

# Activity Two:

**The Classic Fossil Lab - Simple Format**

**Materials:** Lab Handout, One Baggy for each group with the following items: trilobite, brachiopod, pelecypod, horn coral, blastoid, shark’s tooth, gastropod, cephalopod, sea urchin or starfish.

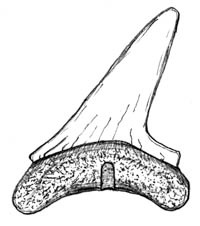
**NOTE:** If your fossils don’t match mine, then do some substitutions. You can change the pictures on the front of the lab. You may have to add to the key, but most basic phylums are present in this key.

DIRECTIONS:

1. Hand out labsheets to each student and baggy of fossils to each group.
2. Have the students carefully remove the fossils from the baggy and place on the table. Give them time to pass them around the group. It is nice to have each student handle each fossil and get familiar with each fossil’s characteristics.
3. Then have the students place the fossils on one student’s labsheets, matching fossils to illustrations on the labsheet/
4. Walk around and check to be sure they are right. Adjust if necessary.
5. Once they have an okay from you, they need to use the Fossil Key to identify each fossil. Make sure they use pencil to write in case they are incorrect.
6. Walk around and okay the identifications.
7. Once a group’s ids are okayed, they can start working on the Summary Questions.

## NOTE: Be sure to count the fossils in each baggy when you collect them to be sure something hasn’t “disappeared!”

**Fossil Identification Lab**



**DIRECTIONS**: Remove your fossils from their container and place on top of the matching fossil on this labsheet. Have the teacher okay your placement. Then use your key to identify the fossils. Write the common name each the line.

## 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Fossil Lab Questions**

1. What are fossils? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. Are the fossils in your packet plants **or** animals? land **or** marine (sea)?

**HINT:** Check the Fossil Identification Key before you answer this question!

1. What is the main **difference** between a plant and animal?**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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4. How many fossils are **echinoderms**? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

What is a characteristic of this phylum? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

## Go to this website: https://en.wikipedia.org/wiki/List\_of\_U.S.\_state\_fossils

Does your state have a State Fossil? yes or no

State fossil name(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Are they plants or animals or both?

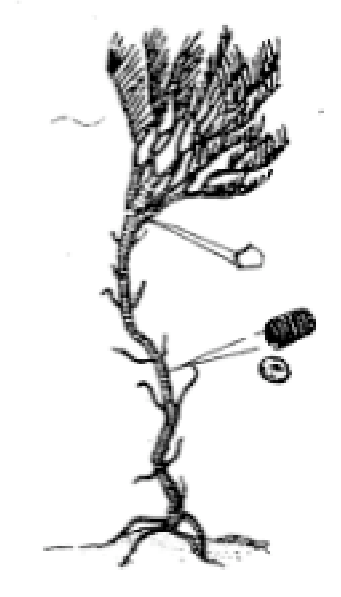
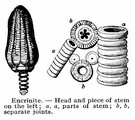
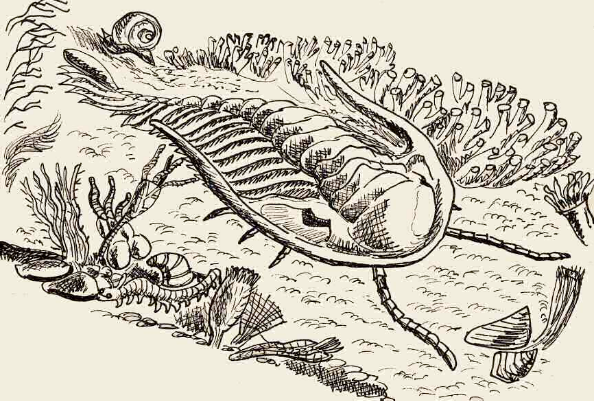
1. The **Trilobites** were marine animals in what era?

What are some modern examples of **arthropods**?

**Sketch (State Fossils)**

1. How do **Brachiopods** attach to the sea floor?
2. How does **horn coral** appear to differ from **hexagonaria**?
3. Why are teeth the most common fossil of a **shark**?
4. Why is it so important to learn about **fossils** of ancient animals?

# FOSSIL IDENTIFICATION KEY



***Images obtained from the Internet and altered for clarity.***

**1. Phyllite: ECHINODERMATA**

**Geologic Time Period: Paleozoic - Cenozoic**

**Echinoderms** are marine animals usually having a five-fold (pentagonal)

symmetry. Some are attached to the bottom by stems, whereas others are free- moving. Most live by filtering food out of the water, but at least one croup (the starfish) is carnivorous. Some members of the Phyllite are extinct, but there are many living examples. Crinoid fossils (a variety of "Sea Lily."

**A. CRINOIDS**

Sea Lilies

Pal. to Cenozoic

**B. Sea Urchins** Echinoids Pal. to Cen.

**C. Starfish** Stelleroids Pal. to Cen.

**D. Blastoids**

Pal. to Cen.

**2. Phyllite: ARTHROPODA**

**Geologic Time Period: Paleozoic**

Arthropods make up a wide range of organisms. They include modern crabs,

lobsters, crayfish, insects, and spiders. Besides these, they also include an extinct class called the **TRILOBITES**. Trilobites were marine animals that swam, floated, crawled, and burrowed their way through the Paleozoic Era. Some of the various types are pictured below:

**Trilobite**

**Trilobite**

**Trilobite**

**Trilobite**

**Trilobite**



**4. Phylum: BRACHIOPODA**

**Geologic Time Period: Paleozoic to Cenozoic**

Brachiopods were more common during the Paleozoic Era than they are today.

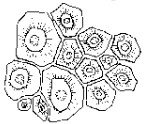
Some grow attached to the rocky sea floor by an "anchor line" called a pedicle. Others "sit" on softer substrates where they are supported by spines.

**Brachiopod**

**Brachiopod**

**Brachiopod**

**Brachiopod**



**3. Phylum: COELENTERATA**

**Geologic Time Period: Precambrian - Cenozoic**

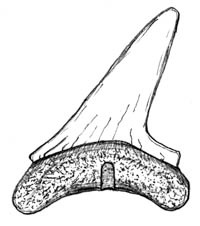
Of all the coelenterates, corals are by far the most conspicuous as fossils. Corals

are important reef-builders and reefs commonly form important petroleum reserves.

**A. HORN CORAL**

**B. HEXAGONARIA**

**C. FAVOSITES**



**5. Phylum: CORDATE**

**Geologic Time Period: Cenozoic**

This great phylum of the animal kingdom includes the most highly developed

animals that have ever inhabited the Earth: fishes, amphibians, reptiles, birds, and mammals, including man. All animals in the Cordate Phylum have backbones. They are also called Vertebrates.

Class of Cordates: Chondrichthyes (Cartilage Fishes) the sharks, rays, and skates. Of the fishes that controlled the ancient seas, sharks have survived in relatively large numbers to the present day.

**Shark's Teeth**