STUDENTS NEED TO CHOOSE TWO PROJECTS: MAKE SURE THE PROJECT IS AT LEAST A LEVEL 2 or 3, if the project is a level 1 please add some research to get more out of it

1. Label a United States map with national parks and monuments

that are of geologic interest. (V-1) 🡨-----(level)

2. Locate and label the following places on a world map: (V-2)

CL

Vesuvius

Kilauea

Mount Hood

Mount Pelee/Saint Pelee

Mount Katmai

Mount Agung

Paricutin

Krakatoa

Mount Lassen

Mount Baker

Aconcagua

Hibokhibok

Mount Etna

Stromboli

Mount Shasta

Mount Rainier

Mount Saint Helens

Mauna Loa

Cotopaxi

Mount Tambora

Surtsey

EARTH SCIENCE CONTRACTS 24

3. Make **a bulletin board** that will explain the different kinds of

**volcanoes and volcanic material.** (V-2) **CL**

4. **Research,** then write a two-page report to tell how **the plate**

**tectonics theory** is used to explain the locations of most

volcanoes. (W-2)

5. How many ways can **changes** occur in **the earth's crust?**

Research this question, then explain in a two-page report.

Include illustrations. (W-2)

6. Read about **quicksand.** Construct **a bulletin board** of the

important points. **(V-1) CL**

7. Conduct **research on caves and caverns** in the United

States. Write a three-page report on how they are formed,

what they look like, and how they are explored. (W-2) **CL**

*Option:* Add a shadow box showing the inside of a cave (W4)

**CL**

8. Prepare **a presentation** for the class in which you explain

**how geologists lookat land forms and rocks** and can know

that ancient seas were once there. Be sure you have read and

researched the problem. **(0-1) CL**

9. Read about **Vesuvius** and **Pompeii.** Retell the story to the

class. Tape record for use at Open House. (0-1)

1O. Read and research to discover **the ways that scientists**

**have developed to study earthquakes.** Present your information

to the class. (0-1)

11. What is the **Ring of Fire?** Read and research to learn about

it. Present a lesson to the class. Be sure to use **visuals.** (0**1)**

**CL**

12. What is a tsunami? Read and research about them. Write a

newspaper story about one. Include a map and other illustrations.

(W-2) CL

13. Teach the class about the Richter Scale. Include such

information as: who developed it? How and when is it used?

(0-1 )

14. Read several myths that explain geologic events such as

earthquakes, volcanoes, etc. Retell two of your favorites tothe

class. (0-1)

15. Make a model (papier mache, salt dough, etc.) of Mount St.

Helens before and after the major eruption of May 18, 1980.

(V-3) CL

16. Make a map or model of the world. Show the plates of the

Earth's crust. Showthe Ring of Fire. Accuracy and neatness

are important. (V-2) CL

17. Make a shadow box or flip book (cartoon) of a volcano

erupting. Be sure to work for neatness and artistic effect. (V2)

18. Make a bulletin board showing an interior side view of a

volcano. Label all parts. (V-2) CL

19. Make a model of the Earth that will show the parts (Le., the

three layers). (V-2) CL

20. Devise a demonstration for the class that will show how

"new" land forms at the mouth of a river. (K-2) CL

21. Read several Greek, Roman, Norse, or Native American

myths. Determine the characteristics of myths. Create your

own myth about earthquakes. (W-2) CL

22. Devise an experiment or a model of a glacier that will

demonstrate how glaciers contribute to erosion. (K-2) CL

23. Write a one-page report to summarize why volcanoes occur

in certain areas of the world. How are scientists able to predict

when some volcanoes are going to erupt? (W-2)

EARTH SCIENCE CONTRACTS 26

24. How does soil erosion take place most often in your area?

How do farmers and construction workers deal with erosion?

