Post Mid-Term Review
Units 1-3

S6E5. Students will investigate the scientific view of how the earth's surface is formed.

a.Compare and contrast the Earth's crust, mantle, and core including temperature, density, and composition.

b.Investigate the contribution of minerals to rock composition.

c.Classify rocks by their process of formation.

d.Describe processes that change rocks and the surface of the earth.

e.Explain the effects of physical processes (plate tectonics, ***erosion***, ***deposition***, volcanic eruption, ***gravity***) on geological features including oceans (composition, currents, and tides).

f.Describe soil as consisting of weathered rocks and decomposed organic material.

g.Explain the effects of human activity on the erosion of the earth's surface.

h.Describe methods for conserving natural resources such as water, soil, and air.

Rocks are ***generally*** **classified** according to ___.

A. Their mineral content
B. Their color
C. How they form
D. Where they are found

Which of the following is considered the **“building blocks” of rock**?

A. Fossils

B. Sand

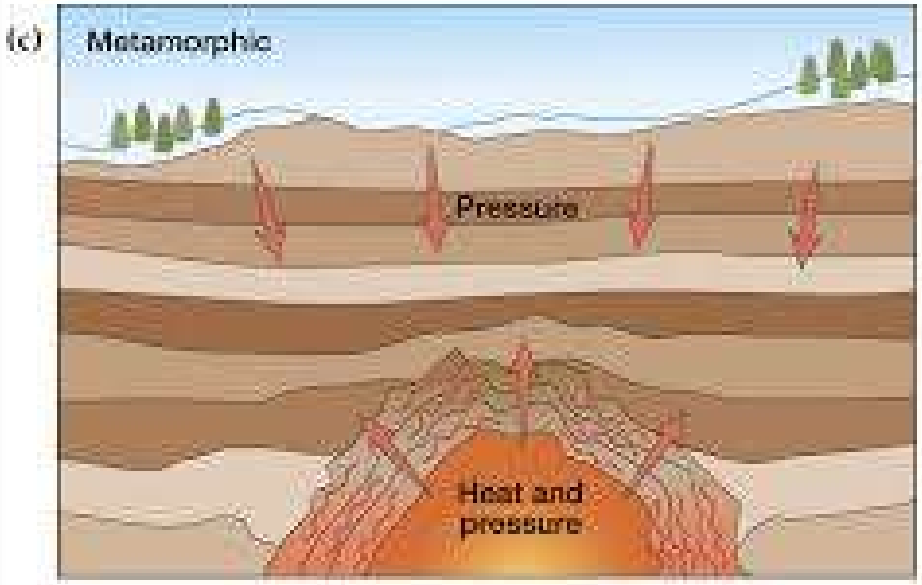
C. Minerals

D. Water

True or False?

Metamorphic rock forms when heat & pressure deep underground change an existing rock into a new rock.

True



Plants, animals, and people are living things. **What is a synonym** for materials that were once part **of one of these living things**?

A. Organic

B. Inorganic

C. Clastic

D. Chemical

If a sedimentary rock is put under extreme heat & pressure to the point that it melted back into magma, based on the rock cycle, what classification of rock would it become next?

A. Metamorphic

B. Igneous

C. Sedimentary

D. There is no way to tell

Choose the answer that provides the **best definition of a Mineral.**

A. Man made, organic, with a physical composition, and crystals inside

B. Naturally occurring, inorganic solid, with a crystal structure, and a definite chemical composition

C. Naturally occurring, organic solid, with a variable composition, and a crystalline structure

Two continental plates that crunch or smash together slowly can produce _____.

A.a trench

B.islands

C.a mountain range

D.hot spots

Wegener proposed a THEORY about the continents. He said they have been moving around for millions of years.

What did he call this THEORY?

