PDF File

LEARNING AND SIMULATING PROJECTILE MOTION

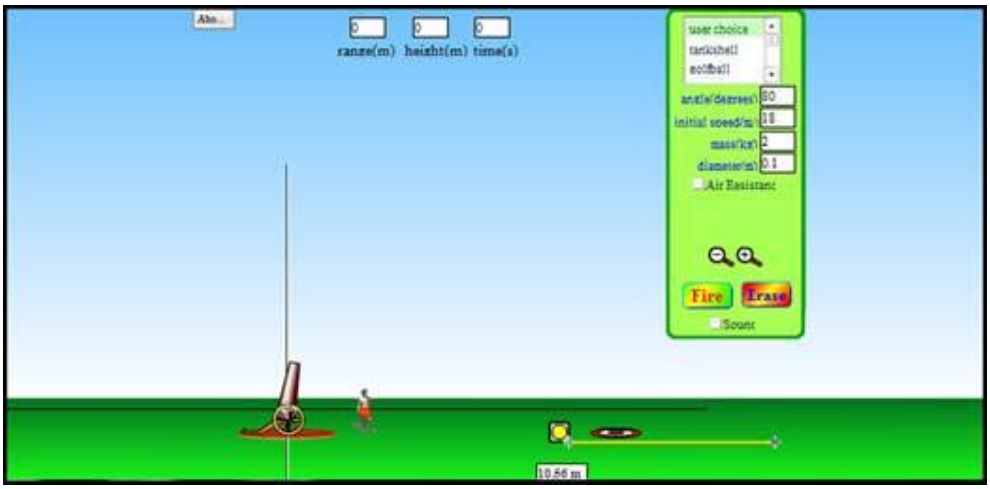
During the first part of the lab you are given the opportunity to hypothesize about a projectiles angle, velocity, range, maximum height and time of travel. You will see how these variables directly affect a projectile. In part two of the lab you will observe a projectile with and without air resistance in order to determine the effect of air resistance on a projectile. In part two, you will also be able to see how mass affects a projectile in terms of angle and initial velocity.

Part I

Go to the University of Colorado Physics Simulations Website PhET:
http://phet.colorado.edu/sims/projectile-motion/projectile-motion_en.html

Download the printable worksheet below. Once you have the worksheet completed , scroll to question #1.

Projection Motion Simulator Worksheet



You can grab, drag, rotate, and stretch the objects to satisfy the requirements. You can also use + and - , ERASE, and FIRE buttons. You can download the labs to your desktop. It is wise to house all of the simulations in a folder so you can refer back to them when needed.

Assume no air resistance. Set the sound on.

Part II

Use the same simulator as in Part I.
http://phet.colorado.edu/sims/projectile-motion/projectile-motion_en.html

Download the printable worksheet below. Once you have the worksheet completed , scroll to question #9.

Learning and Simulating Projectile Motion Worksheet

Below are additional educational resources and activities for this unit.

Unit 5 Resource 1

Unit 5 Resource 2