



## **EXPERIMENT WITH MINI GOLF** Make your own golf course and experiment with force.

### Materials

- 20-30 Books
- 2 Plastic cups
- Scissors
- Masking tape
- Yardstick
- Golf ball



### Procedure

- Design the shape of your golf course by laying the books out end to end to make a course for the golf ball. They should line the edge of the path.
- Cut the bottom out of one plastic cup to make a tunnel for the golf ball. Tape the cup to the floor with the larger end towards the front. The tape should make a ramp.
- Tape the other plastic cup to the floor to serve as the hole.
- Place the golf ball on the ground at the beginning of the golf course. Use the flat side of the yardstick to hit the ball through the tunnel and into the hole.
- Experiment by hitting the ball harder or softer.

### Results

The golf ball was pushed towards the hole!

### Why?

Using the yardstick, you can apply a force to push the ball through the tunnel and into the hole. The force exerted on the ball is applied force. Once it's moving, frictional force from the air and ground slow it down. Golfers use different amounts of force (strong or weak) to make the ball move. They can hit the ball in different directions. The ball moves in the direction that the force was applied. With practice, you can learn to control where the ball moves by changing the direction and amount of force you use to hit it with.

To learn more about physics, check out the *Magic of Science* theater program at the Pink Palace Museum.