

Launch It!

Procedure

- 1. Collaborate** Work with a partner. Tape one end of a thin dowel to the surface of a table as shown. Half of the dowel should stick out past the edge of the table. Slide a spring onto that end of the dowel. **Safety:** Wear goggles.
- 2.** Push a plastic-foam ball onto the same end of the dowel. Slide the ball back and forth until it can move freely.
- 3. Measure** Pull the ball toward the desk until the coils of the spring are squeezed tightly together. Let go of the ball. After the ball stops rolling, use a tape measure to find out how far the ball traveled. Record the distance on the line below.
Safety: Make sure the ball is always aimed away from people.

- 4. Use Variables** Repeat step 3, but squeeze the spring only halfway. Predict how far the ball will travel. Record your prediction on the line below. Release the ball. Then measure and record the distance.

Conclusion

Write the answers to the questions below.

1. **Infer** The spring stored energy when you squeezed it. What happened to this stored energy when you let go of the ball?

2. **Hypothesize** Explain why squeezing the spring less affects the distance the ball travels.

Investigate More!

Be an Inventor Invent a tool, toy, or machine that uses the stored energy of a spring to make another object move. Draw a picture of your invention in the space below. Describe how it might be useful or fun.

