



Curiosity Guide #502

Simple Machines: Wedge

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

Wedge Shavers

Investigation #2

Description

Are you old enough to shave? Let's find out!

Materials

- Fork
- Knife
- Grater
- Peeler
- Hatchet
- Zipper
- Scissors
- Apple corer
- Nail
- Pushpins
- Staples
- Shim
- Spatula
- Shovel or spade
- Ice cream scoop
- Toothpick
- Chisel
- Planer
- Piece of wood

- Cheese
- Carrot

Procedure

- 1) Ask a friend to look at all the objects.
- 2) What do the objects have in common?
- 3) Take the piece of wood and use the plane to shave off bits of wood.
- 4) How does the plane work?
- 5) How is this like when we use a peeler on a carrot, or a grater with cheese?
- 6) What other examples of wedges can you think of?

My Results

Explanation

Each of these objects is an example of a wedge, which is a tool made from two or more inclined planes, forming a sharp point. Wedges are simple machines that are used to provide a mechanical advantage.

Wedges can be used for many purposes. For example, a wedge can be used to separate things, as in the cases of the fork, knife, grater, peeler, hatchet, zipper, scissors, spatula, ice cream scoop, apple corer, shovel, or chisel. Wedges can also be used to hold things in place like the nail, staple, pushpins, or shim. The wood plane is an angled piece of iron that, when rubbed against the wood surface, cuts and separates high sections of wood to make the surface smoother and more uniform. A vegetable peeler and cheese grater work in similar ways by shaving off bits of the top layers.

Think about this! The wedge is an example of a simple machine that has been around for two and a half million years! A wedge starts with two triangular inclined planes put together into a V shape. Look closely at a fork, and you will notice that the tines of the fork are each a little wedge that can separate the food when you press down. A fork has several tines, which add friction and make lifting the food easier. Wedges can be used to separate things, like with an ax or jackhammer; hold things in place, like with a nail or a pushpin; or even lift things up like a forklift. Even your own front teeth are wedges!

Parents and Educators: use **#CuriousCrew**
#CuriosityGuide to share what your Curious
Crew learned!



Curious Crew is a production of Michigan State University.

Learn more at WKAR.org.

© MSU Board of Trustees. All rights reserved.