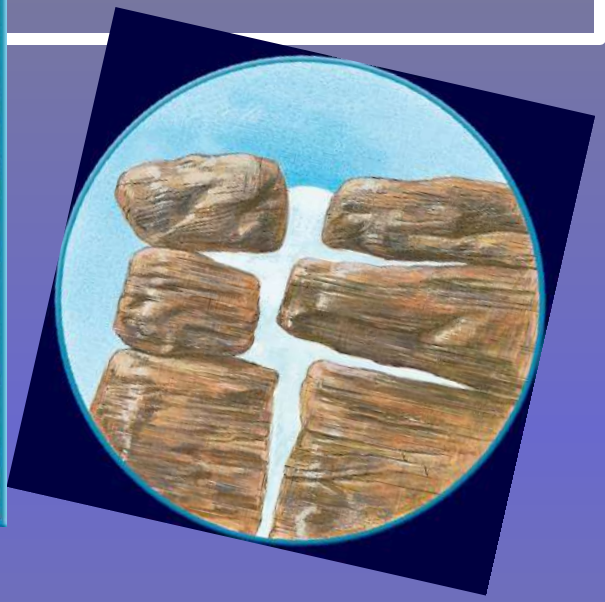
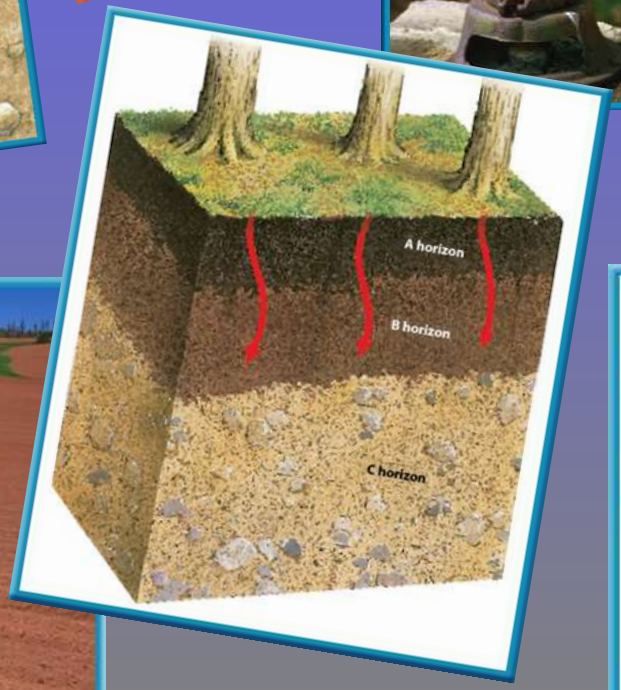
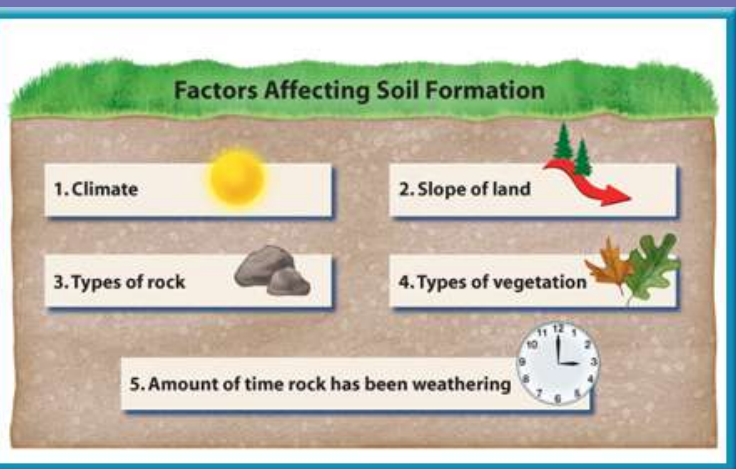
Weathering & Soil Erosion







#1 The type of weathering that occurs when water freezes and thaws in the cracks of rocks eventually breaking the rocks is called

- a. chemical
- c. ice wedging
- b. erosion
- d. oxidation

Plants can cause both chemical & mechanical weathering. When a plant causes chemical weathering during the decay process they give off an acid, which part of the plant gives off the acid? #2

- a. flower
- b. roots
- c. leaves
- d. stem

What type of weathering occurs when chemical reactions dissolve or change the minerals in rocks?

#3

- a. erosion
- c. mechanical
- b. ice wedging
- d. chemical weathering

#4

Mechanical weathering is more rapid in _____ climates.

- a. colder
- b. warmer
- c. mountainous
- d. dryer

#5 Oxidation can occur when materials containing _____ are exposed to oxygen and water creating rust.

- a. magnesium
- b. calcite
- c. iron
- d. hydrogen

#6 **When water freezes it _____ which can cause rocks to break apart.**

- a. expands
- b. contracts
- c. spills
- d. turns into acid

#7 What type of weathering occurs when rocks breaks apart by physical processes?

