

Inspecting Coal Samples - Primary

Return to [Primary Lesson Plans](#)

Title: Inspecting Coal Samples

Level: Primary - Middle (1 - 8)

Time: 30 - 45 minutes

*Bonus Activity will require additional time

KERA Goals: 1.1, 1.2, 1.3, 2.1, 2.22, and 5.1

Objective:

Use observational skills to determine the similarities and differences in various coal samples.

Materials:

lignite
coke
sub-bituminous coal
bituminous coal
anthracite
hand lens
bucket of soapy water
paper towels

Activity:

1. Pass the various coal samples around the room, allowing the students to handle them. The attached worksheet may be used to record observations.
2. The following statements/ questions may be used as observation "guides," but students should be encouraged to record any and all observations that they make. A quick sketch of each type of coal may be appropriate.
 - (a) Observe the color of each sample.
 - (b) Touch the sample. Does it break easily? Do you get "black" on your hands? How does the coal feel to the touch? Is it smooth? Rough? Soft? Describe.
3. After returning the coal, wash your hands.
4. What conclusions can you draw from your experience? Is all coal the same?
5. **EXTRA BONUS:** Try to use various reference books to find the kinds of problems the different coals are causing in the world. How are scientists hoping to solve these problems?
6. **EXTRA, EXTRA CREDIT:** Create a poem, a poster, a rap, a monologue, or a puppet show, etc. to show the various kinds of coal in the world. Be prepared to share your talents with the class.
7. Write and/or draw a detailed description of each coal sample that you examined. You may choose to supplement each description with a sketch.

Provided by Pittsburgh Energy Technology Center

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Return to [Primary Lesson Plans](#)