AUSTRALIAN EARTH SCIENCE EDUCATION

Fossilisation – Moulds and Casts Student Activity

What are moulds and casts?

A mould is an imprint made by an organism or part of an organism. A mould may be a trace fossil, such as a footprint, or a body fossil, such as the shell of an animal. A cast is formed when material fills the mould. Some of the world's most beautiful cast fossils are found in Australia's opal fields.

Aim

To model and interpret mould and cast fossils.

Opalised belemnite fossils from Coober Pedy. (MLT Pamart 2020, Wikimedia Creative Commons)

Equipment

- Plasticine or playdough
- Plaster of Paris
- Cup or beaker
- Paddle pop stick
- Shell or tooth to make mould

Method

- Make a ball of plasticine.
- Press the shell or tooth firmly into the plasticine to make an imprint. Place the shell next to the mould.
- In the cup, mix plaster of Paris with enough water to form a thick slurry. Stir with the paddle pop stick.
- Pour plaster into the imprint in the plasticine.
- Allow plaster to set overnight.
- Gently remove the plaster from the mould and record observations of the original item, mould and cast.

Observations

1. Which is the most accurate copy of your original item – the mould or the cast? Explain your answer. _____

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2. Describe any false details in your cast or mould. (*Hint: stretching of the mould or bubbles in the plaster can cause distortions or false detail.*)_____

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Discussion

1. What information is lost and what is preserved in moulds and casts? _____

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2. What can you infer about the trilobite based on the mould shown in the photo at right? _____

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Mould of a trilobite.

Explore

Discover what we can learn from fossils and learn more about fossilisation in the AusEarthEd blog.

Watch the AusEarthEd video about fossilisation and try some of the experiments at home.