# TOPIC 5.9 Impacts of Mining

## Required Course Content

### ENDURING UNDERSTANDING

**EIN-2**

When humans use natural resources, they alter natural systems.

| LEARNING OBJECTIVE | ESSENTIAL KNOWLEDGE |
|---|---|
| **EIN-2.K**<br>Describe natural resource extraction through mining. | **EIN-2.K.1**<br>As the more accessible ores are mined to depletion, mining operations are forced to access lower grade ores. Accessing these ores requires increased use of resources that can cause increased waste and pollution.<br><br>**EIN-2.K.2**<br>Surface mining is the removal of large portions of soil and rock, called overburden, in order to access the ore underneath. An example is strip mining, which removes the vegetation from an area, making the area more susceptible to erosion. |
| **EIN-2.L**<br>Describe ecological and economic impacts of natural resource extraction through mining. | **EIN-2.L.1**<br>Mining wastes include the soil and rocks that are moved to gain access to the ore and the waste, called slag and tailings that remain when the minerals have been removed from the ore. Mining helps to provide low cost energy and material necessary to make products. The mining of coal can destroy habitats, contaminate ground water, and release dust particles and methane.<br><br>**EIN-2.L.2**<br>As coal reserves get smaller, due to a lack of easily accessible reserves, it becomes necessary to access coal through subsurface mining, which is very expensive. |

**SUGGESTED SKILL**

*Environmental Solutions*

**7.E**

Make a claim that proposes a solution to an environmental problem in an applied context.

**AVAILABLE RESOURCES**

- Classroom Resource > **AP Environmental Science Teacher's Guide**
- The Exam > **Chief Reader Report 2018, Q2**
- The Exam > **Student Performance Q&A 2016, Q2**
- The Exam > Samples and Commentary (**2018, Q2, 2016, Q2**)