

Fossil Rocks

What is a paleontologist and what do they do? Learners will discover how fossils are dug out of the earth by carefully exposing treasures hidden in an artificial rock that is easily made at home.



Recommended Age: 5+ years old

Time needed: 30 minutes to make, several hours to wait, 15+ minutes to explore

What You Need

- 2 cups of flour
- 1 cup of salt
- 1 cup ground coffee (no need to use the good stuff)
- 1 cup salt
- A mixer OR large bowl and mixing spoon
- A baking sheet
- Small toys or treasures to hide inside the rocks; OR buy actual fossils here: <https://geologicalenterprises.com/>
- Paintbrushes
- A small screwdriver
- A light hammer or mallet
- A small bowl of water
- Optional: safety glasses

What You Do

Making your rocks

- Set your oven to 200°F.
- Mix the flour, salt, coffee and water together until you have a nice moldable dough.
- Press the dough firmly around one of the toys, treasures or fossils, then continue to add dough to create a “rock.” You can make it whatever size you want.
- Place your rocks on the cookie sheet and set them in the oven to dry for 4+ hours.
 - *Safety tip!* Do not leave the oven unattended! If you need to go out, simply turn off the oven and leave the rocks inside to dry OR leave rocks to dry on the counter for several days.

Exploring the rocks

- Ask your child if they know what fossils are? Do they know what a paleontologist does?
- Explain that paleontologists use special tools to dig fossils out of the ground. They have to be very careful so they don't damage the fossils.



- Challenge your child to use the tools to carefully clear away the rock until they expose the treasure inside. The mallet and screwdriver are good for the rough work (optional: have your child wear safety glasses in case there are small pieces that go flying off), but once your junior paleontologist is getting closer to the treasure, they should switch to the paintbrushes. They don't want to damage the treasure inside!
- Have a small bowl of water handy to rinse the last of the dirt from the treasure.



Tips for Adults

- Your fossil rocks will last for a really long time. Store them in a tightly sealed bag, and pull them out on a rainy day.
- Beads, buttons, small action figures, plastic animals and similar items all make good treasures.
- If you do order the bulk fossils (which are \$10/pound), they won't look like much but they are real fossils. If you are only making a few rocks, you may want to buy a few slightly more expensive but identifiable fossils.



Learning and Skills Connection

- **Persisting:** Focusing, sticking to it, repeating, learning from mistakes
- **Being open to possibilities:** Expressing interest, wanting to explore, taking things apart, trying things out, asking questions
- **Developing craft:** Using tools, materials, and practices to engage in the STEAM disciplines

What's Going On?

Most fossils are found on Earth that once lay underwater. They usually formed from the hard parts—such as shells or bones—of living things. After a living thing died, it sank to the bottom of the sea. Layers of earth and the remains of other living things built up on top of it. Over time, these layers turned into rock. Eventually, part or all of the living thing's hard parts also turned into rock. The fossil is the shape of these hard parts in the rock.

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Doing STEAM with Kids

STEAM stands for Science, Technology, Engineering, Art, and Math. There are lots of ways you can explore these letters, apart or together. Ask your child to make predictions, describe what they see, and to imagine possibilities and solutions. Don't worry so much about the "right" answer. Developing curiosity, and problem-solving skills are important first steps to doing STEAM!

