Grade 6 Science EOG Quiz Answer Key

Geology - (S6E5.b.) Composition Of Rock, (S6E5.c.) Classify Rocks, (S6E5.d.) Processes That Change Rocks, (S6E5.j.) Conserving Natural Resources, (S6E6.b.) Renewable And Nonrenewable Resources

Student Name: _____ Date: _____

Teacher Name: Trony Dixon Score: _____

1) Rocks are composed of different kinds of

A) soils.

B) sands.

C) minerals.

D) water crystals.

Explanation:

Different minerals combine in many different ways to make up the variety of rocks on the earth.

2) For a science experiment, a student rubs a mineral against a porcelain plate. The students has just performed

A) an acid test.

B) a streak test.

C) a hardness test.

D) a fracture test.

Explanation:

A streak test shows the color of the mineral in its powdered form by rubbing the mineral against a porcelain plate.

3) Which type of rock typically has the largest formed crystals?

A) metamorphic

B) sedimentary

C) extrusive igneous

D) intrusive igneous

Explanation:

The slow cooling of intrusive igneous rock can cause large crystals to form. Crystals also form in metamorphic rock, but due the pressure, are often smaller.

4) Which factor is MOST important in determining which minerals will form in a rock?

A) The size of the rock.

B) The weight of the rock.

C) The hardness of the rock.

D) The composition of the rock.

Explanation:

The most important factor in determining which minerals will form in a rock is the composition of the rock. Some minerals will only form when certain chemicals are in a rock. For example, calcite forms in limestone, a kind of rock that contains calcium carbonate.

5) A rock has alternating layers of dark and light colors. The rock has visible quartz crystals and does not contain any fossils. Where was this rock MOST LIKELY formed?

A) in a river bed

B) on the ocean floor

C) deep under the earth

D) in an active volcano

Explanation:

The rock was most likely formed deep under the earth. The presence of crystals and the non presence of fossils are clues to help determine this.

6) Which property is not commonly used to identify minerals?

A) luster

B) texture

C) hardness

D) crystal form

Explanation:

Texture is used in identifying rocks, but not to identify minerals.

7) Which statement about rocks is true?

A) Rocks usually contain several minerals.

B) Rocks usually contain several crystals.

C) Rocks have a specific chemical composition.

D) Rocks have a specific crystalline structure.

Explanation:

While some rocks contain only one mineral, most rocks contain several minerals. A rock, unlike a mineral, does not have a specific chemical composition.

8. Which of these BEST describes the concept of the rock cycle?

A) sedimentary rocks may be remelted several times

B) rocks move in circles on the earth as the earth rotates

C) rocks can be moved from place to place on the earth without changing

D) rocks are continually changing, and any type of rock may be

transformed into another type by appropriate processes

Explanation:

Simply put, the rock cycle explains that rocks are continually changing, and any type of rock may be transformed into another type by appropriate processes. IF the correct conditions are met, rocks can, and will, changes through history. Exposure to things like weathering, heat, and pressure can all lead to the changing of rocks.

9) Marble is formed when intense heat and pressure is applied to limestone. What type of rock is marble?

A) metamorphic

B) sedimentary

C) extrusive igneous

D) intrusive igneous

Explanation:

Marble is a metamorphic rock. It is made up of calcite.

10) Layers of rock containing fossils, like the layers illustrated here, are MOST LIKELY composed of _____ rocks.

A) igneous

B) sedimentary

C) metamorphic

D) crystallized

Explanation:

sedimentary

Sedimentary rocks formed when sediments are deposited one layer on another. Compaction helps turn the sediment into rock. As the sediments are deposited, plants and animals are trapped and often can be seen as fossils.

11) Once the magma found at location "E" cools and crystalizes, it will

A) turn into lava.

B) form igneous rocks.

C) sink back into Earth's deep interior.

D) form igneous, metamorphic, and sedimentary rocks.

Explanation:

The magma in area E will form igneous rocks. Different minerals cool at different rates but eventually ignesou rocks are formed. The different rates of coling and crystalization give us rocks with different sized crystals.

12) More than a billion years ago, the continent of Africa hit North America, generating enormous pressure and heat while pushing up the Blue Ridge Mountains to a height of 30,000 feet. Most of these mountains have since been worn away by wind, rain, and the growth of living organisms. The order of the rock cycle in this case is BEST described as

A) igneous, sedimentary.

B) metamorphic, igneous.

C) igneous, metamorphic.

D) metamorphic, sedimentary.

Explanation:

The order of the rock cycle in this case is best described as metamorphic, sedimentary. The immense heat and pressure will form metamorphic rock and then, eroded by wind and rain, compact to form sedimentary rock.

13) This example of sedimentary rock is formed when rock fragments, minerals, and the remains of plants and animals are deposited as sediments and are then

A) chemically weathered by water.

B) compacted and cemented together.

C) recrystalized under the weight of the layers.

D) melted due to increased temperature and pressure.

Explanation:

Sedimentary rocks are formed when sediments are deposited and then compacted and cemented together. Recrystalization is a chracteristic of metamorphic rock. Chemical weathering and the action of water can help produce and deposit sediments.

14) Most fossils are found in what type of rock?

A) igneous

B) lava

C) metamorphic

D) sedimentary

Explanation:

Most fossils are found in sedimentary rock. Since the rock is formed by particles being pressed together, fossils can easily form when an organism is caught between the sediment that will become a rock.

15) Granite is a coarse or medium-grained rock that is rich in quartz and feldspar. It is formed when bodies of magma cool and harden deep below the earth. What type of rock is granite?

