

6th Grade, Ch. 2 Practice Test

Multiple Choice

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

- _____ 1. A mineral is inorganic, which means that it contains
- | | |
|----|--|
| a. | compounds. |
| b. | materials made by humans. |
| c. | parts of living things. |
| d. | no materials that were once part of living things. |
- _____ 2. An example of a mineral made up of a pure element is
- | | |
|----|---------|
| a. | coal. |
| b. | copper. |
| c. | quartz. |
| d. | glass. |
- _____ 3. The repeating pattern of a mineral's particles forms a solid called a(n)
- | | |
|----|-----------|
| a. | crystal. |
| b. | element. |
| c. | compound. |
| d. | rock. |
- _____ 4. Although brick, steel, and glass all come from substances found in Earth's crust, they are NOT classified as minerals because
- | | |
|----|-----------------------------------|
| a. | they are organic. |
| b. | they are not naturally occurring. |
| c. | they are too hard. |
| d. | they have many uses. |
- _____ 5. A hard, colorful mineral that has a brilliant or glassy luster is a(n)
- | | |
|----|-------------|
| a. | alloy. |
| b. | pure metal. |
| c. | ore. |
| d. | gemstone. |
- _____ 6. Rock that forms from the cooling of magma below the surface or lava at the surface is called
- | | |
|----|----------------------|
| a. | sedimentary rock. |
| b. | metamorphic rock. |
| c. | igneous rock. |
| d. | coarse-grained rock. |
- _____ 7. Which of the following is NOT one of the possible stages in the rock cycle?
- | | |
|----|-------------------|
| a. | volcanic activity |
| b. | erosion |
| c. | smelting |

d.	melting
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8. Geologists infer from the rounded, eroded shapes of the Appalachian Mountains that

a.	the principle of uniformitarianism does not apply.
b.	the mountains formed recently.
c.	the mountains are made of soft rock.
d.	the mountains have been eroding for millions of years.

9. The geological principle stating that the same processes that operate today also operated in the past is called

a.	mechanical weathering.
b.	chemical weathering.
c.	uniformitarianism.
d.	soil conservation.

10. The agent of mechanical weathering in which rock is worn away by the grinding action of other rock particles is called

a.	erosion.
b.	cracking and peeling.
c.	abrasion.
d.	ice wedging.

11. Ice wedging causes mechanical weathering of rock by means of

a.	heating and cooling.
b.	plant growth.
c.	animal actions.
d.	freezing and thawing of water.

12. What kind of weathering causes the mineral composition of rocks to change?

a.	mechanical weathering
b.	permeable weathering
c.	chemical weathering
d.	general weathering

13. A rock containing iron becomes soft and crumbly and reddish-brown in color. It probably has been chemically weathered by

a.	abrasion.
b.	carbon dioxide.
c.	oxygen.
d.	acid rain.

14. The most important factors in determining the rate of weathering are

a.	carbon dioxide and acid rain.
b.	abrasion and acids from plant roots.
c.	animal actions and oxygen.
d.	rock type and climate.

15. Granite lasts a long time when it is used for building in areas where the climate

a.	does not have freezing and thawing.
b.	is cool.
c.	has lots of acid rain.
d.	is hot and rainy.

16. A permeable rock weathers easily because it

a.	is made up of small particles.
b.	contains many small, connected airspaces.
c.	is made up of only one mineral.
d.	is made up of many minerals.

17. Soil formation would take place most rapidly with the weathering of

a.	granite on a mountain top.
b.	limestone in a desert.
c.	granite in a cold, dry climate.
d.	limestone in a warm, wet climate.

18. When earthworms add their wastes to the soil, then die and decay in the soil, they are contributing to the formation of

a.	silt.
b.	litter.
c.	humus.
d.	clay.

19. The texture, or particle size, of soil determines

a.	soil fertility.
b.	whether the soil is topsoil or subsoil.
c.	how much air and water the soil can hold.
d.	how much litter will form.

20. In a cross section of soil, the B horizon consists of

a.	clay, minerals, and little humus.
b.	humus only.
c.	partly weathered rock.
d.	topsoil.

