

We have grants!
See inside.



**We address NYS,
MA, & VT Learning
Standards in Science,
Technology and Math.**

schenectady
MUSEUM
& suits-bueche
PLANETARIUM

science center of tech valley

School Programs 2010-2011



**Visit the
Schenectady
Museum &
Suits-Bueche
Planetarium...
*where science
is fun for everyone!***

Science Explorations at the Museum

Students improve their skills by using hands-on, minds-on learning, including interactive demonstrations and experimentations. Programs are geared to a variety of learning styles and include hands-on exploration, Q&A discussions and participatory demonstrations. All programs are 45 minutes, unless otherwise noted.

Grade Levels At A Glance

Recommended Grade Levels

Science Explorations	PreK	K	1	2	3	4	5	6	7	8	9-12
Energy Science							●	●	●	●	
Fun with Physics					●	●	●	●	●	●	
It's Electric					●	●	●	●	●	●	
Just a Phase					●	●	●	●	●	●	
Meet the Science Center	●	●	●	●	●	●	●	●	●	●	●
Nanoworld								●	●	●	●
Science Solutions					●	●	●	●			
Star Time					●	●	●	●	●	●	●
Who Are You, Scientist?	●	●	●	●							
Who Did It?							●	●	●	●	●
Wow...Bugs!			●	●	●						

- **Energy Science**
Grades 5-8 NEW!

NYS MST Standards 4 & 7
Watch a demonstration on steam turbines, see a toy car zip around powered by a fuel cell, and investigate the design of a solar panel. In this engaging program, students learn about different methods of producing energy from both renewable and non-renewable sources.

- **Fun with Physics**
Grades 3-8

NYS MST Standards 1, 4 & 7
Physics is everywhere, even when we play. Learn how a baseball follows principles of physics, and how a bicycle tire can turn you into a human gyroscope! Through interactive demonstrations, this program explores Bernoulli's Principle, center of gravity, and other physics theories.

- **It's Electric • Grades 3-8**

NYS MST Standards 1 & 4
We all use it...but what IS it, and how does it work? Through hands-on demonstrations, learn the basics of electricity, including the hair-raising Van de Graaf generator. Learn how electricity is generated, delivered to homes, and has changed our lives forever.

- **Just A Phase • Grades 3-8**

NYS MST Standards 1 & 4
The Moon is so close and yet our understanding may seem far away. Explore the Moon with a hands-on activity designed to show students the Moon phases through a 28-day cycle. This program is designed to describe and replicate Moon phases to uncover the Moon's mystery.

- **Meet the Science Center**
All grades

NYS MST Standard 1
What is a science center, and how can it help us learn? Led by our science educators, students use critical thinking skills to discover the stories embedded in our exhibits and artifacts. Pre-K and Kindergarten tours are 30 minutes.

- **Nanoworld • Grades 6-12**

NYS MST Standards 1, 3, 4, 5 & 7
The nano world is all around us, but we can't see it with our eyes. These interactive demonstrations explore the everyday applications of nanotechnology. Students learn just how small nano is and what it takes to work with nano-size objects.

- **Science Solutions**
Grades 3-6

NYS MST Standards 1, 3 & 4
Science can be fun! In this program, students make their own bouncy, stretchy putty while learning about chemistry. Individuals mix different ratios of ingredients to make the best product.

● **Star Time • Grades 3-12**

NYS MST Standards 1, 4 & 5
What time is it? Students learn ancient ways to measure time using the stars and Sun. In this hands-on program, students make and learn to use astronomical clocks.

● **Who Are You, Scientist? Grades PreK-2**

NYS MST Standards 1 & 4
Our exhibits and collections feature work of scientists from yesterday and today. Transform yourself into a scientist and discover how scientists work. Use tools a scientist uses. Conduct a simple experiment in chromatography, and take home the colorful results.

● **Who Did It? • Grades 5-12**

NYS MST Standards 1 & 4
Using science and not just instinct, students solve the mystery of the missing microscope. We'll conduct a fingerprint analysis and extract DNA from a banana to solve this mystery, all the while learning about the very popular topic of forensics.

