

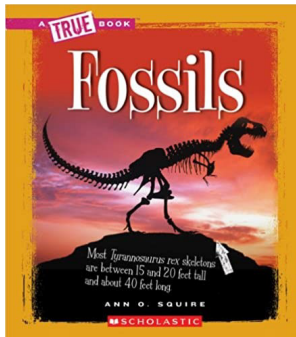
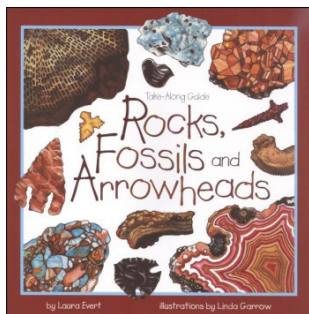
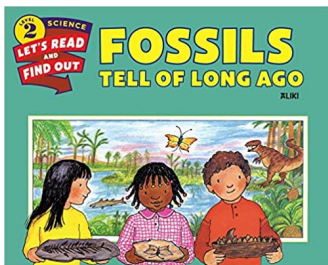
Roots

Digging Deeper into Soil & Water Resources



FASCINATING FOSSILS

LITERACY CONNECTIONS



Finding a print or impression in a rock is always an exciting discovery. These fossils reveal clues about what lived here a very long time ago. Though most people think of dinosaur bones when fossils are mentioned, plants and smaller animals also form fossils.

Fossils are the preserved remains or traces of the remains of ancient organisms. Most fossils are formed when an organism or evidence of an organism are covered in sediment. Over a long period of time, the minerals within the sediment seep into the remains. The remaining fossil is a rock, no longer the organism that created it. The chart below describes different fossil categories and how they are formed.

Categories of Fossil Types						
Category	Trace fossil	Molds and casts	Replacement	Petrified or permineralized	Amber	Original material
Example						
Formation	A trace fossil is any indirect evidence left by an organism. Footprints, burrows, and fossilized feces are trace fossils.	A mold is an impression of an organism. A cast is a mold filled with sediment.	The original material of an organism is replaced with mineral crystals that can leave detailed replicas of hard or soft parts.	Empty pore spaces are filled in by minerals, such as in petrified wood.	Preserved tree sap traps an entire organism. The sap hardens into amber and preserves the trapped organism.	Mummification or freezing preserves original organisms.

Ohio is home to many different fossils, determined by the age of the rocks in different parts of the state. Ice Age fossils, including large mammals such as the American mastodon, can be found in glaciated areas of the state. Rocks in eastern Ohio hold ancient remains of plants and animals, including reptiles and amphibians. Southwestern and northwestern Ohio boast a wide variety of much older marine fossils, including the official state invertebrate fossil *Isotelus*.

Ohio's fossil list does not include **dinosaur fossils**. Although dinosaurs probably roamed through Ohio, the rocks from that time period have eroded away, taking any evidence of dinosaurs with them.



Did You Know?

The state invertebrate fossil in Ohio is the trilobite *Isotelus*, part of an extinct group of arthropods related to insects, spiders, and horseshoe crabs. The name trilobite means "three-lobed animal," from the three longwise divisions, or lobes of the body.

The state fish fossil, *Dunkleosteus terrilli*, was a top predator belonging to the now-extinct group of fish called placoderms or "plate skin." This giant armored fish did not have teeth, but captured and devoured its prey with powerful, chisel-like jaws.



FASCINATING FOSSILS

MAKE YOUR OWN FOSSILS AT HOME

It's time to get creative and put our artistic skills to work! Let's create our own fossils from items outdoors and at home.

Supplies:

- Small items like leaves, nuts, seeds, shells etc., remember to get permission from an adult before collecting natural items outside
- Modeling Clay or Play Dough, you can make your own dough following the recipe in the [Fossil Fun video](#)
- Wax Paper
- Rolling Pin
- Flat Surface (table or desk)

Procedures:

- Place the wax paper on the flat surface
- Spread the clay or playdough on the wax paper
- Smooth out the clay or playdough with a rolling pin until is about the width of your finger, be sure not to make it too thin as it will be difficult to pick up
- Cut the dough into smaller pieces, be sure these pieces are large enough to make impressions of your objects
- Place one object on each piece of dough and press it into the dough gently, be sure not to push all the way through
- Remove the object and you have a fossil

Extensions:

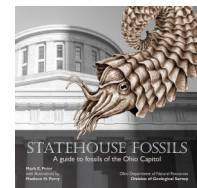
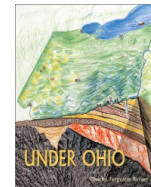
- Set out your fossils and ask a friend or family member to guess what item created each fossil. Or, make it a matching game by placing the fossils and the items you used out on a table. See if they can match the item with the correct fossil.
- In this activity, you made a mold fossil. To make a cast fossil, fill your mold with [plaster of paris](#). When it dries, carefully pull off the plaster of paris to reveal your cast fossil. Does it look like the original item you used to make the mold?

