Rock Cycle Test Your Knowledge Introductory Level

Please feel free to adapt the Test your Knowledge questions or answer choices to best serve your students. The short answers in question number 1- 6 can be expanded or answered in shorter form. The explanations only present the basic information to answer the question. Students should be encouraged to add diagrams and examples to their explanations.

Igneous Level 1:

1. Describe how a new igneous rock is formed?
   An old rock melts or turns into a liquid called magma or lava. Then the melted rock has to cool down and harden into a new igneous rock.
2. Solidification of igneous rocks is also called? Explain Why
   Crystallization because to a scientist a solid rock is made of crystals. If an igneous rock has enough time to cool and harden crystals will form.
3. Name two different types of volcanic glass
   Obsidian, Pumice and Scoria are all types of Volcanic glass
4. Name one type of igneous rock that contains vesicles.
   Any igneous rock that has holes in it that are formed from escaping trapped gases has vesicles. Some examples are Pumice, Scoria and Vesicular basalt
5. What types of rocks can be changed into an igneous rock?
   a. igneous b. sedimentary c. metamorphic d. all of the above
6. Compare and contrast Basalt and Granite
   Both Basalt and Granite are igneous rocks. Granite cools slowly and has large crystals. Basalt cools quickly and has tiny crystals. Granite forms deep under the surface of the earth. While Basalt forms in thin layers near the surface of the earth.
7. Draw the two steps in igneous process in the rock cycle

Sedimentary Rock Level 1:

1. How are sediments formed?
Rocks are broken into smaller pieces or are dissolved by acids to form pebbles, dirt, sand or minerals in water.
2. Give one reason why sediments have to be buried before a new sedimentary rock can form? If sediments are left uncovered they will move away and not form new rock. Water could wash it away or wind could blow it to a new location.
3. Describe how sediments are compacted. Support your answer with an example
   Mud can be squeezed by layers of soil or still water on top. Mudstone and shale can be formed by compaction.
4. Explain how conglomerates are formed by cementation.
   When natural glue like calcium carbonate, silica or iron oxide goes between pebbles and dries a conglomerate is made.
5. Can living things make sedimentary rocks? Support your answer with an example.
   Some Limestone can be made by ocean animals like coral Chalk is made from tiny sea creatures. Coal is made from compacted plants. It is a fossil fuel.

Also draw the 5 steps of the sedimentary process in the rock cycle

Metamorphic Rock Level 1:

1. Explain what metamorphism means. Support with an example.
Metamorphism means a total change. Examples are a caterpillar changing into a butterfly or a tadpole into a frog or granite turning into gneiss or limestone into marble.
2. Name one place where metamorphic rock is formed
inside mountains or deep under the earth is where metamorphic rock is formed. (Also impact craters and in small amounts deep in fault zones) Accept any place where there is a combination of heat and pressure
3. How can pressure help to change rock?
Rock surrounding other rocks can squeeze them and make the minerals move to form larger crystals or to move into stripes.
4. Name one metamorphic rock that does not show a sign of banding. What rock was it made from? Marble is made from limestone or quartzite is made from sandstone. Neither have stripes,
6. Compare and contrast heat in the formation of igneous rock with the formation of metamorphic rock. Heat is apart of the formation of both igneous and metamorphic rock but in igneous rock the rock melts or turns into a liquid while in metamorphic rock the rock just warms up. Igneous rock is like an ice cube heated in a pan on the stove. Metamorphic rock is like heating up a Kid's Cuisine meal in the oven. If it melts you cooked it too long. If you make smores you heat the marshmallows and chocolate until they begin to get soft and then squeeze the graham crackers together.
Draw the steps in the metamorphic process in the rock cycle.