Nature-Watch Activity Kit

Prehistoric Amber

(Nature Watch Kit #137)

Kit Contents

	Kit Size		
	1	**25**	**100**
Item:	Quantities:		
Unpolished Amber	1	25	100
Sandpaper Squares	1	25	100
Emery Board Pieces	1	12	48
Toothpaste	1	1	4
Denim Squares	1	5	10
Toothbrushes	1	3	10
Baggies	0	25	100
Instructor Manual	1	1	1

This page includes the Next Generation Science Standards (NGSS) mapping for this kit and Science, Technology, Engineering, and Math (STEM) extensions (on back) to use in adapting and extending this activity to other subject areas.

Next Generation Science Standards Alignment

2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

MS-PS1-3. Gather and make sense of information that synthetic materials come from natural resources and impact society.

See Back for STEM Extensions

This Nature Watch Activity Kit contains an Instructor Manual and materials to implement the curriculum. The kit was designed to be used with adult supervision only. Unsupervised use is not recommended.

Nature Watch 5312 Derry Ave. #R, Agoura Hills, CA 91301
800-228-5816 info@nature-watch.com www.nature-watch.com

Prehistoric Amber

(Nature Watch Kit #137)

STEM Extensions

Science

Select a few interesting objects at school or at home. Use them to conduct the investigations "Amber examination" and "Amber Waves of Light" described under "Additional Amber Investigations" on page 3. What results do you come up with? How do these results compare with what you saw with the amber specimens?

Go online to find pictures and descriptions of some of the prehistoric bugs that have been found in amber. How are they similar to bugs you have seen? What else can you learn about them?

Explore the area around your school or home to find evidence of resin that has healed cuts on trees. Photograph the resin examples that you find, then come back to compare your examples with other students' examples. Discuss what similarities and differences you see in the resin and in the trees where you found the resin.

Technology

Extracting DNA from an organism is a first step in DNA technology. Go online to find the directions for extracting DNA from a banana, which is relatively simple and uses basic science lab materials. Try it out to get a feel for how scientists work in the DNA technology field.

After you complete "Incredible Inclusions" under "Additional Amber Investigations" on page 3, do some more research to learn what scientists can actually create with DNA technology. Come up with a movie short script along the lines of Jurassic Park to show one example of real DNA technology in action.

Engineering

(Younger) Think of as many foods and other objects that have properties similar to amber (translucence, color, hardness, the ability to have inclusions). Make a poster of cut-out or drawn pictures to demonstrate the similarities.

(Older) Try to make your own imitation amber, with inclusions. Think about foods that might have similar properties to amber, such as the translucence of gelatin, the color of honey, and the translucence and hardness of rock candy. Come up with a recipe for an amber-like treat, and try making it.

Design a piece of jewelry that you could make with your piece of amber. Draw the design and list the materials you would need for it.

Math

Read through the information in the activity kit and make a timeline that displays all of the time markers mentioned related to amber (such as the youngest amber being from 13 million years ago). Decorate the timeline with pictures that represent each event.

Find the mass and estimate the surface area and volume of your piece of amber.