Insects and Plants

In what ways are fossilized plants and insects different than other fossils?

MATERIALS

- Souffle Cup
- Play-Doh
- Insects
- Top Coat
- Yellow Food Coloring
- Red Food Coloring
- One Ounce Cup
- Air Dry Clay
- Plant Fossil Template
- Skewers
- Toothpick

GET SET UP

1. Today you will make two fossils—a fossilized insect and a fossilized plant imprint.
2. For the insect you will need a soufflé cup, a ball of Play-Doh, a plastic insect and a one ounce cup.
3. Make sure your ball of Play-Doh is smooth. Spread it out on the bottom of your soufflé cup. Place your insect on top. Stick its legs into the Play-Doh as if it has been trapped and can't move.
4. Fill your one ounce cup with top coat. Add two drops of yellow food coloring and one drop of red. Carefully stir together with a toothpick.
5. Pour your yellow top coat mixture over your insect. This represents amber. A common fossilizing agent for insects.
6. For the plant imprint you will need a ball of air dry clay, a plant fossil template and a skewer.
7. Flatten out the clay. Make sure it's about a half inch thick.
8. Study the fossil plant template. Using this as inspiration, take your skewer and carve out an imprint.

DID YOU KNOW...

Most think of fossils as fossilized bone or shells. When they think of bone they usually think of dinosaurs or ice age mammals. But many living things have been fossilized far longer than the oldest dinosaur. The insect fossil you made is a model of how insects became trapped in amber. **Amber** is a fossilized tree resin (sap) that is very resistant to decay. If amber is a fossilized resin than how do insects become fossilized? Easy! An insect might land on or walk across a part of a tree that is oozing sap; it gets stuck. Eventually more sap oozes out and the insect is covered completely. If the amber is resistant to decay and able to fossilize, the insect fossilizes with the amber. Paleontologists prefer insects fossilized in amber because their bodies are almost intact. If an insect leaves an imprint there is not much a scientist can learn other than the general look of the insect and when it might have lived. An insect fossilized in amber can be broken out and dissected with sophisticated tools. Plant fossils are generally imprints because as the plant is exposed to weathering and erosion the organic material is lost. This happens to animals too but bones and shells covered with dirt and subjected to erosion retain the original shape and can be studied with higher application. Fossilized trees leave a trace much like bones and shells. Trees become petrified (the living material becomes crystalized and rocky) and preserved for millions of years. In Arizona you can visit a petrified forest!

CHALLENGE

1. What are some of the ways living material is fossilized?
2. Why are insect and plant fossils just as important as dinosaur or mammal fossils?
3. Top coat is a representation of amber. How do you think amber is naturally formed?

STEAM Challenge: The earliest identifiable insect, *Rhyniognatha hirsti,* lived 407 million years ago. The earliest known dinosaur, *Nyasasaurus parringtoni* lived 243 million years ago. How much longer were insects on Earth before dinosaurs became prominent?