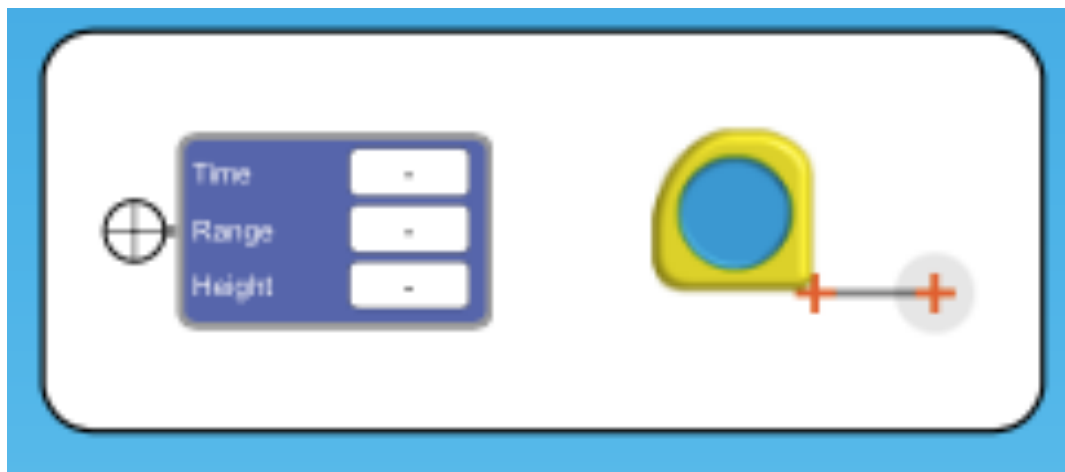


Variables that effect Projectile Motion

Use the Phet Cannon simulation to explore the ways initial height, mass and initial horizontal velocity effect time in the air and range.

1. Be sure the launch angle of the cannon is zero (that is the definition of a horizontally launched projectile).
2. Raise the cannon up by dragging the tower up.

Use the tool on the left below by dragging the circle to the landing point of the trajectory:



What is the effect of **mass** on the time in the air and the range?
Change only the mass (leave the height and the initial speed the same).

Height = _____ initial speed = _____

Mass	Time in the air	Range

Conclusion:

What is the effect of **height** on the time in the air and the range?
Change only the height (leave the mass and the initial speed the same).
initial speed = _____ mass = _____

Height	Time in the air	Range

Conclusion:

What is the effect of **initial speed** on the time in the air and the range?
Change only the mass (leave the height and mass the same).
Height = _____ mass = _____

Initial speed	Time in the air	Range

Conclusion: