

Unit 1: Newtonian Mechanics – Kinematics in One Dimension

LAB 2: Acceleration Due to Gravity

Galileo Galilei (1564-1642) was the first person to measure the acceleration of falling objects on Earth. [Click here for a link to a video that describes his experimental approach.](#)

Objective: Determine the acceleration due to gravity of an object on Earth.

Equipment:

- You may choose from a variety of equipment. Options include a PASCO Smart Cart with track, PASCO photogates, a cell phone, a meterstick, a variety of balls, and a protractor. If there are additional items you'd like to include, check with your teacher first.

Procedure: Your group will design the procedure for this experiment.

Requirements:

- Your procedure cannot exactly match that of any other experimental team in the class. Be sure to connect with other teams to make sure you are using a unique approach.
- You must use a graphical (data tables and graphs,) quantitative (measurements and calculations,) and narrative (written) analysis of your experiment.
- You must include an error analysis.