



**High School Science Virtual Learning**

# **Earth Science**

**Resources from Earth's Crust**

**May 15, 2020**



# High School Earth Science

## Lesson: May 15, 2020

### **Objective/Learning Target:**

Students will be able to identify the main resources provided from the land.



Let's Get Started:

**Watch this video: [Journey 2050: Land Use](#)**

[Link to Video](#)

**Questions:**

1. What are some things we use land for?
2. Why is it important to properly manage our land resources?



## Let's Get Started: **Answer Key**

1. Question 1- **Growing food, grazing livestock, building homes and communities, mining mineral resources, industry, etc.**
2. Question 2 - **With a growing world population, we will need to be sure we can provide the resources of food, water, and for infrastructure(homes, roads, transportation, business).**



## Lesson Activity: **Topsoil**

**Directions:** Read - *“Soil is a non-renewable resource”* from the Food and Agriculture Organization of the United Nations

[Link to page](#)

Complete the guided reading questions on the following slide.



1. Why is soil considered a finite (nonrenewable) resource?
2. What are some competing uses for soil?
3. How much of Earth's soil has been moderately or highly degraded?
4. List five key points of sustainable soil management.



## Lesson Activity: **National Forests and Public Land**

**Directions:** Read “America’s Public Lands Explained” from U.S. Department of the Interior

[Link to Page](#)

Complete the guided reading questions on the following slide.



1. How much undeveloped public land has been set aside for future generations to use and enjoy?
2. What was the first national park in the U.S.?
3. What are some of the services provided by national forests under the supervision of the U.S. Forest Service?
4. What type of activities can a person do in a national wildlife refuge?





## Lesson Activity: **Rock & Mineral Resources**

**Directions:** Read “Rocks and Minerals: Everyday Uses” from University of Oregon Museum of Natural and Cultural History

[Link to Page](#)

Complete the guided reading questions on the following slide.

1. In the U.S., each person during their lifetime will use an average of \_\_\_\_\_ pounds of rocks, minerals, and metals.
2. What is a major use for the mineral gypsum?
3. What is glass made from?
4. What is one of the principle uses for the mineral talc?
5. How is cement made?
6. What do coal and graphite have in common?
7. What is plastic made from?



# Answers

1. Why is soil considered a finite (nonrenewable) resource? **It can not be replaced or replenished within a human lifespan.**
2. What are some competing uses for soil? **Forestry, crops, pasture, urbanization**
3. How much of Earth's soil has been moderately or highly degraded? **33%**
4. List five key points of sustainable soil management.
  - a. **Increasing soil organic matter content**
  - b. **Keeping soil surface vegetated**
  - c. **Using nutrients wisely**
  - d. **Promoting crop rotation**
  - e. **Reducing erosion**

1. How much undeveloped public land has been set aside for future generations to use and enjoy? **250 million acres**
2. What was the first national park in the U.S.? **Yellowstone**
3. What are some of the services provided by national forests under the supervision of the U.S. Forest Service? **they provide Americans with a number of services, including lumber, grazing, minerals and recreation**
4. What type of activities can a person do in a national wildlife refuge? **recreation opportunities, including hiking trails, canoeing and kayaking, auto tours, wildlife viewing, hunting, fishing**

1. In the U.S., each person during their lifetime will use an average of 3 million pounds of rocks, minerals, and metals.
2. What is a major use for the mineral gypsum? **Making drywall**
3. What is glass made from? **Melted quartz (sand)**
4. What is one of the principle uses for the mineral talc? **Baby powder**
5. How is cement made? **Heating ground up limestone to remove carbon dioxide**
6. What do coal and graphite have in common? **Both are forms of carbon**
7. What is plastic made from? **Petroleum**



## Extensions:

**Article “Land and Natural Resources”**

[Link to page](#)

About how much of the land surface in the U.S. is used for agriculture?

**Video “North America - Natural Resources”**

[Link to Video](#)

Discuss how the land resources of the US and Canada have helped to make them among the most prosperous nations in the world.



## Extension Answers

**About how much of the land surface in the U.S. is used for agriculture?**

**Nearly half of our land area, 1.2 billion acres.**

**Discuss how the land resources of the US and Canada have helped to make them among the most prosperous nations in the world. The US and Canada have abundant deposits of fossil fuel energy resources (coal and oil) as well as both industrial metal ores (iron, copper, and aluminum) and precious metal ores (gold and silver). Both countries also have abundant areas of fertile soil for growing wheat, corn, and other grain crops.**