

## **Projectile Motion**

Students will be able to understand the basic concepts of projectile motion.

### **Learning Targets**

1. I can recognize the independence of X and Y variables in 2-dimension problems.
2. I can determine the range of a horizontally launched projectile given initial launch conditions.
3. I can determine the time of flight, maximum height, and range of a projectile launched from the ground and landing on the ground given the initial launch conditions.
- \*4. I can determine the time of flight, maximum height, and range of a projectile launched at a given angle and height.
5. I can justify that if the only force acting on an object is gravity, it will have the same constant downward acceleration regardless of mass, velocity or position.
6. I can apply the various kinematics equations in one and two dimensions.

\*Pre-AP Physics Learning Objective