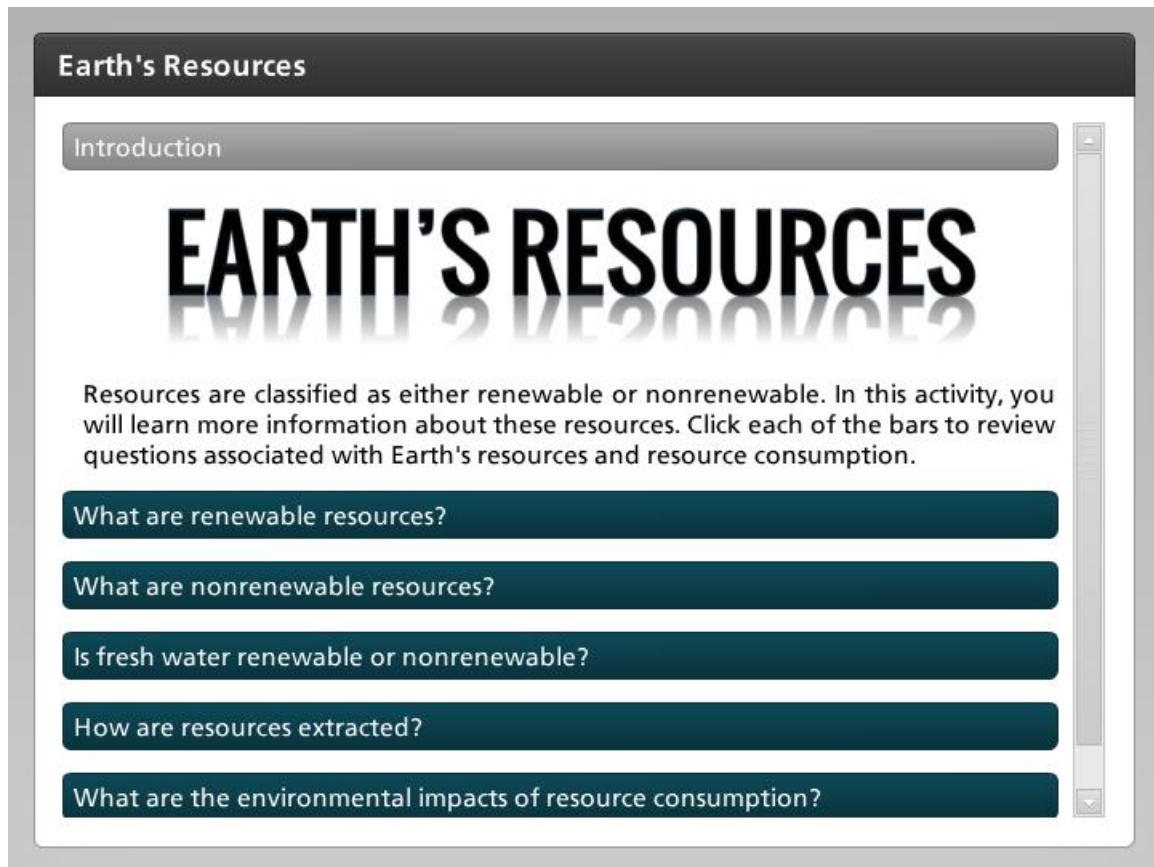


Module 10: Resources and Virginia Geology

Topic 1 Content: Earth's Resources Notes

Introduction



The screenshot shows a web interface with a dark header bar containing the text "Earth's Resources". Below the header is a light gray bar with the word "Introduction". The main content area features the title "EARTH'S RESOURCES" in large, bold, black letters with a reflection effect. Below the title is a paragraph of text: "Resources are classified as either renewable or nonrenewable. In this activity, you will learn more information about these resources. Click each of the bars to review questions associated with Earth's resources and resource consumption." Underneath this text are five dark teal horizontal bars, each containing a question: "What are renewable resources?", "What are nonrenewable resources?", "Is fresh water renewable or nonrenewable?", "How are resources extracted?", and "What are the environmental impacts of resource consumption?". A vertical scrollbar is visible on the right side of the content area.

Resources are classified as either renewable or nonrenewable. In this activity, you will learn more information about these resources. Click each of the bars to review questions associated with Earth's resources and resource consumption.

Module 10: Resources and Virginia Geology

Topic 1 Content: Earth's Resources Notes


What are Renewable Resources?

Earth's Resources

Introduction

What are renewable resources?

Renewable resources are resources that can be replenished over a relatively short amount of time. Many renewable resources are considered inexhaustible. Inexhaustible resources never run out. Energy produced by wind, the Sun, tides, heat trapped within the Earth, and running water are considered inexhaustible. Crops, such as corn for food and cotton for clothing, are grown each season. Crops are considered renewable resources. Trees used for furniture and paper products are considered renewable, if they are carefully managed.



What are nonrenewable resources?

What are renewable resources?

