② Clues About Evolution

What You'll Learn:

Identify the importance of fossils as the evidence of evolution.

Explain how relative and radiometric dating are use to estimate the age of fossils.

List examples of five types of evidence for evolution.

Clues from Fossils

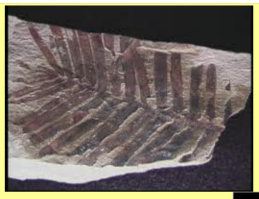
***Fossils allow us to look back in time and see what organisms looked like in the past.**

Types of fossils

***Most evidence of evolution comes from fossils.**

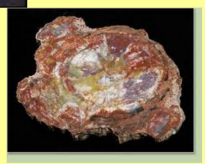
***A fossil is the remains, imprint, or trace of a prehistoric organism (Most are found in sedimentary rock)**

•Fossils are found more often in limestone than in any other kind of sedimentary rock.



1. Imprint- an imprint on a sediment that later hardens and becomes rock.

2. Mineralized- minerals replace the structure of the organism.



3. Frozen- remains of an organism trapped in ice for thousand or millions of years.

4. Amber- sticky resin that traps and hardens over time .

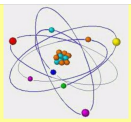
5. Cast- minerals fill in animal tracks or other part of the organism to form a fossil.

Determining a Fossil's Age

1. Relative dating uses the idea that younger rock layers form on top of older rock layers.

***It estimates the age by comparing the ages of rock layers around the fossil.**

2. Radiometric dating uses radioactive elements to determine the age.



They compare the amount of radioactive element with the amount of nonradioactive element in the rock.

This method is more accurate than relative dating , but neither method is exact.

Fossils and Evolution

***The fossil record is incomplete, because most organisms don't become fossils.**

***Scientists use fossils to make models of the organism, and determine how it lived.**

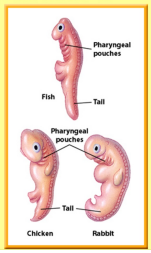
Most fossils represent extinct organisms.

More Clues About Evolution

***Embryology studies how embryos are similar and use the info to determine if organisms are related.**

•A tail and pharyngeal pouches are found at some point in the embryos of fish, reptiles, birds, and mammals.

•These similarities suggest an evolutionary relationship among all vertebrate species.



*Homologous structures are body parts that share similar structure/origin

*They often indicate the species share an ancestor.

*DNA is compared to identify similarities with ancient organisms.

*It is used to determine if or how closely organisms are related.

*Vestigial structures no longer have a function.

*They provide evidence for evolution, because scientist believe that they were once use in an ancestor.