Create an Amber Fossil

Explanation: In this activity, students will model the process of unaltered preservation, which is when an organism is preserved intact inside sticky tree resin (not sap) that hardens to form amber (also called fossil resin).

Supplies:

- Resin (can also use clear nail polish for smaller pieces)
- Yellow & red food coloring
- Dead insect (indoor window ledges are good places to collect) OR plastic insect (available in assorted bulk bags)
- Clay

Steps:

1. Roll a fist-sized ball of clay
2. Create a large pebble-shaped mold in your ball of clay either using your fingers or an actual pebble to press down into the clay
3. Mix several drops of yellow food in the resin or nail polish; add 1 drop of red food coloring to make it more amber-colored
4. Fill the mold with a small amount of resin
5. Insert insect
6. Fill the rest of the way with resin and let dry for 24 hours

Note: you can easily turn the fossilized insects into magnets for students to display on their refrigerators at home. Just hot glue a magnet to the back of the resin piece (two magnets may be necessary for larger pieces).

Teachable moments:

- Connection to life science: Clarify with the students that resin and sap are not the same liquids and are produced by different structures in a tree. Not all trees make resin, but all have sap. Sap is the fluid found in phloem and xylem, the tubes that make up the vascular system of the tree. Phloem moves sugars throughout the tree, whereas xylem mainly moves water and minerals. On the other hand, resin is stored in the outer cells of the tree and is produced from wounds as a defense response (much like a clot forms over a wound in humans). Resin is highly viscous and sticky, and can harden to form a protective, watertight covering. Historically, resin has been used as varnish, pitch, turpentine, lamp oil, tar, rosins for string instruments, and perfumes (think frankincense and myrrh). Sometimes, unlucky insects may get stuck in the resin—if they are old enough, they are considered to be “fossilized in amber.”
- Review the body parts of insects and their life cycles