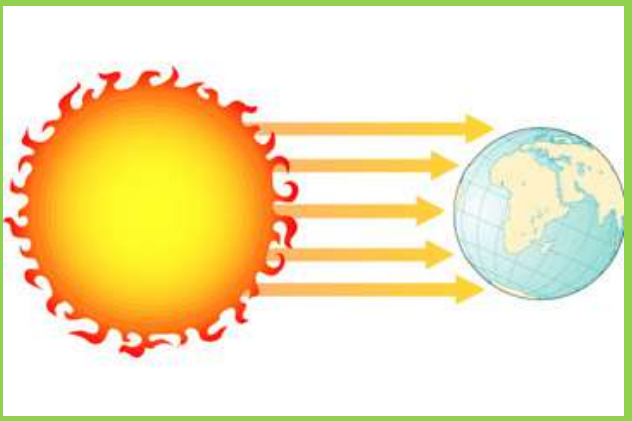
Seafloor Spreading

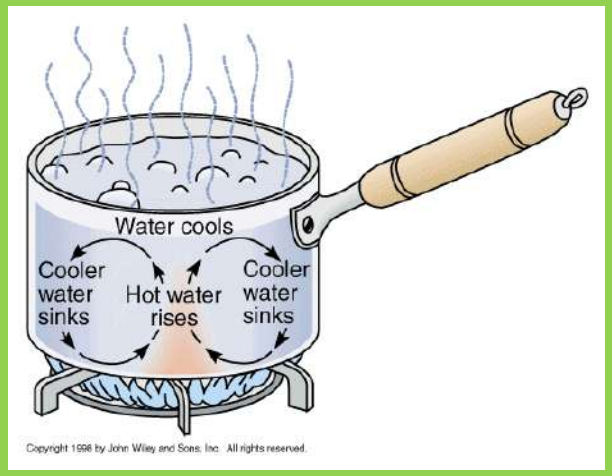
A. Island Formation

B. Volcanic Eruptions

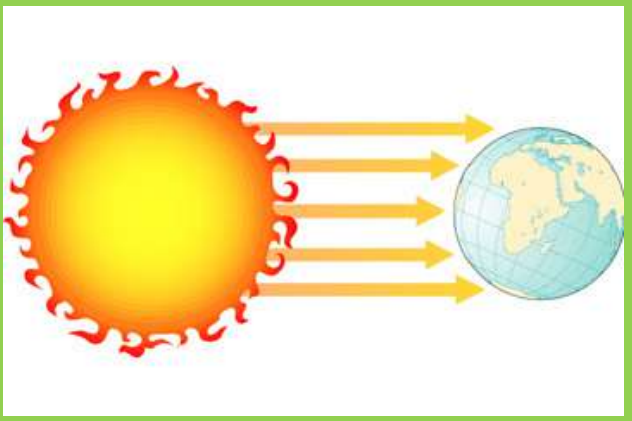
C. Continental Drift

Name the 3 types of heat transfer.
Here are some hints…

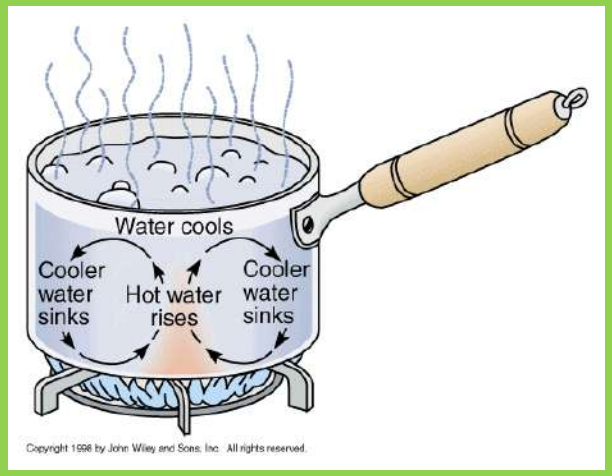