ADDITIONAL RESOURCES

[Learning Junction Video: What are Fossils and How are They Formed](#)

[Ohio Fossils](#)

[Ohio's Fossil Record](#)



Finding Fossils

Take a walk around your neighborhood or local park and examine rocks for fossil prints. Take a closer look, you may find amazing things hidden within the hard surface. Don't forget to look at the rocks on fences and building walls, they may have fossils too!

Venture a little further from home and check out these [public fossil collecting sites in Ohio](#).

QUESTIONS TO EXTEND LEARNING:

1. How can paleontologists (scientists that study fossils) tell us what Ohio's climate was like by the fossils they find?
2. Ohio is not near an ocean or a tropical climate. Why does Ohio have so many fossils from shallow tropical seas?
3. Some animals that are alive today are called "living fossils." Research the term "living fossils" and see if you can discover at least 3 species of living fossils.

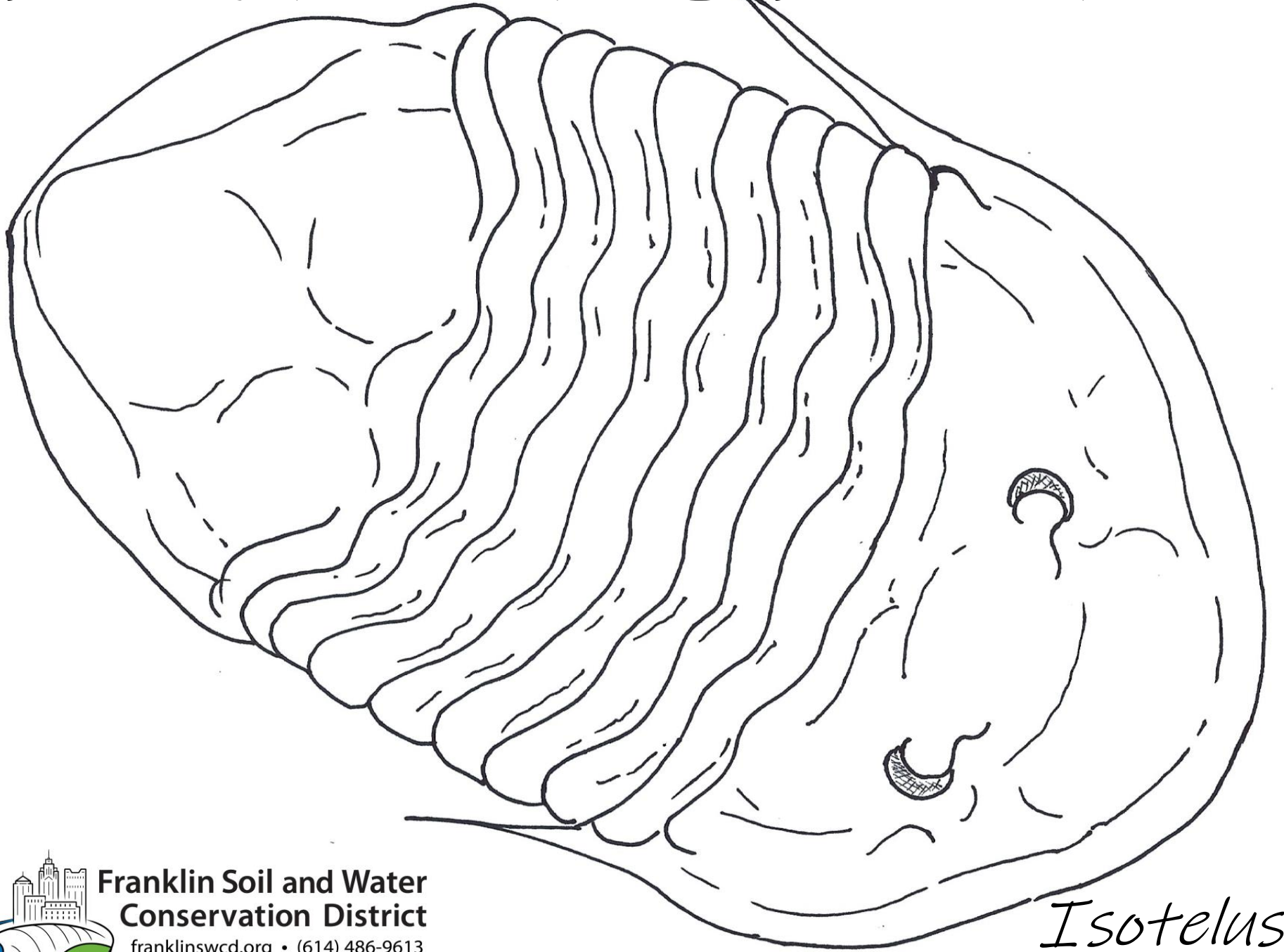
[State Fossils](#)

43 of the 50 states have a state fossil. They are named for a variety of reasons. Illinois named the "[Tully Monster](#)" as their state fossil because it is a rare fossil found only in their state.

