

**Science Academy
Homeschool Science Classes
2016 – 2017**

**Sponsored by
Science Resources**

Earth Science

Grades 6-9

This is an introductory-level lab course, appropriate for any student. Choose middle- or high-school depending on the grade level of the student. Both sections of the class will meet concurrently. (While the MS and HS labs will mostly be the same, the textbook, problems, and tests will be different depending on the level chosen.)

Day / Time: Thursdays, 12:30 to 2:00 p.m.

Class Schedule: Sept. 15 to Dec. 15 / Feb. 16 to May 25, with holiday breaks

Tuition: High School -- \$430 / Middle School -- \$390 (does not include non-refundable registration fee)

HS Textbook: *Modern Earth Science* (HRW) **MS Textbook:** *Earth Science* (Holt S&T)

Pre-requisites: Science skills (see back) or previous Science Academy class.

Topics Covered: plate tectonics, earthquakes, volcanoes; rocks & minerals; oceans; erosion; atmosphere, weather; astronomy

Biology

Grades 9-11

High-school biology is a college-preparatory, lab-based biology course suitable for any motivated high-school student. Students will be well prepared for the SAT II if they choose to take it, and an honors option (with science fair prep) will also be available. Yes, we will do some dissections.

Day / Time: Wednesdays, 9:45 a.m. to 12:00 p.m.

Class Schedule: Sept. 7 to May 24, with holiday breaks

Tuition: \$550 (does not include non-refundable registration fee)

Textbook: *Biology*, by Miller & Levine (Pearson/Prentice Hall, ©2008)

Pre-requisites: Science skills (see below) or previous Science Academy class.

Topics Covered: Ecology; cells; genetics; evolution; the kingdoms: bacteria, protists, fungi, plants, animals.

High-School Physics

Grades 10-12

This physics course is appropriate for all college-bound students, especially those planning to major in science or engineering. Students should be motivated and willing to work hard. Students will gain an understanding of basic principles and apply math skills to the solution of physics problems. Weekly labs will give students hands-on opportunities to apply concepts learned.

Day / Time: Tuesdays, 9:45 a.m. to 12:00 p.m.

Class Schedule: Sept. 6 to May 23, with holiday breaks

Tuition: \$550; includes all books and lab fees (does not include non-refundable registration fee)

Textbook: *Physics: Principles and Problems* (Glencoe McGraw-Hill, ©2002)

Topics Covered: Motion, forces & vectors, energy, sound, light, electricity, and magnetism

Pre-requisite: Science skills (see below); completion of geometry (including a basic introduction to trigonometry); Algebra II or higher should be taken during the 2016-2017 school year.

Other Requirements: Students must have a scientific calculator (TI-84 Plus recommended if you need to buy one). Math packet (to be mailed after registration) must be completed over the summer.

Science Skills Workshop

Grades 6-12

Science skills is a three-day workshop for learning skills necessary for success in science. Required for students new to Science Academy classes, science skills is also appropriate for any student entering a new (traditional) school in the fall or planning to compete in science fair for the first time.

Dates: Tuesday, Wednesday, Thursday, August 30 to September 1

Time: 10:30 a.m. to 12:00 p.m.

Cost: \$30 (does not include non-refundable registration fee)

Topics Include: scientific method, experimentation, data analysis, graphing, problem-solving, math skills, logic, measuring, using basic tools of science

General Information

All classes are held at Springton Lake Presbyterian Church, Route 252 & Media Line Rd, Newtown Square

Science Class Format: Each class will consist of review followed by a lab—approximately 50% of class time will be spent in 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, and a lab practical will be given at the end of each semester.

High-school students must have their own email address and regular access to the Internet.

New science students (both MS and HS) must complete the science skills workshop.

Textbooks will be provided. A complete supplies list will be sent to students after registration.

Classes may be canceled if minimum enrollment is not reached (usually 4-6 students).

Instructor

Lisa Swieson received her BA in biology from the University of Pennsylvania in 1987. She homeschooled her children from 1995 through 2014 has been teaching science classes to homeschooled students since 2002. Mrs. Swieson taught science at Cornerstone High School from 2007 until 2013 and currently teaches science at Delaware County Christian School. She is the founder and director of the Greater Philadelphia Homeschool Science Fair.

Registration / Payment Information

To register, complete all 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.)

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!)

Registration and science skills payments are due August 15.

First tuition payment (50% of class total) is due August 31. Tuition balance is due January 31. Alternative payment arrangement can be made upon request.

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

Tuition is not refundable after classes have started. Only wait-listed students who are never enrolled in a class, or students whose class was canceled, can receive a refund of their registration fees.

Class sizes are limited, so register early!

For More Information

Contact Lisa Swieson – 610.355.9174 – LSwieson@science-resources.org
or visit www.academy.science-resources.org

Completing Assignments

Science Academy classes require a significant amount of independent study between classes—about an hour per day in high school and 45 minutes per day in middle school. It is expected that you will do your best to complete all assignments thoroughly and turn them in on time. If prevented from doing so by illness or emergency, one of your parents must email the teacher the night before class.

Students who miss deadlines regularly may not be invited back next year.

Lab Safety

Lab safety procedures must be followed during every lab.

Getting Ready for Lab:

Do not wear:

- Open-toed shoes (a.k.a. sandals)
- Loose / baggy clothing
- Dangling necklaces or bracelets
- Contact lenses

Students who are dressed inappropriately may not be allowed to participate in lab.

