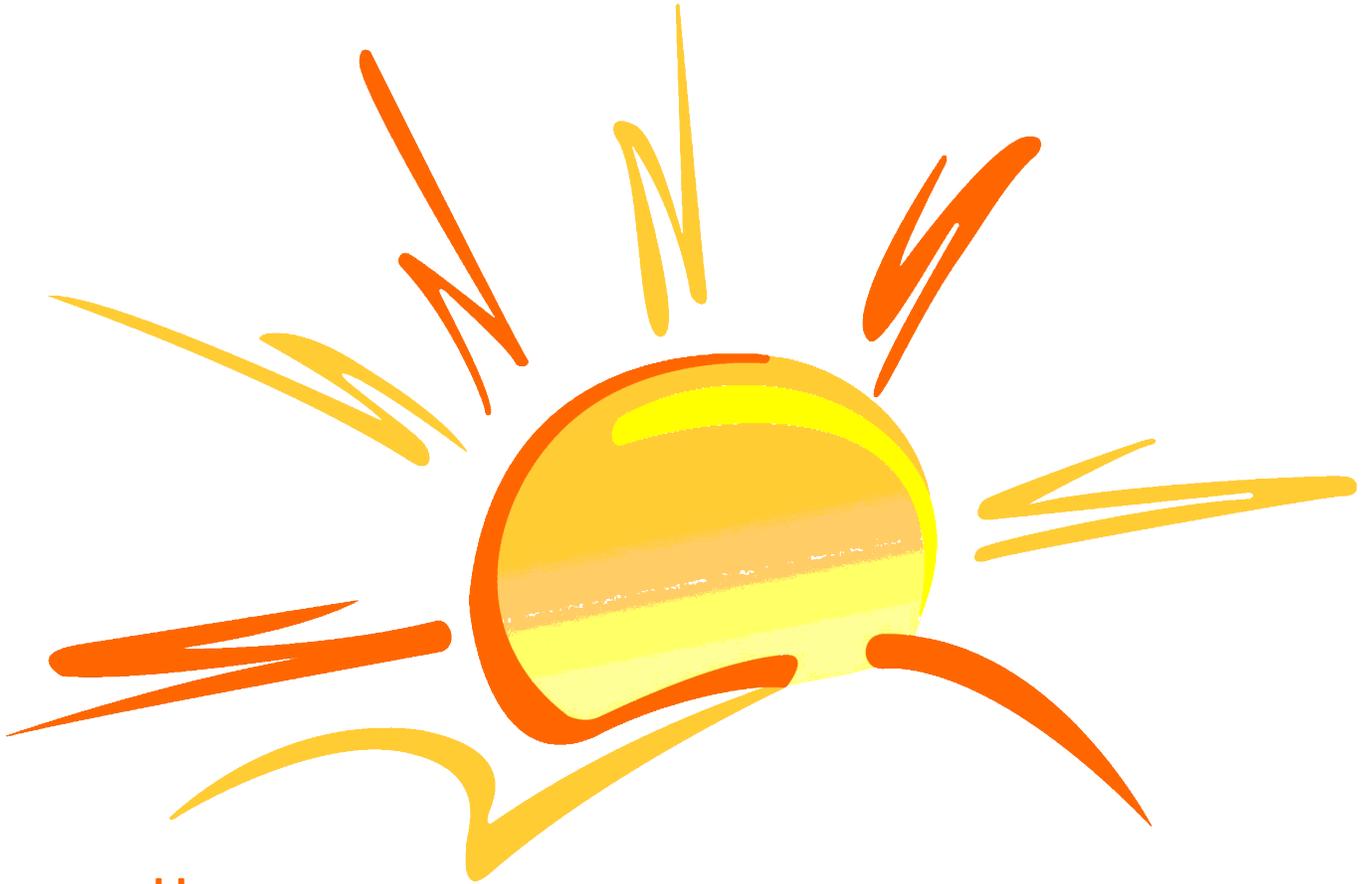


Summer of Innovation 2017

Course Guide



Sponsored by:

Alfred University

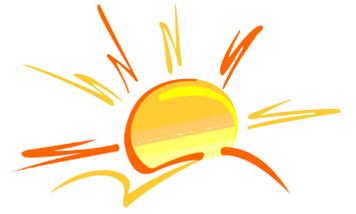
Science & Discovery Center 

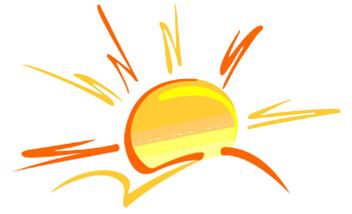


Notre Dame
HIGH SCHOOL
Grades 7 - 12

CORNING







What is the Summer of Innovation?

Several organizations from across the Southern Tier have united to offer unique learning opportunities for children and young adults during the summer months. These organizations have a common goal of extending the traditional school year into a third summer semester. Our offerings have another purpose as well – to provide students with STEM (Science, Technology, Engineering and Mathematics) skills that are essential to their success in the future.

Partnering organizations include:

- Alfred University – www.alfred.edu
- The First Tee Corning – www.thefirstteecorning.org
- GST BOCES – www.gstboces.org
- MST Connect
- Notre Dame High School – www.notredamehighschool.com
- The Science & Discovery Center – www.sciencediscoverycenter.org
- Tanglewood Nature Center and Museum – www.tanglewoodnaturecenter.com
- Wings of Eagles Discovery Center – www.wingsofeagles.com

How do I register my child for these courses?

To register your child for any of the courses listed in this brochure, please go to www.gstboces.org and click on the link to the agency offering the course your child is interested in. From there, you will be able to access the registration information you need.

Enrollment is limited; please register early!

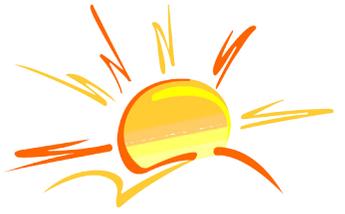
When registering for courses, please use the grade your child will enter in the fall unless otherwise indicated.

What is the cost of these programs?

The cost of these academies varies. Please see the course description for information on price.

Join us for summer fun and learning at a variety of sites including:

Summer Academic Enrichment Programs



@Alfred University

1 Saxon Drive, Alfred

To apply, complete the online application found on the web page indicated for each camp. Applications submitted after the deadline dates will be accepted if space is available. If applying after the deadline, please call 607-871-2612 to inquire about space availability.

