



KOPERNIK OBSERVATORY & SCIENCE CENTER

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Link Summer Science Explorations - 2010

Overview: For the eighteenth summer, the *Kopernik Observatory & Science Center* in Vestal, New York is offering weeklong science programs for young people in grades 1-12 as part of our Kopernik Talent Search. Sponsored by the Edwin A. and Marion C. Link Foundation in memory of inventor/explorer Ed Link, *Link Summer Science Explorations* introduces students to hands-on, high-tech science. The Kopernik Link Residential Institutes provides students the opportunity to learn about various aspects of astronomy. Professional grade instruments are used to study and learn about astronomical objects. Black and white photography as well as digital photography is used to record and preserve observations for further study and presentation. Residential students are housed on campus at Binghamton University and attend nighttime programs at Kopernik Observatory. **Commuter options are available for the residential programs** and include a program fee adjustment. Call for details. All students who are new to Kopernik Talent Search (except Link 5 level) are required to have a nomination form completed by a teacher.

Application/nomination and financial assistance forms are available after January 21 and due by April 23, 2010 (later applications will be considered if space is available) Course Outlines on the Link Residential Programs are available upon request. Payment is not required at this time.

Link 1 Residential Astronomy: Moon Craters and Catastrophes (current 9th-12th graders-09/10 school year)

The Moon's blasted surface gives astronomers ample evidence of its violent past and clues to its catastrophic formation. This institute will help students understand the dynamic processes that shaped the Moon's surface over the eons. Lab work will include lunar astrophotography, digital image processing, cratering simulations, high-speed photography, telescope sessions, lunar mapping, and a visit to Cornell's SPIF Imaging Center. Session A: July 11-17 **and/or** Session B: July 18-24. Fee: \$935 (1 week) **or** \$1770 (2 weeks) **Commuter Option: \$525 per week**

Link 2 Residential Space Science: Search for Life in the Universe (current 7th & 8th grade—09/10 school yr)

Is there evidence of life on Mars? Are we alone in the universe? Students will first investigate our solar system to discover places to look for life. Next they will look farther into space and explore other star systems to determine the probabilities of finding earthlike planets. Activities will include modeling planetary surfaces, analyzing the requirements for life, processing digital images, and learning micro-photography. All students will be trained in basic sky watching with binoculars and small telescopes. Students may choose one-week or two-week institutes. Session A: July 25-31- **and/or** Session B: Aug 1-7. Fee: \$835 (1 week) **or** \$1570 (2 weeks) **Commuter Option: \$475 per week**

Link 3 Earth Science: It's All About Me, Meteors and Dinosaurs (current 5th & 6th graders—09/10 school year)

What ever happened to the dinosaurs? Your child will explore several theories of dinosaur extinction and learn a lot of science along the way. We will make our own prehistoric raptor claws, papier-mâché models of various dinosaurs, dinosaur jewelry, meteor impact craters and many other fun projects. Your child will learn about animal adaptations, history of the dinosaurs, asteroid collision theories and many other concepts that are aligned with the latest NYS Math Science and Technology Standards, and the Project 2061 benchmarks. Session A: July 19-23 **or** Session B: Aug 9-13, 9AM-3PM; Non-Member Fee: \$200 (Kopernik Observatory Member Fee: \$170)

Link 4 Junior Astronomers: All About Space (current 3rd & 4th graders—09/10 school year)

Modern astronomy began in 1610 when Galileo observed the heavens with his small telescope. Today astronomy is the most popular science for young people. This course will introduce students to the wonders of space from constellations to black holes. Activities include: making star finders, making and using planispheres, creating planetary models, and building simple telescope. Session A: July 12-16 **or** Session B: Aug 2-6, 9AM-3PM; Non-Member Fee: \$200(Kopernik Observatory Member Fee: \$170)

Link 5 Young Scientists: Super Science Explorers (current 1st & 2nd graders—09/10 school year)

All great scientists began as kids who loved exploring the world around them. Kopernik's science explorers will experience a dazzling array of hands-on activities. Your child will make gliders, build electric circuits, experiment with liquids and make dinosaur fossils as they learn how to measure, sketch and make computer images. Session A: July 5-9 **or** Session B: July 26-30, 9AM-3PM; Non-Member Fee: \$200(Kopernik Observatory Member Fee: \$170)

For more information: Contact 607-748-3685 x313 or visit our website at www.kopernik.org