**How Fossils Form**

**Conditions for Fossil Formation**

In order for a fossil to form, three conditions are necessary:

1. The plant or animal must die \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Organism is buried quickly, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Surrounding sediments \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into rock.

From here, there are two types of preservation that can take place:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The organism’s material remains more-or-less intact, including:

 - Hard parts (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

 - Soft parts (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

This type of preservation is very \_\_\_\_\_\_\_\_\_\_\_\_!

 e.g. in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Jurassic park!)

 in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Altered Preservation**

Usually occurs with just the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

There are three main types:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Replacement**

- hard part is burried.

 - surrounding rock lithifies.

 - water seeps through and slowly dissolves the hard part to

 create a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 - minerals slowly fill the mold, replacing the original material
 and creating a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. **Recrystallization**

- after burial and lithification, hard part DOES NOT dissolve.

 - chemical structure of the part recrystallizes from one mineral into another.

 - a special type is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 - organism (usually a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) gets buried and its carbon recrystallizes into a *thin film* of

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. **Per mineralization**

- occurs in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ material (wood, bone, etc.)

 - after burial and lithification, water with dissolved minerals seeps into the pores.

 - minerals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out of water, filling the pores,
 creating a mix of original material and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Trace Fossils**

A third “type” of fossil is called a trace fossil.

Trace fossils are not made from organisms but from

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 e.g. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_