

## Controlling our Rate of Consumption

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**Title:** Controlling Our Rate of Consumption

**Level:** Intermediate, Middle School

**Time:** 1 Day

**KERA Goals:** 2.1, 2.33:

**Objective:** Students will determine that resources are limited, and thus scarce and list some energy conservation measures.

**Materials:**

1. Two chocolate cookies per pupil
2. Graph paper
3. Clock with second hand

**Activity:**

1. Give each pupil a cookie. When the signal is given, the pupils will begin eating the cookies. Each student must raise a hand and keep it raised when he or she is finished. Count the hands raised every 15 seconds until all the cookies are eaten. At the last count, all hands should be raised.

2. Create the graph indicating how many pupils finished eating every 15 seconds.

### Students Finished

Eating Cookies

25									
20									
15									
10									
5									
0	15	30	45	60	75	90	105	135	150

Seconds

3. One cookie equals one coal deposit. Analyze the graph with the pupils. How many different coal deposits were consumed after 15 seconds? After 30 seconds? After 45 seconds? etc.

4. Distribute the second cookie. This time the pupils can only take a bite when you say "take a bite." Do this every 15 seconds. The system is the same: the pupils raise their hands when finished and you tally the number every 15 seconds.

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5. Construct a second graph. The graph usually indicates that coal resources last longer. Analyze the data. How long did it take for all resources to be eliminated?

Question:

Compare graph #1 (unlimited consumption) with graph #2 (limited consumption). How do they differ? How are they the same? Can we help control how rapidly we use our resources, such as coal, oil and natural gas? How?

Provided by American Coal Foundation

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