

DISNEY Y.E.S. PROGRAM DESCRIPTION



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

PHYSICAL SCIENCE

Grade Levels:
3rd-12th

Program Length:
3 hours

This program is aligned with National Standards.

Meeting Location:

(Morning) The *Magic Kingdom*® Transportation and Ticket Center Bus lot.

The *Space Mountain*® learning experience is not available on mornings with *Magic Kingdom*® Park extra magic hours.

OBJECTIVE

While experiencing select *Magic Kingdom*® Park attractions, students will come face to face with science at work in an exploration of the forces that keep roller coasters and Audio-Animatronics in motion. Students will discover the role of physics in generating thrills and chills as they examine speed, velocity, acceleration, centripetal force, hydraulics, and pneumatics at the most magical place on Earth!

KEY LEARNING HIGHLIGHTS

Science in Motion

- Onboard the *Walt Disney World*® Resort Monorail Transportation System students are introduced to inertia and Newton’s First Law of Motion.
- Students gain knowledge of OHERC, an acronym for one version of the Scientific Method.

Physics at Work

Select *Magic Kingdom*® Park attractions set the stage for student’s discovery of the role of physics in generating thrills and chills.

- Students examine how speed, velocity, and acceleration influence roller coaster design elements.
- Through the use of model roller coaster elements, students uncover the interplay of potential and kinetic energy in attraction design.
- Students use OHERC and apply knowledge gained through the model activity to an up-close experience on a select *Magic Kingdom*® Park attraction.
- On select days students discover the geometric process of indirect measurement.
- Using simple tools, students will demonstrate and calculate centripetal force.
- Students will observe and experience airtime, positive g-force, and lateral g-force when they fasten up for an exercise on a *Disney Mountain*.

Hydraulics and Pneumatics

- At a select *Magic Kingdom*® Park attraction, students discover the role of hydraulics and pneumatics in Audio-Animatronics technology.

THE DISNEY DIFFERENCE

- This program begins prior to the opening of the *Magic Kingdom*® Park.
- Trained and knowledgeable *Disney Y.E.S.* Cast Members facilitate this high-quality and educationally sound program, while never forgetting that fun is a vital part of learning.



Disney Y.E.S. programs are accredited by Northwest Association of Accredited Schools.

All programs subject to availability. Program content, times, attractions, and locations subject to change due to inclement weather, availability, or group dynamics.



Toll-free Phone: 877-FIELDTRIP (877-343-5387) • Web: www.DisneyYES.com