

Ball Bounce Lab Using Argument Driven Inquiry

(Adaptation from *Teaching Physics for the First Time* by Jan Mader and Mary Winn)

Problem: How does dropping a ball from a certain height affect the height it bounces?
How is the time of free fall related to the distance fallen? (Grades 5-12)

Materials: various balls (golf, tennis, basketball, super balls...)

Wall with blocks or flat wall and hard surface floor

Graph paper

Meter stick

Stopwatch (grades 5-12)

Whiteboard

Markers

Research: Design a method to solve the problem using the materials given. Have your teacher check your design.

Argument: Development your argument from the data collected. The argument is made up of a claim, evidence to support your claim, and a justification of the evidence. Remember to explain why you included evidence in your arguments and data necessary to make a good justification.

Share: Display your argument and be prepared to present the results to your classmates.

Improvement: Design a better investigation using the results of your exploration.

Report: Write a report of your investigation sharing your goal, method, and argument.