

Name _____ Period _____

Chapter 13, section 2 - Gravity and motion - Toolkit

Gravity and Falling Objects

In the story about Galileo dropping metal balls from the leaning tower of Pisa, what did the experiment prove?

Why do objects fall to the ground at the same time?

What would happen if an astronaut dropped a bowling ball and a feather on the Moon at the same time, from the same height? Why would the experiment have different results if conducted in our classroom?

Projectile Motion and Gravity

Definition of Projectile motion:

What are the two types of movements (motion) responsible for projectile motion?

What force affects the vertical movement of an object in projectile motion?

How does the force of gravity affect the horizontal and vertical velocities of an object in projectile motion?

Air resistance and Falling Objects

What is air resistance?

How does air resistance affect the acceleration of falling objects?

Which 2 forces combine to determine the net force of a falling object? In which directions do these two forces act?

Definition of Terminal Velocity:

Definition of Free fall:

Skydivers must open their parachutes before they reach a certain distance above the ground. Explain why a parachute would be less useful if it were opened too soon to the ground.

Orbits

How is an orbit of a space shuttle formed?