21. Living organisms in soil help to

a.	slow the rate of soil formation.
b.	build up the C horizon.
c.	mix the soil and make humus.
d.	prevent the formation of humus.

22. Decomposers are the soil organisms that

a.	store moisture in the soil.
b.	break down and digest the remains of dead organisms.
c.	make spaces in the soil for air and water.
d.	burrow deep below the topsoil.

23. Most of the work of mixing humus within the soil is done by

a.	fungi.
b.	ants.
c.	earthworms.
d.	bacteria.

24. Soil is a valuable resource because it

a.	is important to all living things on land.
b.	contains sand and gravel.
c.	is rich in decomposers.
d.	has all three soil horizons.

25. How long did it take for the thick, fertile soil of the North American prairies to develop?

a.	several years
b.	dozens of years
c.	hundreds of years
d.	thousands of years

26. What can cause the loss of soil that is not protected by plant cover?

a.	chemical weathering
b.	erosion by water or wind
c.	mechanical weathering
d.	too many organisms in the soil

27. Plowing removed the grass from the Great Plains and exposed the soil. What effect did this have when a drought struck the Great Plains during the 1930s?

a.	It had no effect.
b.	It reduced the soil's fertility.
c.	It helped to cause the Dust Bowl.
d.	It prevented sod from developing.

28. What term describes the management of soil to prevent its destruction?

a.	soil exhaustion
b.	soil decomposition
c.	soil conservation
d.	soil fertility

29. The practice of plowing fields along the curves of a slope is called

a.	drought plowing.
b.	contour plowing.
c.	no-till plowing.
d.	sod plowing.

30. In conservation plowing, why are dead weeds and stalks of the previous year's crop left in the ground?

a.	to keep the soil from becoming too fertile
b.	to reduce the amount of seed needed for the next year's crop
c.	to retain moisture and hold the soil in place
d.	to keep more organisms out of the soil

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. A mineral must be formed by a(n) manufactured process to be considered a mineral.

- _____ 32. The movement of rock particles by ice, wind, water, or gravity is called weathering.

- _____ 33. After chemical weathering, the chemical makeup of the weathered rock is the same as that of the original rock. _____
- _____ 34. The type of weathering that occurs due to release of pressure is mechanical weathering.

- _____ 35. The rate of chemical weathering is faster in hot, wet climates than in cold, dry climates.

- _____ 36. The loose material on Earth's surface that contains weathered rock particles and humus is bedrock. _____
- _____ 37. The loose layer of leaves on the surface of the soil is called litter.

- _____ 38. A thick mass of tough roots called loess kept the fertile soil of the prairies in place and held on to moisture. _____
- _____ 39. To restore soil's fertility, a farmer might plant legumes as part of a soil conservation technique called nutrient depletion. _____
- _____ 40. The practice of plowing fields along the curves of a slope is called contour plowing.

Completion

Complete each statement.

- 41. A mineral is always a(n) _____ because it has a definite volume and shape.
- 42. Gold is an example of a(n) _____ that occurs in nature in a pure form.
- 43. Most minerals are chemical _____ in which two or more elements are combined.
- 44. The usefulness of minerals called _____ is that they can be stretched, hammered, or molded without breaking.
- 45. The most common source of quartz used in making glass is _____.
- 46. Talcum powder is made from the very soft mineral _____.

47. The actions of animals most commonly can cause the type of weathering known as _____.
48. During the 1800s, the igneous rock called _____ was widely used in the United States to build bridges and public buildings.
49. A series of processes known as the _____ slowly changes rocks from one kind to another kind.
50. Rapid chemical weathering can be caused by _____, which is rain combined with pollutants.
51. One agent of chemical weathering is _____, which combines with water to form carbonic acid.
52. A rock that contains tiny, connected spaces through which water can move is said to be _____.
53. Two factors that determine the rate of weathering are the type of rock and the _____.
54. Sandy top soil is said to be _____ because water drains quickly through the spaces between the sand particles.
55. The best type of soil in which to grow plants is called _____.
56. Humus makes soil _____, or rich in nutrients that plants need to grow.
57. Water and wind can _____ soil, or carry it away.
58. In the 1930s, an area in the southern Plains states was named the _____ because the topsoil turned to dust.
59. In the Great Plains, _____ removed the grass and exposed the soil to wind erosion.
60. A type of plowing known as _____ helps conserve soil by disturbing it as little as possible.

