

Educational Innovations^{INC}[®]

AMB-100 Amber Kit

What is Amber?

Millions of years ago large stands of forests in some parts of the world began to seep globs of sticky, aromatic resin down the sides of the trees. Unlike sap, resin is produced to protect the tree from disease and injury and is extruded through the bark of the tree during rapid periods of growth.

As it continued to ooze, this resin would trap such things as insects, seeds, leaves and other light debris. As geologic time progressed, these forests were buried under sediment and the resin hardened and formed the soft, warm golden gem we know today as amber. Most of the amber in the world ranges from 30 to 90 million years old and is found in sedimentary clay, shale and sandstones associated with layers of lignite.

Amber From Around The Globe

Amber is found in the far-corners of the world and is mined from the ground. It can be found from the shores of the Baltic Sea (Poland, Russia, Germany, Denmark, Lithuania), to mountain ranges in the Dominican Republic and Columbia. There is also Romanian, Burmese and Canadian Amber. Amber can be found in the United States and is most abundant in Alaska and New Jersey. This amber dates back to the Cretaceous Period, the age of the Dinosaurs! The size of amber found varies tremendously. The biggest piece of Dominican amber ever found was 18 pounds!

The Copal vs. Amber Debate

Copal is a younger form of amber, much of it from Columbia is said to be up to 10 million years old. Over the past several years, it has become available in great supply. Dealers who sell other types of older and more rare amber, such as Baltic or Dominican, due to their commercial interest, have been trying to convince others to not classify copal as a type of amber. Many scientists disagree, stating that anything made from resin IS technically amber, despite its age.

The Polishing Process

Amber can be hand or machine polished. Professionals use machinery such as sanding wheels to polish amber. They first start with coarser grit levels of sandpaper and as material is removed and they get closer to the surface, they switch to less coarse grit levels to add final touches. Final polishing can be done with a cotton buffing wheel and dental polishing compound. For amber jewelry, holes are drilled with a very fine drill bit. Experts must be aware that amber is sensitive to extreme heat.



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Jurassic Park

In the movie, the storyline was that dinosaur DNA had been retrieved from insect remains found in amber, allowing them to regenerate dinosaur life for the park. This is just a story. Scientists have never been able, in real life, to do this.

Real vs. Fake?

Beware! There are actually counterfeit producers of amber who make fake amber using living insects and synthetic resins. Experts have tests to confirm what is real or fake. Our amber is real. We only purchase our amber from reputable miners who guarantee authenticity.

It's Electric!

Amber actually has the ability to develop a static charge when rubbed with a cloth. In fact, the source of the word electricity is from the Greek name for amber *elektron*.

Kit Contents

- 8 large pieces of rough amber to use for class activity
- 17 small pieces of rough amber
- 25 plastic bags for students to secure their amber samples
- 8 polishing brushes
- Tube of amber polish
- 2 Sheets of sandpaper (9x11)

CLASS PROJECT: POLISHING GENUINE ROUGH AMBER

Supplies Needed:

- 8 large chunks of rough amber
- Cups filled with water
- Sandpaper, cut into small squares (approximately 2" x 2")
- Gel type toothpaste
- Polishing brushes (A.K.A. toothbrushes)
- Paper towel or dry cloth

The mission is to hand-polish the rough amber until you can see through it.

Steps:

If you have one, show the class a polished display piece of amber and un-polished piece as a before and after example of what the amber should look like when they are finished.

1. Set up cups of water, 1 for each group of 3 students.
2. Give each group a large specimen of “rough” amber, polishing brush, some gel toothpaste and sand paper.
3. Wet the sandpaper
4. Lightly rub sandpaper on your amber specimen. The amber should stay wet at all times. This process will take some time, so it would be good for the students to “share” in the polishing responsibility.
5. Be sure to rinse the amber in the cup of water periodically.
6. Within 10 minutes, at least a portion of the amber should begin to look transparent

7. Hold the specimen up to a light source to check to see if any bugs or plant life got trapped (specimens are found in about 20% of our rough amber).
8. After the specimen has been smoothed, place a small dab of toothpaste on a wet paper towel or brush to polish.
9. Rinse off specimen in water.
10. Dry off and buff specimen with paper towel or dry cloth
11. Since there are only 8 large pieces, you can raffle the larger, polished pieces off in the groups. In any case, each child will take home a piece of amber and can add it to their gem collection. Bags can be used to secure the amber samples.
12. Students may continue the polishing activity at home for a more finished look.