Geopark at home

Activity 5 – funky fossils

Fossils are the remains or impressions of ancient living things. It is rare that a creature will get preserved and be fossilised. Today you can make your own fossil with this hands-on activity, which includes and optional extension.

You will need:

- Deep tray (at least A5 size)
- Clay (playdough or plasticine would also work)
- Shells

What to do:

Cover the bottom of the tray with a layer of clay (or playdough made with flour, salt and water). Press shells into the clay and pull them out again to leave pretty patterns. Try turning them different ways around to make different shapes. Once done, leave your clay or playdough open to the air and let it dry out. This may take several days.

What's going on?

You have made a fossil mould. About 350-300 million years ago, the bit of the Earth's crust that is now the North Pennines was down near the equator, at the edge of a tropical sea. Rivers sometimes washed sand and mud down to cover the sea floor. This place was bustling with life. When creatures that lived in or near the water died, they would sink to the bottom and sometimes left an imprint in the mud. If this was buried and compressed, it could be preserved as a fossil.

Extension

Fossil casts can be made from fossil moulds. A mould is the imprint (like you made with the shells and clay) and the cast recreates the shape of the shell.

You will need:

- Plaster of Paris
- Water
- Spoon
- Cup (empty yoghurt pots or margarine tubs work well for this)

What to do:

Take care when using Plaster of Paris as it produces lots of dust, especially when you pour water on it. Keep it away from you face to avoid breathing it in. Take a couple of spoonfuls of Plaster of Paris and put them into the cup. Pour water over the powder and stir until the mixture looks like yoghurt.

Pour the Plaster of Paris mixture evenly over the clay and leave to set. Your clay does not have to have set hard for you to do this part of the activity. Depending on the size of your tray you may need to make up more Plaster of Paris to cover all the clay. Your layer of plaster should be a couple of centimetres thick.

Once the Plaster of Paris has dried and gone cold (this will take a couple of hours) you can gently separate the plaster from the clay, revealing your fossils.

What's going on?

The plaster has filled the fossil mould (the imprints you made in the clay) and hardened to form a fossil cast.

If the imprint of something in the mud or sand was filled in by slightly different mud or sand, the infill might also get squashed and stuck together and turn to rock. The two halves might get separated later on so only the cast is left.

Imprint fossils and cast fossils of animals and plants are found in lots of parts of the UK, mainly in sandstones and mudstones. Dinosaur footprints are one example. In the North Pennines we don't have dinosaur fossils, but we find imprints of shellfish called brachiopods, or casts of parts of plants like the bark on tree roots from more than 300 million years ago, before the dinosaurs.

Take it further:

Can you find other items to make imprint fossils of?

- Make imprints of things you find in your house (ask first if it's not yours though!)
- Plants are sometimes fossilised in this way. Make imprints of things you can find in your garden.

Share your pictures or comments on Facebook or Twitter, and let us know if you enjoyed this Geopark at home activity.

Facebook: **https://www.facebook.com/NorthPenninesAONB**
Twitter: **https://www.twitter.com/NorthPennAONB**