- Radiation



Convection



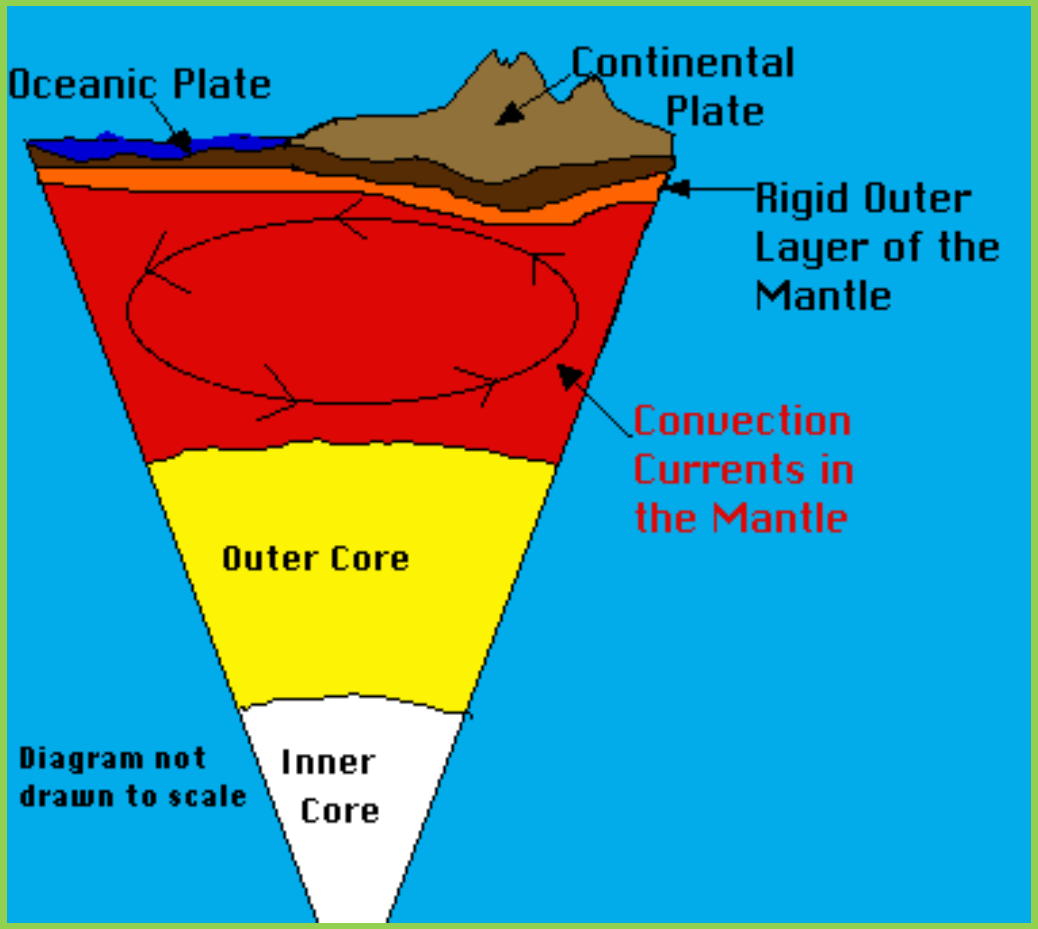
Conduction

The stress that pulls on the crust where two plates are moving apart is called _____.

A. Compression
B. Reverse
C. Shearing
D. Tension

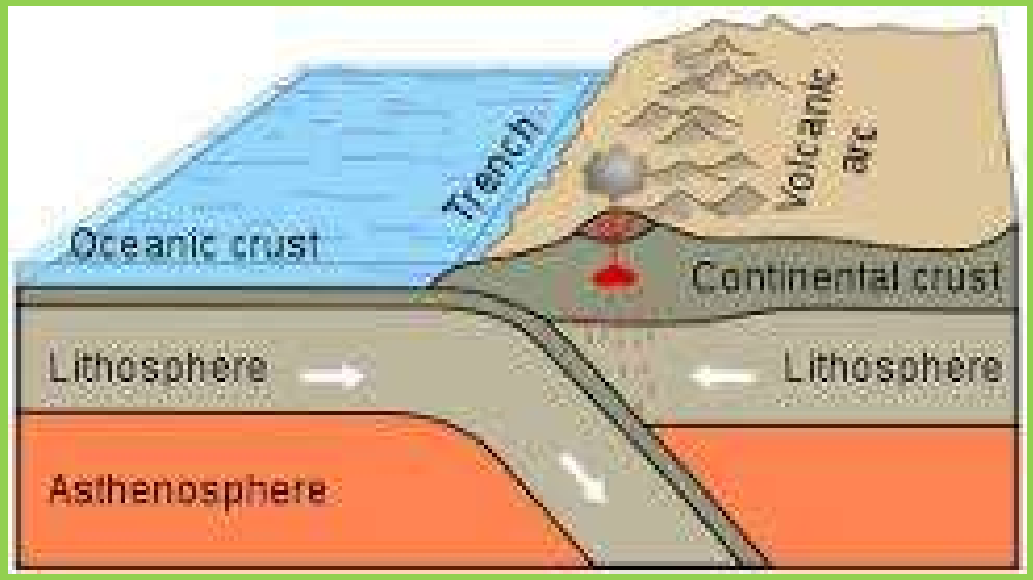
What causes the mantle rock to flow very slowly?

