



# KOPERNIK OBSERVATORY & SCIENCE CENTER

698 UNDERWOOD ROAD, VESTAL, NEW YORK 13850  
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Winter/Spring 2016

Pegasus  
Grades 1-8



*The Pegasus program for students in grades 1-12 encourages students to work and think like scientists as they explore the world around them. Pegasus classes are offered on weekends and school holidays. They emphasize creativity, teamwork, and independent learning and teach students to draw on **Science, Technology, Engineering and Math (STEM) resources to solve problems in the real world.***

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## Grades 1 & 2

**Chemistry for Kids** Friday, Feb.12, 9 a.m. - Noon Member \$30/Non-Member \$36  
Students will spend time in Kopernik's lab, exploring the world of chemistry while creating stuff like slime and bouncy balls, and watching chemical reactions, including some that change color and fizz!

**Shocking Experience** Saturday, April 2, 9 a.m. - Noon Member \$30/Non-Member \$36  
In this class, budding engineers will use common household items to create voltaic batteries, which will turn chemical energy into electricity that can light an LED! They also will use Snap Circuit® kits to create their own electronic projects.

**Why Do Animals Do What They Do?** Saturday, April 30, 9 a.m. - Noon Member \$30/Non-Member \$36  
Has your child wondered why zebras have stripes or how a bat can see at night? Join us for a day of activities and learning about interesting animal adaptations. Students will create their own animal and describe how it has to adapt to live here!

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## Grades 3 & 4

**Violent Weather** Saturday, February 20, 9 a.m. - Noon Member \$30/Non-Member \$36  
Students will be meteorologists for the day! They will use Kopernik's weather station to measure and interpret the weather. They also will make their own storm clouds and tornadoes as well as learn ways to stay safe during dangerous storms.

**LEGO® WeDo Robotics** Saturday, April 9, 9 a.m. - Noon Member \$30/Non-Member \$36  
Students will build and program a robotic alligator that makes sounds, opens and closes its jaw, and moves in response to sounds! They also will build and program a soccer kicker, goalie, and fans, and combine them into an interactive soccer scene!

**Phases Matter** Saturday, May 14, 9 a.m. - Noon Member \$30/Non-Member \$36  
This class will challenge students to investigate the properties of matter on a large and small scale. They will explore different phases of matter, the relationship between phases of matter and energy, and the structure of matter.

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## Grades 5 & 6

**Lots of littleBits** Saturday, February 20, 1-4 p.m. Member \$30/Non-Member \$36  
Students will use innovative littleBit™ building blocks, including servos, sensors, LED bar graphs, logic arrays and transducers, to bring a wide range of electronic and mechanical projects to life. They also will design and build a project of their own.

**Household Chemistry** Saturday, April 2, 1-4 p.m. Member \$30/Non-Member \$36  
Students will use household items to explore the difference between physical and chemical change. Students also will learn about the different elements and the periodic table, and will study how substances react to one another given different concentrations, temperature and pressure.

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## Grades 5 & 6 (continued)

**Creatures and Trees and Bees, Oh My!** Saturday, April 30, 1-4 p.m. Member \$30/Non-Member \$36  
Have you ever seen a tree cookie? Did you know that bees are in danger and you can help? Spend the day exploring the great outdoors, immersed in learning about Nature and the cycles of life.

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## Grades 6-8

**Eyes on the Earth** Friday, February 12, 1-5 p.m. Member \$41/Non-Member \$48  
Students will make Earth science come to life using NASA's web-based app! They will pose scientific questions and then use this tool to answer them, monitoring physical parameters, tracing water movement, and spotting fires around the Earth.

**Observational Astronomy** Friday & Saturday, March 11 & 12, 6:30-9:30 p.m. Member \$51/Non-Member \$60  
This two-evening class will teach students about observing the night sky. Students will learn how to use binoculars, Dobsonian and other basic telescopes and more sophisticated systems.

**Exploring Music with Computer Programming** Saturday, April 9, 1-5 p.m. Member \$41/Non-Member \$48  
Add the Arts to STEM and you get STEAM! In this class, students will use electronics and computer programming to create music. Using littleBits™ electronic components with their Arduino microprocessors and C++ programming, students will create and play tunes in harmony or rounds.

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## Winter/Spring 2016 Pegasus Registration Form

**Convenient online registration is available!**  
**Go to [www.kopernik.org](http://www.kopernik.org) and click the Register Now button.**

**Register for 3 or more classes at once (for same student or siblings) and get a 10% discount!**  
**Online, enter code PEGASUS15.**

Please check the session(s) you plan to attend:

- Grades 1 & 2:**  Chemistry for Kids     Shocking Experience     Animals  
**Grades 3 & 4:**  Violent Weather     LEGO WeDo Robotics     Phases Matter  
**Grades 5 & 6:**  Lots of littleBits     Household Chemistry     Creatures & Trees & Bees  
**Grades 6 – 8:**  Eyes on the Earth     Observational Astronomy     Music & Computer Programming

Student name: \_\_\_\_\_ Grade (2015/16) \_\_\_\_\_

Parent/Guardian/Grandparent name: \_\_\_\_\_

Address: \_\_\_\_\_ City/ST/ZIP \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

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) \_\_\_\_\_

Registration form and fee must be received ten days prior to class. Walk-in registrations available, space permitting, with additional \$5 fee. Minimum enrollment 10 students required for each class to run. In case of cancellation, participants will be notified in advance and full refund returned. Refunds available (less \$5 administration fee) if student withdraws seven days prior to the start of the class.

**Return to: Winter/Spring Pegasus, KOSC, 698 Underwood Road, Vestal, NY 13850**

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