

# DISNEY Y.E.S. PROGRAM DESCRIPTION



## “DISNEY’S WORLD OF PHYSICS: PROPERTIES OF MOTION”

### PHYSICAL SCIENCE

**Grade Levels:**  
3rd-12th

**Program Length:**  
3 hours

**Meeting Location:**

(Morning) *Magic Kingdom*® Transportation and Ticket Center bus portico, located on the far right near the *Magic Kingdom*® Group Sales window.

This program is aligned with National Standards.

The *Space Mountain* learning experience is not available on *Magic Kingdom* Extra Hour of Magic mornings.

### OBJECTIVE

Students become Theme Park scientists for a day as they apply the scientific method to explore the physics concepts of mechanics.

### KEY LEARNING HIGHLIGHTS

#### The Scientific Method

On the ride from the Transportation and Ticket Center to the *Magic Kingdom*® main entrance, students are introduced to the scientific method, which acts as a tool for explorations into the principles of physics.

#### Dynamics of Motion

Students observe the design elements of a *Magic Kingdom* attraction. This provides an ideal setting to study potential and kinetic energy, speed, velocity, and acceleration.

- Students simulate their own roller coasters and test different track elements to determine which requires the greatest amount of potential energy.
- On *Splash Mountain*® days only, students discover the geometric process of triangulation in determining height.

#### Mechanics in Action

Participants explore hydraulics and pneumatics during a closer look at Audio-Animatronics® technology.

#### Physics in Motion

A select *Magic Kingdom* attraction helps students gain a better understanding of gravity, acceleration, and inertia.

- Students measure G-forces by using vertical and horizontal accelerometers and experience the effects of inertia.

### THE DISNEY DIFFERENCE

- Students step behind the scenes to see how illusions are created.
- Trained and knowledgeable *Disney Institute* Cast Members facilitate this high quality and educationally sound program, while never forgetting that fun is a vital part of learning.

