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 Enrichment 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

**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*

**Plastics and Beyond**
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*
Don’t be Neutral About Acids
What are acids and bases? How strong can they get and 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 acids 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 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 the 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 The World
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. The 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 students 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

Trumpf Laser Lab (Available only in September - October 2010)
On the 50th Anniversary of the laser, Trumpf, Inc., an international manufacturer of lasers, has created this innovative assembly of interactive, hands-on kiosks activities that will enable students to explore and experience such questions as: What makes one source of light different from another? What is a laser and what can be done with it? Where can we find lasers in everyday life? How can a laser be made more powerful? How can the direction of the laser light be controlled?
Grades 5 - 12; Length: 45 minutes