

Earth Science Ch. 6 Practice Test

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ____ 1. Volcanic belts form along
- | | |
|----|-----------------------------------|
| a. | islands in the Pacific Ocean. |
| b. | North American mountain ranges. |
| c. | the boundaries of Earth's plates. |
| d. | the coast of Antarctica. |
- ____ 2. Before lava reaches the surface, the molten material is called
- | | |
|----|---------------|
| a. | rock. |
| b. | magma. |
| c. | volcanic ash. |
| d. | liquid fire. |
- ____ 3. The volcanoes along converging oceanic plate boundaries may form
- | | |
|----|--------------------------------|
| a. | a hot spot. |
| b. | a part of the mid-ocean ridge. |
| c. | an island arc. |
| d. | a subducting plate. |
- ____ 4. The formation of the Hawaiian Islands is one example of
- | | |
|----|---|
| a. | volcanoes forming over a hot spot. |
| b. | volcanoes forming along plate boundaries. |
| c. | the Ring of Fire. |
| d. | continental drift. |
- ____ 5. The long tube in the ground that connects the magma chamber to Earth's surface is called the
- | | |
|----|------------|
| a. | vent. |
| b. | side vent. |
| c. | pipe. |
| d. | crater. |
- ____ 6. What provides the force that causes magma to erupt to the surface?
- | | |
|----|--------------------------------------|
| a. | the silica in the magma |
| b. | dissolved gases trapped in the magma |
| c. | gravity in the lithosphere |
| d. | the density of the magma |
- ____ 7. If a volcano's magma is high in silica, the volcano will probably
- | | |
|----|----------------------------|
| a. | erupt quietly. |
| b. | remain dormant. |
| c. | erupt explosively. |
| d. | produce dark-colored lava. |
- ____ 8. Which of the following volcano hazards is made up of rocky particles about the size of a grain of sand?
- | | |
|----|------------------|
| a. | volcanic bombs |
| b. | pahoehoe |
| c. | volcanic cinders |
| d. | volcanic ash |
- ____ 9. The main hazard from a quiet volcanic eruption is
- | | |
|----|--------------------|
| a. | volcanic gases. |
| b. | lava flows. |
| c. | geysers. |
| d. | pyroclastic flows. |
- ____ 10. Which type of rock would you expect to form as the result of an explosive eruption?

a.	pahoehoe
b.	granite
c.	pumice
d.	aa

____ 11. What triggers the small earthquakes that occur around a volcano before an eruption?

a.	upward movement of magma
b.	pyroclastic flow
c.	cooling magma inside the crust
d.	plate movements

____ 12. A volcano that is not currently erupting but may erupt again at some time in the distant future is

a.	active.
b.	dormant.
c.	explosive.
d.	extinct.

____ 13. If geologists detect many small earthquakes in the area near a volcano, what can they infer about the volcano?

a.	It is dormant.
b.	It is probably about to erupt.
c.	It is extinct.
d.	It is a good source of geothermal energy.

____ 14. Tall, cone-shaped mountains in which layers of lava alternate with layers of ash are called

a.	shield volcanoes.
b.	cinder cone volcanoes.
c.	composite volcanoes.
d.	lava plateaus.

____ 15. When many layers of thin, runny lava build up a high, level area, the result is a

a.	lava plateau.
b.	shield volcano.
c.	cinder cone volcano.
d.	composite volcano.

____ 16. The huge hole left by the collapse of a volcanic mountain is called a

a.	lava plateau.
b.	caldera.
c.	cinder cone.
d.	shield volcano.

____ 17. When ash, cinders, and bombs build up in a steep pile around a volcano's vent, the result is a

a.	cinder cone volcano.
b.	shield volcano.
c.	composite volcano.
d.	dormant volcano.

____ 18. What is the landform that forms when a mass of hardened magma is uplifted, causing the layers of rock to bend upward?

a.	volcanic neck
b.	dike
c.	lava plateau
d.	dome mountain

____ 19. A mass of rock formed when a large body of magma cools inside the crust is called a

a.	neck.
b.	dike.
c.	lava plateau.
d.	batholith.

____ 20. When magma hardens in a volcano's pipe, the result will eventually be a landform called a

a.	batholith.
b.	dike.
c.	volcanic neck.
d.	sill.

____ 21. Magma that is forced across rock layers hardens into a

a.	sill.
b.	volcanic neck.
c.	dike.
d.	batholith.

____ 22. When groundwater heated by magma rises to the surface and collects in a natural pool, it is called a

a.	hot spring.
b.	geyser
c.	vent.
d.	pyroclastic flow.