● **Wow...Bugs! • Grades 1- 3**

NYS MST Standards 1 & 4
What makes a butterfly an insect? Explore the amazing diversity of insects. Through a hands-on activity students create an insect that represents basic insect biology, including their adaptive color schemes.

Science on Stage - Making It Go!

Perfect for auditorium-style presentations, this 45-minute stage show engages your students as they discover different methods of producing the energy we use for personal transportation. Our science educator will use an illustrated presentation and demonstrations with working models to explain how engines work when powered by different fuels.

- \$150.00 for a 45-minute presentation + travel fee
- \$125.00 per additional presentations on the same day

SCIENCE CIRCUIT [FOR LARGE GROUPS!]

ELECTRICITY, NANO or PHYSICS demo! GREAT FOR MIDDLE SCHOOLS! Grades 3-12

Does your large group of students have a taste for science? Geared for groups from 50-200, the Science Circuit includes:

- Planetarium Show of your choice
- Self-Tour of our Galleries
- Scavenger hunts available upon request
- A 30-minute interactive Science Demonstration where students help demonstrate basic scientific principles. Choose either Electricity, Physics or NanoWorld for your Science Demo topic.

Science Circuit programs run approximately 2 hours and 45 minutes depending on group size.

\$7.50 per student

Little Wonders of Science Pre-school (ages 3-5)

It's never too early to explore science! This 45-minute program uses familiar books and hands-on activities to offer youngsters an opportunity to learn about basic scientific concepts. Requires active adult participation.

Choose from:
Clifford's First Snow Day – Snow
Curious George Flies a Kite – Wind
Mouse Paint - Color
Olivia Forms a Band – Sound
The Very Hungry Caterpillar – Insects

At the Museum - \$5 per child, with \$80 minimum. Adult chaperones required and admitted free at the rate of one chaperon per 8 pre-school children.

At your school or day care center - \$150.00 for a 45-minute class, up to 25 students; \$125.00 per class for additional presentations on the same day

Little Wonders is sponsored by:
The Equinox- Albany Community Foundation Fund



Traveling Science

Can't make it to the Schenectady Museum? We'll bring the excitement to you! We travel far and wide, from Utica to the Berkshires, Plattsburgh to Poughkeepsie. FREE travel if located in Schenectady County.

Museum in Your Classroom
These 45-minute programs can be taught in your classroom by our knowledgeable science educators.

Choose from:
Who Are You, Scientist? (PreK – 2) It's Electric (3 – 8)
Just A Phase (3 – 8) Star Time (3 -12)
Fun with Physics (3 - 8) NanoWorld (6 – 12)

- \$150.00 for a 45-minute class, up to 25 students + travel fee
- \$125.00 per class for additional presentations on the same day

Planetarium Programs

We are the only regional Planetarium where every show is hosted by an educator and includes a tour of the seasonal night sky. Unless otherwise noted, all programs are 45 minutes.

The Schenectady Museum & Suits-Bueche Planetarium is an official NASA Space Place!

All Planetarium programs: NYS MST 1 & 4

Grade Levels At A Glance

Planetarium Programs	Recommended Grade Levels										
	PreK	K	1	2	3	4	5	6	7	8	9-12
Honey, I Shrank the Solar System!					●	●	●	●			
Lunar Odyssey								●	●	●	●
Our Place in Space			●	●							
Rusty Rocket's Last Blast			●	●	●						
The Sky Above Mister Rogers' Neighborhood	●	●									
'Tis the Season (Nov. 23 – Dec 31)						●	●	●	●	●	●
Wonderful Sky	●	●									
WSKY: Radio Station of the Stars					●	●	●	●			
Secrets of the Sky (Live Show)			●	●	●						
Cosmic Wonders (Live Show)					●	●	●	●	●	●	●
Astronomy for Earth Science: The Moon & More (Live Show)									●	●	
Astronomy for Earth Science: The Sun & More (Live Show)									●	●	

● Honey, I Shrank the Solar System! Grades 3-6

Students go on an in-depth exploration of the solar system during this program about Abby Phelps and her science fair project.

