6th Grade Science – Unit 1 Assessment: Natural Resources, Rocks, and Minerals

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

Natural Resources:

1. Fossil fuels are nonrenewable sources of energy that form over millions of years from the remains of organisms. Which choice is NOT a fossil fuel?
   a. Coal
   b. Natural gas
   c. oil
   d. solar energy

2. Which of these describes a way that people can conserve water?
   a. Do laundry at night instead of in the morning.
   b. Swim in a pool for shorter periods of time.
   c. Turn off the faucet in between washing dishes.
   d. Run the dishwasher and the washing machine at different times.

3. Nearly all cars run on gasoline, which is made from oil. Why will cars have to change in the future?
   a. Oil will have a high tax, so people won't want to use it anymore.
   b. Oil is a renewable resource, so we will eventually run out.
   c. Eventually, people will get tired of cars.
   d. We are running out of the trees that make oil.

4. Which one of these is NOT an inexhaustible resource?
   a. Soil
   b. Sunlight
   c. wind
   d. ocean waves

5. Which one of these is a renewable resource?

   a. 
   b. 

   c. 

   d. 

6. Trees are easy to grow. Why might a living 500-year-old redwood tree be considered a nonrenewable resource?
   a. It will turn into coal.
   b. It can turn into charcoal.
   c. It will take a very long time to replace.
   d. A tree can be planted to replace it.

7. What is the main difference between renewable and inexhaustible resources?
   a. Renewable resources can never be used up, while inexhaustible resources can.
   b. Inexhaustible resources can never be used up, while renewable resources.
   c. Renewable resources originate on Earth, while inexhaustible resources come from elsewhere.
   d. Inexhaustible resources originate on Earth, while renewable resources come from elsewhere.

8. Which of the following energy sources does NOT ultimately rely on the sun?
   a. Solar energy
   b. Geothermal energy
   c. energy in animals
   d. wind energy

Minerals:

9. Which mineral property describes the way a mineral reflects light?
    a. Cleavage
    b. Effervescence
    c. luster
    d. streak

10. What is the relationship between rocks and minerals?
    a. Rocks are made up of one or more types of minerals.
    b. Minerals are made up of one or more types of rocks.
    c. Rocks are on the surface of Earth, and minerals are underground.
    d. Rocks and minerals are different names for the same thing.

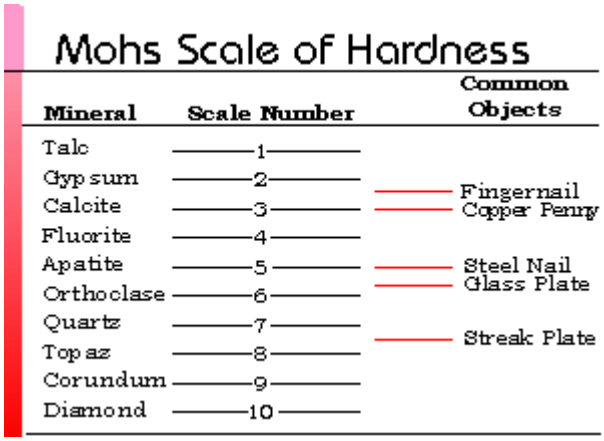
11. Which is NOT a mineral part of the soil?
    a. Sand
    b. Silt
    c. rotting leaves
    d. rocks

12. Why is Mohs' scale NOT very useful for identifying rocks?
    a. Rocks are too hard to be scratched by any material.
    b. Mohs' scale is designed for use with living things, not inanimate objects.
    c. Rocks are made of collections of different minerals, and each mineral could have a different hardness.
    d. Sedimentary rocks crumble too easily for Mohs' scale to be useful.

13. You are trying to determine whether a sample is a mineral. Which of these characteristics might mean the sample is a mineral?
    a. It is a living thing.
    b. It exists in a liquid state.
    c. It is a natural substance.
    d. It has a varying chemical makeup.

14. Which question is LEAST useful to ask if you want to identify a mineral?
    a. What color is the mineral?
    b. What color is the mineral's streak?
    c. How hard is the mineral?
    d. What are the mineral's special properties?