Art: Portfolio Preparation for College Bound Artists (Grades 9-12)

July 9-13; Cost: \$910 residential, \$810 commuter

This program is for students who wish to continue their art education at a college of their choice. This is a four-day intensive program to aid in establishing a body of work in portfolio preparation. The goal of the program is to expose students to a variety of media, allow for exploration of personal art themes and provide a sound foundation in the vocabulary of art and art-related pursuits. Students will create artwork and receive daily art instruction. Students are asked to bring a portfolio with them for review and will be given constructive advice on how to accomplish the best college application portfolio they can. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/art.cfm

Astronomy Camp (Grades 10-12)

July 16-20; Cost: \$910 residential, \$810 commuter

This popular residential camp is for students who love astronomy and want to spend time learning more about this fascinating subject with others who share their passion. Campers enjoy a mix of night and daytime classes and activities involving extensive use of the telescopes and electronics at AU's Stull Observatory. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/astronomy.cfm

Ceramic & Glass Engineering Camp (Grades 10-12)

June 25-29; Cost: \$910 residential, \$810 commuter

Find out all about the exciting field of ceramic and glass engineering! This camp offers dynamic hands-on lab experiences in ceramic processing, tape casting, glass melting and press forming. Each student will cast a glass piece to take home. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/science.cfm

Computer Engineering Camp (Ages 12-17)

July 9-13; Cost: \$910 residential, \$810 commuter

Learn about video game design, microcontrollers, computer languages, web page design, software applications, simple robotics and more! This camp offers creative and practical programming experiences for both basic and advanced students. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/computer-engr.cfm



Chemistry: The Nature of Light Camp (Ages 14-17)

June 25-29; Cost: \$910 residential, \$810 commuter

This dynamic program is for students who want to know more about spectrophotometry. Participants will use the scientific method to design and build their own spectrometers, experiment with spectrophotometers, perform a colorimetric analysis and use their creativity to apply the wavelengths of light energy to clothing. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/chemistry.cfm

Creative Writing Camp (Grades 10-12)

June 25-29; Cost: \$910 residential, \$810 commuter

This dynamic program is for students who love to write and wish to hone their writing skills. This camp provides an introduction to a variety of genres: poetry, short fiction, creative nonfiction and drama. Students will participate in writing-intensive exercises designed to address the elements of craft: voice, character, image, scene and setting. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/writing.cfm

New – Equine Business Institute (Grades 9-12)

July 16-20; Cost: \$775 residential, \$675 commuter

This newly-established summer opportunity is for students who wish to learn more about the equine business and how to successfully operate an equestrian center. This institute is designed to provide an excellent opportunity to learn more about the horse industry as a business and all concepts that it entails including riding and caring for horses. The camp will end with a full day at a local county fair where participants will gain hands-on experience in running a horse show. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting new camp and how to apply please visit: www.alfred.edu/summer/camps/equine-business.cfm

Robotics Engineering Camp (Grades 10-12)

June 25-29; Cost: \$910 residential, \$810 commuter

Build a robot this summer! This camp, based on the VEX Robotics System, offers a dynamic platform for learning about areas rich with career opportunities spanning science, technology, engineering and math. Student teams will assemble robots and program them to perform various functions and to compete in a classroom football/soccer game on the last day of camp. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/robotics.cfm

Theatre (Grades 10-12)

July 2-14 (two-week camp); Cost: \$1,995 residential, \$1,795 commuter

Summer Theatre at Alfred University provides a great opportunity for students to create, experience and develop perspectives and skills in theatre through full group sessions and with a good deal of individual attention, training and experience in theatre from our distinguished faculty. Our unique blend of broad choices and training in specific areas (acting, improvisation, character development, staging, voice production, design and technical theatre including state managing, scenery, costume and lighting, to name a few) leads to many energetic classes and much individual growth. Students may also elect to receive two (2) college credits at an additional cost. Application deadline is May 1, but registration will continue until the camp is full. For more information about this exciting camp and how to apply, please visit: www.alfred.edu/summer/camps/theater.cfm



Engineering Day Camp (Grades 1-8)

July 17-20; Cost: \$160

8:30 to 11:30 a.m. for grades 1-3/12:30 to 3:30 p.m. for grades 4-8

Top quality instruction and learning! Classes feature science, technology, engineering and mathematics concepts with skills of critical thinking, problem solving, collaboration, agility and adaptability, curiosity and imagination. Students use unique LEGO® kits to creatively build and modify machines applying basic engineering principles. Throughout the camp, they will learn a variety of concepts and apply their acquired knowledge about gearing and gear ratios, simple machines, problem solving and communication skills. This challenges students to incorporate the traits of an engineer in a classroom setting. This camp includes a take-home project students can keep! Enrollment deadline is July 1. For further information, please visit www.alfred.edu/summer/camps/engineering-day.cfm

We also offer residential sports camps in Equestrian and Swimming, and day camps in Art, Basketball, Equestrian Football, Lacrosse and Tennis. Please visit www.alfred.edu/summer/ for further information.

@GST BOCES Bush Education Center

459 Philo Road, Elmira

Please note: There is no charge for courses at the Bush Education Center.

Animal Science: Animals Rock! (Grades 7-10)

June 26-30, 8:30 -11:00 a.m.

Do you love animals and working with them? Do you wonder what they are thinking? Do you want to learn more about animal behavior? You will learn to predict, read, identify and decode the body language of animals. You also will learn the animal likes and dislikes, including treats, exercise, motivation and stimuli. You will select an animal from the Animal Science program to work with. You will work with three different dogs (therapy, 6 months of training and friendly pet) and based on what you have learned, you will identify and predict each dog's body language, including what they are saying to you or others around you. You will learn leash-walking techniques, bathing and grooming and proper supplies/materials for each type of coat.

Animal Science (Grades 7-10)

July 31-August 4, 8:30-11 a.m.

The Animal Science Summer Academy will give students hands-on animal care and handling experience. Each day will include care of classroom animals including guinea pigs, rabbit, dogs, cat, hedgehog, ferret and various reptiles. Students will clean enclosures, prepare daily diets, provide enrichment activities and learn how to groom and monitor the health of small animals. Throughout the week, students will use positive, reward-based training methods to train one of the classroom animals to perform a behavior.

