

# **Teacher Page: Case Study- The growing problem of Coal Ash (p. 307-308)**

**Unit:** Unit 7

**Grade Level Indicator:**

**Description:**

**Time:** 25 minutes

**Materials:** Book page 307-308

**Procedure:**

**Warm-up:**

**Instructional Strategies:**

**Assessment:** Grade question, student participation

**Variations:** Do questions orally with teacher led instruction,

**Interdisciplinary Connection:**

**Sample Data/ Answers:** The answer key follows the student page.

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**Case Study: The growing problem of Coal Ash** (p. 307-308)

1. What are some of the products that come from burning coal? \_\_\_\_\_

\_\_\_\_\_

2. What are 3 positive uses of coal ash?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

3. Describe the accident that happened on December 22, 2008 near Knoxville, Tennessee. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Why was the accident such a problem? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. What has the Environmental Integrity Project (EIP) recommend? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. What reason have coal companies given to fight regulations on coal ash? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Critical Thinking: With most of Ohio's electrical energy coming from burning coal, do you support regulations on coal ash? \_\_\_\_\_

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\_\_\_\_\_

## Key

1. Arsenic, cadmium, chromium, lead, mercury, and radioactive radium
2.
  1. Blended into cement and concrete
  2. Used as a base for paving roads
  3. Converted into wallboards for use in homes and offices
3. A pond released a large volume of coal ash sludge and flooded over 300 football fields.
4. Destroyed or damaged 40 homes, tainted water ways, and soils with arsenic
5. Phasing out all wet storage of coal ash
6. It would raise the price of electricity generated by their plants and make coal less competitive with other energy alternatives.

Critical Thinking: Answers will vary