



# Houston Gem and Mineral Society & Texas Earth Science Teachers Association

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## KEY FOR ROCK CYCLE SPECIMENS (please see photo at bottom of article)

1. **BLACK SHALE**, a sedimentary rock formed from mud and clay by burial at depth in the earth.
2. **LIMESTONE**, a sedimentary rock composed of calcite (calcium carbonate) and formed on the sea bottom from the remains of animals with calcium carbonate shells and from direct precipitation from the seawater.
3. **SANDSTONE**, a sedimentary rock composed mostly of quartz grains but also sometimes containing grains of other minerals and rock fragments. It forms from sand sized particles.
4. **DOLOSTONE (dolomite)**, a sedimentary rock composed of dolomite (calcium-magnesium carbonate), which forms from and with limestone.
5. **GRANITE**, an igneous rock composed mostly of light colored silica minerals, which forms from the cooling of magma deep in the earth.
6. **RHYOLITE**, an igneous rock with a similar composition to granite. It is formed at or near the earth's surface, so the rapid cooling results in tiny individual mineral grains that can only be seen with a microscope.
7. **BASALT**, an igneous rock formed by lava on the earth's surface. It is composed of dark colored calcium rich minerals and less silica than the light colored igneous rocks. Trapped gases form vesicles when the lava cooled.
8. **GABBRO**, a dark colored igneous rock with a similar composition to basalt but formed at depth in the earth. The deeper the magma is and the slower it cooled, the larger the crystals will be.
9. **MARBLE**, a metamorphic rock formed when limestone is recrystallized by heat and pressure deep within the earth.
10. **QUARTZITE**, a metamorphic rock formed when sandstone is subjected to heat and pressure deep within the earth.
11. **SLATE**, a metamorphic rock formed from shale by heat and pressure in the earth.
12. **SCHIST**, a metamorphic rock formed when slate is subject to more intense heat and pressure. The individual minerals are recrystallized and are visible.
13. **SAND**, from a riverbed. It is composed of quartz grains, small amounts of other minerals and rock fragments. It forms when rocks decompose.
14. **CLAY**, from a bay bottom. Clay forms when feldspar and other minerals decompose and the residue is carried by water or wind to quiet areas where it settles to the bottom.
15. **SOIL** is a mixture of sand, clay and organic materials. It is what supports much of our tree and plant life.



**This photograph is representative, but does need to be updated.**