



KOPERNIK OBSERVATORY & SCIENCE CENTER

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**Link Summer STEM
Exploration Camps 2016**
Grades 1-6

For the 24th summer, the Kopernik Observatory & Science Center (KOSC) in Vestal, NY is offering week-long camps for students in grades 1-12. Sponsored by the Link Foundation, in memory of inventor/explorer Edwin A. Link, the Link Summer STEM Exploration camps offer hands-on, high-tech adventures in science, technology, engineering, and math (STEM) in a fun and nurturing environment. Camps for students in grades 1-6 run Monday to Friday from 9 a.m. to 3 p.m. Early drop-off and late pick-up options are available.



Super Science Discovery (STEM, grades 1 & 2)

July 11-15 (A) or August 8-12 (B)

Each day of this camp will have a different theme, including Space Day full of NASA-developed activities and Flight Day when young scientists build and fly gliders and kites celebrating the genius of local inventor, Edwin A. Link, and his flight simulator! Other activities will include building electric circuits, experimenting with bubbling liquids, making life-like dinosaur fossils, and going on a scavenger hunt with a digital camera.

Secrets of Code (Engineering, grades 2 & 3)

July 18-22

During this camp your KSA (Kopernik Secret Agent) will discover the world of codes, old and new. Each KSA will receive a TOP SECRET folder filled with a variety of codes and activities. They will have fun using them to decipher messages and solve mysteries. KSAs will learn about Morse Code and use Snap Circuits to build their own code transmitter. They will learn about and practice using Braille and American Sign Language. As they discover ways in which we all use code in our daily lives through a variety of activities and guest speakers, each KSA also will learn how to write computer programs that can design an avatar, create music, generate animation, activate their own LEGO project, and more.

Space & Stars (Astronomy, grades 3 & 4)

July 25-29 (A) or August 15-19 (B)

Mikolaj Kopernik observed the planets and became the father of Modern Astronomy. In Space & Stars, your young astronomer will explore what lies beyond our Solar System, including blue, red giant, and sun-like stars, supernovas, constellations, galaxies, and nebulas. Students will learn how to use telescopes and how to observe the Sun safely. They will explore what it is like to be sucked into a black hole and "spaghettified" with Hubble's Black Hole Simulator! Activities will include making star wheels, modeling the Milky Way Galaxy and building NASA Spacecraft models.

Robots on the Space Station (STEM, grades 4 & 5)

August 15-19

Astronauts on the International Space Station (ISS) use robot assistants called ROBONAUTS to help them install and repair machines. In this exciting camp, students will learn to build and program robots using LEGO® WeDo and littleBits® modules, then work in teams to create a ROBONAUT which has a special skill (such as hands that grip) that could someday help astronauts in space. This week of engineering includes training in radio transmission and reception, how to use radio language protocols and how to track and map satellites - including the ISS. **Students will speak live, by Ham Radio, with an astronaut on the ISS**, earning a card from NASA indicating they talked to an astronaut.

BIOBLITZ! Get Outside, Explore Your World! (Life Science, grades 4 & 5)

July 11-15

A BioBlitz is an adventure that involves finding and identifying as many species as possible in a specific area. In this camp students will spend the week observing natural phenomena, identifying different species of organisms, classifying them into categories, and mapping the data. Using a variety of methods, students will collect specimens and keep a journal of field experiences. Students should be prepared to spend time outdoors walking in the woods and along the creek.

