



## Curiosity Guide #502

### Simple Machines: Wedge

Accompanies Curious Crew, Season 5, Episode 2 (#502)

#### Carving with Wedges

Investigation #8

#### Description

Find out how artists use wedges to make sculpting and carving easier.

#### Materials

- Clay
- Clay sculpting tools
- Soap
- Candle wax
- Foam
- Variety of wedges: balsa wood, plastic, Styrofoam. Alibates flint, table knife, putty knife, screwdriver, chisel
- Woodcarvings
- Arrowheads

#### Procedure

- 1) Use the available wedges to sculpt figures out of the different materials.
- 2) Which tools worked best with which materials?
- 3) What tools were probably used to make the arrowheads and wooden carvings?

## My Results

### Explanation

A wedge is often used to separate materials by inserting the point of the inclined plane into a surface and applying a force. The downward force causes an outward force that moves away from the faces of the wedge through the material. Some substances are more effective for making wedges than others. For example, Alibates flint can be turned into a wedge by striking it with a rounded stone or antler. This causes stone flakes to come off the flint and allows the maker to shape the tool precisely. With the flint arrowheads, the best tools are copper boppers, antlers, or striking stones. Clay works better with plastic sculpting wedges, and metal chisels work well when carving with wood.

**Did you know** some artists use wedges in their work? It's true! Think about a potter who is sculpting with clay. Some of that work is done with tiny wedges to remove clay or carve in designs. Sculptors who work in wood or stone also use harder wedges to remove material and define the lines in the carvings. Of course, construction sites are a great place to see wedges in action, like the jackhammer or the teeth on the backhoe bucket. Wedges are wonderful!

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