____ 23. Pahoehoe is

a.	cooler, slower-moving lava.
b.	fast-moving, hot lava.
c.	volcanic ash.
d.	lava with a rough, chunky surface.

____ 24. A volcano that is unlikely to erupt again is considered to be

a.	active.
b.	dormant.
c.	explosive.
d.	extinct.

____ 25. Rock that forces itself between rock layers and is always younger than the rock around it is a(n)

a.	batholith.
b.	caldera.
c.	intrusion.
d.	volcanic neck.

____ 26. What substance found in magma determines if a volcano will have a quiet or explosive eruption?

a.	aa
b.	obsidian
c.	pahoehoe
d.	silica

____ 27. Parícutín in Mexico is a

a.	cinder cone volcano.
b.	composite volcano.
c.	lava plateau.
d.	shield volcano.

____ 28. What type of landform do the Sierra Nevada and Coastal mountain ranges surround?

a.	a fault
b.	a volcano
c.	a crater
d.	a basin

____ 29. Mount Shasta and Lassen Peak were formed by

a.	subduction.
b.	erosion.
c.	spreading.
d.	bending.

____ 30. Which of the following is the most likely prediction about the formation of a new island in the Hawaiian Island chain?

a.	A new island will not form in the Hawaiian Islands.
b.	Over time, a new island is likely to form as the Pacific plate continues to drift over the hot spot.
c.	A new island will form in the middle of the existing Hawaiian Islands.
d.	A new island will form at the boundary of the Pacific plates and continental drift will push it into the Hawaiian Islands.

Modified True/False

Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.

____ 31. Volcanoes that form along a mid-ocean ridge occur at a(n) spreading plate boundary.

____ 32. Dissolved minerals trapped in magma under tremendous pressure provide the force for a volcanic eruption. _____

____ 33. A pyroclastic flow typically occurs during a(n) quiet eruption.

____ 34. Magma sometimes forces its way out of the side of a volcano through a(n) vent.

____ 35. During a quiet eruption, a(n) lava flow may set fire to and then bury everything in its path. _____

____ 36. A(n) dormant volcano is erupting or may erupt in the near future.

____ 37. Ash, cinders, and bombs build up in a steep pile to form cinder cone volcanoes.

____ 38. A dike forms when magma forces itself between rock layers and hardens.

____ 39. The Pacific and North American plates meet at the Juan de Fuca fault.

____ 40. The Sierra Nevada are mountains that formed from a(n) batholith.

Completion

Complete each statement.

41. A major volcanic belt known as the _____ circles the Pacific Ocean.

42. Mountains that are formed by volcanoes along a coastline occur at a(n) _____ plate boundary.

43. A string of islands known as a(n) _____ can form from the collision of two oceanic plates.

44. Molten material that leaves a volcano's vent is called _____.

45. A(n) _____ is an area where material from deep within the mantle rises and then melts, forming magma.

46. The bowl-shaped area around a volcano's central vent is called a(n) _____.

47. The smallest lava fragments produced by an explosive eruption are called volcanic _____.

- _____.
48. An eruption of ash, cinders, bombs, and gases from a volcano is called a(n) _____.
49. A huge hole, or _____, is left when the roof of a volcanic mountain's magma chamber collapses.
50. A mass of rock that forms when a large body of magma cools inside the crust is called a(n) _____.
51. Hardened magma in a volcano's pipe that remains when softer rock around it has worn away is called a(n) _____.
52. Sometimes rising magma is blocked by horizontal layers of rock. The magma forces the layers of rock to bend upward into a landform called a(n) _____.
53. A quiet eruption may produce slow moving, cooler lava that hardens to form rough chunks. This type of lava is called _____.
54. Groundwater heated by a nearby body of magma can spray from the ground under pressure, forming a(n) _____.
55. _____ is in California is surrounded by the Sierra Nevada and Coastal mountain ranges.
56. Amboy Crater is a cinder volcano that is considered to be considered to be _____ because it is unlikely to erupt again.
57. During a volcanic eruption, magma moves from the _____ through the pipe and out of the volcano through a vent.
58. Yellowstone National Park in Wyoming is a(n) _____ where magma has formed under the North American plate.
59. A(n) _____ is broad, bowl-shaped valley.
60. Earth's plates push and pull on the crust with enormous force along _____.

Short Answer

Use the diagram to answer each question.

61. How do volcanoes form at B?
62. In the United States, where can volcanoes like those at B be found?
63. Name and describe the type of boundary shown at A.
64. How do volcanoes form at A?
65. Name and describe the type of boundary shown at B.
66. Describe an exception to the patterns pictured at A and B where volcanoes also can form.

