

ENRICHMENT PROGRAMS (Starting September 1, 2010)

Connecticut Science Center; www.ctsciencecenter.org; reservations@ctsciencecenter.org; 860-520-2150

The Discovery Center Enrichment Programs give students a hand-on experience in an advanced science concept using more sophisticated equipment and techniques than might be possible in a standard classroom. These are not videos, lectures or mere demonstrations, but in each session, the students themselves will be active participants in performing experiments, discovering the reality behind the science and learning how it can be used to impact their own lives. Although these are more advanced programs, they can still be adjusted to suit a variety of grade levels as shown below.

Participation in a Foundation Program is an additional charge to the general student admission fee. For availability information or scheduling any of our programs, contact our Reservation Center at (860) 520-2150 or reservations@ctsciencecenter.org (*Put Field Trip page link here*)

Living in Space

Expanding upon aspects of our “Exploring Space” Gallery, discover what it is like to live and work in space. What is gravity and what happens to humans without gravity? Do you need a sweater or a t-shirt in space and why? Explore an unknown planet to determine if humans can survive there or not.

Two levels available: Grades 5 – 8 or Grades 9 - 12

Length: 90 minutes

Greenville - Energy City

Expanding upon our Energy City Gallery, experiment with solar cells, wind power, hydrogen fuel cells and other energy sources to design an eco-friendly model town with power grid; using both conventional and alternative fuel power plants. How low can you get its carbon footprint?

Two Levels Available: Grades 5 – 8 or Grades 9 - 12

Length: 90 minutes

Polymers

They can bend and stretch. They can be flexible, or they can be unyielding. They can be a source of pollution or they can be vital to our existence. What are these chemicals? They’re polymers. In this session, students will learn about polymers and how these chains of simple molecules play such a vital role in our everyday life. Topics will touch on everything from DNA to Nylon to Rubber to Silly Putty.

Grades: 9-12

Length: 90 minutes

Acids & Bases

What are acids and bases and how strong can they get? How are these chemicals used? In this session students will explore what makes something acidic or basic, as well as how acidity is measured. Students will discuss how acids are used to create batteries, digest food, and how acid can impact the environment around us. Students will also have the opportunity to perform titrations to determine just how strong a particular acid is.

Grades: 9-12

Length: 90 minutes

Be a Molecular Biologist

Students will discover what is inside themselves that makes them unique. In this lab activity your students will extract their own DNA and bring it back to class with them in a necklace. Students will learn techniques used by molecular biologists and will explore the world of forensic investigation to see how DNA fingerprinting is used in helping determine a suspect's guilt or innocence.

Two Levels Available: Grades 6 – 8 or Grades 9 - 12

Length: 90 minutes

Roaming Robotics

Students will learn the fundamentals of Robotics as their team programs real microprocessor-controlled Robots to perform a variety of challenges and tasks. This is a hands-on experience in the practical application of artificial intelligence and your students' first step into the World of Robotics which will be a major part of their future.

Two Levels Available: Grades 6 – 8 or Grades 9 - 12

Length: 90 minutes

Controlling Microcontrollers

Students will actually create and wire electronic circuits and then program a microcontroller to operate those circuits just like the automatic systems in the real world all around us. This is the same technology used today to control everything from traffic lights to cars to iPods. Your students have all used it, now they can control it.

Two Levels Available: Grades 6 – 8 or Grades 9 - 12

Length: 90 minutes

Discovering Your Senses

Students will discover the role of sensory organs in perceiving stimuli and sending signals to the brain. Why do we need five senses? Using advanced technology students will explore each of their senses and how they are interconnected. This class will focus on showing different health careers that are associated with each of the five senses.

Two Levels Available: Grades 5 – 8 or Grades 9 - 12

Length: 90 minutes

Exploring Reaction Time

How much do you really depend on your eyes? How fast can you react in a situation? Using advanced technology we will explore how we interact in our environment using the different senses. This class will focus on showing different health careers that are associated with using the senses and making judgments including the careers in forensic science.

Two Levels Available: Grades 5 – 8 or Grades 9 - 12

Length: 90 minutes