

# **EARTH SCIENCE** Lesson Plan

Quarter 3, Week 8, Day 1



## **Outcomes for Today**

---

Standard Focus:

### **PREPARE**

#### **1. Background knowledge necessary for today's reading.**

---

Everything on Earth is a resource and all organisms use resources. Many of the resources can be and are being cycled and recycled for continued use. Some cycles such as the carbon, nitrogen, and water cycles occur naturally. Other resources are recycled through concerted effort and commitment.

#### **2. Vocabulary Word Wall.**

---

Introduce 3-5 important words from today's reading

**natural resources    renewable resources    biosphere    sustainable yield**

- Show, say, explain, expand, explode or buzz about the word briefly
- Show, say, define the word quickly and add to the word wall.

### **READ**

#### **3. Review the vocabulary and concepts previously covered in this chapter.**

---

#### **4. Read directions for investigation/activity.**

---

#### **5. Read text.**

---

Ch. 25.1, pp. 655-657

## RESPOND

### 6. Fix the facts. Clarify what's important.

---

Discuss the reading and add 3-5 events/concepts to the billboard

Students might mention:

- Natural resources includes Earth's air, water and land, all living things, and nutrients, rocks, and minerals in the soil and beneath the surface.
- Renewable resources are replaced through natural processes at a rate equal to or greater than the rate at which they are used.
- Examples of renewable resources are fresh air, fresh water, ground water, soil and all living things.

### 7. Post information on the billboard. Add new information to ongoing projects on the wall.

---

## EXPLORE

### 8. Explore today's investigation with inquiry activities.

---

### 9. Explore today's simulation with inquiry activities.

---

### 10. Collect data

---

**One possible activity:** A Web of Resources

**Procedure:** Students discuss various types of resources

**Discussion:** Discuss what constitutes a resource

**Key question:** What are the important resources?

**Source:**

<http://nationalgeographic.com/xpeditions/lessons/16/g912/web.html>

## EXTEND

### 11. Prompt every student to write a short product tied to today's reading.

---

### 12. Close with a short summary.

---

Extend the reading to the students' lives or to the world

# **EARTH SCIENCE** Lesson Plan

## Quarter 3, Week 8, Day 2



### **Outcomes for Today**

---

Standard Focus

#### **PREPARE**

##### **1. Background knowledge necessary for today's reading.**

---

The need for a particular resource can change over time as technology advances. The continued industrialization of the world put demands on supplies of certain finite resources such as oil. The value of some resources comes from its scarcity, the amount of time, in some cases millions and millions of years, needed to recreate it, or the cost of extracting and processing it.

##### **2. Vocabulary Word Wall.**

---

Introduce 3-5 important words from today's reading

#### **nonrenewable resources**

- Show, say, explain, expand, explode or buzz about the word briefly
- Show, say, define the word quickly and add to the word wall.

#### **READ**

##### **3. Review the vocabulary and concepts previously covered in this chapter.**

---

##### **4. Read directions for investigation/activity.**

---

##### **5. Read text.**

---

Ch. 25.1, pp.657-658

## RESPOND

### 6. Fix the facts. Clarify what's important.

---

Discuss the reading and add 3-5 events/concepts to the billboard

Students might mention:

- Nonrenewable resources are exhaustible because they are being used at a faster rate than the rate at which they were formed.
- Natural resources are not distributed evenly on Earth.
- The availability of natural resources helps determine a country's wealth and power.

### 7. Post information on the billboard. Add new information to ongoing projects on the wall.

---

## EXPLORE

### 8. Explore today's investigation with inquiry activities.

---

### 9. Explore today's simulation with inquiry activities.

---

### 10. Collect data and post.

---

**One possible activity:** A Web of Resources

**Procedure:** Students create questions related to statements about resources

**Discussion:** Discuss student responses to the activity

**Key question:** none

**Source:**

<http://www.nationalgeographic.com/xpeditions/lessons/16/g912/web.html>

## EXTEND

### 11. Prompt every student to write a short product tied to today's reading.

---

### 12. Close with a short summary.

---

Extend the reading to the students' lives or to the world

# **EARTH SCIENCE** Lesson Plan

## Quarter 3, Week 8, Day 3



### **Outcomes for Today**

---

Standard Focus: Earth Sciences 9.a “students know the resources of major economic importance in California and their relationship to California geology”

#### **PREPARE**

##### **1. Background knowledge necessary for today’s reading.**

---

Land is considered a natural resource, both for the space it provides for humans and other living organisms, and for its uses as farming, grazing, forests, and mining areas. In the later part of the nineteenth century and early twentieth century, Americans came to realize the benefit of preserving large tracts of land for public good. Yellowstone became the first national park in 1872. The railroads lobbied for many of the early parks and built grand hotels to accommodate tourists and visitors to the West. There were people who advocated for regulated use of public land rather than strict preservation of natural resources. In 1913 Congress permitted the creation of a reservoir in the Hetch Hetchy Valley of Yosemite.

##### **2. Vocabulary Word Wall.**

---

Introduce 3-5 important words from today’s reading

**public lands**

**wilderness areas**  
**bedrock**

**desertification**  
**aggregate**

- Show, say, explain, expand, explode or buzz about the word briefly
- Show, say, define the word quickly and add to the word wall.

