

Projectile Motion (2D Motion) Skill Objectives

What you should know and be able to do by the end of the unit.

1. Use video analysis techniques to produce position-time and velocity-time graphs which represent the behavior of an object moving in two dimensions.
2. Determine which model (Zero Total Force or Non-Zero Total Force) best describes the horizontal and vertical motion of an object.
3. Determine which model (Constant Velocity Particle or Constant Acceleration Particle) best describes the horizontal and vertical motion of an object.
4. Draw a motion map for an object undergoing parabolic, 2-dimensional motion, with velocity and acceleration vectors for both dimensions.
5. Draw a force diagram for an object undergoing parabolic, 2-dimensional motion.
6. Given information about a projectile's initial velocity and height, determine:
 - a. the time of flight
 - b. the point where the projectile lands
 - c. velocity at impact
7. Explain what effect the mass of a projectile has on its time of flight.

• Additional Study Hints

- Look over all our activities, worksheets, and questions of the day.
- Form a study group and review together and quiz each other.