

1. An organization wants to restore an area's ecosystem to attract bird species that used to live there. How might a restoration ecologist help them?

2. Look at the photos of the landfill area and its restoration. Describe at least two ways that changes to living and nonliving components of the ecosystem have positively affected the biodiversity of the area.

3. What types of evidence might help determine whether the restored ecosystem has high biodiversity?

4. Collaborate With a group, outline a restoration project in an area in your community. Suppose that you and your classmates are the restoration ecologists planning and carrying out the work. Develop a short presentation of your proposal. Include an explanation for how the project would positively affect biodiversity in the area.