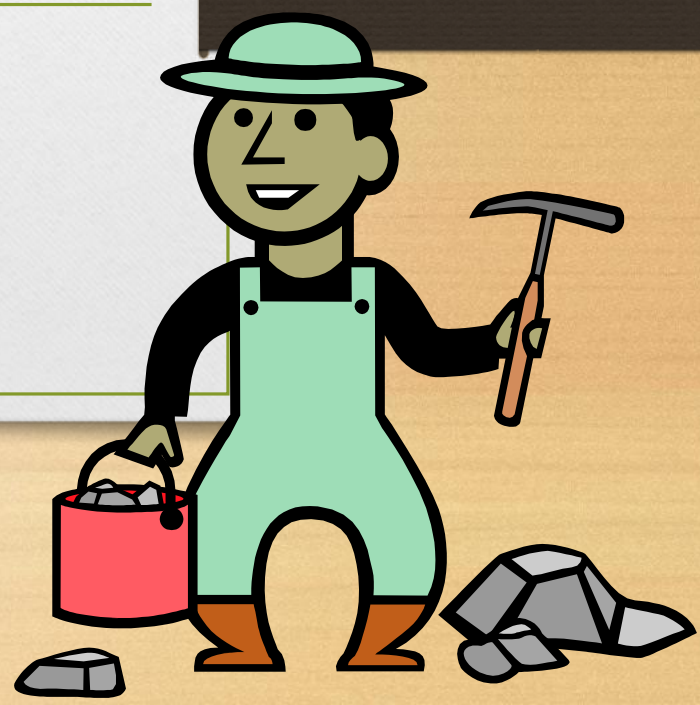
Sedimentary Rocks

Third Grade Field Guide

Source: AIMS

Science Specials - Askew

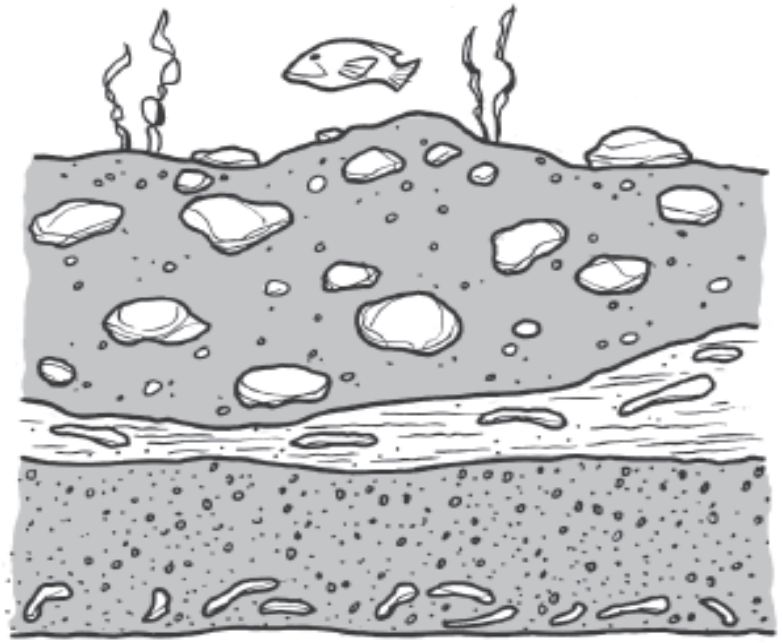


All About Sedimentary Rocks

Sedimentary rocks are made of sediment.

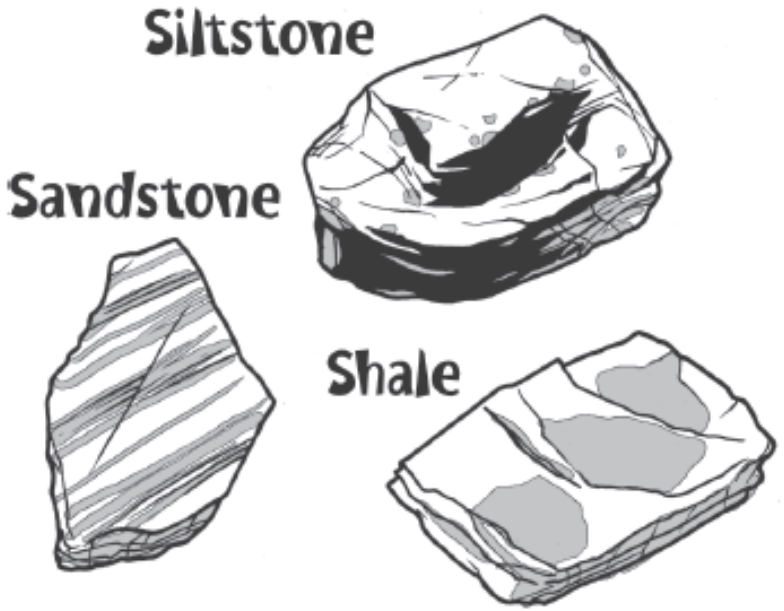
Sediment can be lots of things. It can be pieces of other rocks. It can be minerals. It can be parts of once-living things.

