

SUGGESTED ADDITIONAL ACTIVITIES

The suggested additional activities listed below may be used to expand upon the original activities.

Teacher's Guide

Activity #1 - Crossword Puzzle

Divide the class into groups. Divide the 14 vocabulary words used in the puzzle among the groups. Additional vocabulary words can be found in the text. Have each group pantomime the meaning of the word. The other groups will guess the word. The group that guesses that most words, wins.

Activity #2 - Map

Find out how much coal was produced in the U.S. in 1981. Use the production information for the years 1981 and 2003 to answer the following questions:

- What states increased the amount of coal they produced?
- What states decreased the amount of coal they produced?
- What state(s) had the largest increase and decrease?
- What happened to production in your state?

Activity #3 - Fractions

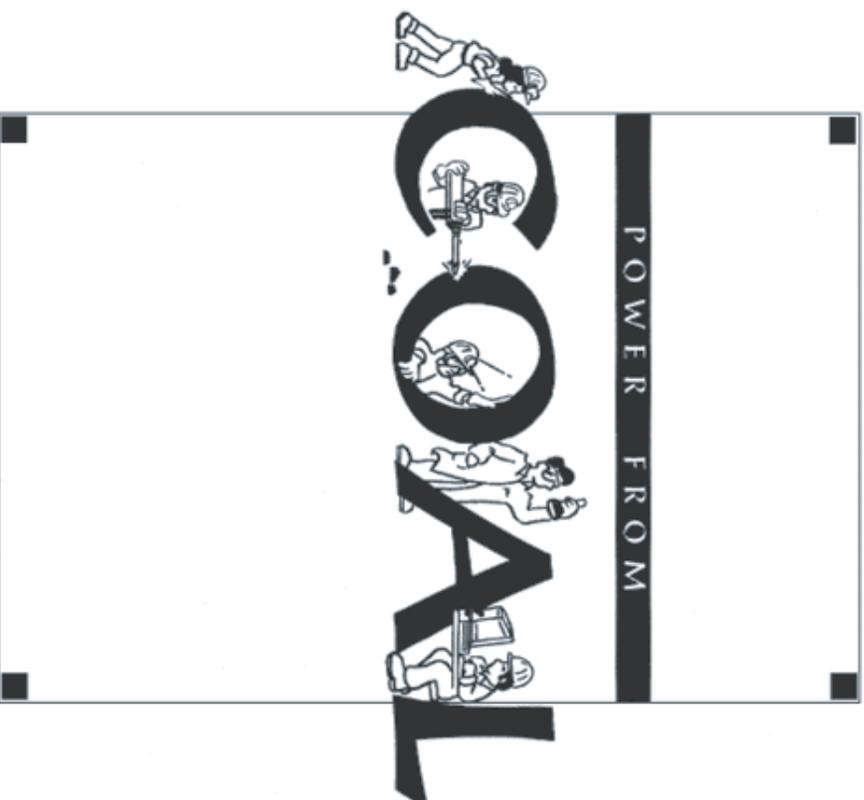
Divide the class into groups and have each group develop a similar activity using fractions (addition, subtraction, multiplication, division).

Activity #4 - Story Problems

- Have each student find out how much electricity their family uses in one month, six months, and a year.
- How much coal is this?
- Why does the amount of electricity vary from household to household?

Activity #5 - Sequencing

Have students research other developments in the use of coal between 1850 and now. Make a timeline using the events in the activity and the events found through the additional research.



A M E R I C A N C O A L F O U N D A T I O N

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ANSWER KEY

Dear Teacher:

Power from Coal is designed to help your class learn more about America's most abundant energy source – coal. By reading the text, your students should be able to complete the activities beginning on page 9. Included in this teacher guide are the answer key and a list of suggested additional activities.

We hope Power from Coal will be a useful addition to your library of energy teaching aids. For further information about coal, please go to www.teachcoal.org or write to the American Coal Foundation, 101 Constitution Ave. NW, Suite 500-E, Washington, DC 20001-2133.

After reading the booklet and completing the activities, your students should be able to:

- List the ways they use electricity and cite ways life would be different without it.
- Explain the role coal plays in the generation of electricity.
- Identify the reasons coal is a good fuel choice.
- Describe the jobs associated with coal mining.
- Demonstrate the stages that land undergoes from pre-mining through reclamation.
- Compare air pollution control methods.

Activity #1

Across

1. Surface
4. Hopis
5. Barges
8. Underground
11. Electricity
13. Carbon

Activity #2

1. a. Wyoming
- b. West Virginia
- c. Kentucky
- d. Pennsylvania
- e. Texas
- f. Montana
- g. Colorado
- h. Indiana
- i. Illinois
- j. Virginia
2. No. This map does not show the depth of the coral seam.
3. New England
4. Check map and local utility

Down

1. Steel
2. Reclaimed
3. Exports
6. Safety
7. Sulfur
9. Overburden
11. Factories
12. Unit

Activity #3

1	1	4	0	1	1	1	1
4	A	5	R	4	H	A	9
H	A	R	D	H	A	T	T

1	5	1	3	2	1	3	2
5	8	A	4	4	4	3	4
G	L	A	S	S	E	S	S

2	1	1	1	1	8	15	8
4	A	7	F	3	T	Y	Y
S	A	F	F	E	T	Y	Y

Activity #4

1. 4,310 pounds
2. 1,077 pounds
3. 5,262.50 kilowatt hours
4. 6 years
5. 85 pounds
6. 96 pounds
7. 424 pounds

Activity #5

1. The Hopis use coal to bake the pottery they made from the clay.
2. James Watt invents the steam engine.
3. Coke replaces charcoal as the primary fuel for iron blast furnaces.
4. Coal-fired steam generators begin to produce electricity.
5. Trains switch from coal to diesel fuel.
6. Coal production levels rise to about one billion tons annually.