Auto Body: Air Brushing (Grades 7-10)

June 26-30 or July 31-August 4, 8:30 a.m.-2:00 p.m.

Academy participants will learn how to custom paint, including airbrush techniques and how to apply water-based paint. They can use stencils, freehand or other techniques. They will use their own design to complete the pre-determined projects. Students will need to bring a white t-shirt. Please bring a brown-bag lunch.



Conservation: The Outdoor Classroom (Grades 7-10)

June 26-30 or July 31-August 4, 8:00 a.m.-12:00 p.m.

If you're the outdoorsy, active type, this academy is for you! Throughout the week, you'll spend time in the great outdoor classroom learning to identify the trees and wildlife of New York State. We'll also look at pond life and test soil and water. You will take home a wildlife project that you construct and will enjoy some time fishing in our many ponds.

Cosmetology 101 (Grades 7-10)

June 26-30

Morning Session: 8:00-10:30 a.m. or

Afternoon Session: 11:00 a.m.-1:30 p.m.

Do you enjoy making people feel better about themselves? Come to the GST BOCES Cosmetology Summer Academy at the Bush Campus. Each student will learn the importance of hygiene and sanitation, as well as braiding, manicuring, pedicuring and how to do plain facials. Summer of Innovation students will get to work one-on-one with senior students from the BOCES Cosmetology program.

Criminal Justice: Crime Scene Investigation (Grades 7-10)

July 31-August 4, 9:00 a.m.-2:00 p.m.

Students will learn about forensic science and solve a mock crime scene. They will have the opportunity to dust for fingerprints, cast footprints, use microscopes, interview suspects in a mock investigation, evaluate evidence and make an arrest. They will speak with real life crime scene technicians and police officers to discover the myth vs. reality of CSI. Please bring brown bag lunch.

Culinary Arts: Cupcake Wars (Grades 7-10)

June 26-30

Morning session: 9:00-11:00 a.m. or

Afternoon session: 12:00-2:00 p.m.

Students will learn about making breads and decorating techniques for cakes and cupcakes. By the end of the week, students will be able to compete in a "Cupcake Wars" competition, with time to plan and design a cake or cupcake, mix, bake and decorate using techniques learned earlier in the week from chef's demos.

Woodworking/Mass Production: From Forest to Factory (Grades 7-10)

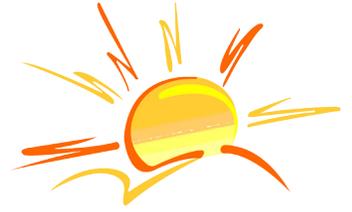
June 26-30, 8 a.m.-12 p.m.

If you like working with wood, this course is for you! You'll learn how lumber is processed from forest to stock as well as how to plan, layout, measure, cut, assemble and finish your own woodworking project. In addition, you'll learn how to safely and properly handle all sorts of power equipment. The week will close with a field trip to a local sawmill.

@GST BOCES Coopers Education Center

9579 Vocational Drive, Painted Post

Please note: There is no charge for courses at the Coopers Education Center.



Auto Body: Custom Paint & Graphics (Grades 7-10)

June 26-29, 9:00 a.m.-2:00 p.m.

Students will learn custom paint techniques used in the industry. They will achieve this using airbrushes, paint spray guns, stencils and free-hand techniques. They will layout and complete a pre-determined project. Then, they will be able to come up with their own design for a panel. Students will also get to visit a local racetrack for an exciting look behind the scenes. If time permits, we will learn about the exciting technique of water transfer printing, also known as hydrographics.

Auto Tech: Let's Go Racing (Grades 7-10)

June 26-29, 9:00 a.m.-2:30 p.m.

If you're an auto racing fan, this class is for you. You'll begin the week by creating a team with your classmates and participating in a pit row competition. You'll learn to operate a lift, operate tire machines, identify fluids, check and adjust air pressure and build a V/C Racer. At the end of the week, we'll visit a local raceway.

Cosmetology: Be Our Guest (Grades 7-10)

June 26-30, 8:00 a.m.-12:00 p.m.

This year's academy is filled with exciting activities. Each student will learn the dynamics of thermal curling, updos, braids, make-up applications and manicures. Students will practice these procedures throughout the week on a mannequin. On Friday, invite your mom or another special person to "Be Our Guest" for a day of pampering. During the week, we will visit two salons on Market Street in Corning for students to see the dynamics of a successful salon. At the end of the academy, each student will receive a certificate of completion and an award ribbon to take home.

Culinary Arts: Rolling in the Dough (Grades 7-10)

June 26-29, 9:00-11:30 a.m.

Do you think there is nothing better than the taste of delicious and mouthwatering fresh bread? If so, you may want to be a part of "Rolling in the Dough"! The versatility and possibilities of fresh yeast doughs are endless! You'll create fresh yeast breads each day such as bread sticks, garlic knots, pizza dough with an amazing topping and cinnamon rolls, among others. In addition to creating your tasty breads, you'll be able to identify specific ingredients and the role they play in each of your breads.

Culinary Arts: Everything Chicken (Grades 7-10)

June 26-30, 12:00-2:00 p.m.

How well do you know chicken? Do you like the flavor of mouthwatering wings or chicken tenders with your favorite dipping sauce? How about a nice bowl of chicken chowder on a cold day? If that sounds good, you may want to take part in "Everything Chicken" at GST BOCES Coopers Campus Culinary Arts summer academy. You will learn all parts of the chicken and make amazing sauces for dipping, as well as soup, sandwiches and a main chicken dish for your tasting pleasure. In addition to creating delicious dishes, you will be able to identify every part of the chicken and its location, you will understand flavor blending and tastes enhanced by spice.



Digital Media Arts: Creative Ventures (Grades 7-10)

June 26-29, 8:30 a.m.-2:00 p.m.

If you love art, this class is for you! You'll practice computer graphics (Adobe Photoshop), photography, video and vinyl graphics. You will create photo composites such as a "Hybrid/New Animal" using two different images, a vinyl transfer for a T-shirt and a photo cup. You also will put yourself into another world using a green screen effect. Please bring a brown-bag lunch each day.

New Visions Medical: Healthcare Helping Hands @Corning Hospital (Grades 9-11)

June 26-30, 9:00 a.m.-12:00 p.m. or July 10-14, 9:00 a.m.-12 p.m.

