

**Science Academy  
Homeschool Science Classes  
2009 – 2010**

**Sponsored by  
SCIENCE Resources**

**Course Descriptions**

**Senior Biology**

Grades 10-12

Senior Biology is a collection of three half-credit courses, each of which explores an aspect of biology at a more sophisticated level than a first-year biology course. Students may choose one, two, or all three courses. Note that biochemistry, offered for 3 weeks in September, is a no-credit, tuition-free prerequisite for any of the three courses.

**Day / Time:** Wednesdays, 9:30 a.m. to 11:45 a.m.

**Class Schedule:** Sept. 9 - May 26, with breaks for Thanksgiving, Christmas/New Year, and Easter

**Class Location:** Bethany Collegiate Church, Route 1 & Concord Road, Havertown, PA

**Class Format:** Each class will consist of 45-60 minutes of review followed by a lab. Between classes, students are expected to read course material and complete lab write-ups and other daily assignments on their own. Take-home tests will be given monthly.

**Pre-requisite:** Documented completion (with grade C or better) of both high-school biology and high-school chemistry.

**Other Requirements:** Students must have regular access to email and the Internet.

**Tuition:** \$200 per course; includes all books and lab fees.

**Prerequisite:**

**Biochemistry** (Tuition: \$0 / Credit: 0)

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**Textbook:** Internet resource

**Topics Covered:** Carbon, water, biological macromolecules, cells

**Class Dates:** September 9 – 23 (3 weeks)

**Course details:**

**Genetics** (Tuition: \$200 / Credit: 0.5)

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**Textbook:** Internet resource

**Topics Covered:** Mitosis/meiosis, Mendelian genetics, chromosomes, DNA, translation, prokaryotic & eukaryotic genetics, DNA technology & genomics

**Class Dates:** September 30 – December 2 (9 classes – includes 1-week Thanksgiving break)

**Human Anatomy & Physiology** (Tuition: \$200 / Credit: 0.5)

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**Textbook:** *Essentials of Human Anatomy & Physiology* (provided)

**Systems Covered:** Skin, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, and urinary.

**Class Dates:** January 6 – March 24 (10 classes – includes 2-week science fair break)

**Forensic Science** (Tuition: \$200 / Credit: 0.5)

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**Textbook:** *Forensic Science* (provided)

**Topics Covered:** Properties of matter, blood spatter, drugs, DNA, trace evidence, fingerprints ...

**Class Dates:** April 7 – May 26 (8 classes)

## Earth Science

Grades 7-10

Two levels are available, depending on the age and ability of the student:

**Earth science lab** (for grades 7-9) consists of a weekly lab and a practical lab exam at the end of each semester. Students are expected to do readings on their own using book(s) of their own choosing and complete a written lab report each week. (Credit: 0.5)

**High-school earth science** (grades 9-10; advanced 8<sup>th</sup> graders also accepted) is a full course, with homework and take-home exams in addition to the weekly lab work mentioned above. A high-school earth science textbook (*Modern Earth Science*) will be provided for reading and written assignments. (Credit: 1.0)

**Day / Time:** Mondays, 10:30 a.m. to 12:00 p.m.

**Class Schedule:** Sept. 14 to Dec. 7 / Feb. 22 to May 24, with holiday breaks

**Class Location:** Bethany Collegiate Church, Route 1 & Concord Road, Havertown, PA

**Class Format:** Each class will consist of 30-45 minutes of review followed by a lab.

**Topics Covered:** Plate tectonics, earthquakes, volcanoes; rocks & minerals; erosion; atmosphere, weather, climate; astronomy (including moon rocks)

**Tuition:** Earth science lab (lab only): \$180; includes lab fees.

High-school earth science (full course): \$380; includes book and lab fees.

## Moon Rocks

Grades 4-10

Moon Rocks, included in both earth science options, will also be offered as a 6-week, stand-alone class in April & May for students who are interested in that course only. Details coming soon.

## Instructor

**Lisa Swieson** received her BA in biology from the University of Pennsylvania in 1987. She has been homeschooling since 1995 and has been teaching music and science classes to homeschooled students since 1998. She is the founder and director of the Greater Philadelphia Homeschool Science Fair. Lisa also teaches science at Cornerstone High School.

Mrs. Swieson can be contacted during the week by phone or by email for help with assignments.

## Registration / Payment Information

To register, complete the attached forms and submit them with a non-refundable \$40 registration fee. (Note that registration fee is a per-student fee **in addition to** the tuition.) Early registration fee is \$20 if received **by July 30**.

If the class you have chosen is full, you will have the option of selecting a different class or of putting your child on the waiting list. (Yes, we do sometimes get last-minute cancellations!)

One-half of tuition is due August 31. Tuition balance is due January 31.

Make check payable to "SCIENCE Resources" and send to:  
Lisa Swieson, 210 Lindbergh Avenue, Broomall, PA 19008

Tuition and fees are not refundable after classes have started. Only wait-listed students who are never enrolled in a class can receive a refund of their registration fees.

This registration packet is also available online at [www.academy.science-resources.org](http://www.academy.science-resources.org).

*Class sizes are limited, so register early!*

Financial aid is available.

## For More Information

Contact Lisa Swieson – 610.355.9174 – [LSwieson@science-resources.org](mailto:LSwieson@science-resources.org)  
or visit [www.science-resources.org](http://www.science-resources.org)