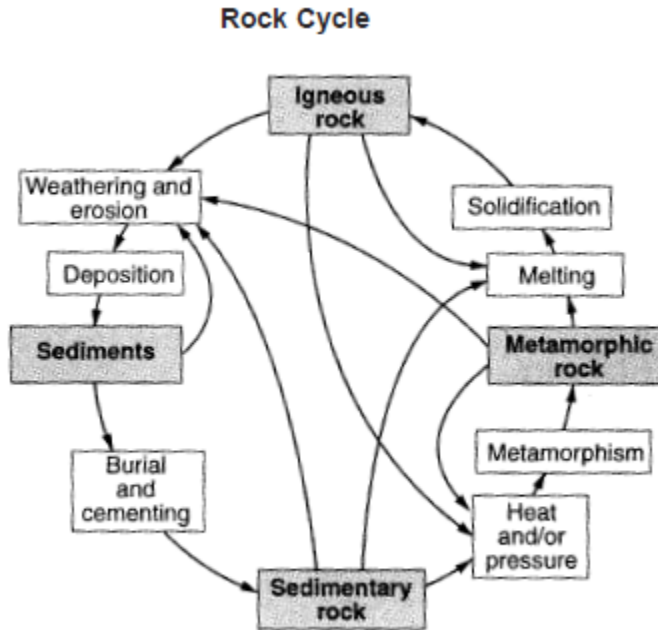


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6th Grade Science MSL Practice

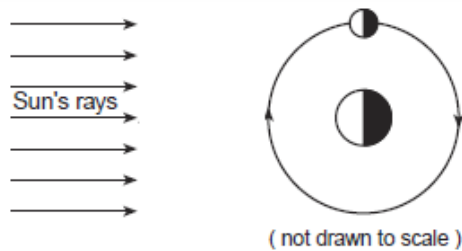
1. The diagram below shows the rock cycle. (6.E.2.3)



Which two processes result in the formation of igneous rocks?

- A. melting and solidification
- B. sedimentation and evaporation
- C. crystallization and cementation
- D. compression and precipitation

2. The diagram below shows the Moon revolving around Earth as viewed from space. (6.L.2.1)



- A. The surface of the Moon emits its own light, which can be seen from Earth.
- B. The Moon absorbs light during the day and emits the light at night.
- C. Light emitted by Earth illuminates the Moon's surface, making it visible.
- D. Light emitted by the Sun is reflected to Earth by the Moon's surface.

3. The **solid** part of Earth's surface is called the (6.E.2.1)

- A. hydrosphere
- B. lithosphere
- C. troposphere
- D. atmosphere

4. When rocks melt, what do they become? (6.E.2.2)

- A. lava.
- B. magma
- C. sandstone.
- D. marble

5. What causes the motion of the plates? (6.E.2.2)

- A. convection in the mantle of Earth
- B. gravity
- C. the magnetic field of Earth
- D. the turning of Earth

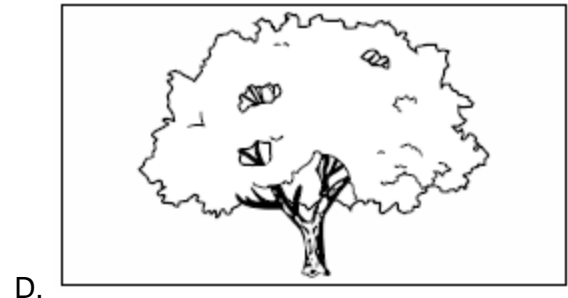
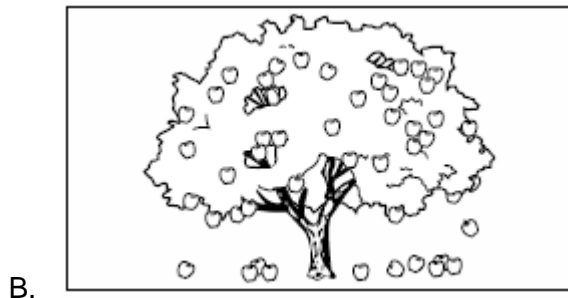
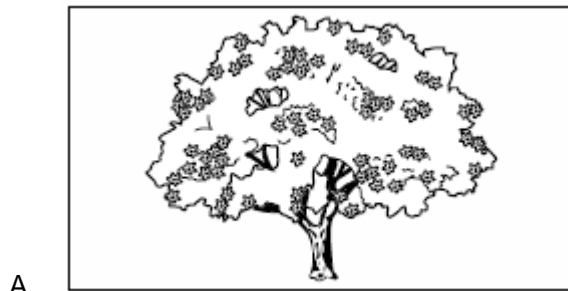
6. When two plates slide, one under the other, it is called (6.E.2.2)

- A. a plate collision.
- B. subduction.
- C. a transform fault.
- D. seafloor spreading.