Use the diagram to answer each question.

67. Name the type of volcano illustrated in diagram A and describe how it forms.
68. Name the type of volcano illustrated in diagram B and describe how it forms.

69. Name the type of volcano illustrated in diagram C and describe how it forms.
70. In the United States, where do volcanoes like the one shown in diagram C occur?
71. What kind of eruption—quiet, explosive, or both at different times—would you expect from each volcano shown?
72. If the magma chamber beneath volcano B empties and then collapses, what kind of feature will form? Explain.

Essay

73. How does the release of trapped gases in magma cause a volcano to erupt?
74. You live on a large volcanic island not far from an active volcano. Besides damage from lava, what other hazards might affect your town and its people?
75. What kind of eruption is likely to occur in a volcano having magma that is low in silica? Explain your answer.
76. Describe the three stages of a volcano's activity.
77. Compare and contrast lava plateaus and dome mountains.
78. How do lava and volcanic ash develop into fertile soil?
79. Identify and give an example of each of the the four major types of geologic features found in California. Explain how plate tectonics caused the formation of each feature.
80. A geologist is monitoring an area near a volcano with a tiltmeter and discovers that the surface has increased in elevation. What might this indicate? What else should the geologist monitor and how can he use the information?

Earth Science Ch. 6 Practice Test

Answer Section

MULTIPLE CHOICE

1. ANS: C PTS: 1 DIF: L1
OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: knowledge
2. ANS: B PTS: 1 DIF: L2
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: comprehension
3. ANS: C PTS: 1 DIF: L2
OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: comprehension
4. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.1.2 Explain how hot spot volcanoes form. STA: S 6.1
BLM: application
5. ANS: C PTS: 1 DIF: L1
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: knowledge
6. ANS: B PTS: 1 DIF: L2
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: application
7. ANS: C PTS: 1 DIF: L2
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: comprehension
8. ANS: D PTS: 1 DIF: L2
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d

BLM: comprehension
9. ANS: B PTS: 1 DIF: L2
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: comprehension
10. ANS: C PTS: 1 DIF: L2
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: application
11. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.2.3 Identify a Volcano's stages of activity. STA: S 6.1.d
BLM: comprehension
12. ANS: B PTS: 1 DIF: L1
OBJ: CaES.6.2.3 Identify a Volcano's stages of activity. STA: S 6.1.d
BLM: knowledge
13. ANS: B PTS: 1 DIF: L2
OBJ: CaES.6.2.3 Identify a Volcano's stages of activity. STA: S 6.1.d | S 6.2.d
BLM: application
14. ANS: C PTS: 1 DIF: L1
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: knowledge
15. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: comprehension
16. ANS: B PTS: 1 DIF: L1
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: knowledge
17. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: comprehension
18. ANS: D PTS: 1 DIF: L2
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms.
STA: S 6.1.e BLM: application
19. ANS: D PTS: 1 DIF: L1
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms.
STA: S 6.1 BLM: knowledge
20. ANS: C PTS: 1 DIF: L1
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms.
STA: S 6.1 BLM: knowledge
21. ANS: C PTS: 1 DIF: L1
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms.
STA: S 6.1.e BLM: knowledge
22. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.2.3 Identify a volcano's stages of activity. BLM: comprehension
23. ANS: B PTS: 1 DIF: L1
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: knowledge
24. ANS: D PTS: 1 DIF: L1
OBJ: CaES.6.2.3 Identify a volcano's stages of activity. STA: S 6.1.d
BLM: knowledge
25. ANS: C PTS: 1 DIF: L2
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1
BLM: application
26. ANS: D PTS: 1 DIF: L2
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: comprehension
27. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: comprehension

28. ANS: D PTS: 1 DIF: L2
OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: comprehension
29. ANS: A PTS: 1 DIF: L2
OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: application
30. ANS: B PTS: 1 DIF: L3
OBJ: CaES.6.1.2 Explain how hot spot volcanoes form. STA: S 6.1.e
BLM: synthesis

MODIFIED TRUE/FALSE

31. ANS: T PTS: 1 DIF: L1
OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: knowledge
32. ANS: F, gases

PTS: 1 DIF: L2
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: comprehension
33. ANS: F, explosive

PTS: 1 DIF: L1
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: knowledge

34. ANS: T PTS: 1 DIF: L2
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: comprehension

35. ANS: T PTS: 1 DIF: L2
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: comprehension

36. ANS: F, active

PTS: 1 DIF: L1
OBJ: CaES.6.2.3 Identify a Volcano's stages of activity. STA: S 6.1.d
BLM: knowledge