Learn first-hand how rewarding it can be to help people when they are ill. First, we'll learn some healthcare basics, including infection control, HIPAA, professionalism and communication. Then, we'll take a complete tour of Corning Hospital to learn what each department does. Finally, students will be ready to visit patients and provide ice water, drinks and snacks; offer magazines and reading material; and communicate with patients, families and staff.

@GST BOCES Wildwood Education Center

1126 Bald Hill Road, Hornell

Please note: There is no charge for courses at the Wildwood Education Center.

Auto Technology: Remote Control Vehicles (Grades 7-10)

July 10-14, 8:00 a.m.-12:00 p.m.

Have you ever wanted to build your own remote-control car? Come and learn about electric motors and fabrication the fun and easy way. You will learn how to build a remote-controlled race car and, if time allows, a boat or helicopter.

Auto Technology: Lawn Mower Dragster (Grades 7-10)

July 24-28, 8:00 a.m.- 12:00 p.m.

Students will learn how to alter a riding lawn mower for speed and performance, and Grandpa's lawn mower will never be the same! Students will learn basic steering, suspension, internal combustion diagnosing, operation, and fabrication skills.

Cosmetology: Touch of Beauty (Grades 7-10)

July 10-14, 9:00-11:00 a.m.

Do you enjoy being pampered? Come to the GST BOCES "Touch of Beauty" Cosmetology camp at the Wildwood Education Center. Each student will learn the importance of hygiene and sanitation, manicuring, pedicuring, facials, shampooing and styling. Summer of Innovation students will get to work one-on-one with senior students from the BOCES Cosmetology program.



Cosmetology: Mini Make Over (Grades 7-10)

July 10-14, 12:00-3:00 p.m.

Summer of Innovation students will get an introduction to the Cosmetology program and learn about the origins of personal beautification, advancements made in Cosmetology and career opportunities. Students will learn the importance of hygiene and sanitation by conducting an experiment that demonstrates how germs are spread. Students also will learn about thermal curling, updos, braids, make-up applications, foiling techniques and gel nail polish. Students will practice these procedures throughout the week on a mannequin and with each other. Each day of the summer academy, the students will have mini make overs with photos to document their work. On Friday, students can invite a special guest to be pampered for the day. At the end of the academy, each student will receive photos of their creations, a certificate of completion and a mini make-up gift bag to take home.

Criminal Justice: Crime Scene Investigation (Grades 7-10)

July 10-21, 9:00 a.m.- 12:00 p.m.

Through hands-on activities, role playing and brief lectures, we'll learn how law enforcement collects evidence at a crime scene. We'll find out why photography is such a vital part of the criminal trial process and learn how to process crime scene photography. In addition, you'll also learn about bloodstain splatter, the importance of DNA to a criminal investigation, how to make a plaster mold from a foot impression, the classifications of fingerprints and how to dust for fingerprints at a crime scene, how to collect and analyze trace evidences, how to analyze ballistics and the scientific principles of projectiles and how a drug dog can be used at a crime scene.

Culinary Arts: Fun with Sauces (Grades 7-10)

July 24-28, 9:00 a.m.-1:00 p.m.

You won't believe how many dishes you can cook when you know how to make a white sauce. First, you learn to make the sauce, then you learn how to use it to make macaroni and cheese, white garlic pizza, cheddar and broccoli soup and pasta Alfredo. Yum!

Culinary Arts: Cupcakes! (Grades 7-10)

June 26-30, 8:30-11:00 a.m.

Kids will learn basic cooking skills while they make cookies, cupcakes and mini cakes. Then, they'll learn some basic cake decorating skills, including how to make buttercream frosting, frost a cake, use basic cake decorating tools and work with fondant. The week will end with a friendly cupcake competition with prizes awarded in multiple categories.

Digital Media Arts: Video Animation Workshop (Grades 7-10)

June 26-30, 8:00 a.m.-12:00 p.m.

Students will complete a variety of fun hands-on projects in which they will learn principles of animation, filmmaking techniques and recording audio sound effects. Projects include building early animation devices, creating some fun videos that show filmmaking techniques, green screen projects and creating sound effects to put into a video.



Heavy Equipment: Skid Steer-Excavator Material Handling (Ages 14-16 only)

July 5-7, 9:00 a.m.-12:00 p.m.

If you've ever wanted to learn how to operate heavy equipment, this course is for you. You'll learn how to safely operate a skid steer and excavator. Once you've learned the basics, you'll take on individual and team obstacle courses.

Heavy Equipment: Introduction to Mechanical Fabrication and Small Engines (Grades 7-10)

June 26-29, 9:00 a.m.-12:00 p.m.

In this course, you'll work on teams to research and fabricate lawn mower-pulling tractors. You'll develop a plan, complete mechanical drawings, fabricate your tractor, trouble-shoot problems and have time for customization. In the end, teams will compete with the final products.

Introduction to Woodworking

June 26-30, 8:30 a.m. – 12:30 p.m.

Students will spend the week in the GST BOCES Career Beginnings and Exploration Lab designing and building projects that they will be able to take home. Shop safety and proper use of hand tools and power tools will be incorporated in every project. Students will get hands-on experience in some of the other areas covered in Career Beginnings and Exploration curriculum, including landscaping, and build a custom wooden sign, birdhouse, bird feeder, flower box, bookshelf, washer toss and more!

Marketable Me! (Grades 7-8)

July 17-28, 9:00 a.m.- 12:00 p.m.

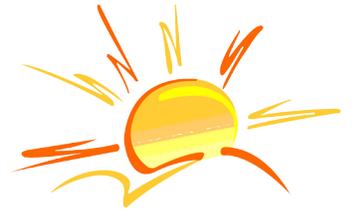
Come join this two-week career development program for seventh- and eighth-graders. Discover your individual learning style, career interest and the independent living skills needed for a specific occupations. You will participate in a variety of career-related field trips and hear from guest speakers about careers in animal care, retail, food service and community service.

Students also will participate in service learning to acquire potential CDOS hours. You'll leave the two-week camp with digital and hard copies of a portfolio that includes self-assessments, résumés and work experience.

Online registration information can be found at www.gstboces.org. Please click on the Summer of Innovation banner at the top of the page. For more information, please contact Terri Walczak at (607) 281-3152.

