

UPSIE DAISY!

Materials:

- *One person
- *Hot water bottle
- *Hose, 6-foot (2-meter)
- *Pitcher of water
- *Square, flat piece of wood, 12-inch-by-12-inch (30cm by 30cm)
- *Funnel

Objective: Learn about the force of water.

Instructions:

1. Insert the funnel into one end of the hose.
2. Insert the other end of the hose into the hot water bottle. Tape the hose to the hot water bottle so that the end doesn't come out of the bottle.
3. Place the wooden board on the empty hot water bottle that is on the floor.
4. Have someone stand on the wooden board that is over the hot water bottle.
5. Stand on a chair and hold the funnel and hose about 5 feet (1-1/2m) above the ground.
6. Pour water from the pitcher into the funnel until the hot water bottle is full.
7. Raise the funnel and hose; then lower them.

How Does It Work?

The pressure of the water is dependent on the height of the liquid. The higher the funnel and hose are held, the more easily the weight is lifted. The pressure of the water has "more head" or more pressure as you lift the hose higher. This means that the water has more air pressure behind it. When you lower the funnel and the hose, you reduce the amount of pressure on the water – so you reduce the amount of weight that the water can raise.

Questions to Ask:

1. What happens to the person standing on the board when you put the water into the funnel?
2. What happens when you lower the funnel and the hose?
3. What happens when you raise the funnel and the hose?