37. ANS: T PTS: 1 DIF: L2
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: comprehension

38. ANS: F, sill

PTS: 1 DIF: L2
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms. STA: S 6.1 BLM: comprehension

39. ANS: F, San Andreas

PTS: 1 DIF: L2
OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: comprehension

40. ANS: T PTS: 1 DIF: L2
OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: comprehension

COMPLETION

41. ANS: Ring of Fire

PTS: 1 DIF: L1
OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: knowledge
42. ANS: colliding

PTS: 1 DIF: L2
OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: comprehension
43. ANS: island arc

PTS: 1 DIF: L2
OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: comprehension
44. ANS: lava

PTS: 1 DIF: L2
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: comprehension
45. ANS: hot spot

PTS: 1 DIF: L1
OBJ: CaES.6.1.2 Explain how hot spot volcanoes form. STA: S 6.1.e
BLM: knowledge
46. ANS: crater

PTS: 1 DIF: L1
OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
BLM: knowledge
47. ANS: ash

PTS: 1 DIF: L1
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: knowledge
48. ANS: pyroclastic flow

PTS: 1 DIF: L1
OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
BLM: knowledge
49. ANS: caldera

PTS: 1 DIF: L1
OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d
BLM: knowledge
50. ANS: batholith

PTS: 1 DIF: L1
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms. STA: S 6.1 BLM: knowledge
51. ANS: volcanic neck

PTS: 1 DIF: L2
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms. STA: S 6.1 BLM: comprehension
52. ANS: dome mountain

PTS: 1 DIF: L2
OBJ: CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms. STA: S 6.1 BLM: application

53. ANS: Aa
- PTS: 1 DIF: L2
 OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d
 BLM: comprehension
54. ANS: geyser
- PTS: 1 DIF: L2
 OBJ: CaES.6.2.3 Identify a volcano's stages of activity. BLM: comprehension
55. ANS: Central Valley
- PTS: 1 DIF: L2
 OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: comprehension
56. ANS: extinct
- PTS: 1 DIF: L2
 OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: comprehension
57. ANS: magma chamber
- PTS: 1 DIF: L2
 OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d
 BLM: comprehension
58. ANS: hot spot
- PTS: 1 DIF: L2
 OBJ: CaES.6.1.2 Explain how hot spot volcanoes form. STA: S 6.1.e
 BLM: comprehension
59. ANS: basin
- PTS: 1 DIF: L1
 OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.e BLM: knowledge
60. ANS: faults
- PTS: 1 DIF: L2
 OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.e BLM: comprehension

SHORT ANSWER

61. ANS:
 As the oceanic plate is subducted, the plate melts and forms magma, which rises toward the surface and erupts as lava, forming volcanoes.
- PTS: 1 DIF: L2
 OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: application
62. ANS:
 in the Pacific Northwest, including Oregon, Washington, and northern California
- PTS: 1 DIF: L2
 OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: application
63. ANS:
 The part of the diagram labeled A shows a spreading plate boundary. Two oceanic plates diverge to

form a mid-ocean ridge.

PTS: 1 DIF: L2

OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: application

64. ANS:

Magma erupts as lava through cracks in the crust along the central valley of the mid-ocean ridge.

PTS: 1 DIF: L2

OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: application

65. ANS:

B shows a colliding plate boundary, where an oceanic plate collides with a continental plate. As a result of this collision, the oceanic plate sinks beneath a deep-ocean trench into the mantle.

PTS: 1 DIF: L2

OBJ: CaES.6.1.1 Identify where Earth's volcanic regions are located and explain why they are found there. STA: S 6.1.e BLM: application

66. ANS:

Volcanoes also can form at "hot spots" in the middle of continental or oceanic plates. At a hot spot, magma melts through the crust and moves to the surface. Another exception is a collision between two oceanic plates. In such a collision, one of the oceanic plates is subducted. The result is the melting of the plate and the formation of magma, which erupts to form a chain of volcanic islands called an island arc.

PTS: 1 DIF: L3

OBJ: CaES.6.1.2 Explain how hot spot volcanoes form. STA: S 6.1.e

BLM: synthesis

67. ANS:

Diagram A shows a cinder cone volcano. It forms when cinders erupt again and again, piling up around the vent to form a steep, cone-shaped hill.

PTS: 1 DIF: L2

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d

BLM: application

68. ANS:

Diagram B shows a composite volcano. It forms when lava flows alternate with explosive eruptions of ash, cinder, and bombs.