@Notre Dame High School

1400 Maple Avenue, Elmira



All academies at Notre Dame are \$100 per child, per academy. Registration fees are non-refundable and must be paid at the time of registration. Please note: “Grade” is the grade-level that the student will be entering in the fall of 2017. For more information or to register, go to: www.notredamehighschool.com and click on Summer Camps under “Quick Links”. Students who sign up for a morning and afternoon session during the same week are invited to pack a brown-bag lunch and may eat in the cafeteria in between sessions.

Bird Buddies (Grades 3-6)

June 26-30, 8:00-11:30 a.m.

Extend your wonder about our natural world through the amazing world of BIRDS! We’ll be sharpening our bird observing skills, learning to identify birds by sight and sound, participating in eBird and other Citizen Science opportunities through the Cornell University Lab of Ornithology, and developing bird-friendly habitats, such as make it-take it bird feeders and bird baths. Academy Instructor is Karen Jennings, Notre Dame Jr. High Coordinator and Science Teacher.

Rolling in the Dough!

July 11-14, 8:00-11:30 a.m. (Grades 9-12)

July 11-14, 12:00-3:30 p.m. (Grades 5-8)

Fee: \$80

Do you enjoy the smell of fresh bread? Did you know the versatility and possibilities of fresh yeast doughs are endless? Do you think there is nothing better than the taste of delicious and mouthwatering fresh bread? If so, you may want to be a part of “Rolling in the Dough”! You’ll create fresh yeast breads each day such as bread sticks, garlic knots, pizza dough with an amazing topping and cinnamon rolls, among others. In addition to creating your tasty breads, you’ll be able to identify specific ingredients and the role they play in each of your breads. Class size is limited to 10 students. Course Instructor is Burt Beebe, Master Chef at GST BOCES.

The Nature of Light (Grades 9-12)

July 10-14, 12:00-3:30 pm

Have you ever wondered how 3-D movie glasses work? Why do some objects glow in the dark while others do not? What makes LED light so different from fluorescent and incandescent light? Why is laser light “special”? How does a telescope differ from a microscope? If so, then this course is for you! Join this hands-on exploration of the strange and fantastic properties of light. Explore color, polarization, refraction, reflection and coherence properties of light in a hands-on manner. In this course, you will make your own spectroscope to get to the heart of light’s color properties and create various geometric optical devices including a telescope. Use of student-grade lasers allows for the creation of interference patterns and the creation of spooky 3-D laser speckle patterns. Academy instructor is Sandra Williams, Notre Department Science Department Chair and Physics Teacher.



Prosthetics Production (Grades 6-9)

July 17-21, 8:00-11:30 a.m.

Student teams will investigate biomedical engineering and the technology of prosthetics. Students will create lower leg prosthetic prototypes using various ordinary materials. Each team will debut its prototype at a final event and students will evaluate the device's strengths and weaknesses, giving insight into the characteristics and materials biomedical engineers consider in designing artificial limbs. A teenage amputee will serve as a mentor for this class. Academy instructor is Lori Favela, Notre Dame English and ENL Teacher.

Building for the Future (Grades 4-7)

July 17-21, 12:00-3:30 p.m.

Ever wonder why vehicles are built the way they are? Think you have a better design? Come and test your theories this summer as we explore how to build for the future! You and your design team will research and build your own vehicle prototype. Will you be the winner? Find out when teams race against each other to see who has the best design. Put your STEM skills to the test and see if YOU are ready for "Building for the Future." Academy instructor is Brett Moore, Notre Dame Science Teacher.

Make it 3-D: Sculpture Camp (Grades 5-8)

July 24-28, 8:00-11:30 a.m.

Is your young artist looking for something different this summer? Check out ND's Sculpture Camp! Students will explore various sculpture construction techniques using a variety of materials, including clay, newspaper and tinfoil. Each new project offers the student the opportunity to problem solve creatively and think outside the box. The week will culminate in a display of student work for family and friends. Academy instructor is Hannah Leeber, Notre Dame Art Teacher.

Crazy Concoctions Art Camp (Grades 5-8)

July 24-28, 12:00-3:30 p.m.

Make mysterious mixtures in mini workshops. Find out how to use a blender to make your own paper. Make watercolor cakes and brushes to paint with. Experiment with mixing up a variety of clay and modeling compounds. Design your own stickers. Camp will end with an exhibition of student art work! Academy instructor is Susan LaVelle, Notre Dame Art Department Chair and Art Teacher.

Hydroponics & Aquaponics Academy (Grades 6-9)

July 31-August 4, 12:00- 3:30 p.m.

This is an exciting academy for budding horticulturalists! Students will start their own micro greens and sprouts, plan for and create a larger hydroponics 16-20 container system and, at the end of the week, be able to bring home some edible seedlings. Class size is limited to 11 students. Academy instructor is Carol Howard, Notre Dame Earth Science Teacher.

El Mundo Hispano (Grades 6-8)

August 7-11, 8:00-11:30 a.m.

Join us for an educational adventure as we explore the diversity of the Hispanic culture. Students will spend a fun-filled week creating memorable connections to the Hispanic culture by learning basic Spanish vocabulary, completing Spanish influenced arts/crafts projects; enjoying Hispanic music, dance and games and learning about the geography and history of Spanish-speaking cultures. Each day will focus on a different Hispanic country. No previous exposure to the Spanish language is necessary. Academy instructor is Marina Liriano, Notre Dame Spanish Teacher.



La Cocina Hispana! (Grades 6-8)

August 7-11, 12:00-3:30 p.m.

Explore the diverse culinary world of Hispanic cooking! Learn about what makes Spanish cooking unique and the flavors that are associated with traditional Hispanic dishes. This is a great opportunity to expand not only your young chef's culinary skills, but also his or her palette with this introductory academy of Hispanic cooking. A team approach will be used to produce a delicious and healthy sampling of Hispanic dishes. Students will wrap up the week by providing a tasty treat for their parents. Academy instructor is Marina Liriano, Notre Dame Spanish Teacher.

Science & Discovery Center

@Corning Community College and Spencer Crest Nature Center

Registration is online only at www.sciencediscoverycenter.org. Registration fees are non-refundable and must be paid at the time of registration. Scholarships are available. Inquiries may be emailed to Lisa@stny.rr.com. Please note: "Grade" is the grade level that the student will be entering in the fall of 2017.

