

Making trace fossils

Why do this?

Children find fossils fascinating, as they show the types of animals and plants that were on the earth at different times in the past. This simple procedure lets children make their own trace fossils

Curriculum links: *rocks, evolution and inheritance, properties and changes of materials*

Suitability

Years 1-6

Practical details

This activity has been prepared using CLEAPSS guidance. If in doubt, or for further information, contact CLEAPSS.

Safety

- Ensure children do not taste the dough.
- Ensure children wash their hands after the practical.



Equipment per child

- 2 tablespoons of used coffee grounds
- 2 tablespoons of plain flour
- 1 tablespoon of salt
- 1 tablespoon of cold coffee
- 1 bowl
- 1 spoon

Equipment per class

- A variety of objects to press into the dough
e.g. shells, toy dinosaurs, leaves
- Measuring spoons
- Greaseproof paper

Notes

- Coffee shops will often provide used coffee grounds free of charge.
- Before the lesson make enough black coffee (instant is fine) for the class to use and allow it to cool.

Procedure

1. Measure 2 tablespoons of coffee grounds, 2 tablespoons of plain flour and 1 tablespoon of salt into a bowl and mix.
2. Add 1 tablespoon of cold coffee and initially mix using a spoon.
3. Once combined, knead the dough until it is completely mixed.
4. If the mixture is too wet add more flour, too crumbly add more cold coffee.
5. Shape the dough into a scone-like shape and then press an object firmly into it to leave an imprint.

6. If you are not happy with your first attempt, you can reshape the dough and try again.
7. Have the children use a pencil to put their name on a square of greaseproof paper. Place the 'fossil' onto it and leave it undisturbed to dry.
8. The fossils will harden after several days depending upon the humidity of the surroundings.

Be aware when doing this practical

The hardening process can be speed up by baking the 'fossils' in an oven at 150°C for 10-15 minutes, however this may cause cracking. Fossils baked in an oven will be firmer and less easy to squeeze out of shape than those that are air dried.



Expected observations and results

The firm dough will allow children to press an object into it which leaves an imprint resembling a fossil.

Possible further activities

- Use them as part of a mock archaeological dig.
- Include the activity as part of learning about Mary Anning.

Background notes

This activity mimics how trace fossils form. Trace fossils are not the same as body fossils, because the actual object does not remain as the fossil. Something, for example: a shell, skin, a feather, a leaf, a bug, or a foot, etc, gets pushed into a soft substance (like mud) and creates an impression. If the substance solidifies and then is subjected to enough pressure by being buried in the earth under layers of more mud, it will turn into rock and become a fossil for palaeontologists to find millions of years later.

