



KOPERNIK OBSERVATORY & SCIENCE CENTER

698 UNDERWOOD ROAD, VESTAL, NEW YORK 13850
PHONE (607) 748-3685 * FAX (607) 748-3222 * WWW.KOPERNIK.ORG

**Link Summer STEM
Explorations 2014**
Grades 6-12

For the 22nd summer, the Kopernik Observatory & Science Center (KOSC) is offering week-long camps for students in grades 1-12. Sponsored by the Link Foundation since 1994, in memory of local inventor / explorer Edwin A. Link, the Link Summer STEM Exploration camps offer hands-on, high-tech adventures in science, technology, engineering, and math.

In-depth Astronomy, Earth Science, and Space Exploration Institutes, which go beyond typical camp experiences, are offered for students in grades 6-12. These Institutes start on Sunday afternoons and conclude with Saturday morning project presentations. Monday through Friday, students in the Astronomy and Space Exploration Institutes are at KOSC from 4 p.m. until 11 p.m. for classes, laboratories, and field work; dinner is included. Students in the Earth Science Institute are at KOSC Monday through Friday, from 11 a.m. until 6 p.m., for classes, laboratories, and field work.



Students may add a residential option with recreational activities, meals, and overnight accommodations at Binghamton University, supervised by residential counselors.

Earth Science Institute: *Glacial Landscapes*

(grades 9-12 during 2013/14 school year)

Earth's surface is constantly changing through a variety of geological processes. This institute will explore the effects of the half mile thick glacier that covered New York State 25,000 years ago. Participants will take part in an extended day trip to New York's beautiful Finger Lake region. Students will photograph the geologic features, take soil samples, and hunt for fossils as they explore how the last glacial period modified various geological features. Guest speakers from Binghamton University and field work will provide students information to be used in a team project exploring the formation of glacial features.

One session: July 6-12

Students completing grades 9-12 may combine this week with the Astronomy Institute to create a two-week stay.

Astronomy Institute: *The Moon, Craters & Catastrophes*

(grades 9-12 during 2013/14 school year)

The Moon's rugged surface gives astronomers ample evidence of its violent past and clues to its formation. This institute will help students understand the dynamic processes that shaped the Moon's surface over the eons. Students will explore geological features of the moon, such as crater morphology, regolith, mountains, and rilles, and will examine various rock types in relation to past, present and future lunar processes. Lab work will include lunar astrophotography, digital image processing, crater simulations, high-speed photography, telescope sessions, and lunar mapping. Team projects will challenge students to create a model of the Moon's topography and propose ways to continue to explore it. During the week, there will be a number of guest speakers, and students will learn about different theories of lunar formation and the history of lunar exploration.

One session: July 13-19

Students completing grades 9-12 may combine this week with the Earth Science Institute to create a two-week stay.

Space Exploration Institute: *Life Beyond the Earth*

(grades 6-8 during 2013/14 school year)

Students attending this institute will explore the search for life beyond the earth, starting first with profound questions about what the foundations of life are. Is a model based on earthly life sufficient? What is the boundary between the living and the non-living? As the students look for life beyond Earth, they will go farther than Mars, to places such as Enceladus, a moon of Saturn. Finally, they will look to the stars, and consider planets orbiting distant stars. Topics of study will include the results of NASA's Kepler mission, which is capable of finding Earth-like planets orbiting other stars. Students also will use KOSC's telescopes and cameras to develop skills in visual observation and astrophotography.

One session: July 20-July 26



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Link Summer STEM Explorations 2014
Grades 6-12

Link Summer STEM Exploration Institutes

For students in grades 6 – 12 during the 2013/14 school year

Kopernik Observatory & Science Center (KOSC) is a great place for students of all ages to explore our world and the universe around us. Now your student has even more reasons to come to KOSC this summer. In addition to our regular Astronomy Institute for high school students and Space Exploration Institute for middle school students, KOSC again is offering an Earth Science Institute for high school students this year. The Earth Science week is scheduled so that it can be added on to the Astronomy Institute for an extended camp experience.

This summer, the Astronomy and Space Exploration Institutes will run from 4 p.m. until 11 p.m. at KOSC (occasionally later on clear nights). In these Institutes, students will participate in classes, laboratories, and field work, with ample time for observing and other activities involving the night sky. Dinner is included. The Earth Science Institute will run from 11 a.m. until 6 p.m. at KOSC; the day will be extended and transportation will be provided for the geology field trip. All students and parents should plan to attend orientation Sunday afternoon on the BU campus and the final project presentations Saturday morning at KOSC. Students who choose the residential option will spend the day on the BU campus, participating in educational and recreational activities, as well as breakfast and lunch. Residential students will be transported to KOSC for classes and then back to BU for overnight accommodations.

A deposit of \$200 commuter/\$500 residential per week (all but \$50 refundable – see Note below) is due with this registration form. Students must be registered, all fees must be paid in full, and all required forms (sent with information packet after registration) must be received by *June 2, 2014*. KOSC members receive 15% off tuition costs (see Fees table below). Register today! Enrollment is limited. Late registrations may be permitted if space is available (call to inquire). After May 15, 2014, add \$50 late registration fee.

Fees (member / nonmember)		
Option	Commuter Tuition only	Residential Tuition, food and lodging
1 week	\$395 / 465	\$995 / 1065
2 weeks	\$750 / 885	\$1970 / 2105

Please check Institute(s) your student will attend:

Earth Science July 6-12

Astronomy July 13-19

Space Exploration July 20-27

**two week residential option includes Sat-Sun food, lodging, and supervision*

Student name: _____ Gender: Male Female Grade in 2013/14: _____

Parent / Guardian / Grandparent name: _____ Student 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 will receive 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: Contact (607)748-3685 x308 or visit our website at www.kopernik.org

Complete this registration form and mail it to: LSSE, KOSC, 698 Underwood Rd, Vestal, NY 13850

or email it to: registration@kopernik.org or fax it to: (607)748-3222

Note: Refunds are available (less \$50 administrative fee) if student withdraws 21 days prior to the start of camp.

Date Received _____

DB _____

QB _____