● Lunar Odyssey Grades 5-12

Experts in lunar mythology, history, science, and astronomy take you on a guided tour of the awesome beauty and mysteries of Earth's nearest neighbor in space, the Moon.

● Our Place in Space Grades 1-2

While solving a crossword puzzle about the sky, endangered animals explore the cause of day and night, the importance of our star the Sun, the beauty of the constellations, and the variety of objects that make up the Universe.

● Rusty Rocket's Last Blast Grades 1-3

Lift off with Rusty Rocket and learn rocket basics, tour the solar system, relive great moments in space exploration, and discover how far it really is to the Moon and planets.

● The Sky Above Mister Rogers' Neighborhood Grades PreK-K

Fred Rogers and his Neighborhood-of-Make-Believe friends explore the wonders of the sky in this first-visit planetarium show geared to pre-school audiences. (30 minutes).

● 'Tis the Season (Nov. 23 – Dec. 31) Grades 4-12

Light up the cold, dark winter with a bright holiday show that explores the history of holiday customs, cultural celebrations practiced during the winter solstice, and general astronomy topics like seasons and the winter night sky.

● Wonderful Sky Grades PreK-K

Explore the sights and sounds of the day and night sky. From clouds to stars, from the Moon to the Planets, we move from our own backyard on a partly cloudy night, through a brief storm and on to the stars. This introductory program guides young audiences through the seasonal sky and helps them experience the wonders of the cosmos. (30 minutes).

● WSKY: Radio Station of the Stars • Grades 3-6

This entertaining overview of astronomy topics is delivered in a fast-paced radio show format. Tune in to WSKY, a radio station that talks about the night sky, plays the hottest songs, and even delivers the traffic report from the asteroid belt of the solar system.

Custom Live Programs

● **Secrets of the Sky • Grades 1-3**

A live program geared to younger audiences and featuring a sing-along. Like other live shows, it highlights the seasonal night sky and astronomical happenings.

● **Cosmic Wonders • Grades 3-12**

This live program highlights the seasonal night sky, including constellations, planets, the moon and current astronomical events. Tell us what you are studying! We will emphasize specific topics such as constellation mythology or the solar system.

Astronomy for Earth Science (AES) • Grades 8-12

The Planetarium is an excellent tool to demonstrate astronomical phenomena and concepts covered on the Regents Exam. We offer two separate lessons examining the different topics that are on the Regents. Sign up for either or both, your choice. Special rate applies when you book both programs on the same day. An introduction to the seasonal sky is included with each show.

● **AES: The Moon & More**

This program demonstrates planetary motion, including retrograde motion of the planets as seen from Earth, and from outside of the Solar System. The Lunar Cycle and phases are viewed in the dome at "weekly intervals" and the phenomena of Eclipses is explained and shown.

● **AES: The Sun & More**

This program takes a look at the apparent motions of the stars and circumpolar constellations. The rising and setting of the Sun at the start of each season is duplicated in the Planetarium sky, along with the Sun's elevation at noon throughout the year. Incorporated into this lesson are the Ecliptic, Meridian, and Celestial Equator, and how they relate to the seasons and the tilt of the Earth's axis.

Invention Convention Grades K-8

Do your students come up with great ideas for inventions and practical solutions? Try out Invention Convention! Students define a problem, design an invention to solve the problem and submit their idea on an invention disclosure form. Volunteer scientists will come to your classroom, and inspire your students to come up with creative inventions that affect the world around them. The top 100 entries will be invited to create a model of their invention for a regional museum exhibit in the spring. Visit www.crd.ge.com/invent/ for more information.



Disclosure deadline: February 7, 2011
Top 100 notified: End of March 2011
Invention Convention Award Ceremony: May 26, 2011

And don't forget to schedule your visit during
Invention Convention...

Teacher Open House

Tuesday, October 19, 2010 • 4 – 6 pm

Join us for light refreshments and a chance to check out all that is new at the Museum. Special Planetarium shows will be offered, along with demonstrations of activities we present in our school programs. Open to all educators, please RSVP to 518.382.7890 x 224.

