

Week 6 – Projectile Motion

What is Projectile Motion?

- Any object that is moving horizontally and vertically at the same time is a projectile.
- The horizontal and vertical motion are independent of each other.
- The speed with which an object is launched does not affect how long it takes to reach the ground.
- The vertical height (and gravity) affect the time it takes to hit the ground.

What is Projectile Motion?

- Horizontal Motion:

- $x = vt$

- x is the horizontal distance, v is the speed, and t is time

- Vertical Motion:

- $y = 0.5gt^2$

- y is the vertical distance, g is acceleration due to gravity (9.8 m/s^2), and t is time