S3E2: Fossils

Dates: 3/8 -3/31

Key Terms

Fossils[2]
Organism[2]
Fossil Formation[3]
Evidence[2]
Archaeologist[3]
Paleontologist[3]
Mold[2]
Cast[2]
Imprint[1]
Characteristics[1]
Sedimentary[2]
Amber[2]
Ice[1]
Ice Age[3]
Petrified wood[2]
Extinct[2]
Investigate[2]
Evidence[2]

Framework for Teaching:

Students Will Be Able To:

1. Describe fossils.
2. Observe and discuss fossils using authentic fossils or models.
3. Research information about fossils and identify this information as evidence for organisms that lived in the past.
4. Explain the formation of a fossil using a sequential process.
5. Identify and relate extinct organisms to organisms are currently living.
6. Model the formation of fossils.

For the teacher to know for their own understanding and to avoid misconceptions:

1. Fossils are the remains of plants and animals that were once living. The hard parts are preserved (i.e. bones, shells, exoskeletons, etc.)
2. Fossils are considered molds. They can be found as amber or casts.
3. Fossils form in sedimentary rocks. The heat and pressure of metamorphic and igneous rock often times destroy the plants and animal parts.
4. Some animals have changed a great deal over time and some have remained relatively the same. (E.g. Camels are the same; however the T. Rex does not have a living ancestor that is similar.)
5. The fossil record is not the only way that scientists can determine how long ago something lived. They can also use radioactive decay of elements within the sample to approximate the date.

Activities (Suggestions)

- ✓ Make a Model Fossil (pg. 112)
- ✓ Animals from Long Ago (pg. 126 in the text book)

Notes:

Sequencing is the foundational piece for fossils. Using inferences and technology students can see how fossils allow us to approximate the age of fossils and the time periods that are they are from. Use this as a tool to promote conservation from the life science unit. Students can apply the principles of pollution and conservation to extinction of many plants and animals. Relating habitats and pollution to fossils as a means to provide evidence and argumentation is a powerful tool. This should guide class discussions and create a healthy academic discourse.