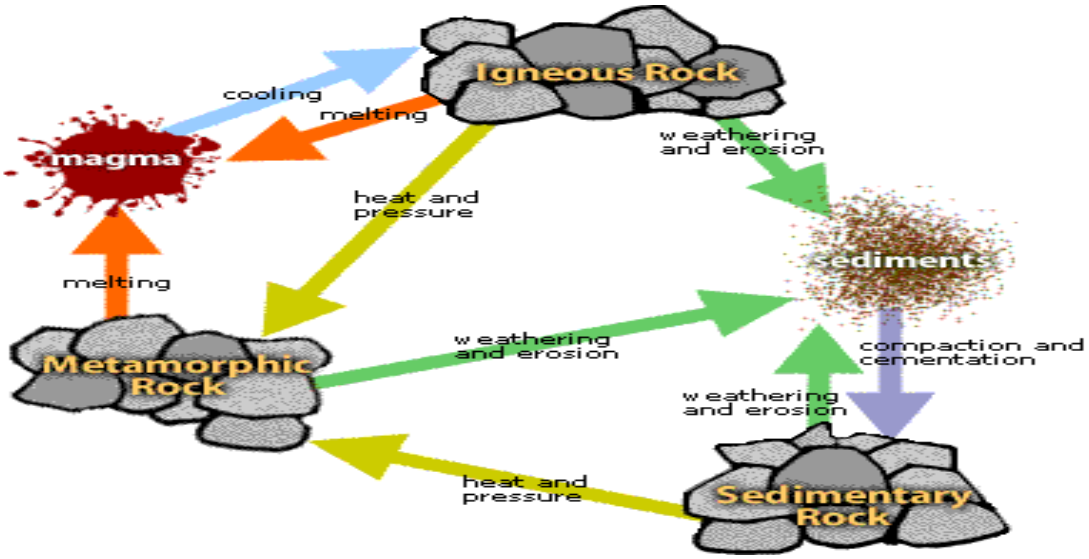
Use the table below to answer question 15.



15. Which substances are harder than apatite, but softer than corundum?
    a. Fluorite and quartz
    b. Topaz and quartz
    c. diamond and quartz
    d. talc and gypsum

Rock Cycle:

Use the diagram below to answer questions 16-19.



16. Which process results in rock changing into magma?
    a. Weathering and erosion
    b. Melting
    c. Cooling
    d. compaction and cementation

17. Which process pictured results in the formation of metamorphic rock?
    a. Weathering and erosion
    b. Heat and pressure
    c. melting and cooling
    d. compaction and cementation

18. Which rock forms from sediments that become compacted and cemented together?
    a. Igneous
    b. Magma
    c.
    c. metamorphic
    d. sedimentary

19. Which type of rock weathers to become sediment?
    a. Igneous
    b. Sedimentary
    c. metamorphic
    d. all rocks can weather to form sediment

20. Which of the following is a role of Earth's water system in the formation of rocks?
    a. It supplies the magma to make rocks.
    b. It applies pressure to and changes existing rocks.
    c. It weathers existing rocks and transports sediment.
    d. It changes the nature of minerals.

21. Which of the following transitions does NOT happen in the rock cycle?
    a. Weathering and erosion change igneous rock into sediment.
    b. Heat and pressure change igneous rock into metamorphic.
    c. Weathering and erosion change metamorphic rock to sediment.
    d. Heat and pressure convert metamorphic rock to igneous rock.

22. New rocks form all of the time as lava and magma cool at Earth's surface. Why isn't the world overrun by rocks?
    a. Volcanoes explode.
    b. Sedimentary rocks change into metamorphic rocks.
    c. Igneous rocks are broken into sediments.
    d. Existing rocks move deeper inside the Earth's surface and melt back into magma.

Rocks 1:

23. What processes combine to form an igneous rock?
    a. Melting and cooling magma or lava
    b. Compaction and cementation of sediments
    c. Heat and pressure changing a rock
    d. Chemical reactions changing a rock

24. What type of material would MOST likely be found in the ocean floor at a divergent plate boundary where magma rises up and cools?
    a. Sedimentary rock
    b. Fossils
    c. soil
    d. igneous rock

25. The size of crystals in an igneous rock can be determined by how fast the magma cools and solidifies. Which type of igneous rock would produce the largest crystals?
    a. Intrusive igneous rocks because the magma cools off very quickly and does not allow the mineral grains to collect.
    b. Intrusive igneous rocks because the magma cools off very slowly and allows the mineral grains to collect.
    c. Extrusive igneous rocks because the magma cools off very quickly and does not allow the mineral grains to collect.
    d. Extrusive igneous rocks because the magma cools off very slowly and allows the mineral grains to collect.