#### **READ**

##### **3. Review the vocabulary and concepts previously covered in this chapter.**

---

##### **4. Read directions for investigation/activity.**

---

##### **5. Read text.**

---

Ch. 25.2, pp. 659-661

## RESPOND

### 6. Fix the facts. Clarify what's important.

---

Discuss the reading and add 3-5 events/concepts to the billboard

Students might mention:

- Forty-two percent of all the land in the U.S. is certified as public land, of which 95% is in Alaska and the western states.
- The erosion of topsoil is a problem on about one-third of the world's cropland.

### 7. Post information on the billboard. Add new information to ongoing projects on the wall.

---

## EXPLORE

### 8. Explore today's investigation with inquiry activities.

---

### 9. Explore today's simulation with inquiry activities.

---

### 10. Collect data and post.

---

**One possible activity:** A Web of Resources

**Procedure:** Students create a web for a particular resource

**Discussion:** Discuss the components of the web

**Key question:** What relationships emerged?

**Source:**

<http://www.nationalgeographic.com/xpeditions/lessons/16/g912/web.htm>  
!

## EXTEND

### 11. Prompt every student to write a short product tied to today's reading.

---

### 12. Close with a short summary.

---

Extend the reading to the students' lives or to the world

# **EARTH SCIENCE** Lesson Plan

## Quarter 3, Week 8, Day 4



### **Outcomes for Today**

---

Standard Focus

#### **PREPARE**

##### **1. Background knowledge necessary for today's reading.**

---

Land is a natural resource both on and below the surface. Every state in the U.S. has some sort of mining taking place. Bedrock and aggregate materials are used in construction. Most people think of gold and silver and its value for jewelry making. Other metal ore, such as iron, copper, zinc, aluminum, nickel, chromium, and titanium have uses in construction, industry, manufacturing, and technology.

##### **2. Vocabulary Word Wall.**

---

Introduce 3-5 important words from today's reading

**ore**

**hydrothermal veins**

**placer deposits**

- Show, say, explain, expand, explode or buzz about the word briefly
- Show, say, define the word quickly and add to the word wall

#### **READ**

##### **3. Review the vocabulary and concepts previously covered in this chapter.**

---

##### **4. Read directions for investigation/activity.**

---

##### **5. Read text.**

---

Ch.25.2, pp. 661-662

## RESPOND

### 6. Fix the facts. Clarify what's important.

---

Discuss the reading and add 3-5 events/concepts to the billboard

Students might mention:

- An ore is a natural resource that can be mined at a profit.
- Early mining in California relied on placer deposits.

### 7. Post information on the billboard. Add new information to ongoing projects on the wall.

---

## EXPLORE

### 8. Explore today's investigation with inquiry activities.

---

### 9. Explore today's simulation with inquiry activities.

---

### 10. Collect data and post.

---

**One possible activity:** Mining Made Simple

**Procedure:** Students use chocolate chip cookies to simulate mining

**Discussion:** Discuss the costs and risks associated with mining.

**Key question:** What is your EIA and Reclamation plan?

**Source:**

<http://www.bedford.K12.ny.us/flhs/science/stevek/DLESEworkshop/minigmadesimple.pdf>

## EXTEND

### 11. Prompt every student to write a short product tied to today's reading.

---

### 12. Close with a short summary.

---

Extend the reading to the students' lives or to the world



# **EARTH SCIENCE** Lesson Plan

Quarter 3, Week 8, Day 5



## **Outcomes for Today**

---

Standard Focus

### **PREPARE**

#### **1. Background knowledge necessary for today's reading.**

---

While there are economical and industrial benefits derived from mining there are also societal and environment negatives. Mining provides jobs for many residents of an area, but often the local economy becomes dependent on the mine. Negative health impacts to the miners may result because of the effects of their work situation. The mining also affects the contours of the land, native plants and animals, and may contaminate of the soil.

#### **2. Vocabulary Word Wall.**

---

Introduce 3-5 important words from today's reading

#### **gangué**

- Show, say, explain, expand, explode or buzz about the word briefly
- Show, say, define the word quickly and add to the word wall.

### **READ**

#### **3. Review the vocabulary and concepts previously covered in this chapter.**

---

#### **4. Read directions for investigation/activity.**

---

#### **5. Read text.**

---

Ch. 25.2, pp. 662-663

## RESPOND

### 6. Fix the facts. Clarify what's important.

---

Discuss the reading and add 3-5 events/concepts to the billboard

Students might mention:

- The extraction of some mineral resources can have a negative impact on the surrounding environment.
- Mining is identified as the most dangerous occupation in the U.S.

### 7. Post information on the billboard. Add new information to ongoing projects on the wall.

---

## EXPLORE

### 8. Explore today's investigation with inquiry activities.

---

### 9. Explore today's simulation with inquiry activities.

---

### 10. Collect data and post.

---

**One possible activity:** Mining Made Simple (continued)

**Procedure:** Students complete activity begun on previous day

**Discussion:** Go over the requirements for the "mining operation"

**Key question:** Was your endeavor profitable?

**Source:**

<http://www.bedford.K12.ny.us/flhs/science/stevek/DLESEworkshop/miningmadesimple.pdf>

## EXTEND

### 11. Prompt every student to write a short product tied to today's reading.

---

### 12. Close with a short summary.

---

Extend the reading to the students' lives or to the world