(Interview and take notes.) Analyze the methods. Which are

costly? Which are practical? Present in a written report. Turn

in your notes. (W-3) CL

25. Interview several people about their memories of Mount

Saint Helens' eruption on May 18, 1980. Write a newspaper

story. What conclusions can you form about the importance of

that event to the people of your area? Turn in your interview

notes. (W-3) CL

26. Conduct a survey of 30 or more people. See how many can

name three geologic hazards. Make a graph of the information.

Turn in your interview notes. (V-2) CL

27. Pretend you are a prehistoric person and you have just seen

your first volcano. Perform a skit in which you have to tell

others about it. See the procedures for skits in the Student

Guide. (K-3) CL

28. Compose a song about the volcanoes of Oregon, California,

Hawaii, and Washington. Use original music and words. If you

play an instrument, accompany yourself. Present in person or

on tape for an audience. The song should represent knowledge

of the states and the volcanoes. Don't simply hurry

through this project. Work to create a quality song you are

proud to present. (M-3)

29. Read several kinds of poetry. Discuss poetry with your

teacher before beginning. Choose any two forms (Le., cinquain,

haiku, limerick, couplet, triplet, or other forms as your

teacher may suggest). Write at least four poems about volcanoes.

(O/W-3)

30. Research how geologists predict the eruption of a volcano.

Then write your prediction of Mount Saint Helens' next eruption.

(W-2) CL

31. Compare the following four volcanoes: Kilauea, Vesuvius,

Krakatoa, and Mount Saint Helens. Evaluate the after effects

to human kind in terms of dollar costs, human life, and other

ways. Write a report and consider including diagrams or

graphs. (W-3) CL

32. Evaluate the results of a volcanic eruption. Describe in a

report. Give at least four positive and four negative results.

(W-2) CL

1. Observe your classroom closely. What do you see in your

classroom that came from the Earth's crust? Prepare a list

and share with the class through an oral report. (0-1) CL

2. Use a world map and label major oil fields. (W-1)

3. Read to find out about natural resources. Make a mobile

about 10 natural resources. (KN-2) CL

4. Write a letter that will travel

back in time to a prehistoric

person. Explain mining

today. Include the following:

a) definethe meaning

of the term "ore," b)

describe one way ore may

be formed, c) tell how the

process of smelting aids in

the recovery of certain minerai

resources, d) howdoes

mineral exploration affect

human resources. (W-2)

CL

EARTH SCIENCE CONTRACTS 28

5. Make two collages-one showing renewable resources and

one showing nonrenewable resources. (V-2) CL

6. Make a mural that illustrates the steps-from mining to

production-involved in the manufacture of steel. Check

with you rteacher about when and where to display it. (V-2) CL

7. Draw a diagram or paint a mural that explains the water

cycle. Check with your teacher about when and where to

display it. (V-2) CL

8. Research the production of concrete from initial through final

stages. A visit to a cement company will help. Create a

display of the step-by-step process. (V-2N-3 if the trip is

included) CL

9. Research and graph the rate of oil consumption in this

country in the last 15 years. Then make predictions about our

consumption in the future. (V-3) CL

10. Describe the major types of fuels used to produce energy.

Present the information through a mobile or bulletin board.

(V-2) CL

11. Read and research to learn the history of human beings' use

of rocks for making tools. Give an oral report to the class.

(0-2) CL

12. Write **a letter to a pen pal from another**

**planet.** Explain the uses of natural gas

and oil. Describe the functions of a refinery.

Describe new methods of recovery

and sources of oil currently being explored.

Pretend that your pen pal's planet

does not have oil or gas. (W-2) **CL**

13. Write a report in which you describe the differences between

bituminous and anthracite coal and the mining of each as

well as the value of each as a source of energy. Be sure to

describe how coal is formed. (W-3) CL

14. Write a biography of an ore mineral from the time it is formed

until it is discovered, mined, processed into a product, and

used by a consumer. (W-2) CL

15. Make up 10 story problems based on mining. Two of the

problems must include money or time and two must include

ounces, pounds, or tons, also use multiplication and division.

