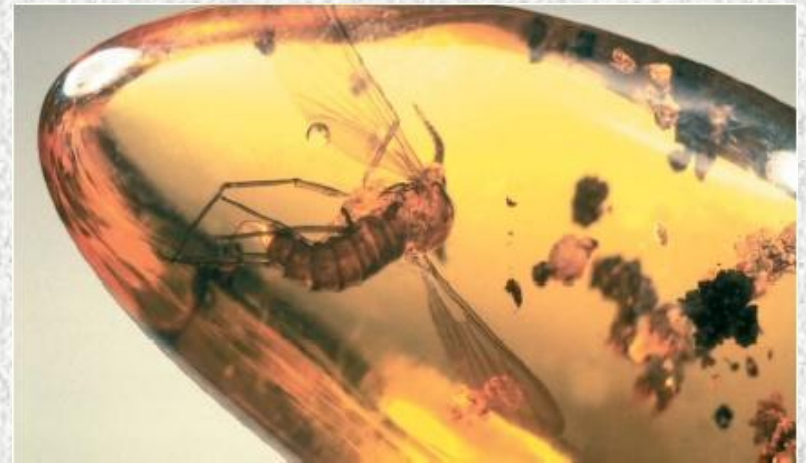


How Exactly are Fossils Formed?

- There are several processes for how plants and animals are preserved as fossils. A lot of it relies on pure **LUCK!**



The Different Types of Fossils are...

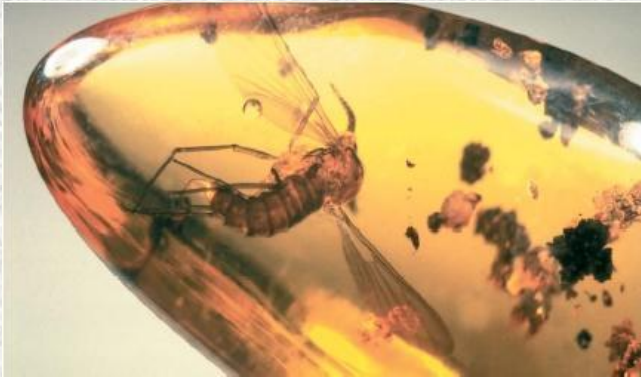
- Amber Fossils
- Molds
- Casts or Replicas
- Imprints



Amber Fossils



A frog
preserved in
Amber.



A mosquito
preserved in
amber.

- Some fossils are made when covered in tree sap.
- This can happen to small leaves and small insects.
- If this happens to an insect and it is unable to escape, then it dies and will become fossilized in the tree sap creating an **Amber Fossil**.

Mold Fossils



A mold fossil is shown below, while a cast fossil is shown above.

- A **mold** fossil is an imprint of a plant or animal.
- For example, a shell can make an imprint in sand. After the sand begins to harden, the shell might dissolve, leaving a space shaped like the shell in the rock. The space in the rock is a mold fossil.
- When the sediments harden into rock, they form a fossil that has the same shape as the shell that made the mold.



Casts or Replicas

- A **cast or replica** fossil is formed after a mold is created.
- A cast fossil forms when minerals or sediment fills in the mold and hardens in the same shape of the organism that used to be there.
- A cast is an exact copy of a plant or animal that forms when minerals fill a mold and it hardens.



A cast fossil.



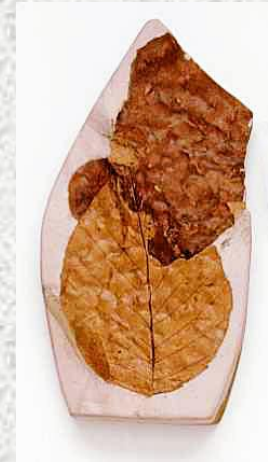
Imagine

If you were given an animal mold and some modeling clay, how could you create a Cast or Replica of that mold?

Take 2 minutes to sketch or list the steps you would take to create your cast fossil on your handout. Be prepared to share your ideas with your partner once time is up.

Imprint Fossils

- The fourth type of fossil is an **Imprint Fossil**.
- An imprint fossil is a mark left in the sediment that has hardened and remained.
- *Think of a handprint made in wet cement that has now dried over time.*



A leaf imprint.



A fish imprint.

Let's review...

Chose a question to discuss quietly with your table for a few minutes. Be prepared to share your thoughts with the class!

1. What are some important things that scientists such as paleontologists, archeologists, and geologists can learn from fossils?
2. What are the similarities and differences between the formation of mold and cast or replica fossils?
3. Suppose you are a paleontologist studying fossil remains, what type of fossil do you think would be most exciting to discover and study? Why do you feel that way?
4. What would happen if an amber fossil not only preserved a prehistoric insect, but once uncovered kept it alive? Would that be a good or bad thing? Describe your thoughts!

Active Summary

Partner 1 tell partner 2:

- 3 things you learned from the lesson &
- the 1 thing you found to be most important

Partner 2:

- Listen to partner 1 &
- Repeat what partner 1 said

Active Summary

Partner 2 tell partner 1:

- 3 things you learned from the lesson &
- the 1 thing you found to be most important

Partner 1:

- Listen to partner 2 &
- Repeat what partner 2 said

One last class discussion...

Take some time to think about these questions independently. You can jot down some ideas on your handout to discuss with the class.

1. How are the four different types of fossils similar and different?
2. Create a mnemonic device for remembering one or more of the fossil types.
3. Which type of fossil do you think is most helpful to scientists in unlocking clues from our past?