

Procedure

1. Select one of the available modes:
 - Angled Launch
 - Horizontal Projection
 - Compare Angles
2. Set the required parameters using the sliders:
 - Launch angle (where applicable)
 - Initial speed
 - Initial height (for horizontal projection)
3. Alternatively, click and drag from the green launch point to adjust the launch direction and speed interactively.
4. Press the Launch button to start the simulation.
5. Closely observe the projectile as it moves along its trajectory.
6. Monitor the displayed values for:
 - Time elapsed
 - Horizontal position
 - Vertical position
 - Horizontal velocity
 - Vertical velocity
 - Resultant speed
 - Maximum height
 - Horizontal range
 - Flight time
7. Study the graphs provided in the simulator:
 - Trajectory (Height vs Distance)
 - Velocity vs Time
 - Range vs Launch Angle
8. In Compare Angles mode, compare the trajectories produced by two complementary launch angles and observe that they have the same horizontal range.
9. Use the Pause button to temporarily stop the simulation and inspect the motion.
10. Use the Reset button to restart the experiment with the selected parameters.
11. Use Clear Trails to remove previously drawn trajectories while keeping the current settings.
12. Repeat the experiment with different launch angles, speeds, and heights to analyse their effect on projectile motion.

Simulator Procedure

1. Choose the desired simulation mode.
2. Set the launch parameters using the sliders or by dragging from the launch point.
3. Click Launch to begin the simulation.
4. Observe the projectile path and the real-time flight data displayed on the screen.
5. Switch between the available graph tabs to analyse trajectory, velocity, and range.
6. Pause or resume the simulation as required.
7. Reset the simulation to perform another trial.
8. Compare different launch conditions and record the observations.