

6th Grade Science – Unit 2 Assessment: Weathering, Erosion, Deposition and Soil

Directions: Please bubble in the letter of the correct answer choice on your answer document.

Weathering:

- Which of these is an example of chemical weathering?
 - Water freezes and expands in cracks in rock, pushing the rock apart.
 - Waves wear away rocks on a beach.
 - Acid seeps into the ground and dissolves rock such as limestone.
 - Rock pieces carried by river water weather the rocks in the riverbed.
- What is weathering?
 - a type of climate
 - the transport of rock particles
 - the breaking down of rock
 - the aging of rock
- What does it mean to conserve?
 - To waste
 - To save
 - to share
 - to eliminate
- Chemical weathering is different than mechanical weathering because it
 - breaks down rock.
 - moves rock from place to place
 - changes the composition of rock.
 - makes new landforms
- Which of these is an example of mechanical weathering?
 - Rock is broken by ice expanding in cracks.
 - Oxygen mixes with iron in rock to cause oxidation.
 - Solar energy heats water and causes it to evaporate and react with pollutants.
 - A river moves loose rock downstream.
- What are the two main causes of mechanical weathering of a surface?
 - chemical reactions and wind
 - wind and water
 - chemical reactions and water
 - wind and acid rain
- Ivy grows onto the walls of buildings by pushing its roots into fissures in the stone or brick. This is an example of
 - mechanical weathering.
 - biological weathering.
 - chemical weathering.
 - erosion.
- Which of the following statements BEST describes the difference between weathering and erosion?
 - Weathering involves both disintegration and movement of rocks.
 - Erosion only applies to soil, not rocks.
 - Erosion describes the movement of rocks.
 - Weathering only applies to rocks, not soil.

Deposition:

- Deposition is a process that
 - dissolves sediment.
 - breaks down rock into smaller particles.
 - removes rock particles from landforms
 - drops sediment to form landforms.
- Where do deltas form?
 - in a desert area
 - at the mouth of a river
 - on the banks of a river
 - in a valley formed by a glacier

11. Which landform is formed by deposition of sediment?
- a. beach
 - b. mountain
 - c. cliff
 - d. canyon
12. Which of the following BEST explains the meaning of deposition?
- a. The mechanical surface processes that break rock into smaller pieces.
 - b. A process in which surface materials are won away and transported from one place to another by agents such as gravity, water, wind and glaciers.
 - c. The dropping of sediments that occurs when an agent of erosion, such as gravity, a glacier, wind or water, loses its energy and can no longer carry its load.
 - d. The chemical surface processes that break rock into smaller pieces.

Erosion:

13. There is an open plot of land next to an animal preserve. A fence separates the preserve from the land. The keepers of the preserve plant a short grass on the land. What is the MOST LIKELY reason for the planting?
- a. to give the animals a natural food source
 - b. to stop weeds from growing in the preserve
 - c. to stop animals from wandering off the preserve
 - d. to prevent the soil on the land from eroding
14. Geologists have found that one source causes ten times more soil erosion than all other processes combined. Which source causes the MOST soil erosion?
- a. human activities
 - b. blowing wind
 - c. flowing water
 - d. glacial movement
15. Which of the following processes causes change on Earth as a result of the force of gravity?
- a. earthquake
 - b. landslide
 - c. volcano
 - d. tsunami
16. A mudflow can occur when a large amount of water flows through sediment. The combination of water and sediment starts traveling downhill, picking up more material as it goes. What types of erosion combine to create a mudflow?
- a. wind erosion and water erosion
 - b. ice erosion and wind erosion
 - c. ice erosion and gravity erosion
 - d. gravity erosion and water erosion
17. Which of these is NOT a major agent of erosion?
- a. wind
 - b. glaciers
 - c. rivers
 - d. the Sun
18. A landslide is a type of erosion caused by
- a. wind
 - b. water
 - c. gravity
 - d. ice
19. An area of forest is burned down to make way for new farm fields. Three seasons pass before a crop is planted in the field. How will the soil in the field MOST likely be affected by being left bare for so long?
- a. The nutrient-rich topsoil may be blown or washed away by erosion.
 - b. The soil will not be affected in any way by being left bare.
 - c. The topsoil will be cleansed of all insecticides by the rain.
 - d. The topsoil will be more nutrient rich by being allowed to rest.
20. U-shaped valleys are MOST LIKELY caused by erosion due to
- a. wind.
 - b. glaciers.
 - c. rivers.
 - d. gravity.