Inventors and Inventions (Grades 4-7)

June 26-30, 9:00 a.m. to 3:00 p.m.

CCC Campus

Bring your lunch and spend the day with us while you put your imagination and creativity to work. We'll supply the old computers, clocks, appliances, machines and tools, and you take them apart to invent something new. On Friday, family and friends are invited to celebrate your creativity and attend a presentation and small reception.

Super Summer Science (Grades 1-3)

July 17-21, 8:30 a.m.-12:30 p.m.

Spencer Crest Nature Center

Explore a different science topic each day. Hike the trails to the pond on Botany and Biology Day. Observe cool chemical reactions as you mix everyday ingredients together on Crazy Chemistry Day. Build model cars, boats, gliders and more on Things That Move Day. Design and build towers or bridges on Engineering Day. Have fun getting wet as we explore fun things to do with water!

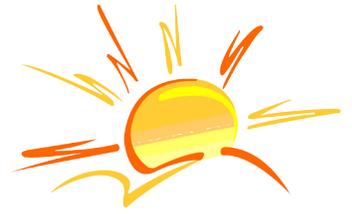
STEM Makes Music (Grades 5-8)

July 17-21

Choose one session – Morning: 8:30-11:30 a.m. or Afternoon: 12:30-3:30 p.m.

CCC Campus

This is a unique opportunity for young people to learn about the science of music, to build simple and fun musical instruments out of recyclable materials, to compose pieces of music together and to bring it all together for an evening performance at the CMOG for the opening of the Endless Mountain Music Festival! The week-long camps will be led by renowned composer Tina Davidson and SDC Educator Bruce McLaren. There will be two groups, one in the morning and one in the afternoon. No musical experience is necessary! Everyone is encouraged to bring in some recyclable materials, but we will have lots available. Please note, participation in the evening performance at CMOG is mandatory for participation in this academy.



Cooking with Science (Grades 5-8)

July 24-28, 8:30 a.m.-12:30 p.m.

Spencer Crest Nature Center

Campers will combine food, science and chemistry to explore a new culinary topic each day. Observe and taste the science of fermentation in baking. Explore the effects of altering a recipe. Receive hands-on training from our local Wegmans chefs. We will end the week with a cook-off contest.

Engineering (Grades 4-7)

July 31-August 4, 8:30 a.m.-12:30 p.m.

Spencer Crest Nature Center

We will do a lot of building – bridges, domes and towers! Think like engineers to compare the strength of various designs. Test your structures to see how much weight it can hold up before breaking. Your creations are yours to take home, too!

Science & Discovery Center

@Elmira College

Registration is online only at www.sciencediscoverycenter.org. Registration fees are non-refundable and must be paid at the time of registration. Scholarships are available. Inquiries may be emailed to Lisa@stny.rr.com. Please note: “Grade” is the grade level that the student will be entering in the fall of 2017.

Photography (Grades 4-8)

August 7-11, 8:30 a.m.-12:30 p.m.

Elmira College Campus

Learn about simple black and white photography and developing in a darkroom – and take pictures with a pinhole camera that you made! Make photograms and sun prints using natural lighting to make cool images. Learn about the science and art of perspective and how artists learned to draw before photography was invented. Then, let’s have some fun with digital photography and play with the images we make with special photographic effects (and take your prints home!)

Animated Animation (Grades 4-7)

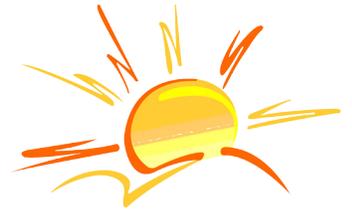
August 14-18, 8:30 a.m.-12:30 p.m.

Elmira College Campus

Campers will create their own stop-motion animation video to bring home and show their families and friends. Students can even craft an on-screen story starring their favorite toys from home! Creative artists may elect to do their own hand drawings and coloring. Every participant will learn the animation software and burn their own DVDs.

@Tanglewood Nature Center

443 Coleman Avenue, Elmira



An opportunity to play, explore and discover the great outdoors.

Visit www.tanglewoodnaturecenter.com for pricing and registration information.

Zookeepers Camp (Grades K-2)

June 26-30, 10:00 a.m.-3:00 p.m.

- Dissect owl pellets and rebuild the skeletons of their prey
- Roll logs and pull apart to discover decomposers
- Feed our animals gourmet meals of fruit, rats and bugs, and build jungle gyms and toys for our animals
- Personally meet each major animal group and care for our critters from tooth to toe!

Mad Scientists Camp (Grades 3-5)

June 26-30, 10:00 a.m.- 3:00 p.m.

- Turn a chicken bone to rubber
- Defy gravity with water in wacky experiments
- Send a balloon into the stratosphere only using the power of the sun
- Explode, grow, disappear and slime all kinds of things with experiments!

Walk on the Wild Side Camp (Grades K-5)

July 5-7, 10:00 a.m.-3:00 p.m.

- Build a habitat bookmark from natural materials to keep
- Test the water from our ponds and use the Enviroscope to play with water cycles
- Make a bird feeder to take home
- Use Mud Watt to create electric charges from the soil!

Nature Play (Grades K-2)

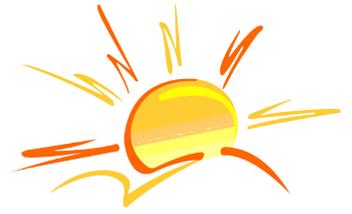
July 10-14, 10:00 a.m.-3:00 p.m.

- Go home laughing and grass-stained after a day of playing games including the classics and brand-new games unique to Tanglewood
- Sculpt mud pies, make fossil prints and play park rangers
- Climb trees and peer into cavities to see who nests there
- Tag, kickball and forts galore!

Wild Wetlands (Grade 3-5)

July 10-14, 10:00 a.m.-3:00 p.m.

- Look under the surface of the pond to spot egg sacs, creepy crawly crustaceans and see who's hiding in the algae
- Learn how the earth purifies water and build your own water filter – with dirt!
- Find fossils from the prehistoric wetlands and the water that covered New York millions of years ago
- Meet the squirmy salamanders and feisty frogs who rely on our wetlands



Fishing Camp (Grades K-2)

July 17-21, 10:00 a.m.-3:00 p.m.

