

Amber - The Freezing Gold





In ancient times it was called the gold of the North. Amber has been called freezing gold, a window to the past, a time capsule, captured sunshine and a golden tear. It is all of these things.

Amber has long been prized for its beauty in jewelry. The beautiful warm golden color fascinates jewelry admirers everywhere. However, it is so much more than a piece of art.

When amber captures and holds insects, some intact, it becomes a treasure, a fossil. Each and every form of fossil is precious. Why? Because they provide so much information about past life on earth.

What is amber? How is it formed? Why are insects attracted to it? What kind of insects became fossilized in tree sap?

Have you ever seen a dead bug or insect and wanted to preserve him? Amber is a natural preservative, an embalmer. It is a piece of history frozen in time. Even scientist cannot make a better storage system than one that is already provided by God. The Bible says at Psalm 104:24, *LORD, how many are Your works! In wisdom You have made them all; The earth is full of Your possessions.*

Amber - nature's freezing gold just touches on the many facets and fascinating topics about insects and amber.

Because this unit is aimed at a middle school student or an introductory unit for a high schooler, I have just generally classified fossils in two groups. If your student is older, he can determine the difference between an imprint and trace fossil.

Insects-a blessing or curse is another topic to discover. Insects play a vital role as scavengers and soil builders. What would happen if these insects were wiped off the earth? Flowering plants depend on honeybees, bumblebees and moths to name a few for their existence and pollination.

Finally, what do these small chunks of treasures tell us about the fascinating creatures of God that they hold prisoner?

What is amber? How is it formed?

Fold over to make a double match book. Use facts given or write your own.

Glue this part to your page.

Cut here to make two tabs.



Amber is the hardened resin of an ancient tree. The fossilized resin is the process of years of slow processing.

Amber is formed when a tree secretes a resin to heal a wound. The resin protects the tree by forming a sticky barrier.

Fossils teach us about plants and animals from long ago.
Only the soft part of an organism can become a fossil.
Amber is an insect found fossilized in rocks.
Some organisms are preserved without changing.

Glue this part to your page.

True or False mini flap book

Fold over and cut to make four strips. Lift flap and write T or F. Answers: T, F, F, T

Insects preserved
in tree sap



Fly



Ant



Mosquito



A fossil is the remains or evidence of any creature or plant that once lived on earth.

Mini flip book.

Fold over and glue this part to your page.

Write your own definition or use the one provided.

Cut out pocket and information cards.

Place information cards in pocket to use as a reference.

TYPE I

This would include

- *bones*
- *teeth*
- *hair*
- *skin impressions*
- *The hardened shell of an animal without a bone.*
- *Impression of an animal or plant.*

Type II

Trace Fossils. This is something made by an animal while it was living and that has hardened into stone. It would include:

- *Footprints*
- *Burrows*
- *Animal poop*

What is a fossil?



Types Of Fossils



Did you ever see the movie Jurassic Park? They were trying to show that a dinosaur could be reproduced from DNA of the dinosaur's blood found in mosquitoes preserved in amber.

Is this possible? Have they extracted whole forms of DNA to reproduce another dinosaur? No.

There are advocates, pro and con of this issue. Some scientist think it is possible and might answer this question like this: " No, not yet". They feel some have come close to it or will one day recover it and reproduce extinct creatures like dinosaurs.

Others feel that even if they get DNA it is only a fragment of what is need to create life, not to mention it has been damaged.

How do you feel? Use this info or add your own research :o)

Though scientific experiments have recovered small fragments from insects preserved in amber, it is a very minute amount of information. It is one thing to extract fragments and another thing to extract whole organisms.

What is
DNA?
Can DNA be
extracted from
mosquitoes?

DNA stands for deoxyribonucleic acid. It is the chemical that makes up your chromosomes. There are sugars and phosphates located in DNA. All living things have their own DNA. It is like encoded instructions that determine characteristics.

mosquitoes?



Cut out as one unit. Fold flaps down and bring side covers over .

Add research, then cut on dotted gray line to form two tabs inside your book .

This part glues to your page.

DNA and



How do insects get trapped in the resin?

It's a sticky situation.

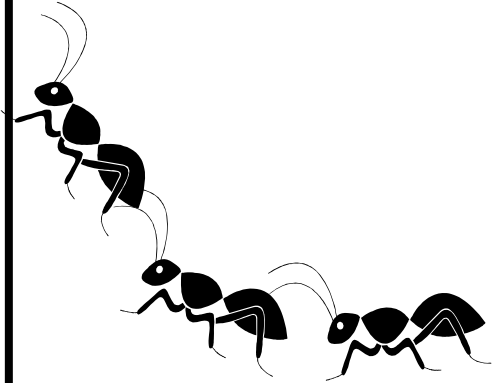


Resin is like the substance of honey. If an ant were walking along, one leg gets stuck, then the other. Then before he knows it, he is covered in resin like a glob or mass.

In time the glob or mass falls down to the ground. Rain washes the prisoner away into a river where he gets covered with silt and stays until he is discovered.

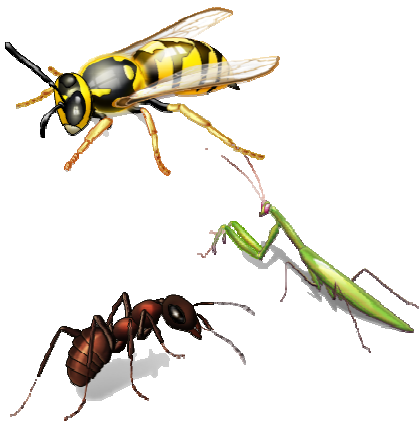
The resin has hardened into amber.

It's a TRAP!



Accordion fold: Fold cover back.
Glue back side of last page to your page.

Entomology



Vocabulary:

For an older student, write the definition. Fold back and glue.

For a younger student, cut off right side and place vocabulary word in pocket.

There are two choices for pockets. One has leaves and one has flowers.