All programs are designed with our mission in mind:
To inspire a sense of wonder about extraordinary scientific
and technological developments: past, present and future.

Come between September & February and receive 10% off your total cost (based upon availability).

Planning Your Visit

Please book your Spring visits early so that your group can get the date and time you request.

Reservations

All programs require reservations. To schedule your visit, call 518-382-7890, ext. 224. Or, download and complete a Reservation Request Form from SchenectadyMuseum.org/teachers/programs.html and fax to 518-377-0298 or e-mail it to Programs@SchenectadyMuseum.org. Reservations are not firm until you receive written confirmation of the program. Ask about prices for other program options.

Program fees are as follows:

Planetarium Show or Science Exploration	\$6.00 per person
Science Exploration + Self Tour	\$6.50 per person
Planetarium Show + Self-Tour	\$6.50 per person
Planetarium Show + Science Exploration	\$7.00 per person
Planetarium Show + Science Exploration + Self-Tour	\$7.50 per person
Science Circuit (50-200 students)	\$7.50 per person
Self-Tour	\$4.00 per person

The Minimum Group Fee is \$80.00 per group. Adult chaperones are required and admitted free at the rate of one chaperone per 10 students. Additional adults are charged the student fee.

- Payment by cash, check, credit card, or money order is expected upon arrival at the Museum. If your group is BOCES-funded, please inquire about billing procedures. One check or credit card per group is requested.



Gift Shop:

Don't miss our gift shop! A child-friendly selection of items is available, many under one dollar! Gift bags can also be pre-ordered for both visiting groups and outreaches.

Accessibility:

Our programs are accessible to people of varying abilities. When you call to make your reservation, please let us know if your group needs special assistance.

Contact Us

Education Department phone:

518-382-7890, ext. 224

Education Department e-mail: Programs@SchenectadyMuseum.org

Museum Fax: 518-377-0298

Museum Website: www.SchenectadyMuseum.org

Powering the Future: The STEM Fund Admission/Transportation Grants

Powering the Future: The STEM Fund provides funds for underserved youth from throughout Tech Valley, whose lack of funds would otherwise prevent Museum visits. Qualified school and community groups are awarded funds to subsidize program fees, admission fees, and transportation costs.

Please call for more information 518.382.7890 x224.

Sample Day at the Museum:

PreK- Early Elementary

Arrival at the Museum	10:15 am
Planetarium Show- The Sky Above Mr. Rogers' Neighborhood	10:30 am
Self Tour of the Museum with adult chaperones	11:00 am
Lunch and time to shop in gift store	12:00-1:00 pm
Depart	1:15 pm

Elementary School (4th Grade)

Arrival at the Museum	11:00 am
Self Tour of the Museum with adult chaperones	11:15-12:15 pm
Lunch	12:15-12:45 pm
Cosmic Wonders Planetarium Show	1:00- 1:45 pm
It's Electric Science Exploration	2:00- 2:45pm
Depart	3:00pm

Middle School (7th Grade)

Arrival at the Museum	9:00 am
Lunar Odyssey Planetarium Show	9:15-10:00 am
Just a Phase Science Exploration	10:15-11:00 am
Lunch	11:00-11:30 am
Self Tour of the Museum/Gift Shop	11:30-12:30 pm
Depart	12:30 pm

High School

Arrival at the Museum	11:15 am
Astronomy for Earth Science: The Sun & More	11:30-12:15 pm
Lunch	12:15-12:45 pm
Self Tour of the Museum	12:45-1:30 pm
Depart	1:30 pm



Time Warner Cable is proud to support the Schenectady Museum & Suits-Bueche Planetarium



2010-2011 School Programs are funded by grants from*

- 1st National Bank of Scotia
- Hudson River Bank & Trust Foundation
- Pitney Bowes
- Schenectady Insuring Agency
- Schenectady County Youth Bureau
- Stewarts Shops
- Walmart

*Confirmed Supporters as of August 2010





science center of tech valley

Non-Profit Organization
U.S. POSTAGE

PAID
Permit No. 63
Schenectady, NY
