

CGC1P Unit 2: Natural Resources and Sustainability

Activity 1: Resource Concepts

Overview

Even though there might be a long list of environmental problems, almost all of them fall into three categories: resource depletion, pollution, and extinction. Here we will be learning about the concept of resource depletion.

Lesson

Your community may be facing many different environmental problems right now. There could be a debate about whether to increase the size of a landfill site, or whether there is enough water to support your community needs, or whether agricultural practices have polluted nearby waterways or water supply, or even whether an environmentally sensitive area should be destroyed to build homes or industrial plants. Even though there might be a long list of environmental problems, almost all of them fall into **three categories: resource depletion, pollution, and extinction**. Here we will be learning about the concept of resource depletion.

In this geography course you have come across the term "ecological footprint". This is an ecological accounting tool to measure how much land area each one of us uses to live our lives. It is important for us to know our ecological footprint to find out whether nature provides enough **resources** to secure good living conditions for everyone in a community. Does our community, region, country, or planet have enough resources to continue to support the way we live? It seems that there is always enough food, clothes, electronic equipment, building supplies, and other things available for us to buy to support our lifestyles. But is this the case for our immediate and long-term future?

Resources can be categorized into two groups:

- **Human Resources** - the knowledge and special skills that people possess, and
- **Natural Resources** - naturally occurring resources that people depend on for survival, e.g., water, food, trees, minerals, etc.

The using up of our natural resources on a large scale will not make our earth or our way of life sustainable. Some resources cannot be replaced. These are called **non-renewable resources**. An example of this type of resource is the metal copper. Copper is used in the wiring of our homes, cars, water pipes, and many other products. The earth has only a limited supply of this resource available. If we use up the existing amount of copper, there will not be enough for future generations to use. The more wasteful we are in our use of non-renewable resources, the sooner they will be gone!

Other resources are continually being replaced, even as they are being used. These **are renewable resources**. An example is the energy from the sun. As long as the sun shines, we will be able to use its energy to create electricity. Trees that are cut down to be used for paper, furniture, or firewood can be replaced by new trees that grow in their place. Fish, like tuna, salmon, or cod, supply an important source of protein to our diet. Fish reproduce and can be caught each year.

However renewable resources can be **depleted**. For example, if trees are cut down faster than they can grow back, we can run out of trees. Trees will take decades to grow back to maturity. Also, if we cut all the trees on a mountainside, the soil will be exposed and erosion of the soil will occur. This will further slow down or even prevent the growth of these trees. We must be careful how we use renewable resources and we must learn to use them at a rate that allows them to renew themselves.

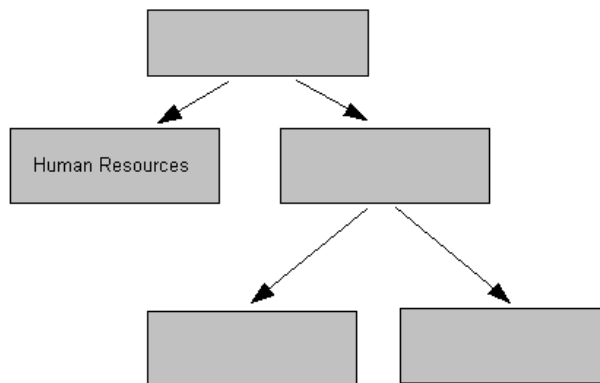
Our environmental concerns may be global in extent. Pollution from our car exhausts and factory smokestacks can enter the air. The air then circulates around the earth through the atmosphere. Farm pesticides, factory chemicals, or garbage can enter our rivers and eventually flow to the oceans that circulate around the world. The destruction of trees, plants, and natural landscapes for building cities may cause **extinction** of animals and plants. This also may increase the amount of carbon dioxide in the atmosphere, which is linked to **global warming**.

The goal of solving environmental problems is to achieve a **sustainable** world, a world in which human populations can exist forever with good health and lifestyles.

Assignment

1. What do you consider to be environmental problems in your community? List at least five.
2. How can geography help solve environmental problems?
3. List the categories into which environmental problems usually fall. Give an example that illustrates each category.
4. Complete the chart below to help organize and connect the concept of resources.

Terms:
Resources
Renewable Resources
Natural Resources
Nonrenewable Resources



5. Give one example of a non-renewable resource not mentioned in this activity and explain why it is a non-renewable resource.