

Stratigraphic Layers & the Fossil Record

Life Science (Lower Middle)
Unit 5

Stratigraphic Layers & The Fossil Record

In certain areas, such as canyons, it is easy to see how rock has been layered over time. It is normally assumed that the bottom layers of rock are the oldest and the uppermost layers are the youngest, and therefore fossils found in each layer are the same age as the layer they are found within. How can we identify rock layers and fossils in areas without visible layers? Archeologists can use a machine to drill into the earth, similar to those that drill for oil, and pull out samples called drill cores from miles below the surface. To get a good idea of the fossils and rock strata in an area it is often necessary to pull out multiple drill cores and compare.



Stratigraphic Layers & The Fossil Record

A stratigraphic column is a scaled diagram that represents the rock layers and any fossils found within them. See an example image on the right.

In this area of San Diego, areas with the following rock types have the following approximate ages:

- **Shale:** 50 million years
- **Dolomite:** 100 million years
- **Sandstone:** 240 million years
- **Granite:** 325 million years
- **Limestone:** 400 million years



Limestone



Dolomite



Shale



Granite



Sandstone

There are also some common organisms that are found in this area. They include:



C. coldus



P. pindoele



G. grandes



L. limpit



F. fenesi



W. wormii



A. alpina



T. trilo