Renewable resources are resources that can be replenished over a relatively short amount of time. Many renewable resources are considered inexhaustible. Inexhaustible resources never run out. Energy produced by wind, the Sun, tides, heat trapped within the Earth, and running water are considered inexhaustible. Crops, such as corn for food and cotton for clothing, are grown each season. Crops are considered renewable resources. Trees used for furniture and paper products are considered renewable, if they are carefully managed.


Module 10: Resources and Virginia Geology

Topic 1 Content: Earth's Resources Notes

What are Nonrenewable Resources?

Earth's Resources

What are nonrenewable resources?



Nonrenewable resources cannot be replenished within a human lifetime. Many of these resources take thousands and even millions of years to form. Minerals, such as aluminum, gold, silver, copper, and soil are examples of nonrenewable resources. It can take hundreds of years for just one inch of nutrient-rich soil to form, and minerals form in the Earth's crust over millions of years. Many of the resources humans use for energy are nonrenewable resources, including coal, oil, and natural gas. As demand for these resources continues to increase around the world, the supply on Earth decreases. These resources will not replenish quickly; once the resource is depleted, it can no longer be used.

What are nonrenewable resources?

Nonrenewable resources cannot be replenished within a human lifetime. Many of these resources take thousands and even millions of years to form. Minerals, such as aluminum, gold, silver, copper, and soil are examples of nonrenewable resources. It can take hundreds of years for just one inch of nutrient-rich soil to form, and minerals form in the Earth's crust over millions of years. Many of the resources humans use for energy are nonrenewable resources, including coal, oil, and natural gas. As demand for these resources continues to increase around the world, the supply on Earth decreases. These resources will not replenish quickly; once the resource is depleted, it can no longer be used.

Module 10: Resources and Virginia Geology

Topic 1 Content: Earth's Resources Notes


Is Fresh Water Renewable or Nonrenewable?

Earth's Resources

What are nonrenewable resources?

Is fresh water renewable or nonrenewable?

Fresh water is a critical natural resource on which all humans rely. The world is mostly covered in water, but only a small percentage of that water is available for human use. From your house, water runs into the drain and is piped into a treatment plant. Here, the water is cleaned and treated in order for it to be reused. It is important to remember that there is a limited amount of fresh water on Earth, and that some of that water is polluted and no longer safe to use. For these reasons, fresh water is considered a nonrenewable resource and it must be conserved.



Is fresh water renewable or nonrenewable?

Fresh water is a critical natural resource on which all humans rely. The world is mostly covered in water, but only a small percentage of that water is available for human use. From your house, water runs into the drain and is piped into a treatment plant. Here, the water is cleaned and treated in order for it to be reused. It is important to remember that there is a limited amount of fresh water on Earth, and that some of that water is polluted and no longer safe to use. For these reasons, fresh water is considered a nonrenewable resource and it must be conserved.

Module 10: Resources and Virginia Geology

Topic 1 Content: Earth's Resources Notes

How are Resources Extracted?


Earth's Resources

What are renewable resources?

What are nonrenewable resources?

Is fresh water renewable or nonrenewable?

How are resources extracted?



Some natural resources simply need to be harvested and used. Others resources, especially mineral and fossil fuel resources, need to be mined and refined before humans can use them. In this sense, it takes resources to produce resources. In some cases, technologies, such as wind turbines and solar panels, are manufactured to harvest renewable resources.

What are the environmental impacts of resource consumption?

How are resources extracted?

Some natural resources simply need to be harvested and used. Others resources, especially mineral and fossil fuel resources, need to be mined and refined before humans can use them. In this sense, it takes resources to produce resources. In some cases, technologies, such as wind turbines and solar panels, are manufactured to harvest renewable resources.

Module 10: Resources and Virginia Geology


Topic 1 Content: Earth's Resources Notes

What are the Environmental Impacts of Resource Consumption?

Earth's Resources

What are the environmental impacts of resource consumption?

Using natural resources impacts the environment in many different ways. Nonrenewable resource use often has the highest negative impact on the environment. The consequences of harvesting, mining, refining, and using resources include water pollution, air pollution, and climate change. These all negatively affect human health. Resource use also leads to land degradation and habitat loss. The way humans use resources also creates a large amount of waste. Some of this waste is toxic and must be treated or contained very carefully. The majority of this waste and the trash created by humans is burned, buried in landfills, or dumped into the ocean.



What are the environmental impacts of resource consumption?

Using natural resources impacts the environment in many different ways. Nonrenewable resource use often has the highest negative impact on the environment. The consequences of harvesting, mining, refining, and using resources include water pollution, air pollution, and climate change. These all negatively affect human health. Resource use also leads to land degradation and habitat loss. The way humans use resources also creates a large amount of waste. Some of this waste is toxic and must be treated or contained very carefully. The majority of this waste and the trash created by humans is burned, buried in landfills, or dumped into the ocean.