Rocket Design (Engineering, grades 5 & 6)

July 18-22

This weeklong camp will introduce students to rocket design and building. Students will start by learning about the history of the space program and building simple, single stage rockets. As the week progresses, they will advance to more complex designs, including multiple stage rockets and rockets with special recovery systems such as gliders and helicopter recovery. Rockets will be tested for flight worthiness in Kopernik's wind tunnel. * *Additional \$20 material fee.*

Investigating Meteorology (Earth Science, grades 5 & 6)

August 1-5

In this camp, young scientists will investigate meteorology, the science of the Earth's atmosphere. Students will learn about weather instruments and build their own to take home. They will learn the difference between weather and climate, take weather measurements each day, and see who can best predict the next day's weather. They will participate in the launch of Kopernik's observational weather balloon that captures video as it rises high above the ground. Students will use NASA's satellite imaging to study the oceans, glaciers and ice sheets and look for evidence of climate change. As a final project, students will create a newscast video predicting Earth's future climate.

Kopernik Observatory & Science Center

Link Summer STEM Exploration Camps

For students in grades 1-6 during the 2015/16 school year

The Kopernik Observatory & Science Center is a great place for students to explore the world around them. Kopernik's STEM-themed summer camps are hands-on and high-tech, while also fun and safe! Students will have their eyes opened and may get their hands wet and feet muddy as they spend time outdoors each day for field exploration and playtime. They will make friends and lasting memories, too!

Camps have a maximum enrollment and many fill quickly each year. Register early to avoid disappointment.

	Kopernik Member	Non-Member
Camp Tuition	\$195*	\$230*

* (Rocket Design class has an additional \$20 material fee)

Save an additional \$10 **per camp** when registering a sibling or registering for more than one camp. Early drop off and late pick up are available for a modest fee.

Register and pay online (www.kopernik.org) or fill out this form and return it to Kopernik.

Please check the session(s) for each camp your child will attend:

----- **LSSE Camp** (focus, grades) -----

Super Science Discovery (STEM, 1 & 2)	<input type="checkbox"/> 7/11 – 7/15 (A) or <input type="checkbox"/> 8/8 – 8/12 (B)
Secrets of Code (Engineering, 2 & 3)	<input type="checkbox"/> 7/18 – 7/22
Space & Stars (Astronomy, 3-4)	<input type="checkbox"/> 7/25 – 7/29 (A) or <input type="checkbox"/> 8/15 – 8/19 (B)
Robots on the Space Station (STEM, 4 & 5)	<input type="checkbox"/> 8/15 – 8/19
BIOBLITZ! Get Outside (Life Science, grades 4 & 5)	<input type="checkbox"/> 7/11 – 7/15
Rocket Design (Engineering, 5-6)	<input type="checkbox"/> 7/18 – 7/22 (has additional \$20 material fee)
Investigating Meteorology (Earth Science, 5-6)	<input type="checkbox"/> 8/1 – 8/5

Student name: _____ Gender: Male Female Grade in 2015/16: _____

Parent/Guardian/Grandparent name: _____ Student's Birthdate: _____

Address: _____ City/St/ZIP _____

Phone: _____ Email Address: _____

Enclosed is: \$ _____ (checks payable to "Kopernik Observatory") KOSC Member Yes No (* add \$60 to join)

Credit Card # _____ Visa MasterCard Discover

Name on Credit Card _____ Expiration Date: _____ CVV code (3 digit code) _____

Request Financial Aid – please see website for a Financial Aid form. Aid offered on a financial need basis.

Each student receives a Link Summer STEM Exploration T-Shirt (included in the tuition). Please indicate shirt size:

Youth Small Youth Medium Youth Large Adult Small Adult Medium Adult Large

For more information call (607)748-3685 ext. 308 or visit our website at www.kopernik.org

Students must register and pay in full by June 15. Late registrations will be permitted if space is available (call to inquire) and will be subject to a \$20 late registration fee. Refunds are available (less a \$15 administration fee) if student withdraws 14 days prior to the start of camp. In case of cancellation due to insufficient enrollment, participants will be notified one week in advance and will receive a full refund.

Complete this registration form and mail it to LSSE16: KOSC, 698 Underwood Rd, Vestal, NY 13850
or email it to registration@kopernik.org or fax it to (607)748-3222

Date Received _____

DB _____

QB _____