Sedimentary Rocks

Weathering – the breakdown of rocks, minerals and earth structures

Mechanical weathering breaks things down into smaller pieces. Increases surface area.
Sedimentary Rocks

Weathering – the breakdown of rocks, minerals and earth structures

Mechanical weathering breaks things down into smaller pieces. Increases surface area.

Chemical weathering breaks things down chemically – taking apart the chemical structure of the material.
Sedimentary Rocks

Weathering – the breakdown of rocks, minerals and earth structures
Chemical weathering breaks things down chemically – taking apart the chemical structure of the material.

As rocks break down into smaller and smaller piece, they get transported (by wind, water, waves and ice) to other places where they CAN get deposited, consolidated (compacted) and cemented (lithified) into sedimentary rocks.
Sedimentary Rocks

The places where sediments get deposited are called “environments of deposition”. Sediments may or may not reside long enough in environments of deposition to be converted to rocks. The process takes very long periods of time.

Identifying Sedimentary Rocks

Sedimentary rocks are characterized according to their grain size, their chemical composition, or whether or not they are organic in origin.

Detrital sedimentary rocks characterizes sedimentary rocks according to how large or small the grains in the rock are.
Chemical Sedimentary Rocks

Chemical sedimentary rocks are derived from the material that is carried in solution to lakes and seas. This material does not remain dissolved in the water indefinitely. When conditions are right, it grows (precipitates) to form chemical sediments.

The most abundant types are carbonates (limestones primarily) which are cemented together with calcium carbonate (CaCO₃).

Other chemical types include the evaporites (rock salt, gypsum) and chert (SiO₂).

Finally there is coal – a sedimentary rock that is made up of organic material. Coal has so much carbon in it that we can burn it (we do this to make electricity in the US).
Geologic history and sedimentary rocks

While all rocks give clues to geologists about their origins and environments of formation, it's the sedimentary rocks that contain the history of life, climatic conditions, and landscape changes.

The Department also plans to informally recruit applicants at the Annual Meeting.

finis
Links
Sedimentary structures

Photos by Frank Hanna