Convection Currents



What is the process called when crust is recycled at a convergent boundary as a denser plate dives under a less dense plate?

Subduction


Trench
Volcanic arc
Oceanic crust
Continental crust
Lithosphere
Lithosphere
Asthenosphere

Waves of energy generated by an earthquake that travel through Earth are called ___.

A. Seismic waves
B. Land formations
C. Weather patterns
D. Sonar waves

Earthquakes may happen when rock breaks along cracks in Earth's crust. These cracks in the crust are called ___.

A. Tunnels
B. Ridges
C. Faults
D. Continents

The point on Earth’s surface where the earthquake is the strongest and most damaging is called the ___.

A. Center

B. Trigger

C. Breaking point

D. Epicenter

The earthquake in Japan was reported as a 9.0 on the Richter Scale. What does this tell us about the earthquake?

A. How long the quake lasted

B. The time of day the quake began

C. The size/magnitude of the quake

D. How much it will cost for repairs

The Gold Gate Bridge in San Francisco, CA was built with special foundations and shock absorbers because it is located near a strike-slip fault. Earthquakes and tremors can happen at any time along THIS famous fault called ___.

A. The Pacific Plate

B. The Rio Grande

C. The San Andreas Fault

D. The California Fault

A string of islands that forms where two plates converge and collide is called ___. The Aleutian Islands, The Caribbean Islands, and Japan are all examples of this geologic formation.

A. A mountain range

B. A subduction zone

C. An island arc

D. A mid-ocean ridge

Hot springs and geysers are two examples of ___. These may be found where there is evidence of past or present volcanic activity.

A. Areas of muddy water

B. Areas of geothermal activity

C. Areas where the ground cools

D. Areas where old people live

In Hawaii there are several wide, gently sloping volcanic mountains. These are examples of ____ volcanoes.

A. Lava dome
B. Shield
C. Cinder cone
D. Composite

A tall, cone-shaped mountain in which layers of lava alternate with layers of ash in explosive eruptions is a ___ volcano. Mt. St. Helens, Mt. Vesuvius, and Mt. Fuji are all examples of this type of geologic formation.

A. Lava dome

B. Shield

C. Cinder cone

D. Composite

Underwater earthquakes, explosive volcanic eruptions, and/or large underwater rock movement can trigger huge ocean waves that may cause extreme flood damage to an area. These huge waves are called ___.

A. Tsunamis
B. Tidal waves
C. Breaker waves
D. Seismic waves

If you were in a tall office building during an earthquake, which type of seismic wave would be responsible for the violent shaking you feel?

A. P waves

B. S waves

C. Surface waves

D. Sonar waves

In 1980 Mt. St. Helens erupted for the first time in 120 years. Its magma was high in viscosity with high silica content. This type of eruption is an example of a(n) ___ eruption.

A. Quiet

B. Vent

C. Explosive

D. Lava fountain

Which of the following would be the best model of an erupting volcano?

A. Clay hardens when it is baked in an oven

B. A car faster when the accelerator is pushed

C. Water in a pot gets hotter when the pot is heated on a stove

D. Carbon dioxide dissolved in soda pop rushes out when the pop is opened

The agent of mechanical (physical) weathering in which rock is worn away by the grinding action of other small rock particles is called _____. This is similar to sandblasting.

