



WOW! on Wheels – STEM Labs
EARTH SCIENCE ROCKS!

Activity 4: Unknown Answer Key – Answer Key

Igneous rocks:

- | | |
|-------------|-------------------------------|
| 1. Basalt | (Somerset County, New Jersey) |
| 2. Gabbro | (Duluth, Minnesota) |
| 3. Granite | (St. Cloud, Minnesota) |
| 4. Rhyolite | (Castle Rock, Colorado) |

Sedimentary Rocks:

- | | |
|-----------------|---------------------|
| 5. Sandstone | (Potsdam, New York) |
| 6. Limestone | (Leroy, New York) |
| 7. Shale | (Bethany, New York) |
| 8. Conglomerate | (Olean, New York) |

Metamorphic Rocks:

- | | |
|---------------|-----------------------------|
| 9. Gneiss | (Uxbridge, Massachusetts) |
| 10. Quartzite | (Dell Rapids, South Dakota) |
| 11. Marble | (Tate, Georgia) |
| 12. Schist | (Manhattan, New York) |



Igneous Rocks:

Basalt is a fine-grained, dark-colored extrusive igneous rock. Extrusive rocks form when magma flows out to the surface (extrudes) and becomes lava that cools into rock or explodes out into the atmosphere and falls to the earth as rock.

Gabbro is a coarse-grained, dark-colored, intrusive igneous rock that contains feldspar, pyroxene, and sometimes olivine. Intrusive rocks cool slowly without ever reaching the earth's surface first. These rocks often have a coarse, crystal like texture.

Granite is a coarse-grained, light-colored, intrusive igneous rock that contains mainly quartz, feldspar, and mica minerals

Rhyolite is a light-colored, fine-grained, extrusive igneous rock that typically contains quartz and feldspar minerals.

Sedimentary Rocks:

Sandstone is a clastic sedimentary rock made up mainly of sand-size (1/16 to 2 millimeter diameter) weathering debris. Environments where large amounts of sand can accumulate include beaches, deserts, flood plains, and deltas.

Limestone is a rock that is composed primarily of calcium carbonate. It can form organically from the accumulation of shell, coral, algal, and fecal debris. It can also form chemically from the precipitation of calcium carbonate from lake or ocean water. Limestone is used in many ways. Some of the most common are: production of cement, crushed stone, and acid neutralization.

Shale is a clastic sedimentary rock that is made up of clay-size (less than 1/256 millimeter in diameter) weathering debris. It typically breaks into thin flat pieces.

Conglomerate is a clastic sedimentary rock that contains large (greater than two millimeters in diameter) rounded particles. The space between the pebbles is generally filled with smaller particles and/or a chemical cement that binds the rock together.



Metamorphic Rocks:

Gneiss is a foliated metamorphic rock that has a banded appearance and is made up of granular mineral grains. It typically contains abundant quartz or feldspar minerals.

Quartzite is a non-foliated metamorphic rock that is produced by the metamorphism of sandstone. It is composed primarily of quartz.

Marble is a non-foliated metamorphic rock that is produced from the metamorphism of limestone or dolostone. It is composed primarily of calcium carbonate.

Schist is a metamorphic rock with well-developed foliation. It often contains significant amounts of mica which allow the rock to split into thin pieces. It is a rock of intermediate metamorphic grade between phyllite and gneiss.