A) metamorphic

B) sedimentary

C) extrusive igneous

D) intrusive igneous

Explanation:

Granite is the most common type of intrusive igneous rock.

16) "Metamorphosis" means to change form. Metamorphic rocks directly form from

A) igneous rocks.

B) magma deep within the Earth.

C) igneous, sedimentary, and metamorphic rock.

D) sediments that are compacted and then cemented.

Explanation:

Metamorphic rocks form from igneous, sedimentary, and metamorphic rock. The agents that change pre-existing rocks are heat, pressure, and chemical activity. Sediments form sedimentary rocks; magma forms igneous rocks.

17) The rock in this picture shows foliation. Foliation can develop in a rock as a response to intense heat and pressure. This rock should be classified as

A) banded.

B) igneous.

C) metamorphic.

D) sedimentary.

Explanation:

Foliation is a characteristic of some metamorphic rocks. See how there seems to be lines of different minerals in the rock? That is foliation.

18) Under normal temperature and pressure conditions, what type of rock could be formed from the weathering and erosion of metamorphic rock?

A) lunar rock

B) igneous rock

C) sedimentary rock

D) metamorphic rock

Explanation:

The type of rock formed by the erosion and weathering of any tpe of rock is sedimentary rock. The smaller pieces broken off, or "sediments", come together to form the new, sedimentary rock.

19) Under what conditions can igneous rock be transformed into metamorphic rock?

A) if it is forced deep into Earth, where it melts into magma

B) if it is heated and put under pressure for long periods of time

C) if layers of sand accumulate over it and harden over a period of time

D) if it is exposed at the surface and is weathered over a period of time

Explanation:

An igneous or sedimentary rock would be transformed into a metamorphic rock if it is heated and put under pressure for long periods of time.

20) All mass movements on Earth, landslides, slumps, creep, and avalanches for example, are caused by what action force?

A) gravity

B) inertia

C) friction

D) centripetal force

Explanation:

gravity A force is a push or a pull. On Earth, the force of gravity pulls all objects, rocks, dirt, water, buildings, down towards Earth's center. Friction would slow the movement; greater inertia would require greater force to move or stop an object.

21) Virginia’s Blue Ridge Mountains were once among the tallest in the world, similar in altitude to the Himalayas of today. This would still be the case if not for the process of

A) erosion.

B) folding.

C) volcanism.

D) metamorphism.

Explanation:

The process of erosion gradually wore down the Blue Ridge Mountains to their current size.

22) Weathering is a process that helps make soil. All but one statement describes how rocks may be weathered. That is:

A) Water fills tiny spaces inside a rock.

B) Rock pieces are moved from place to place.

C) Strong winds can blow small grains from the surface of rocks.

D) Living things, like moss and lichens, chemically break down rocks.

Explanation:

Rocks change because of the effects of natural forces like wind, water, as well as moss and lichens. This process takes place over a long period of time. Weathering does not include moving rocks. That is erosion. So the answer choice that does not describe weathering is rock pieces are moved from place to place.

23) How do wind and water change rocks over time?

A) They add minerals to the rocks.

B) They change the shape of the rocks.

C) They increase the mass of the rocks.

D) They build up the rocks with small sand particles.

Explanation:

Wind and water are strong agents of erosion. They change the shape of the rocks.

24) The limestone caves shown here were MOST LIKELY formed by

A) earthquakes

B) wind erosion

C) small volcanoes

D) acidic groundwater

Explanation:

Limestone caves are usually formed by acidic groundwater which dissolves the limestone, forming a cave.

25) Which method would save the MOST water?

A) Turn off the water while brushing your teeth.

B) Remove plants and other vegetation from your yard.

C) Wash cars with a hose rather than a bucket of water.

D) Run only full loads in the washing machine and dishwasher.

Explanation:

Running only full loads in the washing machine and dishwasher can save 300 to 800 gallons of water per month.

26) Which is the BEST way to conserve the Earth's forests?

A) Ride a bike to work.

B) Set up a compost pile.

C) Recycle paper products.

D) Turn down your thermostat.

Explanation:

Paper is products are made from trees, so the best way to conserve the Earth's forests is to recycle paper products. Other methods of forest conservation include passing laws to limit the number of trees that may be cut down and to combat illegal logging.

27) Fossil fuels are the compressed remains of ancient organisms like plants or dinosaurs. They cannot be recycled. Once they are used, they are gone. Which of these is a fossil fuel?

A) corn

B) coal

C) timber

D) sunshine

Explanation:

Fossil fuels are coal, natural gas, and oil—all non-renewable resources. Unlike timber, they do not grow back again.

28) The deforestation of rainforest ecosystems for logging and for farming has had what direct effect on those areas?

A) desertification of the areas

B) a decrease in the average annual temperature

C) the increase of highly fertile topsoil

D) production of a sustainable area of fertile farmland

Explanation:

Desertification of large areas as rainforests do not easily regenerate. Rainforest soil is nutrient poor, as most of the nutrients in a rainforest are in the trees. Rainforest soil makes poor farmland, and trees can take hundreds of years to re-establish the jungle.

29) Coal, oil, and natural gas

A) are renewable natural resources.

B) are in very short supply for consumers.

C) release carbon dioxide when they are burned.

D) are clean fuels that contribute little to pollution.

Explanation:

Coal, oil, and natural gas release carbon dioxide when they are burned and definitely contribute to air pollution.

30) Wind energy is used to rotate the sails of a windmill. The rotating sails have

A) heat energy.

B) kinetic energy.

C) potential energy.

D) electromagnetic energy.

Explanation:

The rotating sails have kinetic energy since they are in motion. Kinetic energy from the moving air or wind is transferred to the sails.