A. Erosion
B. Cracking and peeling
C. Abrasion
D. Ice wedging

A rock containing iron (Fe) becomes soft, crumbly, and reddish-brown in color. It probably has been chemically weathered by a reaction with _____.

A. Abrasion
B. Acid rain
C. Oxygen
D. Plants

The growth of plant roots and animal activity may result in _____.

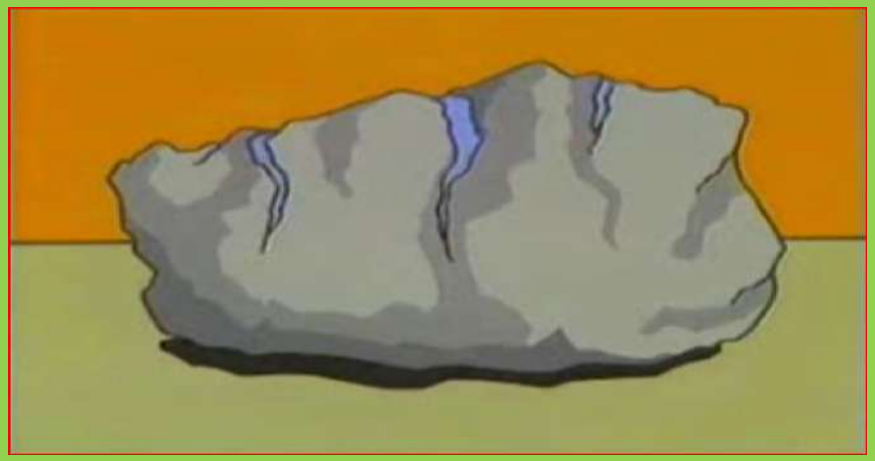
A. Mechanical weathering
B. Erosion
C. Chemical weathering
D. Abrasion

A marble statue is left exposed to the weather. Within a few years, the details on the statue have begun to weather away. This weathering is probably caused by _____.

A. Oxidation
B. Acid rain
C. Lichens
D. Abrasion

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

A. Heating and cooling of air
B. Plant growth
C. Animal actions
D. Freezing and thawing of water



What type of weathering causes the mineral composition of rocks to change?

A. Chemical weathering
B. General weathering
C. Mechanical weathering
D. Permeable weathering

Geologists infer from the rounded, eroded shapes of the tops of the Appalachian Mountains that _____.

A. The mountains formed recently.
B. The mountains are made of soft rock.
C. The mountains are not being changed.
D. The mountains have been eroding for millions of years.

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

A. Carbon dioxide and acid rain
B. Abrasion and acid from plant roots
C. Animal action and oxygen
D. The type of rock and the climate of the area

Permeable rock weathers easily because it _____.

A. Is made up of small pieces of lots of rocks

B. Is made of only one mineral

C. Contains many small, connected air spaces

D. Is made of many minerals

A hot, wet climate causes weathering to take place _____.

A. Slowly
B. Quickly
C. Unevenly
D. At the same rate as a cool, dry climate

Soil formation would take place more rapidly with the weathering of _____.

A. Granite on a mountain top
B. Sandstone in a desert
C. Granite in a cold, dry climate
D. Limestone in a warm, wet climate

Soil that is rich in humus has high _____.

A. Fertility
B. Water content
C. Sand content
D. Clay content

Soil formation begins with the weathering of _____.

A. Litter
B. Bedrock
C. The A Horizon
D. Humus

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

A. Keep the soil from becoming too fertile
B. Reduce the amount of seed needed for next year's crop
C. To retain moisture, hold the soil in place, and add nutrients to the soil
D. Keep more organisms out of the soil

Soil is a valuable natural resource because it _____.

A. Is important to all living things on land
B. Contains sand and gravel
C. Has decomposers
D. Has all three soil horizons

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. Loess
C. Humus
D. Clay

To conserve and protect soil from erosion, farmers might choose to plow fields along curves of a slope. This is called ____.

A. Drought plowing
B. Contour plowing
C. No-till plowing
D. Sod plowing

Mass movement is caused by _____.

