



# “DISNEY’S WORLD OF PHYSICS: ENERGY AND WAVES”

## PHYSICAL SCIENCE

**Location:**

*Disney California Adventure™* Park in California

**Grade Levels/Ages:**  
 6th-12th, ages 11-18

**Program Length:**  
 2 1/2 hours

This program is aligned with National Standards.

### OBJECTIVE

*Disney's World of Physics: Energy and Waves* is a two and a half hour program through *Disney California Adventure™* Park for sixth through twelfth graders. Students will examine and gain an understanding on how the energy of light and sound come together to create a unique experience in *The Twilight Zone Tower of Terror™\** and *It's Tough to be a Bug!\** Students will also discover electromagnetism by exploring the high speed, thrilling roller coaster, *California Screamin'.*

- Articulate how different colors of light are made up of different wavelengths
- Demonstrate how light can be projected through a lens
- Demonstrate how light is reflected in glass

### THE DISNEY DIFFERENCE

- Trained and knowledgeable *Disney Youth Education Series* Cast Members facilitate this high-quality and educationally sound program, while never forgetting that fun is a vital part of learning

### KEY LEARNING HIGHLIGHTS

After completing *Disney's World of Physics: Energy and Waves*, students will be able to do the following:

- Articulate what binaural hearing is
- Define and demonstrate a compression wave
- Define a medium
- Demonstrate and articulate how a solid, liquid and gas affect sound
- Define acoustics
- Articulate the relationship between electricity and magnetism
- Distinguish the difference between permanent magnets and electromagnets
- Identify magnetic properties
- Articulate several applications of magnetism
- Articulate how linear induction motors can be used in transportation systems
- Demonstrate how white light is composed of different colors of light



*Disney Youth Education Series* programs are accredited by the Northwest Accreditation Commission.

\*The Twilight Zone Tower of Terror™: The Twilight Zone® is a registered trademark of CBS, Inc., and is used with permission pursuant to a license from CBS, Inc.

\*\*"a bug's land"/It's Tough to be a Bug!: are inspired by Disney-Pixar's "A Bug's Life." ©Disney-Pixar.

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