

EVERYDAY CHEMISTRY

APPLIED SCIENCES

Designed For Students:

Grades 4th-9th

Ages 8-15

HELLO EDUCATOR!

Disney Youth Education Series is pleased to be able to provide you with these materials to gauge your students' progress as they prepare for and complete their Disney Y.E.S. experience.

To encourage creative thinking, open-mindedness, and generate excitement, we suggest that you use the Pre-Trip Coursework to help your students prepare for Everyday Chemistry. Upon your return to school, you might find the Post-Trip Assessment useful to measure student learning.

These tools are sure to get your students moving in the right direction and help ensure a learning experience that is relevant, inspiring, and thought-provoking!

We look forward to hosting you at the Walt Disney World® Resort where iconic settings, imagination, and storytelling come together to create a unique learning environment and life-long memories. See you soon!

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1. Direct each student to the American Chemical Society web address at www.acs.org

- Students to select the Education tab and then enter the Exploring Chemistry area of the site.
- Students to enter the National Historic Landmarks area of the webpage.
- Students to enter the Timeline area of the webpage.
- Students to select a landmark image and explore the information provided for the image.
- Students to prepare a short classroom presentation describing the landmark and why it was important.

2. While at home, students to gather the clothes and accessories that they would wear on a typical day. Students to examine the labels of each garment and any accessory and chart the materials that make up each item.

- The chart should indicate:
 - ✓ Individual items
 - ✓ Material(s) that make up each item
 - ✓ If the material(s) are synthetic or natural
 - ✓ Source of the natural material(s)
 - ✓ Elements that make up the synthetic material(s)
- Students to discuss the ratio of natural vs. synthetic materials of the garments of the day's clothing.
- Students to discuss the merits and challenges of the use of natural and synthetic materials to create clothing and accessories.

3. Direct each student to the American Chemical Society web address at www.acs.org

- Students to select the Education tab and then enter the Exploring Chemistry area of the site.
- Students to select Science for Kids area of the page.
- Students to select view activities in the Planet Earth area of the page.
- Students to select Plants under Hands-On Activities.
- Students to select and print the It Isn't Easy being Green activity page.
- Students should use the step by step directions to complete the activity as part of an at home-experiment.

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At the conclusion of the Disney Youth Education Everyday Chemistry experience, have each student do the following:

1. Define chemistry
2. Define and illustrate photosynthesis
3. Articulate and demonstrate the benefits of chemistry
4. Identify carbon, hydrogen, and oxygen on The Periodic Table of the Elements
5. Create an elastomer
6. Articulate and provide examples of three types of polymers
7. Articulate the need for conservation of natural resources
8. Construct a model of a water molecule
9. Construct a model of a polymer molecule