A. Plucking and abrasion
B. Gravity
C. Chemical weathering
D. Erosion and deposition

The process by which natural forces move weathered rock and soil from one place to another is called _____.

A. Soil conservation
B. Deposition
C. Abrasion
D. Erosion

What can cause the loss of soil when it is not protected by plant cover?

A. Chemical weathering
B. Erosion by wind or water
C. Deposition of sediments
D. Too many organisms in the soil

The geological principle stating that the *same processes like weathering and erosion* that operate today also operated in the past to shape and change the surface of Earth is called _____.

A. Uniformitarianism
B. Soil conservation
C. Weathering
D. Erosion

Landslides, mudflows, slump, and creep are all examples of _____.

A. Mechanical weathering
B. Runoff
C. Mass movement
D. Soil formation

Areas of limestone are easily eroded by groundwater because _____.

A. Limestone is hard and is easily removed through a process of mechanical weathering
B. Stalactites and stalagmites pull particles of limestone apart and remove them from the parent material
C. Water combines with calcium as it sinks into the ground, absorbing and dissolving particles of sulfuric acid that hold limestone together
D. Water combines with carbon dioxide as it sinks into the ground, creating carbonic acid, which slowly dissolves the limestone

Sand grains being blown around by wind are deposited when _____.

A. The wind speeds up
B. The wind crosses a low area in the ground
C. The wind cools down at night
D. The wind slows down or hits an obstacle

If you want to see a continental glacier, where could you go?

A. Greenland
B. The Rocky Mountains
C. The Indian Ocean
D. No where: they all melted at the end of the last Ice Age

What is one main difference between continental glaciers and valley glaciers?

A. Continental glaciers are much larger and wider, covering a larger area
B. Each type of glacier is made of different materials
C. Continental glaciers never melt
D. Valley glaciers cause more erosion

The amount of runoff in an area depends on which of the following group of factors?

A. Vegetation, amount of rain, soil type
B. Climate, number of rivers nearby, amount of erosion
C. Deposition, tributaries, the extent of the flood plain
D. Slope of the land, amount of snowfall, latitude

A wide, gently-sloping deposit of sediment that forms where a stream leaves a mountain range is called _____.

A. A divide
B. A drainage basin
C. An alluvial fan
D. Slump

A river flowing across a wide flood plain begins to form loop-like bends called _____.

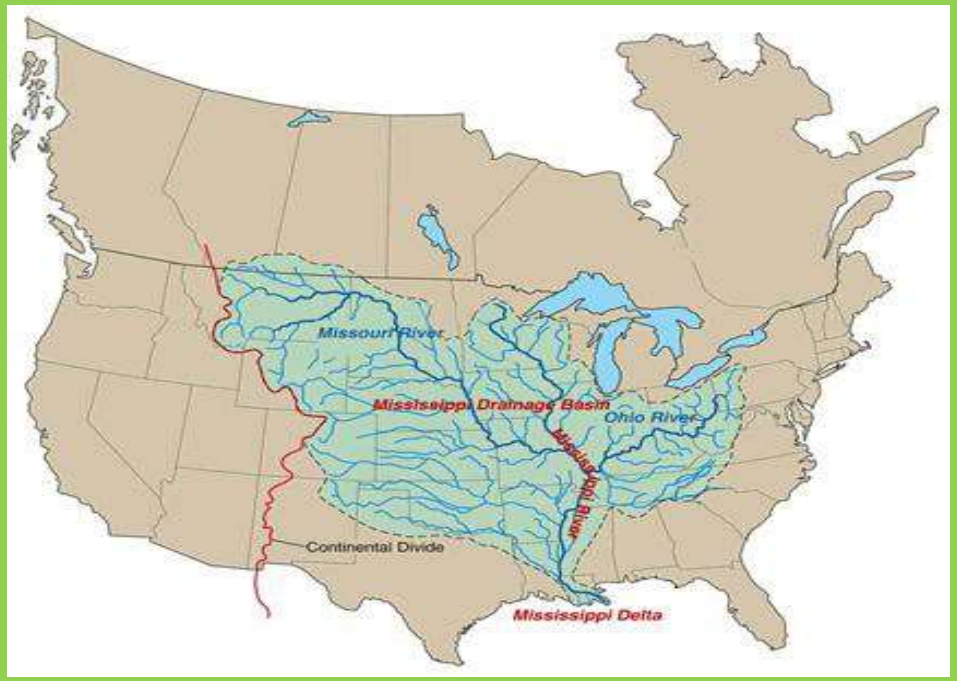
A. Rills
B. Meanders
C. Outside curves
D. Deltas

How do glaciers form?

