

# Casting

## Using Plaster to Cast an Object

Casting during the Early Bronze Age was probably done using simple one-piece moulds carved from stone such as sandstone. By the Late Bronze Age, clay moulds were being used to cast a wide range of weapons and tools. While plaster as a medium itself is difficult to use as it sets so quickly, the following activity provides children with the opportunity to experience casting in a safe environment.

### Modelling with Plaster

The following guidelines outline how to mix plaster and how to make a simple cast using clay and an object:

1. Using equal amount of liquid to plaster, pour the water into a deep bowl. Allow space for the liquid level to rise.
2. Add the plaster to the water gradually by sifting the plaster through your fingers as you let it fall onto the water. This allows the plaster to dissolve gradually and avoids creating lumps.
3. When the mound of plaster appears above the line of the water, this indicates the plaster/water proportion is adequate. Leave it to stand for a short period, less than 8 mins.
4. Stir the mixture.
5. Check that it is properly mixed by placing your hand in the solution. If it leaves a creamy coating on your hand, it should be ready for pouring. The mould or preparation work has to be ready. See the following instructions on making a clay mould.

## Making a Simple Mould

Using an object which is 3-dimensional, it is possible to make a copy of its form by taking an impression of it in clay. If the object is symmetrical it will make the job easier. To illustrate the process there is a sequence of pictures on the following page.

Before you start taking the impression of the object, you need to be mindful of the surface you propose to work on and the risk of inadvertently marking the object.

The surface should be slightly porous, e.g. wooden or indeed plaster. Just in case there are any spillages, a porous surface makes it easier to remove the plaster.

The two pieces must be placed together and a cast of wax, slip or plaster can be made of the object.

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1. Press the object into a clay slab up to the half way point. The object may need a guide marking the half way point.



2. Smoothen the surface of the clay level to the marked object.



3. Create a shape for the mould frame and cut down the slab.



4. Build a wall of clay around the slab. Make sure the wall height allows for the depth of the object plus approx. 1cm.



5. Make sure all edges are well sealed with no gaps for plaster to escape through.



6. Make three small dome-shaped impressions with a finger or small object for mould matching. Pour the plaster onto the mould with the object in it.



7. This is what the plaster mould would look like with a pouring spout also pressed out. The inverse mould can now be made.



8. Lightly rub the surface with soap and place the object in the mould. Seal the edges with vaseline. Build up another wall of clay to frame the mould and pour the plaster as before.