



# Science Department

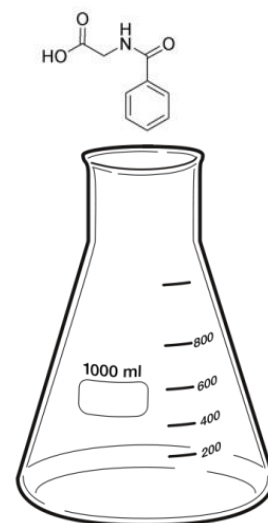


## Our Mission:

Solorio's Science Department prepares students for success in science after high school through increasing scientific literacy, fostering an understanding of the natural world, and inspiring curiosity.

## Our Vision:

All Solorio graduates will be driven individuals who are curious about the universe and who use their problem solving skills to positively impact their communities.



## Extracurricular Activities:

STEAM Fair – integrating science, technology, engineering, art, and math into a science fair project

FIRST Tech Challenge – students design, build, program, and operate robots in head-to-head competitions

Service Learning Opportunities – students are provided with frequent opportunities to apply their science knowledge while volunteering in their community

## Courses Offerings:

### Graduation Requirements

Physics or Honors Physics (9<sup>th</sup>)

Chemistry or Honors Chemistry (10<sup>th</sup>)

Biology, Honors Biology, or AP Biology (11<sup>th</sup>)

### Elective Courses

Honors Neuroscience

AP Environmental Science

AP Biology

AP Physics C: Mechanics

## Staff:

Andrew Au- [agau@cps.edu](mailto:agau@cps.edu)

Breanna Byington- [bbyington@cps.edu](mailto:bbyington@cps.edu)

Kara Brace- [kafagerstorm@cps.edu](mailto:kafagerstorm@cps.edu)

Hannah Erickson- [heerickson@cps.edu](mailto:heerickson@cps.edu)

Deanna Grider- [dddigitale@cps.edu](mailto:dddigitale@cps.edu)

Kathleen Griffin- [kmgriffin10@cps.edu](mailto:kmgriffin10@cps.edu)

Greta Kringle- [gmkringle@cps.edu](mailto:gmkringle@cps.edu)

Elliot Michel- [emichel1@cps.edu](mailto:emichel1@cps.edu)

Tim Nystrand- [tanystrand@cps.edu](mailto:tanystrand@cps.edu)

Jianan Shi- [jshi2@cps.edu](mailto:jshi2@cps.edu)

**Course Description:**

**Physics:** Physics is the study of the universe; in it we study waves, sound, light, sub-atomic particles, forces, and motion.

**Honors Physics:** Honors physics is an advanced version of physics that uses more math and writing skills.

**Chemistry:** Students discover the world of chemistry around them. They learn to ask questions and are challenged to explain their observations. Students develop their own theories, then test and refine them through experimentation.

**Honors Chemistry:** Honors chemistry is an advanced version of chemistry that involves more advanced math.

**Biology:** In biology, students use scientific investigation to explore topics ranging from DNA and protein synthesis to natural selection and evolution, building an understanding of the world in which we live.

**Honors Biology:** In honors biology, students create scientific investigations to explore the living world. Topics will range from chemistry of biological processes to heredity and reproduction, building a foundation for success in college level courses.

**AP Biology:** This is a college-level course for advanced students that studies life on earth from tiny microorganisms to huge animals. This course has an extensive lab component, and can be used to get college credit if the student scores a 3 or higher on the AP Biology test at the end of the year.

**AP Physics C: Mechanics:** This course will cover linear and circular motion, forces, work, energy, power, and gravity. AP Physics requires concurrent registration in AP Calculus. Students who score 3 or higher on the AP Physics exam can earn college credit equivalent to the first semester of college physics.

**Honors Neuroscience:** Honors neuroscience refers to investigations of the development, organization and functioning of the nervous system. This course is an introduction to the mammalian nervous system, with emphasis on the structure and function of the human brain. Topics include the function of nerve cells, sensory systems, control of movement, learning and memory, and diseases of the brain. Students will also explore the current state of knowledge in various areas of research into mental illness and degenerative disease, plasticity and repair of the nervous system, stem cell research and genetic engineering.

**AP Environmental Science:** The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.