Do you know why the trilobite *Isotelus* is Ohio's state fossil? Find out [here](#).

FASCINATING FOSSILS

Name: _____

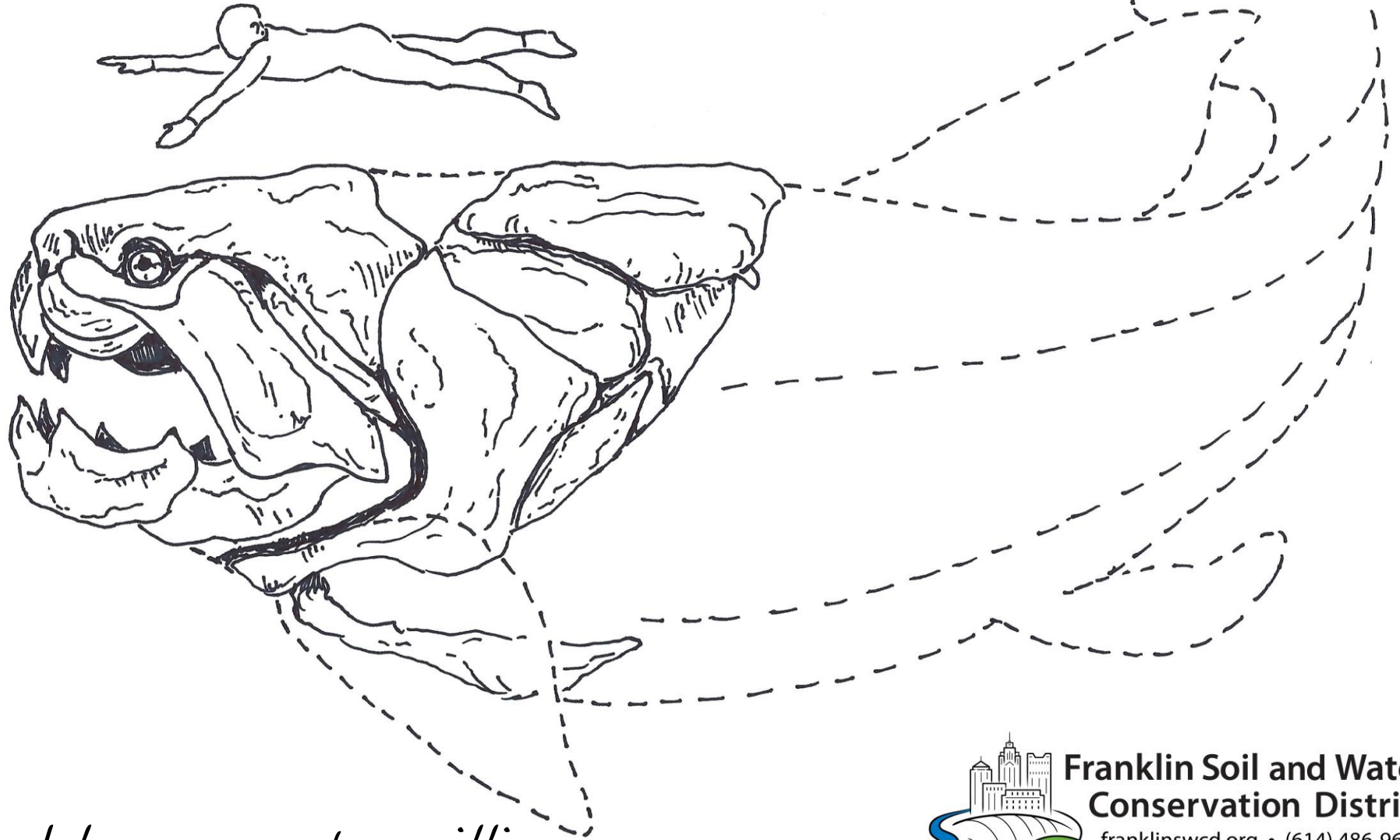


Isotelus



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FASCINATING FOSSILS



Dunkleosteus terrilli



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