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Title: Coal

Level: Primary - Middle (2 - 8)

Time: Varies according to which activity used

KERA Goals: 1.2, 1.3, 2.1, 2.3, 5.1, and 6.2

Objective:

1. Discover and be able to describe how coal was formed, how it is extracted from the earth, and how it is put to use.

Materials:

Recipe—"Cookie Bar Coal" (Advance preparation necessary)

Booklets "Let's Learn About Coal"

Activity sheets on coal (Attached)

Large colored marshmallows

Crayons and pencils

Poster paper

Notebooks

Jar or other container

Transparencies (mining)

Activity:

1. Introduce the students to the concept of coal formation by using the attached demonstration, "Cookie Bar Coal."
2. Display the five coal samples (lignite, sub-bituminous, bituminous, anthracite, coke) and describe each coal's characteristics. Pass the samples around the classroom so that the students may observe and examine them.
3. Students will read and discuss "Let's Learn About Coal." The teacher should list important facts about coal on the blackboard and have the students copy them into a special notebook. Have the students complete the activity sheet on coal.
4. Demonstrate how heat and pressure form layers of coal by using "MarshmallowMoosh" activity (see attached sheet). Conduct a question/answer session to check student's observations and conclusions.
5. Use a transparency (see attached page) to develop types of mining. Discuss equipment used and ways of transporting coal (truck, barge, railroad cars).
6. Discuss how each coal is used today (power plants, electricity, etc.)

Additional Activities:

1. Do the activity sheets on coal (procedure 3) to reinforce the concepts associated with the formation of coal.

Coal - primary

2. Have the students write a paragraph or poem about coal.
3. Have volunteers make a model of each type of mining.
4. Have students do research and reports on the by-products of coal. Different methods could be used to present the information to the class—for example, some students might want to make a bulletin board.

Discussion:

1. Which coal is shiny?
2. Which coal is heavier?
3. What color is each lump of coal?
4. Which coal do you think would be good for burning?
5. What is surface mining?
6. What is underground mining?
7. How is coal transported?
8. Do you think that we will always have enough coal? Why or why not?

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