

Sedimentary Rocks



***"Putting rocks back
together for 3.8 billion
years."
-Mother Nature***

Sedimentary rocks are formed on or near Earth's surface from sediment (clastic sedimentary rock) or from minerals that are precipitated from sea water (chemical sedimentary rock).

Check out the formation process for clastic rocks below!

Step 1: Weathering

Rocks are broken down into **sediment** (small pieces of rocks or minerals) by weathering processes. **Mechanical** weathering breaks bigger rocks into smaller rocks without altering the rock's chemistry. **Chemical** weathering breaks down rocks using water and oxygen.



Step 2: Erosion

Now that the rocks have been broken down into sediment, it's easier for water, wind, ice, and gravity to move it from its original location.

Step 3: Transport

Sediment can be transported from its place of origin in many transport mediums. Mechanically weathered sediment can be transported by surface water, wind, gravity, or even ice. Chemically weathered rocks will have their dissolved minerals transported in water (surface water and/or groundwater).

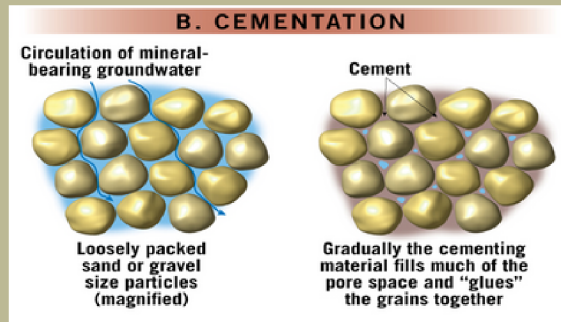
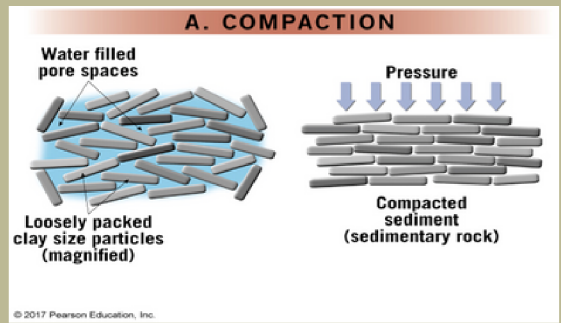


Step 4: Deposition

Flowing water eventually meets a still body of water or a basin where the sediment falls out of the water and is deposited. Deposition can occur in many places: the ocean, a delta, a beach, a mountain lake, a tidal flat, or a lagoon.

Step 5: Lithification

Over time, deposited sediment will be buried, compressed under the weight of overlying materials, and be lithified - the process by which sediment is transformed into solid sedimentary rock. Lithification occurs by two processes: compaction and/or cementation.



A rock is born!

Types of Sedimentary Rocks

Clastic

Form from solid pieces of sediment

Conglomerate



Sandstone



Shale



Chemical

Form from precipitated minerals in sea water

Limestone



Gypsum



Chert



Just a few examples...



Fun Fact!

Fossils are found only in sedimentary rocks. Heat, pressure & melting makes it impossible for fossils to survive in igneous & metamorphic rocks