Short Answer

Use the diagram to answer each question.

61. In which layer of soil in the diagram would you find humus? What is the soil in this layer called?
62. Which layer of soil in the diagram is made up only of partly weathered rock? What is this layer called?
63. Which layer in the diagram provides the basic material that forms soil? Of what material is this layer made?

64. Which layer of soil in the diagram contains fine soil particles and minerals but little organic matter? What is this layer called?
65. The top three layers in the diagram are the three soil horizons. Which of the soil horizons forms last? Explain your answer.
66. What is litter and where can you find it in the diagram?

Use the diagram to answer each question.

67. In which parts of the United States are mountain soils found?
68. Compare the soils in the eastern and central United States.
69. Excluding Alaska and Hawaii, which soil type occupies the largest area on the map?
70. What types of soils occur in the United States, excluding Alaska and Hawaii?
71. Which soils are found in Alaska?
72. Which soil type in the United States covers the smallest area?

Essay

73. Describe the two types of chemical composition that characterize minerals.
74. List the five characteristics a substance must have to be a mineral. Explain why coal and a glass marble are not minerals.
75. What are three properties for which gemstones are valued and two ways they are used in industry?
76. For hundreds of years, an ancient statue had been kept outdoors in a country with a dry, mild climate. A U.S. city bought the statue and placed it outdoors in a park. The city has hot, rainy summers, freezing winter temperatures, and air pollution from the burning of coal in a power plant. Predict how the city's climate will affect the weathering of the statue.
77. Explain why plants will not grow well in soil that is mostly clay or sand.
78. Describe two ways burrowing animals enrich soil with substances that plants need to grow.
79. Explain how every living thing on land depends on soil.
80. Describe three ways soil can be damaged or lost.

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Answer Section

MULTIPLE CHOICE

1. ANS: D PTS: 1 DIF: L1
OBJ: CaES.2.1.1 Describe characteristics of minerals. STA: S 6.6.b
BLM: knowledge
2. ANS: B PTS: 1 DIF: L2
OBJ: CaES.2.1.1 Describe characteristics of minerals. STA: S 6.6.b
BLM: application
3. ANS: A PTS: 1 DIF: L1
OBJ: CaES.2.1.1 Describe characteristics of minerals. STA: S 6.6.b
BLM: knowledge
4. ANS: B PTS: 1 DIF: L2
OBJ: CaES.2.1.1 Describe characteristics of minerals. STA: S 6.6.b
BLM: application
5. ANS: D PTS: 1 DIF: L1
OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. STA: S 6.6.b BLM: knowledge
6. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.1.2 Identify the three major groups of rocks and explain how they form via the rock cycle. STA: S 6.6.b BLM: comprehension
7. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.1.2 Identify the three major groups of rocks and explain how they form via the rock cycle. STA: S 6.6.b BLM: analysis
8. ANS: D PTS: 1 DIF: L2
OBJ: CaES.2.2.1 Explain how weathering and erosion affect Earth's surface.
STA: S 6.2 BLM: application
9. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.2.1 Explain how weathering and erosion affect Earth's surface.
STA: S 6.2 BLM: comprehension
10. ANS: C PTS: 1 DIF: L1
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering.
STA: S 6.2 BLM: knowledge
11. ANS: D PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering.
STA: S 6.2.a BLM: comprehension
12. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering.
STA: S 6.2 BLM: comprehension

13. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering.
STA: S 6.2 BLM: application
14. ANS: D PTS: 1 DIF: L1
OBJ: CaES.2.2.3 Describe the factors that determine how fast weathering occurs.
STA: S 6.2 BLM: knowledge
15. ANS: B PTS: 1 DIF: L2
OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. | CaES.2.2.3 Describe the factors that determine how fast weathering occurs.
STA: S 6.2 BLM: application
16. ANS: B PTS: 1 DIF: L2
OBJ: CaES.2.2.3 Describe the factors that determine how fast weathering occurs.
STA: S 6.2 BLM: comprehension
17. ANS: D PTS: 1 DIF: L2
OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.
STA: S 6.6.b BLM: application
18. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.
STA: S 6.6.b BLM: comprehension
19. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.
STA: S 6.6.b BLM: comprehension
20. ANS: A PTS: 1 DIF: L2
OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.
STA: S 6.6.b BLM: comprehension
21. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.3.3 Identify the roles of plants and animals in soil formation.
STA: S 6.6.b BLM: comprehension
22. ANS: B PTS: 1 DIF: L1
OBJ: CaES.2.3.3 Identify the roles of plants and animals in soil formation.
STA: S 6.5.c BLM: knowledge
23. ANS: C PTS: 1 DIF: L1
OBJ: CaES.2.3.3 Identify the roles of plants and animals in soil formation.
STA: S 6.6.b BLM: knowledge
24. ANS: A PTS: 1 DIF: L1
OBJ: CaES.2.4.1 Explain why fertile soil is a nonrenewable resource.
STA: S 6.6.b BLM: knowledge
25. ANS: D PTS: 1 DIF: L2
OBJ: CaES.2.4.1 Explain why fertile soil is a nonrenewable resource.
STA: S 6.6.b BLM: application
26. ANS: B PTS: 1 DIF: L2
OBJ: CaES.2.4.2 List ways that soil can lose its value. STA: S 6.6
BLM: application

27. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.4.2 List ways that soil can lose its value. STA: S 6.6.b
BLM: comprehension
28. ANS: C PTS: 1 DIF: L1
OBJ: CaES.2.4.3 Identify ways that soil can be conserved. STA: S 6.6
BLM: knowledge
29. ANS: B PTS: 1 DIF: L1
OBJ: CaES.2.4.3 Identify ways that soil can be conserved. STA: S 6.6
BLM: knowledge
30. ANS: C PTS: 1 DIF: L2
OBJ: CaES.2.4.3 Identify ways that soil can be conserved. STA: S 6.6
BLM: comprehension

MODIFIED TRUE/FALSE

31. ANS: F, natural

PTS: 1 DIF: L1 OBJ: CaES.2.1.1 Describe characteristics of minerals.
STA: S 6.6.b BLM: knowledge
32. ANS: F, erosion

PTS: 1 DIF: L1
OBJ: CaES.2.2.1 Explain how weathering and erosion affect Earth's surface.
STA: S 6.2.a Framework BLM: knowledge
33. ANS: F, different from

PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering.
STA: S 6.2 BLM: comprehension
34. ANS: T PTS: 1 DIF: L1
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering.
STA: S 6.2 BLM: knowledge
35. ANS: T PTS: 1 DIF: L2
OBJ: CaES.2.2.3 Describe the factors that determine how fast weathering occurs.
STA: S 6.2 BLM: comprehension
36. ANS: F, soil

PTS: 1 DIF: L2
OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.
STA: S 6.6.b BLM: comprehension
37. ANS: T PTS: 1 DIF: L1

OBJ: CaES.2.3.3 Identify the roles of plants and animals in soil formation.

STA: S 6.6.b BLM: knowledge

38. ANS: F, sod

PTS: 1 DIF: L1

OBJ: CaES.2.4.1 Explain why fertile soil is a nonrenewable resource.

STA: S 6.6.b BLM: knowledge

39. ANS: F, crop rotation

PTS: 1 DIF: L2

OBJ: CaES.2.4.3 Identify ways that soil can be conserved. STA: S 6.6

BLM: application

40. ANS: T PTS: 1 DIF: L1

OBJ: CaES.2.4.3 Identify ways that soil can be conserved. STA: S 6.6

BLM: knowledge

COMPLETION

41. ANS: solid

PTS: 1 DIF: L1 OBJ: CaES.2.1.1 Describe characteristics of minerals.

STA: S 6.6.b BLM: knowledge

42. ANS: element

PTS: 1 DIF: L2 OBJ: CaES.2.1.1 Describe characteristics of minerals.

STA: S 6.6.b BLM: application

43. ANS: compounds

PTS: 1 DIF: L2 OBJ: CaES.2.1.1 Describe characteristics of minerals.