Sediments are moved by water and wind. They pile up in layers.

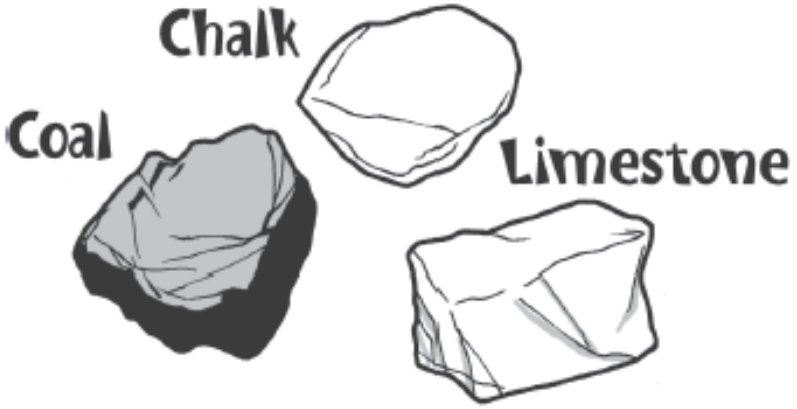


Sometimes these layers are on land. Often they are at the bottom of an ocean, river, or lake. Over time, the layers of sediment become rock.

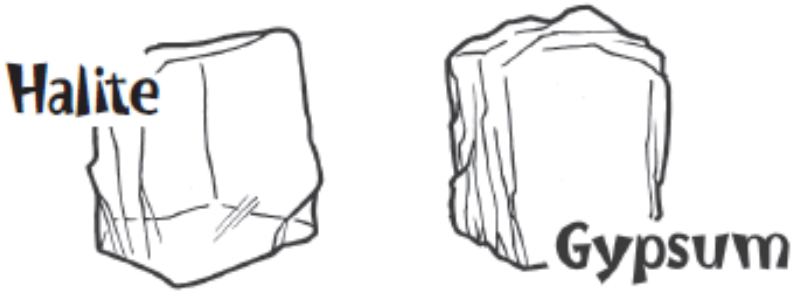
There are different kinds of sedimentary rock. Some are made up of different size sediments.



Sandstone, shale, and siltstone are this kind of rock.



Others are made of once-living things. Coal, chalk, and most limestone are this kind of rock.



Some are made from minerals left behind when water evaporates. Halite and gypsum are this kind of sedimentary rock.

Sandstone

Type of rock
Sedimentary

Minerals common to it
Quartz and feldspar

Where it forms
Sandstones form in regions where quartz sand particles are deposited and buried under layer after layer. This deposition can take place along the coast, in a river, or in a desert.

Fascinating Factoids
Sandstones are often used by geologists to tell about what past environments of the Earth were like. Deep layers of sandstone tell us that this region was once a desert. Horizontal layers show how the sand accumulated in calm water. Aquifers can often be found in sandstone rock formations. Aquifers in sandstones filter out pollutants. Sandstones are often used as building materials.

Breccia

Type of rock
Sedimentary

Minerals common to it
Almost any mixture of any minerals

Where it forms
Breccias form when rock fragments are cemented together with silicas, calcite, and iron oxides. The rock particles in breccias are sharper than those in conglomerates because water, wind, or glaciers have not transported them as long. Breccias often form nearest the land where a river empties into an ocean or large body of water.

Fascinating Factoids
The Greeks used breccias as a decorative building material. Breccias today are often used to make jewelry.

Shale

Type of rock
Sedimentary

Minerals common to it
Quartz

Where it forms
Shale forms when tiny clay particles settle on the bottom of bodies of water. The clay particles are pressed together by the pressure from the weight of the other particles above as well as the weight of the water.

Fascinating Factoids
Shale often contains fossils. Some shale contains oil. Shale can be finely ground and used as filler in paints, plastics, asphalt compounds, roofing cement, and some linoleum.

Limestone

Type of rock
Sedimentary

Minerals common to it
Calcite, dolomite, and aragonite

Where it forms
Limestone forms in a shallow sea when layers of shells and skeletons of small marine animals are buried and compressed. Over time, the layers turn to rock.

Fascinating Factoids
Limestone often contains fossils. Chalk is a soft, fine-grained fossiliferous limestone that is composed of the remains of tiny marine shells called foraminifera. The main use of limestone is to make cement. Limestone has many other uses. It is used to make lime and in the manufacture of paper. It is also used in insecticides, linoleum, and fiberglass. It is used in the backing for some carpets.

Conglomerate

Type of rock
Sedimentary

Minerals common to it
Almost any mixture of any minerals

Where it forms
Conglomerates form when rock fragments are cemented together with silicas, calcite, and iron oxides. The rock particles in conglomerates are rounded. This is a result of them being transported by water, wind, or glaciers. Conglomerates form when a river empties into an ocean or large body of water.

Fascinating Factoids
Conglomerates are used in building roads as well as the roadbed for railroad tracks. Some conglomerates are used for decorative purposes. Conglomerates often look like broken pieces of concrete.