26. Cooling lava forms
    a. Magma
    b. Intrusive igneous rock
    c. extrusive igneous rock
    d. metamorphic rock

27. Stone Mountain is the largest exposed piece of granite in the world. It formed as a result of an upwelling of magma in the asthenosphere. The magma hardened to granite found below the Earth's surface. Which of the following terms describes Stone Mountain?
    a. A volcano
    b. Intrusive igneous rock
    c. extrusive igneous rock
    d. a guyot

Rocks 2:

28. Limestone is a sedimentary rock. During the rock cycle, limestone is changed into marble, a metamorphic rock. The processes that act on limestone to change it into marble are
    a. Weathering and erosion
    b. Heat and pressure
    c. compacting and cementing
    d. melting, cooling, and hardening

29. Some magma hardens and then it is exposed to intense heat and pressure. This is an example of
    a. A sedimentary forming and then changing into a metamorphic rock
    b. An igneous rock forming and then changing into a metamorphic rock
    c. A metamorphic rock forming and then changing into an igneous rock
    d. An igneous rock forming and then changing into a sedimentary rock.

30. Which of the following sequences of events would create a metamorphic rock?
    a. Erosion, deposition, cementation, heat and pressure
    b. Heat and pressure, melting, cooling
    c. Cementation, heat and pressure, erosion
    d. Deposition, erosion, cooling

31. Where would a metamorphic rock MOST LIKELY form?
    a. Near a volcano
    b. Deep inside the Earth's crust
    c. In bodies or water
    d. On the surface of Earth

32. The rock cycle describes the pattern of changes that occur as one rock is transformed into another. Gneiss is a metamorphic rock that may form from the igneous rock granite. Gneiss is known for its banded appearance as its minerals line up in ribbon-like layers. What type of metamorphic rock is Gneiss?
    a. Foliated
    b. Nonfoliated
    c. extrusive
    d. intrusive

33. Which of the following is NOT necessary to form metamorphic rocks?
    a. Sediments
    b. Heat
    c. pressure
    d. chemical reactions

<u>Rocks 3</u>:

34. Limestone and sandstone are examples of sedimentary rock because they form as
    a. Magma or lava cools
    b. Heat a pressure change a rock
    c. Sediments are compacted and cemented together
    d. Air bubbles settle out of lava

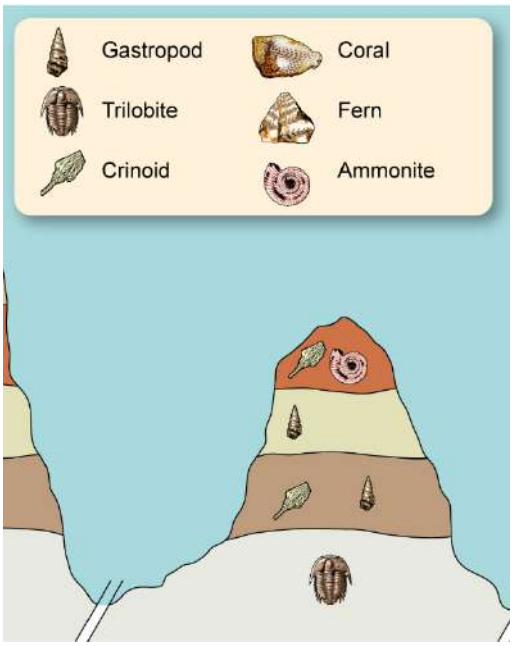
35. Which of the following shows the correct order of events in the formation of a sedimentary rock?
    a. Weathering, erosion, deposition, cementation
    b. Weathering, cementation, erosion, deposition
    c. Erosion, cementation, deposition, weathering
    d. Cementation, weathering, transportation, erosion

36. The Grand Canyon formed over millions of years. Its walls are made of layers of different sedimentary rocks. What does each layer represent?
    a. A time of volcanic eruptions
    b. The direction of plate movement
    c. The type of magma in the area
    d. A period of deposition

37. Where are most fossils found?
    a. On beaches
    b. In sedimentary rocks
    c. In igneous rocks
    d. In metamorphic rocks

38. Coquina is a rock made of sand and bits of seashells cemented together. What kind of rock is coquina?
    a. Igneous rock
    b. Magma rock
    c. Metamorphic rock
    d. Sedimentary rock.

Use the diagram below to answer question 39.



39. The picture shows four layers of undisturbed sedimentary rock. Based on the picture, which conclusion is MOST LIKELY correct?
    a. The Trilobite is older than the Gastropod but younger than the Ammonite.
    b. The Trilobite is older than the Gastropod and the Crinoid.
    c. The Ammonite is the oldest fossil found in the rock.
    d. The Trilobite is the youngest fossil found in the rock.

Short Answer: Answer the questions on the **BACK** of your answer sheet:

40. Use the RACE strategy to explain why sedimentary rocks are where fossils are mostly found.

    R: Restate the question
    A: Answer the question
    C: Cite your evidence
    E: Explain your evidence

Use the pictures below to assist you with answering question 41.

Solar Panel


wind farm

What do the two images have in common? List advantages and disadvantage of each. **Use the RACE strategy when answering!!!**