

Mechanical Energy

Investigation Data Sheet



Build A Fan

Many machines use mechanical energy to do work. A spinning fan is an example of an energy-transfer machine.

Objective

Use simple objects to create a wind machine.

Materials

- a tall box
- 3 corks
- four strips of stiff plastic, 1 inch wide & 3 inches long
- a rubber band
- a small plastic jar lid
- a thin wooden stick
- a hammer
- a nail
- a paper fastener
- a tack

Safety Notice: All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

Procedure

1. Using the tack, make two holes in the front of the box about two inches from the top and bottom. Make a third hole in the back, directly opposite the first hole.
2. Put a hole in the middle of the jar lid and another near its edge.
3. Carefully tack a cork to the outside edge of the lid. This will be the handle for the wind machine.
4. With the paper fastener, attach the handle to the hole that doesn't have a corresponding hole in the box's back.
5. Cut four slits down the sides of the second cork.
6. Slide the four strips of plastic into the slits.
7. Push the stick into the end of the third cork.
8. Poke the stick all the way through the two remaining holes and cap it with the pinwheel cork.
9. Wrap the rubber band around cork number 3 and the jar lid.
10. Turn the handle to operate the fan.

Conclusions

- Where did the energy to operate the fan come from?
