

Physics

Free-Falling

Name: _____ Block: _____

Learning Target: I can explain the principle of free-fall motion in a uniform gravitational field.

You have spent a lot of time considering motion in one dimension along the x-axis. In this activity, you will consider motion in one dimension along the Y-axis. Specifically, you will be playing with a downward (negative) acceleration we know as gravity.

Materials

- Empty film canisters
- Pennies
- Orange plastic golf ball
- White golf ball

Questions

There are two questions you are attempting to find a solution to:

1. Does mass affect the rate at which objects fall?
2. Does shape impact the rate at which objects fall?

Experimental Design

With your group, discuss and write up a simple experiment you could conduct with the materials listed above to answer the two questions. Discuss your experiment with the teacher before doing it. Once you have completed your experiment, your group needs to write a paragraph explaining your results.