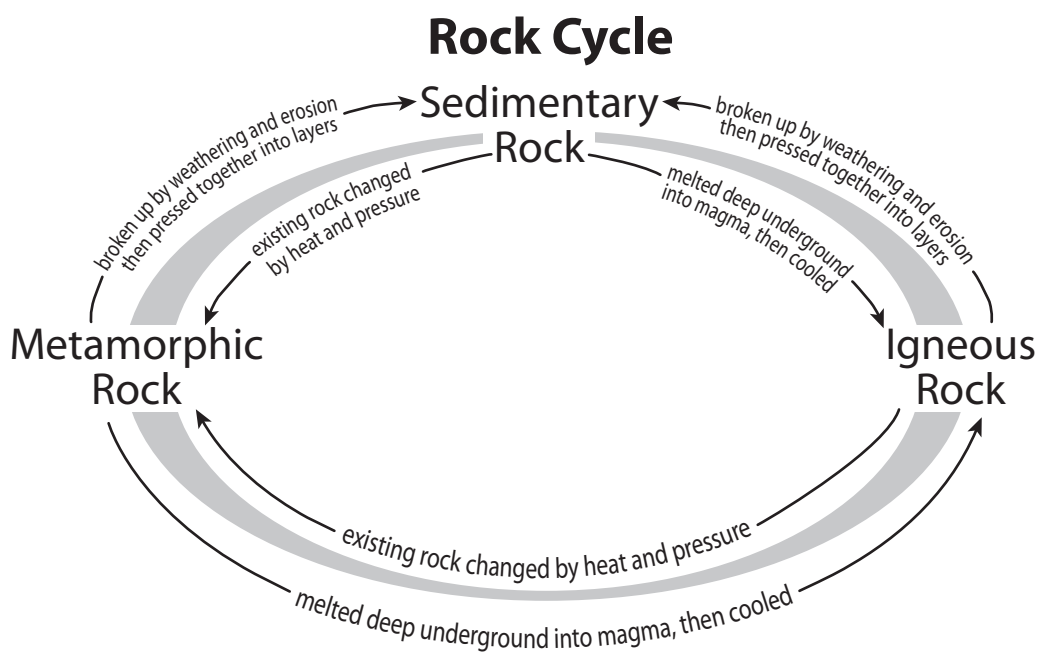




READ and REMEMBER: Rock Cycle

SOL 5.7.a

There are three different kinds of rock: sedimentary, igneous, and metamorphic. The **rock cycle** is the process by which rocks are created, and by which one type of rock can become another.



Rock type	How it's made	Examples
Metamorphic rock	Heat and pressure change the physical and/or chemical makeup of sedimentary or igneous rock.	gneiss, slate
Sedimentary rock	Rock particles (broken down by weathering and erosion) build up and are pressed together. Sedimentary rock is the rock equivalent of particle board: particles "glued" together. Note that some sedimentary rock can be <i>very</i> hard, like flint.	limestone, flint, sandstone, shale, coal
Igneous rock	Rock melts underground, turning into magma (melted rock underground is magma; melted rock above the surface is lava). The molten rock then cools, either above or below ground.	basalt, granite



A rock classification key can help you identify different kinds of rocks.

Rock	Composition	Grain size	Features	Color	Fossils?
Granite (igneous)	Quartz, feldspar	Medium-coarse	Very hard	Pink, dark gray, black	no
Basalt (igneous)	Feldspar, pyroxene, olivene	Fine	Hard; created by volcanoes	Gray to black	no
Gneiss (metamorphic)	Feldspar, quartz, mica	Medium-coarse	Layers	Light and dark stripes	no
Slate (metamorphic)	Clay, shale	fine	Splits into thin sheets	Dark bluish-gray	no
Limestone (sedimentary)	Calcium carbonate	Fine	Made of shells	White, gray	yes
Shale (sedimentary)	Clay, silt, mud	Fine	Splits into thin sheets	Black, gray, red	often
Sandstone (sedimentary)	Sand, silica	Medium-coarse	Porous	Yellow, red, brown, grey	often
Coal (sedimentary)	Carbonized plants	Fine	Used for fuel	Black	yes
Anthracite coal (metamorphic)	Coal that has been altered by high temperature and pressure; harder than common coal.				

As you can see from the chart, fossils are only found in sedimentary rock. Why? The high heat and pressures involved in creating igneous and metamorphic rock destroys them.

Another fact about sedimentary rock: it often has layers or bands in it. This is because the sediments that make it up are themselves often set down in layers. For example, spring floods may deposit a layer of sediment each year, which eventually becomes sedimentary rock. Other rock types may also show layers but they are especially common in sedimentary rocks.