- Basics of fishing, including casting, knot tying, safety and more
- Practice casting and perfect your fly-tying
- Dig bait for different species of fish and make your very own pole
- Watch a pro show you how to gut, fillet and clean a fish-and take home recipes for future fishing!

Wilderness Survival Camp (Grades 3-5)

July 17-21, 10:00 a.m.-3:00 p.m.

- Start off easy with map and compass reading, but by the end of the week, kids will read a tree to find south
- Build and insulate a shelter with no tools
- Learn where to find edible fruits, while tracking and catching (and releasing) wildlife with our own homemade traps
- Finish the week with fire building and preparing a special treat in the woods!

Fairies, Sprites, and Dragons Camp (Pre-K)

July 24-28, 9:00 a.m.-12:00 p.m.

- Back by popular demand: live, play and explore with fairies, dragons, woodland sprites and fun!
- Build your own take home fairy house, create your own fairy crown or dragon wings to wear
- Enjoy the outdoors and search the children's trail for magical friends
- Discover the world of dragons and create your own mythical creatures

Mad Scientists (Grades K-2)

July 24-28, 10:00 a.m.-3:00 p.m.

- Turn a chicken bone to rubber
- Defy gravity with water in wacky experiments
- Send a balloon into the stratosphere only using the power of the sun
- Explode, grow, disappear and slime all kinds of things with experiments!

Fishing Camp (Grades 3-5)

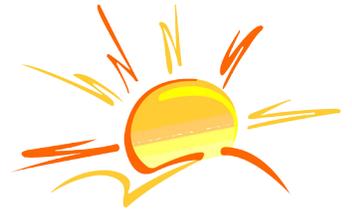
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- Watch a pro show you how to gut, fillet and clean a fish-and take home recipes for future fishing!

Fossils and Dinos (Grades K-2)

July 31-August 4, 10:00 a.m.-3:00 p.m.

- Find real fossils in the woods from the Paleozoic era and make imprints to take home
- Be a dino detective – dig through the dirt and piece together a skeleton
- Get a close look at some critters today who are dino descendents – birds and dragonflies!



Zookeepers Camp (Grades 3-5)

July 31- August 4, 10:00 a.m. to 3:00 p.m.

- Dissect owl pellets and rebuild the skeletons of their prey
- Roll logs and pull apart to discover decomposers
- Feed our animals gourmet meals of fruit, rats and bugs, and build jungle gyms and toys for our animals
- Personally meet each major animal group and care for our critters from tooth to toe!

Homes and Hideaways (Grades K-2)

August 7-11, 10:00 a.m.-3:00 p.m.

- Build a life-sized beaver dam!
- Get tangled up in web weaving – see who you can catch in your lair!
- Hand-make a honeybee comb to take home
- Investigate our big backyard and find nests, holes and hollows

Hunters and the Hunted (Grades 3-5)

August 7-11, 10:00 a.m.-3:00 p.m.

- Practice the art of camouflage as you disguise yourself from your friends and learn other natural defenses like mimicry, venom and mobbing!
- Echolocate your prey like a bat, stalk like a fox and learn to track and trap in the woods
- Watch our frogs, snakes and scorpion hunt their prey, and see Hank our red-tailed hawk fly for his dinner!

“Fly-Guy Presents” Camp (Pre-K)

August 14-18, 9:00 a.m.-12:00 p.m.

- Fly-Guy the series is coming to Tanglewood to teach you remarkable things about animals!
- Create your own Fly Guy wings to flap outside and play a metamorphosis game, and make a bug viewing jar to meet more friends
- Fly Guy I Spy, playtime on the trail and animal friends every day!

Scales and Tails (Grades K-2)

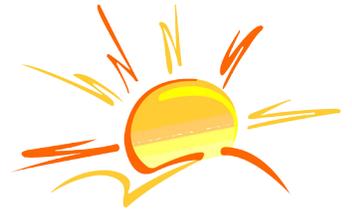
August 14-18, 10:00 a.m.-3:00 p.m.

- Flip over logs to find sneaky salamanders and get your feet wet catching frogs and fish in the ponds
- Shed your own skin with a funky craft and unravel the color-changing mysteries of chameleons and bearded dragons
- Create a life-size masterpiece of our biggest animal – “Bowie” the Colombian red-tail boa
- End the week with a reptile race!

Magical Beasts (Grades 3-5)

August 14-18, 10:00 a.m.-3:00 p.m.

- Discover all the different magical creatures in habitats like the pond, the sky and the woods - mermaids, salamanders in the fire, imps and brownies and gryphons and unicorns
- Design a chimera that mixes up your favorite adaptations like wings, special powers, talons or webbed feet
- Learn about the natural world that mimics magic – why bogs glow in the dark, the science of fairy rings and more
- Build a gnome home and imagine how magical creatures coexist with humans



Feathers and Fluff (Grades K-2)

August 21-25, 10:00 a.m.- 3:00 p.m.

- Learn how birds hatch out of eggs and how they grow
- Make your own binoculars to find birds in the wild
- Construct a nest like a bird to take home
- Cuddle some furry animals and take care of our animal friends

Pioneers to iPads (Grades 3-5)

August 21-25, 10:00 a.m.-3:00 p.m.

- From ancient hieroglyphs to iPads, play around with science and technology!
- Take tech into the woods – using apps on our iPads to take real data for NASA and Cornell’s Lab of Ornithology!
- Construct, create and play with simple machines like seed bomb launchers all the way up to racing solar-powered cars

Nature in a Nutshell (Grades K-2)

August 28-September 1, 10:00 a.m.-3:00 p.m.

- Investigate the furthest corners of our trails
- See the unseen parts of our ponds with microscopes and make your own recycled pond viewer
- Go fish and build a fort
- Make a solitary bee house and save our pollinator friends!

Beaks and Talons (Grades 3-5)

August 28-September 1, 10:00 a.m.-3:00 p.m.

- Discover your passion for creatures that soar
- Watch Hank the Hawk fly and prepare a feast for Sophie the Owl
- Dig deep into the science of how raptors hunt, live and migrate
- Dissect owl pellets and do a raptor hike!

The First Tee of Corning

@Corning Country Club, 2501 Country Club Drive, Corning

The Science of Golf (Ages 13+)

June 29, July 6, 13, 20, and 27, 1:00-3:00 p.m.