STA: S 6.6.b BLM: comprehension

44. ANS: metals

PTS: 1 DIF: L2

OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. STA: S 6.6.b BLM: comprehension

45. ANS: sand

PTS: 1 DIF: L2

OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. STA: S 6.6.c BLM: comprehension

46. ANS: talc

PTS: 1 DIF: L2
OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. STA: S 6.6.c BLM: application

47. ANS: mechanical weathering

PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering. STA: S 6.2 BLM: comprehension

48. ANS: granite

PTS: 1 DIF: L2
OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. STA: S 6.6.c BLM: comprehension

49. ANS: rock cycle

PTS: 1 DIF: L1
OBJ: CaES.2.1.2 Identify the three major groups of rocks and explain how they form via the rock cycle. STA: S 6.2 BLM: knowledge

50. ANS: acid rain

PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering. STA: S 6.2 BLM: application

51. ANS: carbon dioxide

PTS: 1 DIF: L2
OBJ: CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering. STA: S 6.2 BLM: comprehension

52. ANS: permeable

PTS: 1 DIF: L1
OBJ: CaES.2.2.3 Describe the factors that determine how fast weathering occurs. STA: S 6.2.a BLM: knowledge

53. ANS: climate

PTS: 1 DIF: L1
OBJ: CaES.2.2.3 Describe the factors that determine how fast weathering occurs. STA: S 6.2 BLM: knowledge

54. ANS: permeable

PTS: 1 DIF: L2
OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms. STA: S 6.6.b BLM: comprehension

55. ANS: loam

PTS: 1 DIF: L2

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: application

56. ANS: fertile

PTS: 1 DIF: L2

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: comprehension

57. ANS: erode

PTS: 1 DIF: L2 OBJ: CaES.2.4.2 List ways that soil can lose its value.

STA: S 6.2 BLM: comprehension

58. ANS: Dust Bowl

PTS: 1 DIF: L1 OBJ: CaES.2.4.2 List ways that soil can lose its value.

STA: S 6.6 BLM: knowledge

59. ANS: plowing

PTS: 1 DIF: L2 OBJ: CaES.2.4.2 List ways that soil can lose its value.

STA: S 6.6 BLM: comprehension

60. ANS: conservation plowing

PTS: 1 DIF: L1

OBJ: CaES.2.4.3 Identify ways that soil can be conserved. STA: S 6.6.b

BLM: knowledge

SHORT ANSWER

61. ANS:

Layer 1, called topsoil (or the A horizon)

PTS: 1 DIF: L2

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: analysis

62. ANS:

Layer 3, called the C horizon

PTS: 1 DIF: L2

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: analysis

63. ANS:

Layer 4, which is made of bedrock (or unweathered rock)

PTS: 1 DIF: L2

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: analysis

64. ANS:

Layer 2, called subsoil (or the B horizon)

PTS: 1 DIF: L2

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: analysis

65. ANS:

Layer 2, the B horizon, forms last. The B horizon forms after the A horizon as rainwater washes clay and minerals down from the A horizon. The B horizon, also called subsoil, contains little humus.

PTS: 1 DIF: L3

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b BLM: synthesis

66. ANS:

Litter is a layer of dead plant material, such as leaves and stems, that forms on the surface of the soil. In the diagram, the litter lies just above Layer 1.

PTS: 1 DIF: L2

OBJ: CaES.2.3.3 Identify the roles of plants and animals in soil formation.

STA: S 6.6.b BLM: analysis

67. ANS:

Mountain soils are found in the western part of the United States, as well as in Alaska and Hawaii.

PTS: 1 DIF: L2

OBJ: CaES.2.3.2 Explain how scientists classify soils.

STA: S 6.6.b

BLM: analysis

68. ANS:

The eastern states have forest soils, but the central states have primarily prairie soils.

PTS: 1 DIF: L2

OBJ: CaES.2.3.2 Explain how scientists classify soils.

STA: S 6.6.b

BLM: analysis

69. ANS:

forest soils in the eastern United States

PTS: 1 DIF: L2

OBJ: CaES.2.3.2 Explain how scientists classify soils.

