

# Unit 2: Vectors and Projectiles labs

1. Target Practice
2. Virtual Projectile

# Lab: Target Practice

February 7

- Obj: Determine the landing spot of a marble launched from the Marble Launcher, based only on the launch speed and height above the ground. You may choose any angle from 0 to 45 degrees.
- Calculations: Launch speed, time in air, horizontal range.
- The discussion should include: Any issues if you missed the target or just a few words to gloat if you hit the target on the first shot.

# Lab: Virtual Projectile

Due February 9

- Complete the provided lab sheet using the online projectile simulation.
- No further discussion required.
- Make note of the how the various launch angles relate to the projectile range.

# Physics Labs

Labs are due no later than one week after last class day of lab. There is no late, only turned in or not. Feedback is based on accuracy. Grade is based on completion.

- Title (Provided)
- Objective (Provided)
- Diagram(s) of setup/procedure
- Data (tables); minimum\* of 5 data points consisting of trials

# Physics Labs

- Graph(s)
  - use to show relationships between variables
  - General shape of data: line, curve, none
  - Best fit of shape; determine slope if linear
- Calculations – must show work for one, record all results
- Written Discussion
  - What, why, how
  - Results: “answer” to objective using data, calculations, and graphs to support
  - Experimental error: procedural difficulties, “human error”?, never calculations