

Sedimentary Rocks

Sedimentary rocks are formed on the earth's surface from broken-down pieces of other rocks that have been squeezed (compressed) and cemented together.

Weathering and Erosion

So how does rock become broken down in the first place to form the sediments that make up sedimentary rocks?

Over millions of years, water, wind, heat, and ice wear the rock down causing it to fall apart. This process is called **weathering**.

Over time, the weathered bits of rock are carried by streams, rivers, wind, or glaciers (moving ice) away from the large rock that formed them. This process is called **erosion**.

The weathered bits of rock are carried until they can't be moved any farther. They pile up into a big pile. The weathered rocks are called **sediments**. The pile is called a **sediment bed**. Sediment beds are often found at the *bottom* of lakes, streams, and the ocean. (*Note*: This is still considered *on the earth's surface* even though it is under water.)

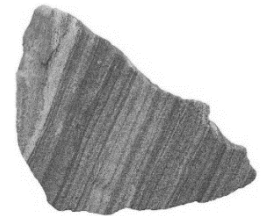
How the Rocks Form

Slowly, the layer of sediment on the bottom of lakes, and especially on the bottom of the ocean, grows deeper and deeper, reaching depths of thousands of feet. The weight of all the sediment becomes immense, pushing down on lower layers of sediment with tremendous force. In addition, a number of minerals, which act like cement, bond the sediment together, causing it to form sedimentary rock.

Examples of Sedimentary Rocks

Common sedimentary rocks include sandstone, shale and conglomerate.

Sandstone is sedimentary rock formed from sand-sized particles of sediment. It is probably the most commonly found sedimentary rock in the world. The natural arches, pillars, pedestals and other amazing rock formations found in southern Utah are formed of sandstone.



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Types of Rocks

Shale is commonly known as *mudstone*. It is made up of very tiny mineral particles (much smaller than the sand-sized grains that make up sandstone). A piece of shale will usually split easily into thin layers.



← **Conglomerate** rock is made from pebbles or gravel-size particles of sediment. The large individual bits of sediment that form the conglomerate are usually easy to see.

Limestone is a sedimentary rock that is made up of bits of marine animal shells (rather than pieces of other rock). Over millions of years these shells collected on the ocean floor. As layers of shells built up, the lower layers get crushed and slowly hardened into limestone. Chalk (that you write and draw with with) is a type of limestone.