21. The number of years it takes for running water to erode a canyon the size of the Grand Canyon should be measured in
- a. hundreds of years.
 - b. thousands of years.
 - c. millions of years.
 - d. billions of years.

Soil:

22. What part of soil consists of decaying organic matter?
- a. mineral layer
 - b. humus
 - c. bedrock
 - d. clay
23. Which soil horizon is MOSTLY affected by leaching?
- a. topsoil
 - b. subsoil
 - c. parent material
 - d. bedrock
24. Which factor does NOT contribute directly to soil formation?
- a. wind
 - b. rain
 - c. freezing water
 - d. sun
25. What type of soil will water move through MOST quickly?
- a. sandy with large pores
 - b. humus soil
 - c. clay soil
 - d. solid rock
26. Order the different types of soil particles from smallest to largest.
- a. sand, silt, gravel, clay
 - b. gravel, sand, clay, silt
 - c. clay, silt, sand, gravel
 - d. silt, sand, clay, gravel
27. Topsoil is rich in humus. Which location would probably have the thinnest layer of topsoil?
- a. rain forest
 - b. desert
 - c. grassland
 - d. deciduous forest
28. A component of soil that is NOT formed by the weathering of rock is
- a. Pebbles
 - b. silt
 - c. clay.
 - d. humus.
29. What are the main ingredients in soil?
- a. oxygen and nitrogen
 - b. water and air
 - c. insects and plants
 - d. weathered rock and the remains of living things
30. Which of these contains large amounts of nutrients?
- a. parent material
 - b. bedrock
 - c. topsoil
 - d. sand

Soil Erosion and Soil Conversation:

31. Which of the following is a likely reason a farmer in a windy place might plant long rows of tall trees around his fields?
- a. to add more nutrients to the soil
 - b. to stop earthquakes
 - c. to provide a home for animals
 - d. to slow down erosion
32. Which of the following is mostly responsible for preventing erosion?
- a. weathering of rocks
 - b. farming
 - c. the presence of plants
 - d. the removal of trees

33. The Blue Ridge Mountains in Georgia are covered by hardwood forests. People in this region often use hardwood trees to build their homes. How might this affect the environment of the Blue Ridge Mountains?
- If enough homes are built, more renewable energy will be available.
 - If too many trees are cut down, erosion of topsoil could occur.
 - If not enough trees are cut down, overcrowding could occur.
 - If not enough homes are built, humus will be less common.
34. When cows graze on the same plot of land for a prolonged period of time, they eventually eat all the grass and leave nothing but bare earth. What would be the likely effect of this?
- A floodplain would be created.
 - Chemical weathering would increase, creating new aquifers in the area.
 - Erosion would decrease, and the topsoil layers would thicken.
 - The topsoil would erode, making it more difficult for new plants to grow.
35. By law, construction sites are not allowed to pollute or disturb the area surrounding them. On paper this seems reasonable, but is more difficult in practice. One key feature of any construction site is that it is surrounded by a perimeter of sandbags and gravel. What is this perimeter designed to eliminate?
- the spread of chemicals into surrounding areas
 - the loss of construction materials such as nails from the site
 - the erosion of exposed topsoil into surrounding areas
 - the trespass of animals and people onto the site
36. Strip-mining is environmentally damaging because
- it increases soil erosion.
 - it decreases soil erosion.
 - it weathers the subsoil
 - it pollutes the water.
37. Construction adds to erosion by
- creating areas of drought.
 - adding soil to the area.
 - removing plant cover from the soil.
 - adding plant cover to the soil.
38. Common marram grass is often planted by humans on beach dunes. Which of the following would be the best reason for this intentional planting?
- to increase dune erosion
 - to decrease dune erosion
 - to increase sand weathering and create soil
 - to decrease sand weathering and create soil
39. Erosion is the _____ of earth material.
- Break down
 - Deposition
 - movement
 - solid

Short Answer:

40. The earth is shaped by both destructive and constructive processes. Discuss each of the following:
- What is one destructive process that affects the shape of the land?
 - What is one constructive process that affects the shape of the land?
 - Compare and contrast the effects of each on earth's surface.
41. Describe the nutrient cycle soil. Use RACE to help you answer.