PTS: 1 DIF: L2

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d

BLM: application

69. ANS:

Diagram C shows a shield volcano. It forms when repeated lava flows build up a broad, gently sloping mountain.

PTS: 1 DIF: L2

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d

BLM: application

70. ANS:

the Hawaiian Islands

PTS: 1 DIF: L2

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d

BLM: application

71. ANS:

A: explosive; B: both at different times; C: quiet

PTS: 1 DIF: L3

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d

BLM: synthesis

72. ANS:

The top of the volcano will sink down, leaving a large hole, or caldera. A caldera forms as the roof of a volcano's empty magma chamber collapses.

PTS: 1 DIF: L3

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.1.d

BLM: synthesis

ESSAY

73. ANS:

The trapped gases in magma are under tremendous pressure. As magma rises to the surface, the pressure decreases and the gases begin to separate out. When the magma finds an opening, the gases rush out and carry the magma with them.

PTS: 1 DIF: L2

OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.1.d

BLM: comprehension

74. ANS:

An eruption could cause landslides or avalanches of mud, melted snow, or rock. If an explosive eruption occurs, clouds of hot, burning gases could injure people. Ash could bury the village, damage crops, and clog car engines.

PTS: 1 DIF: L3

OBJ: CaES.6.2.1 Explain what happens when a volcano erupts. STA: S 6.2.d

BLM: evaluation

75. ANS:

The volcano is likely to have a quiet eruption. Lava that is low in silica is thin and runny, so it flows easily and oozes quietly from the vent.

PTS: 1 DIF: L3

OBJ: CaES.6.2.2 Describe the two types of volcanic eruptions. STA: S 6.1.d

BLM: synthesis

76. ANS:

An active volcano is one that is erupting or has shown signs that it may erupt in the near future. A dormant volcano may awaken in the future and become active. A long time may pass before this happens. An extinct volcano is unlikely to erupt again.

PTS: 1 DIF: L2

OBJ: CaES.6.2.3 Identify a Volcano's stages of activity. STA: S 6.1.d

BLM: synthesis

77. ANS:

Both landforms develop as a result of the upward movement of molten material. Lava plateaus are high, level areas that form when thin, runny lava repeatedly erupts on the surface. In contrast, dome mountains are high, dome-shaped areas that form when hardened magma is uplifted and bends the layers of rock above it into a dome.

PTS: 1 DIF: L2

OBJ: CaES.6.3.1 List the landforms that lava and ash create. | CaES.6.3.2 Explain how the magma that hardens beneath Earth's surface creates landforms. STA: S 6.1.e

BLM: analysis

78. ANS:

The lava, ash, and cinders that erupt from a volcano are initially barren. Over time the hard surface of the lava breaks down to form soil. When volcanic ash breaks down, it releases phosphorus, potassium and other substances into the soil. The soil supports is considered to be fertile and

provides the nutrients plants need to grow.

PTS: 1 DIF: L3

OBJ: CaES.6.3.1 List the landforms that lava and ash create. STA: S 6.2.d

BLM: synthesis

79. ANS:

Answers will vary. Sample Answer: The four major geological features in California are faults, volcanoes, mountain ranges, and basins. The San Andreas fault is the result of two plates, the Pacific and North American plates, sliding past each other. Lassen Peak is a volcano that was formed by the subduction of the Juan de Fuca plate beneath the North American plate. Plate movements pushed up a batholith to form the Sierra Nevada mountain range. Central Valley is a huge basin that is surrounded by the Sierra Nevada and Coastal mountain ranges. As the mountains rose, the crust bent downward, forming the floor of the valley. Then sediment built up on the valley floor.

PTS: 1 DIF: L3

OBJ: CaES.6.4.1 Describe how plate tectonics helps to explain some of the features of California's geology. STA: S 6.1.f BLM: synthesis

80. ANS:

The geologist's measurement indicates that magma is moving underground, which is a sign that the volcano may erupt. The geologist should also monitor the types of gases escaping from the volcano. He or she should measure the temperature of underground water, since an increase may be a sign that magma is nearing the surface. If the magma is moving upward, there will be many small earthquakes near the volcano, so the geologist should look for earthquakes. The geologist can use all of the information to warn people that live near the volcano that the volcano is likely to erupt, but he or she cannot predict the type of eruption or how powerful it will be.

PTS: 1 DIF: L3

OBJ: CaES.6.2.3 Identify a volcano's stages of activity. STA: S 6.1.d

BLM: synthesis