Work the problems on another sheet of paper to tu rn in to you r

teacher. (W-3)

16. Develop a chart of 10 or more of the Earth's resources that

are important to people. Tell how each one is used. (V-2) CL

17. Investigate how the western United States' history relates

to the development of the mining industry. Present an oral

report to the class. Be sure to use visuals. (W-2) CL

18. Set up a display of 10 common by-products of petroleum.

Label with name and use. (K-1) CL

19. Conduct a two-week recycling drive-paper, glass, aluminum.

Take the collection to a recycling center. Bring the

receipt to class and tell about your experience. (K-3) CL

EARTH SCIENCE CONTRACTS 31

20. Save and weigh all the paper used and thrown away in your

classroom for one week. Sort out the part that could be

recycled. Record the weight at the end of that time. Calculate

the amount used (at that rate) in one school year in your

classroom. Use that figu re to estimate the amount used by the

entire school in one school year. It is estimated that one ton

of recycled paper saves one acre of trees. What acreage

would be saved by recycling your school's paper? (K/M-3) CL

21. Plan a one-month prospecting trip into the wilderness

mountains. Tell the time period and the place you'll go, what

minerals you will look for, the equipment you'll need. Plan

what food and supplies will be used. Plan transportation. What

techniques would you use for prospecting? Present in a

written report. (W-3) CL

22. Create a bulletin board to demonstrate the formation of

coal from the remains of ancient plant life which are subjected

to heat and pressure by overlying sediments. (V-2) CL

23. Make a diagram of the process of making gasoline from oil.

Use a large poster board. (V-2) CL

24. Chart the world's transportation routes of oil. Circle the

chokepoints-construction of routes ... look it upl (V-2) CL

25. Design a board game in which coal mining is the theme.

Ideas: coal is a major resource used for energy and the

production of many goods. There are two types of coal and

there are different mining techniques. You think of othersl (K2)

26. **Compare** the values and shortcomings of **different kinds of**

**fuel.** Write an article for a national weekly magazine. (W-2) **CL**

27. **Observe** three hours of **television.** Make a log of each of the

ads. Summarize the ways that each is **related to Earth's**

**resources.** (W-1)

28. **Survey** at least 30 **people.** How many think we are running

out of oil? Graph the results. You may want to group by age,

amount of education, or some other category. (V-3) **CL**

29. **Graph** the amount of the **world's energy** that is derived from

oil, coal, hydro, nuclear. This will require research from a

current reference book-encyclopedia or almanac. (V-3) **CL**

30. Study the **Earth structures** and sedimentary rocks. Then

draw **diagrams** of four different ways oil is trapped. (V-2) **CL**

31. Imagine that the human race had never discovered **petroleum.**

How would the world be different? Present **orally** to the

class. (0-2) **CL**

EARTH SCIENCE CONTRACTS 33

32. Write a diary of a prospector who finds an ore deposit and

over a period of time develops it into a mine. (0-2) CL

33. Make a game that will show that our way of living depends on

how we use the resources of the Earth. (K-1) CL

34. Compose a song that would encourage the recycling of

metals. If you play an instrument, accompany yourself. Present

in person or on tape for an audience. The song should

represent knowledge about the subject. (M-2)

35. Invent a better way of discovering gold. Share this through

a model or diagram. (V-2) CL

36. Invent a new way of mining salt so that people would not

have to go underground. Describe it in an essay. (W-2) CL

37. Consider human dependence upon natural resources for

our day-to-day style of living. Consider the fact that some of

those resources are not renewable. Evaluate the impact on

the present and the future if people quit using those resources.

Present orally to the class. (Consider all aspectspro

and con-of this question.) (0-2) CL

38. Write an editorial on the advantages and the disadvantages

of strip mining. (W-2) CL

39. How might the development of mineral resources help

raise the economic level and thus the standard of living in poor

areas such as Appalachia, China, Ethiopia, Indonesia, etc.

Form your judgment and express it