



# Bouncing Ball

Why do balls bounce? Do all balls bounce? This activity uses different shaped balls to investigate how and why balls bounce differently. Conduct an experiments and found out which ball bounces the highest, the lowest, or not at all.

## Materials:

- Scientific Method sheet (next page!)
- Various types of balls, such as golf ball, ping pong ball, tennis ball, rubber ball, etc.

## Preparation:

1. Use the scientific method sheet to conduct the experiment.
2. Fill in the "Question" box with the question we want to answer for our experiment. For example. "Which ball will bounce? Will all the balls bounce the same height?"
3. Fill in the "Research Sources" box with any information you may have used to develop your experiment such as a book, article, website, person or other sources.
4. Look at the different types of balls you will be testing. Develop a hypothesis & predict what you think will happen. Fill in your "Hypothesis" box.
5. Fill in the "How will you test your hypothesis?" box.
6. Fill in the "materials" box with the types of supplies you will use to test your hypothesis.

## Experiment:

1. Have someone hold the tape measure so you can measure how high each ball bounces.
2. Drop the ball. Record how high it bounced. Write down the measurements in the chart below. Add your observations to scientific method sheet.

Type of Ball	Did the ball bounce?	Height of ball bounce

3. Repeat steps 2 & 3 for each ball.
4. Analyze your data & make conclusions. Did your data fit your hypothesis? What did you learn from your experiment? Fill the answers in on the scientific method sheet.

# Scientific Method Worksheet

Use this sheet & follow along the scientific method steps diagram to help plan & record your bouncing balls experiment!

## Question

What do you want to know about? How can science help you answer the question?

## Research Sources

Where did you find information about the topic of your question?

## Hypothesis

What do you think is the answer to your question? Why do you think it is the answer? Can you test your prediction?

### How will you test your hypothesis?

What method or process will you use?  
How will you design and perform the experiment?

### Materials

What supplies will you use to conduct the experiment?

## Observation

During the experiment what did you see, smell, hear, feel?

## Analyze the Data

Make a chart or graph. Does the data fit your hypothesis? Was your hypothesis correct?

## Conclusion

What did you learn from the experiment? What questions do you have now?