7. The volcanic island chain of Hawaii was formed by which process? (6.E.2.2)

- A. subduction
- B. transform faulting
- C. plate collision
- D. seafloor spreading

8. Which of these apple trees is **dormant**? (6.L.2.2)



9. Which explains why the fork looks different under water? (6.P.2.2)



- A. Light is refracted at an angle.
- B. The wavelength of light lengthens.
- C. Light cannot pass through the glass.
- D. The amount of light increases when going through water.

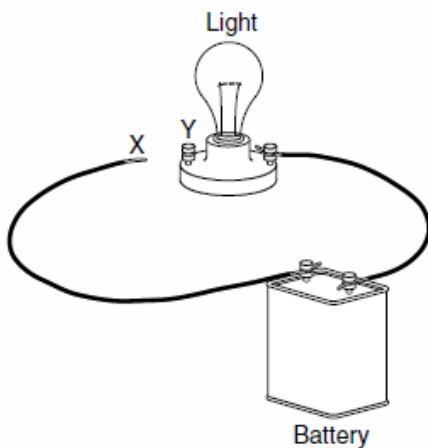
10. Which item is designed to change **electrical** energy into **heat** energy? (6.P.3.1)

- A. Alarm clock
- B. Hand dryer
- C. Fan
- D. Telephone

11. Earth is composed of four layers. Many scientists believe that as Earth cooled, the denser materials sank to the center and the less dense materials rose to the top. The least dense layer is the — (6.E.2.1)

- A. crust
- B. mantle
- C. outer core
- D. inner core

12. A sixth-grade class constructed this circuit. Which of these objects **most** likely made the light glow when connected to points X and Y? (6.P.3.3)



- A. Plastic straw
- B. Cotton string
- C. Aluminum foil
- D. Rubber eraser

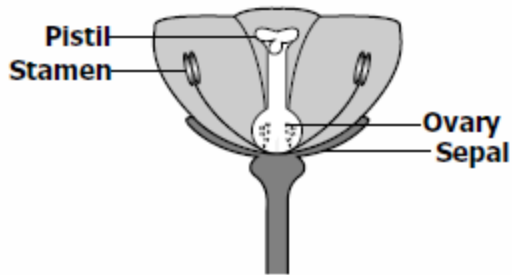
13. Which of these is the **most** responsible for the changes of the seasons on Earth? (6.L.2.1)

- A. Position of the Moon
- B. Tilt of Earth on its axis
- C. Temperature of the Sun
- D. Distance to Mars

14. Which of these is a way the people of North Carolina can help restore a natural ecosystem?
(6.E.2.4)

- A. Burn their trash
- B. Plant native plants
- C. Feed leftover meals to deer
- D. Drain automobile oil into the grass

15. In a flower, what **most** likely happens when pollen from the stamen gets into the ovary?
(6.L.1.1)

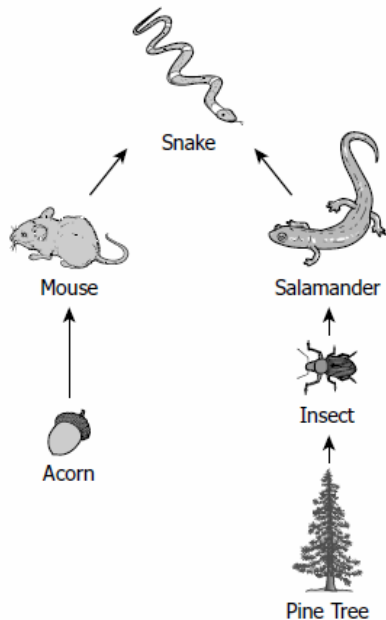


- A. The plant dies.
- B. A seed develops.
- C. The flower closes.
- E. The sepals fall off.

16. Which of these transmits sound the **fastest**? (6.P.1.3)

- A. Water in a pool
- B. A metal rod
- C. Air in a balloon
- D. Empty space

17. Which describes energy through this food web? (6.L.2.1)



- A. Salamanders get energy from snakes and mice.
- B. Acorns get energy from insects and pine trees.
- C. Mice get energy from salamanders and insects.
- D. Snakes get energy from salamanders and mice.

18. Which of these human activities **most** relies on high-quality soil? (6.E.2.4)

- A. Hiking
- B. Hunting
- C. Coal mining
- D. Growing crops

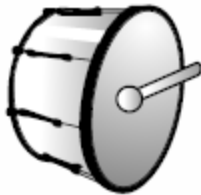
19. A student observes a mineral that is colorless and harder than glass. Based on the chart, which mineral is the student observing? (6.E.2.3)

Mineral Identification Chart

Mineral	Color	Hardness
Amphibole	Green to black	Less hard than a nail
Feldspar	White, pink, gray, green	Harder than glass
Garnet	Dark red	Harder than glass
Quartz	Colorless, gray, white	Harder than glass

- A. Amphibole
- B. Feldspar
- C. Garnet
- D. Quartz

20. Which of these makes a sound with the **slowest** vibration? (6.P.1.3)



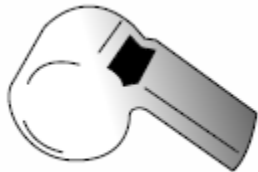
Drum

A.