STA: S 6.6.b

BLM: analysis

70. ANS:

Four major soil types occur in the 48 contiguous states: forest soils, prairie soils, mountain soils, and desert soils.

PTS: 1

DIF: L2

OBJ: CaES.2.3.2 Explain how scientists classify soils.

STA: S 6.6.b

BLM: analysis

71. ANS:

forest soils, mountain soils, and tundra soils

PTS: 1

DIF: L2

OBJ: CaES.2.3.2 Explain how scientists classify soils.

STA: S 6.6.b

BLM: analysis

72. ANS:

tropical soils

PTS: 1

DIF: L2

OBJ: CaES.2.3.2 Explain how scientists classify soils.

STA: S 6.6.b

BLM: analysis

ESSAY

73. ANS:

Most minerals are compounds, but a few minerals are pure elements. A mineral that is a compound always contains certain elements in definite proportions. For example, a quartz crystal has one atom of silicon for every two atoms of oxygen. A few elements occur in nature in a pure form, not as part of a compound with other elements. These elements are considered to be minerals. Almost all pure elements are metals, such as copper, silver, and gold.

PTS: 1

DIF: L2

OBJ: CaES.2.1.1 Describe characteristics

of minerals.

STA: S 6.6.b

BLM: application

74. ANS:

A mineral must occur naturally, be inorganic, be a solid, have a crystal structure, and have a definite chemical composition. Coal is formed from the remains of ancient plants and therefore is not inorganic. Glass is a human-made material, so it does not occur naturally.

PTS: 1

DIF: L3

OBJ: CaES.2.1.1 Describe characteristics

of minerals.

STA: S 6.6.b

BLM: synthesis

75. ANS:

Gemstones are valued for their color, luster, and durability. They are used in industry for mechanical parts and as abrasives for grinding and polishing.

PTS: 1 DIF: L2

OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. STA: S 6.6.c BLM: application

76. ANS:

Because the climate is wet and hot for part of the year, chemical weathering will occur more quickly than it did in the statue's previous location. If there are any small cracks in the statue, freezing temperatures could cause mechanical weathering by ice wedging. Acid rain resulting from the air pollution could also speed up chemical weathering of the statue.

PTS: 1 DIF: L3

OBJ: CaES.2.1.3 Explain how minerals and rocks are processed and list ways these materials are used. | CaES.2.2.2 Identify what causes mechanical weathering and chemical weathering. | CaES.2.2.3 Describe the factors that determine how fast weathering occurs.

STA: S 6.2 | S 6.6.c

BLM: synthesis

77. ANS:

Clay-rich soil will hold too much water, and plants will "drown" for lack of air. Sandy soil will drain quickly, and plants may not get enough water.

PTS: 1 DIF: L3

OBJ: CaES.2.3.1 Describe the composition of soil, and explain how it forms.

STA: S 6.6.b

BLM: synthesis

78. ANS:

Students' answers should mention two of the following: burrowing animals mix humus through the soil; they add nitrogen to the soil when they excrete waste; they add organic material when they die and decay; they mix air into the soil that provides oxygen to plant roots.

PTS: 1 DIF: L2

OBJ: CaES.2.3.3 Identify the roles of plants and animals in soil formation.

STA: S 6.6.b

BLM: comprehension

79. ANS:

Plants depend directly on soil to live and grow. Animals depend on plants to live and grow, or on other animals that depend on plants.

PTS: 1 DIF: L2

OBJ: CaES.2.4.1 Explain why fertile soil is a nonrenewable resource.

STA: S 6.6.b

BLM: comprehension

80. ANS:

First, damage to soil occurs when it becomes exhausted, or loses its fertility. Loss of fertility can result from planting the same crop in the soil year after year. Second, soil can be damaged or lost when it is not protected from water erosion. Normally, plant roots hold the soil in place. If plants are removed from the soil, rain can easily wash the soil

away. Third, wind erosion can result in the loss of dry, unprotected soil. One example of wind erosion was the Dust Bowl on the Great Plains.

PTS: 1
lose its value.

DIF: L3

OBJ: CaES.2.4.2 List ways that soil can

STA: S 6.6.b

BLM: synthesis