A. When there is ice on the ground.
B. When there is a v-shaped valley in a mountain.
C. When more snow falls than melts and snow accumulates in layers.
D. When the amount of snow is greater than the amount of rain.

A stream or river that runs into another stream or river is called a _____.

A. Tributary
B. Meander
C. Rill
D. Gully



Which of the following shows evidence that an area was once covered by a glacier?

A. Plucking
B. Alluvial fan
C. U-shaped valley
D. V-shaped valley

As a river flows into an ocean or a lake, a landform called a delta is formed by _____ of sediments.

A. Deposition
B. Leaching
C. Abrasion
D. Erosion

Gravity can cause large masses of rock to fall from sloped areas. The most destructive type of mass movement is _____.

A. Mudflow
B. Creep
C. Landslide
D. Slump

An area of wave-washed sediment deposited along a coast is _____.

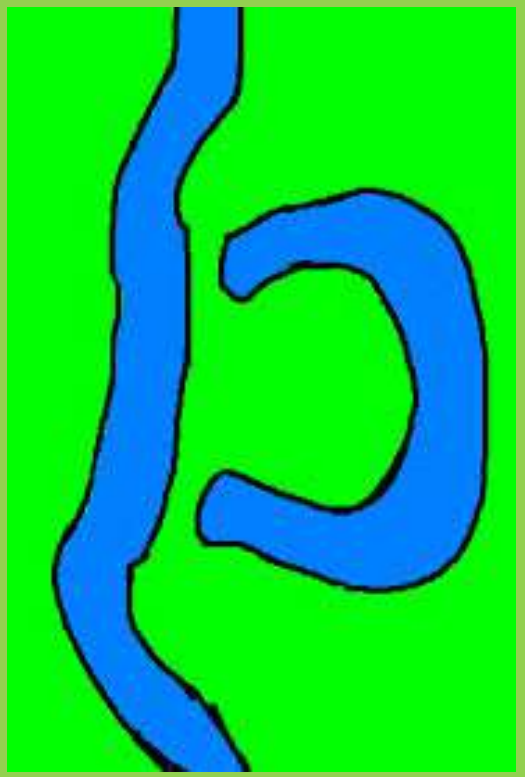
A. A delta
B. An alluvial fan
C. A beach
D. A sand dune

Which statement best describes the process that forms a stream?

A. sheet erosion digs a deep channel
B. tiny rills enlarge to form gullies, which join to form a stream
C. small gullies enlarge to form rills, which deepen to form a stream
D. water flows down a v-shaped valley

A meander that is cut off from the main stream of a river becomes ____.

A. kettle lake
B. oxbow lake
C. delta
D. alluvial fan



The agent most widely and consistently at work changing Earth's surface is

A. fire
B. volcanism
C. water
D. wind

Tom lives close to a river. It has been raining for nearly two days, and the river is widening. The river water is overflowing onto the land on each side by about 50 feet. This makes the land on either side of the river a _____.

A. delta
B. tributary
C. stream
D. flood plain

On a class trip to Ruby Falls, TN, Donna noticed that there were many formations in the cave. She asked Joel about the ones hanging from the roof, and what they were called. Joel told her they were ___.

A. icicles
B. stalagmites
C. stalactites
D. effects of erosion

Abrasion is an agent of mechanical weathering. What effect might abrasion have on rock surfaces?

A. it can crack it
B. it can make smooth, polish rock surfaces
C. it can change the rock's color
D. it can move the rock

Jason is taking a family trip to the north Georgia mountains. Along the way he notices that telephone poles along the road are situated at odd angles. What form of mass movement is he seeing on his trip?

A. creep
B. landslide
C. slump
D. mudflow