Flute

C.



Whistle

B.



Harmonica

D.

21. Which of these lists shows only **insulators**? (6.P.3.3)

- A. Plastic, wood, glass
- B. Wood, copper, glass
- C. Silver, wood, plastic
- D. None of the above

22. Which of these is an important part of how most soil forms? (6.E.2.3)

- A. Weathering of rocks
- B. Pressure building within Earth
- C. Magma rising inside a volcano
- D. Sun heating the crust

23. Why is carbon dioxide important for plants? (6.L.1.2)

- A. Carbon dioxide gives plants their green color.
- B. Plants can release carbon dioxide into the air.
- C. Plants use carbon dioxide to make their own food.
- D. Carbon dioxide lets plants absorb water through their roots.

24. Which of these is the **center** of our solar system? (6.E.1.1)

- A. Mars
- B. The moon
- C. Jupiter
- D. The sun

25. While digging, a person found that most of the rocks were **igneous** rock. What can be concluded? (6.E.2.3)

- A. The rocks were probably carried there by ancient people.
- B. The area was once covered by an ocean.
- C. A glacier passed through at one time.
- D. A volcano was nearby one time.

26. When you hook up a battery to a complete circuit, what flows through the wires from one pole of the battery to the other? (6.P.3.3)

- A. Heat.
- B. Electricity
- C. Light
- D. Sound

27. Drew pours himself a glass of cola with ice in it. **Identify** which objects are solid, liquid, and gas. (6.P.2.2)

- A. The cola is the solid, the ice is the liquid, and the bubbles are the gas.
- B. The ice is the solid, the bubbles are the liquids, and the cola is the gas.
- C. The bubbles are the solids, the cola is the liquid, and the ice is the gas.
- D. The ice is the solid, the cola is the liquid, and the bubbles are the gas.

28. Which picture represents a decomposer? (6.L.2.1)



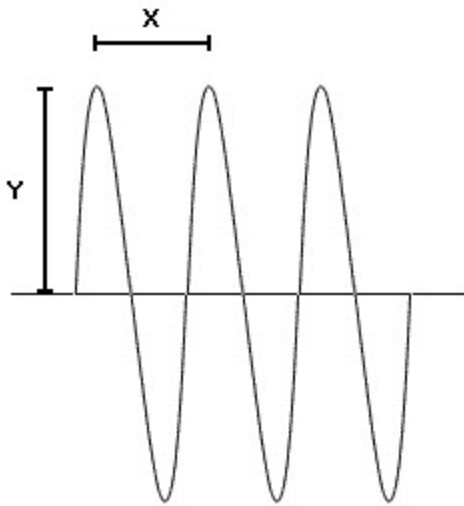
- A. A
- B. B
- C. C
- D. D

29. Which of the following biomes is characterized by extremely low temperatures, a short growing season, and an overall lack of trees? (6.L.2.2)

- A. tropical rainforest
- B. freshwater
- C. grassland
- D. arctic tundra

30. Which of the following defines **wavelength**? (6.P.1.1)
- A. the distance between crests of adjacent waves
 - B. the number of waves that pass a point in a given amount of time
 - C. the distance a wave travels in a given amount of time
 - D. the height of a wave
31. Which of the following physical properties is independent of the amount of a substance present in a particular sample? (6.P.2.3)
- A. mass
 - B. weight
 - C. volume
 - D. density
32. What will likely happen to a species that **cannot** adapt to changing environmental conditions? (6.L.2.3)
- A. It will seek help from other organisms.
 - B. It will thrive in any new condition.
 - C. It will make its own environment.
 - D. It will not survive.
33. _____ forms when sediment compacts and cements together? (6.E.2.1)
- A. Metamorphic rock
 - B. Igneous rock
 - C. A meteorite
 - D. Sedimentary rock
34. Humans can prevent erosion by practicing _____ conservation. (6.E.2.4)
- A. soil
 - B. water
 - C. mass
 - D. energy
35. A(n) _____ is the smallest unit of an element that maintains the properties of that element. (6.P.2.1)
- A. force
 - B. mixture
 - C. wave
 - D. atom
36. _____ is the heat transfer between materials that are touching; _____ is heat transfer through empty space; and _____ is heat transfer by the movement of warm particles. (6.P.3.1)
- A. Convection; radiation; conduction
 - B. Conduction; radiation; convection
 - C. Conduction; convection; radiation
 - D. Convection; conduction; radiation

37. Look at the wave below. (6.P.1.1)



What is shown by the letter Y?

- A. wavelength
- B. frequency
- C. crest factor
- D. amplitude

38. Which of the following can be a component of soil? (6.E.2.3)

- A. air
- B. water
- C. rock particles
- D. all of these

39. Is crushing an aluminum can an example of a physical change or a chemical change?

Explain your answer. (6.P.2.3)

40. Which state of matter has molecules closely packed together? Explain the difference in the molecular structure of solids liquids and gases. (6.P.2.2)