Long hair must be tied back.

Do not use hairspray, mousse, gel, or any other flammable hair products on days when an open flame will be used.

Study all procedures before starting and ask questions if you don't understand any part of the procedure.

Do not begin any activity until directed to do so.

During Lab:

Wear safety glasses/goggles at all times. Gloves and an apron may be necessary for some labs, too.

Use lab equipment for its intended purpose only and in the manner instructed.

Keep your hands away from your face and mouth while working in the lab.

No eating, drinking, or chewing gum.

No horseplay or practical jokes.

Read chemical labels very carefully, before measuring the chemical.

Do not taste, touch, or smell any chemical or substance unless instructed to do so by the teacher.

If instructed to smell a chemical, hold the container several inches away from your nose and fan vapors toward your nose.

Work only on assigned procedures; don't perform unapproved procedures.

When heating or rinsing a container (like a test tube), point it away from yourself and others.

Some labs will involve heat. Remember, hot glassware looks just like cold glassware, so handle all glassware carefully.

Turn off all heat sources when not in use, and never leave them unattended. Keep all combustible material (like clothing, hair, or papers) away from open flames.

Notify the instructor immediately if there is any accident: fire, broken glass, injury, spill, etc. Clean up all spills immediately.

Students who repeatedly violate these guidelines could be suspended from class with no refund.

After Lab:

Clean all equipment and return items to their proper location.

Dispose of all materials properly; don't pour chemicals down the drain unless instructed to do so.

Do not return used chemicals to the reagent bottle. This could contaminate the reagents.

Wash your hands thoroughly with soap and warm water before removing your goggles.

Do not take any chemicals home with you.

Student, please sign and return this sheet with Registration Form. Keep a copy for yourself.

I have read and will follow these guidelines: _____

Science Academy New Family Application

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*This form is for families new to Science Academy classes. Complete only once per family. **Please print.***

Family Information

to be filled out by parent—answer **all** questions

Parents' Names: _____

Parents' Email Address: _____ Phone #: _____

How long has your family been homeschooling? _____

Please describe your reasons for and emphasis in homeschooling. For example, are you unschoolers? Do you emphasize academics, arts, sports, history, science, classical instruction, or other primary focus?

How did you hear about Science Academy classes? _____

Why do you want to enroll your child(ren) in Science Academy class(es)? _____

Science Academy New Student Application

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This form must be completed for each new child in the family that is enrolling. ***Please print.***

Parent Section

to be filled out **by parent**—answer **all** questions

Student Name: _____ Birthdate: _____

Parents' Names: _____

Please describe your child as a student. _____

What is your child's attitude toward authority (teachers, coaches, religious leaders, etc.)? _____

Is your child taking any other outside classes? If so, please list them. _____

Does your child have any learning differences? If so, please describe. _____

Science Academy classes require a significant amount of independent study between classes – at least an hour per day in high school and 45 minutes per day in middle school. **For high-school students**, please describe how well your child will tolerate this workload. (Is s/he self motivated to complete each day's lesson? Does s/he have a lot of other classes that will make it difficult to complete the required assignment?) **For middle-school students**, the assumption is that a parent will be responsible to help the student complete lessons and turn them in on time. Please indicate how you, as the parent, will help your child keep up with the workload.

I have read and understand the "Completing Assignments" section of Student Responsibilities page. _____
(parent initial)

Science Academy New Student Application

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This form must be completed for each new child in the family that is enrolling. **Please print.**

Student Section to be filled out **by student**—answer **all** questions

What do you prefer to be called? (Do you have a nickname?) _____

What is your favorite subject? Why? (It's okay if it's not math or science!) _____

What math course or topics did you study during the 2015-2016 school year? _____

What did you learn about in science during the 2015-2016 school year? (Name the course or list topics.)

Tell us something specific that you learned in science recently that was really cool. _____

Do you participate in sports or other extra-curricular activities? If so, please list them. _____

Please tell us something else about yourself that you would like us to know. _____

Science Academy New Student Registration Form

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Family Information

Parents' Names: _____

Mailing Address: _____

Parents' Email Address: _____ Phone #: _____

Student Information / Course Selection

Student Name: _____ Grade: _____

Student Email Address (required for high school): _____

- Earth Science** (MS) (\$390) **Earth Science** (HS) (\$430) **Science Skills** (\$30)
- Biology** (\$550) **Physics** (\$550)

Release

I, _____, give permission for the child named above to participate in the class(es) indicated above.

I agree to hold Science Resources, its instructors, and Springton Lake Presbyterian Church blameless in the event of any injury that may occur during class for the duration of this course.

We have read the attached responsibilities sheet and agree to follow the assignment and safety guidelines to the best of our ability. We realize that only properly attired students may participate in lab activities and that repeated warnings about breaking safety rules may result in suspension from class without refund. **A signed copy of this sheet is attached.**

I also attest that for the 2016-2017 school year, the child named above is/are either:

- in compliance with the PA Home Education Law, or enrolled in a cyber charter school.

Signed: _____ Date: _____

During class time, I can be reached at this number: _____

Alternate emergency contact: _____ Phone number: _____

Fee Schedule

Registration fee (\$40) is due with registration.

Registration and science skills payments are due August 15.

First tuition payment (50% of class total) is due August 31.

Registration fee is not refundable. Tuition and fees are not refundable after classes have started.

Total deposit enclosed: \$ _____