- a. sedimentary
- C. mechanical
- b. chemical
- d. plant acids

#8

Chemical weathering is more rapid in _____ climates.

- a. colder, wet
- b. Warmer, wet
- c. mountainous
- d. Cold, dryer

#9

All of the following cause mechanical weathering EXCEPT ____.

- a. iron
- b. tree roots
- c. ice
- d. burrowing animals

The roots of a plant can grow through cracks in a driveway, causing the driveway to break. Which kind of process would be occurring?

#10

- a. sedimentation
- b. weathering
- c. erosion
- d. exfoliation

#11 **The rate of weathering depends upon the area's _____.**

- a. climate
- b. soil
- c. oxygen
- d. water

#12 The difference between mechanical and chemical weathering is ____.

- a. if the chemical composition of the rock is changed
- b. that only chemical weathering involves water
- c. the length of time each takes to break up a rock
- d. all of the above

#13

Which of these is an example of how humans *positively* impact the environment?

- a. burning more fossil fuel
- c. planting more trees
- b. increasing water runoff
- d. increasing beach erosion

#14

A man planted trees and shrubs in a bare, empty dirt lot. The roots of the plants can help protect the soil. The soil is most likely being protected from what?

- a. earthquake
- b. wind erosion
- c. water pollution
- d. drought

#15

Large pores in soil are most important for _____.

- a. making it easier to dig through the soil
- b. keeping roots from moving through the soil
- c. water and air to move through the soil
- d. animals to dig through the soil

Farmers would purchase manufactured fertilizers because they _____.

#16

- a. are the only way to fertilize plants
- c. provide missing nutrients to the soil
- b. are difficult to wash away with water
- d. can easily dry out the soil

#17

When forest trees are cleared from the land, and trees are not replanted; which of the following will most likely occur?

- a. sedimentation
- b. lightning fires
- c. increase in habitat
- d. soil erosion

#18 The prairie grass ecosystem once had a deep layer of topsoil which was protected by the grasses that covered it. Removal of these grasses for farmland is causing the soil to be eroded mainly by

- a. increased temperature
- c. animal movement
- b. crops growing in the field
- d. wind and rain

#19 Which of the following is not a method that farmers use to prevent soil erosion?

- a. contour farming
- b. terrace building
- c. deforestation
- d. no-till farming

#20

Soil erosion occurs _____.

- **a.** where animals eat away all the plants.
- **c.** when forests are removed.
- **b.** on steep slopes.
- **d.** all of the above.

#21

From top to bottom, what are the horizons of soil?

- a. Subsoil, bedrock, topsoil
- b. Topsoil, bedrock, subsoil
- c. Topsoil, subsoil, bedrock
- d. Bedrock, subsoil, topsoil

Parts of plants remain on the ground after fields of crops are harvested.

#22 Farmers have mixed these plant remains into the soil for many years. This most likely causes _____.

- a. the number of organisms in the soil to decrease
- c. more minerals to be lost from the fields
- b. the organic matter in the soil to increase
- d. more nutrients in the soil to be dissolved

#23 What is the correct rank of particle size *(largest to smallest)* for the ingredients listed?

- **a.** sand, silt, clay
- **b.** sand, clay, silt
- **c.** clay, silt, sand
- **d.** silt, clay, sand

#24

Plants don't grow as well when ____ has been lost.

- a. topsoil
- c. parent rock
- b. clay
- d. slope

#25

Minerals found in the B horizon were dissolved in water and carried there by a process called

- a. leaching
- c. weathering
- b. oxidation
- d. littering

#26

The rock and mineral fragments in soil come from rock that has been ____.

- a. chemically treated
- b. weathered
- c. blasted
- d. carved

#27

Litter often covers the ____ horizon.

- a. A (topsoil)
- c. C (bedrock)
- b. B (subsoil)
- d. all of the above

#28

Soil is a mixture of weathered rock, decayed organic matter, water, air and ____.

- a. mineral fragments
- c. moss
- b. sand
- d. clay

#29

The organic matter in humus is made of ____.

- a. stems
- b. roots
- c. dead worms
- d. all the above

#30

A _____ is a layer of soil that differs in color and texture from the layers above or below it.

- a. bedrock
- c. humus
- b. parent rock
- d. horizon

#31

The C Horizon is directly below _____.

- a. A Horizon
- c. B Horizon
- b. parent rock/ bedrock
- d. litter

#32

The B horizon is ____.

- a. where leaching begins
- c. rockier than the C horizon
- b. richer in humus than the A horizon
- d. lighter in color than the A horizon

#33

Soils in ____ contain little organic material and have a very thin A horizon.

- a. temperate forests
- c. tropical areas
- b. prairies
- d. deserts


The End!