The First Tee of Corning is proud to announce a new program offering that focuses on the science behind the game of golf. Golf is not only an athletic game, it’s also mental. Developing an understanding of the math and science concepts in golf will improve your game. The following will be covered during the six-week summer program:

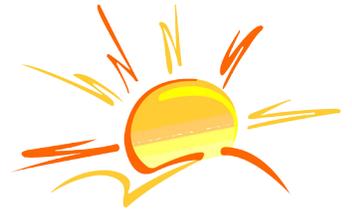
- How to “read” a green and roll it in! – Geometric scaling for topography and slope and kinematics for rolling resistance.
- Backswing and tempo – How force creates kinetic energy and momentum with an intro to biomechanics.
- Career exploration through golf.

This class is open to all youth ages 13 and older. No golf experience is required.

To register, please go to www.thefirstteecorning.org.

@Wings of Eagles Discovery Center

339 Daniel Zenker Drive, Big Flats



Please note: All Wings of Eagles Discovery Center courses are \$50 per child.

A limited number of scholarships are available for children who qualify. Please call 607-738-3054 for more information. To register for courses at the Wings of Eagles, please go to www.wingsofeagles.com.

Fun With Science (Grades 4-8)

July 10-14, 9:00-11:30 a.m.

Household products are curiously inspiring: with a splash of food coloring and a teaspoon each of liquid starch and glue, we can concoct an elastic, slimy glob technically known as a “non-Newtonian fluid.” We will even make our own bubble gum! Come out and enjoy our course in the hands on and edible.

VEX Robotics (Grades 7-12)

July 10-14, 9:00-11:30 a.m.

Do you like to build things that move? Are you fascinated by the Mars Rovers? Have you ever thought about programming your own robot? Students will learn to use Intellitek EasyC and Boot Camp software and will work together using robotics content to strengthen their creative and problem solving skills. These robots are made of metal and definitely are the wave of the future. No prior knowledge necessary.

Science Explorers (Grades K-2)

July 10-14, 12:30-3:00 p.m.

Are you curious about how things work? You can use your own imagination and creativity during this week using Lego’s Simple Machines and other hands-on activities. Come explore with us!

ROV Robotics @ Ernie Davis Academy Pool (Grades 7-12)

July 10-14, 12:30-3:00 p.m.

Do you like to build robots? Have you ever seen an ROV (Remotely Operated Vehicle)? Learn how to build an ROV and then see how it works underwater. ROVs are usually used for ocean exploration and research as well as being used by the gas industry for oil and gas drilling and support. ROVs are unoccupied vehicles that can explore a variety of locations in the water and are piloted by someone on shore or on a boat. Some are even used for crime scene investigations.

NXT Robotics (Grades 5-8)

July 10-14, 12:30-3:00 p.m.

Do you love the Disney/Pixar movie WALL-E? Do you like to build things using LEGOs? Have you ever thought about programming your own robot? If you answer yes to these questions, our LEGO Robotics course is for you! This introductory course introduces students to the basics of NXT LEGO Robotics. Students will work in teams to design, build and program their own robots. Students will be involved with programming their robots through several challenges.



NXT Advanced (Grades 5-8)

July 24-28, 9:00 a.m.-3:00 p.m.

This is an advanced class – MUST have completed a program either at Wings of Eagles or in your school.

Rocketry (Grades 5-8)

July 17-21, 9:00-11:30 p.m.

Rockets are the oldest form of self-contained vehicles in existence. Early rockets were in use more than 2,000 years ago. During a long and exciting history, rockets have evolved from simple tubes filled with black powder into mighty vehicles capable of launching a spacecraft out into the galaxy. Few experiences can compare with the excitement and thrill of watching a rocket-powered vehicle, such as the Space Shuttle, thunder into space. Dreams of rocket flight to distant worlds fire the imagination of both children and adults. Come to Wings of Eagles and learn the science behind rockets. Be ready to build and fly your very own rocket.

Marvelous Machines (Grades 3-4)

July 17-21, 9:00 a.m.-3:00 p.m.

Did you know that you were born an engineer? Do you like to build things, take them apart and figure out how they work? This program gives you a chance to design, create and improve the things that you engineer. This program is designed by the Boston Museum of Science and includes many hands on experiments and activities. Such fun!

Aviation (Grades 5-8)

July 24-28, 9:00-11:30 a.m.

Hop into the pilot seat and learn the basics of aviation. Take the controls and get ready to learn the basics behind flight. We will build airplanes and learn using actual flight simulators. This non-stop action is great for students who love video games and science.

Science on a Sphere (Grades 5-8)

July 24-28, 12:30-3:00 p.m.

Wings of Eagles is the only local attraction with a Science on a Sphere. We can project more than 1,000 different data sets and images on this huge globe. Come learn how to operate this amazing device. Become a volunteer Science on a Sphere docent. Lots of hands on activities during this fun filled week too.

RCX Robotics (Grades 4-8)

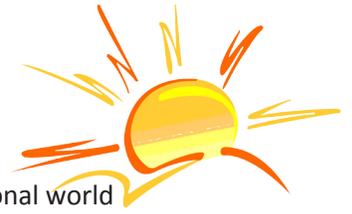
July 31- August 4, 9:00-11:30 a.m.

RCX Robotics is an earlier generation of the NXT Mindstorm Robotics. RCX is a team activity designed to strengthen your student's teamwork skills, communication skills, computer programming and problem solving skills. Your robot can use simple math commands to achieve these tasks. Failure is actually encouraged in RCX. Remember, if Thomas Edison had not failed thousands of times, we wouldn't have the light bulb today. Therefore, as your students fail, they are actually learning and one day will succeed.

Active Worlds (Grades 4-8)

July 31-August 4, 12:30-3:00 p.m.

Do you like to play RPG video games? Have you ever wanted to build your own 3-Dimensional world inside a computer? Would you like to help save the astronauts trapped in space on the International Space Station? Then this program is for you! The online virtual world will be supported with hands-on and engaging experiments.



Program Bridge

Our lunch time (11:30 a.m.-12:30 p.m.) program offers students a chance to sign up for a morning and afternoon class in their age range and stay with us for programming at the museum all day. For an additional \$25.00, students pack their lunch and get to experience hands-on activities and science demos until the next class starts.



