

# Cannonball Projectiles

## Cannon Ball Projectiles

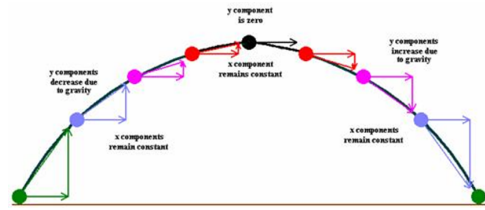
### Objective:

Introduce cannon ball projectiles.



A projectile often moves horizontally as it moves upward and/or downward.

## Cannon ball trajectory



**Tossed Ball**  
A ball tossed upward has initial velocity components 30 m/s vertical, and 5 m/s horizontal. The position of the ball is shown at 1-second intervals. Air resistance is negligible, and  $g = 10 \text{ m/s}^2$ . Fill in the boxes, writing in the values of velocity components ascending, and your calculated resultant velocities descending.

Use the geometry theorem  $c^2 = a^2 + b^2$  to find the resultant velocities.

More specifically,  $v = \sqrt{v_x^2 + v_y^2}$

Conceptual PHYSICS  
Chapter 3: Projectile Motion

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