

## Grade 6 Science (GSE) Quiz Answer Key

Formation of Earth's Surface - (S6E5.c) Rock Cycle

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Score: \_\_\_\_\_

1)



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) recrystallized 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**. Recrystallization is a characteristic of metamorphic rock. Chemical weathering and the action of water can help produce and deposit sediments.

2) 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.

3)



This rock appears to have formed in materials deposited in water. It is most likely a/an \_\_\_\_\_ rock.

- A) igneous
- B) metamorphic
- C) pyroclastic
- D) ***sedimentary***

**Explanation:**

This picture shows two types **sedimentary** rock, limestone and shale. Sediment deposits in water.

4)

Sedimentary rock formation occurs when igneous, metamorphic, or other sedimentary rocks are exposed to the unyielding forces of nature found on the Earth's surface. The formation of sedimentary rock occurs by several processes over millions of years.

Rock sediments are carried to other places by the wind, running water, and gravity. As these forces lose energy settling takes place. The sediments settle out of the air or water in rock particles graded by size with heavier pieces settle out first. Which term of describes this process of sedimentary rock formation?

- A) ***Deposition***

- B) Lithification
- C) Physical weathering
- D) Chemical weathering

**Explanation:**

**Deposition** is the processes where particles of rock are laid down in sections with heavier sediments building up first.

5) Slate is a fine grained rock composed of tightly packed layers. Most slate was originally some type of shale. What process formed slate?

- A) erosion
- B) metamorphism**
- C) sedimentation
- D) volcanism

**Explanation:**

The tightly packed layers of slate are formed through the process of **metamorphism**. Shale metamorphoses into slate.

6) Shale is formed from clay, silt or mud particles that have been compacted together by pressure. What type of rock is shale?

- A) metamorphic
- B) sedimentary**
- C) extrusive igneous
- D) intrusive igneous

**Explanation:**

Shale is a common **sedimentary** rock. Shale is often used to make bricks.

7)



Jill's class is studying how rocks are formed. Jill's teacher showed them a picture of a type of rock. Then, Jill's teacher made a peanut butter and jelly sandwich and explained that one type of rock is formed when layers of sediment are squeezed and cemented together. After the rock is formed, you can still see the layers in the rock.

What type of rock was Jill's teacher trying to help them remember by making a peanut butter and jelly sandwich?

- A) mineral rock
- B) igneous rock
- C) metamorphic rock
- D) ***sedimentary rock***

**Explanation:**

**sedimentary rock**

Sedimentary rock is formed when layers of rock are squeezed and cemented together. This process takes millions of years.

8) Scot has a 50 g sample of sandstone. The sandstone is formed by sedimentation, compaction, and cementation of 50-g of sand particles. Based on this information, what can Scot conclude?

- A) ***Mass is conserved in the rock cycle.***
- B) The structure of sand remains the same.
- C) The sand retains its properties within sandstone
- D) The volume of the parts is conserved in the rock cycle.

**Explanation:**

Sandstone of a particular mass is formed from an equal mass of sand during the rock cycle. The mass of the system remains the same during the change and Scot can conclude **mass is conserved during the rock cycle.**

9) A big rock is weathered over many years by a river, until only small pebbles remain. The mass of all the pebbles is less than the mass of the rock. What PROBABLY happens to the rest of the rock?

- A) It evaporates
- B) It is destroyed
- C) It dissolves in water
- D) ***It is converted to soil***

**Explanation:**

Matter cannot be created or destroyed under normal conditions. The big rock is weathered by the river water and goes through wear and tear because of its motion, and finally turns into gravel. So the lost part of the rock has been **converted to soil.**

**10)**

Sedimentary rock formation occurs when igneous, metamorphic, or other sedimentary rocks are exposed to the unyielding forces of nature found on the Earth's surface. The formation of sedimentary rock occurs by several processes over millions of years.

When rock sediments are deposited, an increase in weight causes pressure to increase which leads to the compaction of the rock particles. Water is pushed out

and cementation occurs as dissolved minerals are deposited in the very small spaces between the rock sediments acting as glue that binds the sediments together. Which process describes the changing of sediments into rock by compaction and cementation?

- A) Deposition
- B) *Lithification***
- C) Physical weathering
- D) Chemical weathering

**Explanation:**

**Lithification** is the processes where rock particles are compacted and cemented together from pressure to form sedimentary rock.