

Parent Guide to HS Physical Science

Welcome parents! Here is your guide to science in your child's class this year.

Remember the most important science resource is your child's teacher. Contact them to find out more!

How Is Science Taught in the School District of Philadelphia Today?

You may find that science is taught very differently from the way that you learned it in school! Pennsylvania's new science standards and the School District of Philadelphia's new K-12 Science Instructional Guide put **student ideas about science** at the center of the classroom. This approach allows students to be scientists --instead of just **learning about** science, they are **figuring out** science!

For example...

Old way: Students memorize the periodic table.

New way: Students use the periodic table as a tool to explain and predict the properties of elements.

Old way: Students create Punnett squares to learn about Mendelian genetics.

New way: Students use statistics and probability concepts in written essays explaining how traits are expressed in a population.

As the science standards are implemented in schools and districts, they will enable students to:

- Develop a deeper understanding of science beyond memorizing facts, and
- Experience similar scientific and engineering practices as those used by professionals in the field.

What Will Your Child Be Figuring Out This Year?

Some of the big ideas students are figuring out in HS Physical Science include:

- How can one explain the structure and properties of matter?
- How do substances combine or change (react) to make new substances?
- How does one characterize and explain these reactions and make predictions about them?
- How can one explain and predict interactions between objects and within systems of objects?
- How is energy transferred and conserved?

How Can I Help My Child Learn and Grow in Science?

Studies show that family involvement is one of the biggest predictors of success in school. That's why parental involvement is so important. Seek opportunities to explore science at home and in the community with your child. Encourage them to keep asking questions, just like scientists. Let them know you don't have all the answers, and together try to find them. We also encourage you to get involved at your child's school and connect with teachers to learn more about changes in science instruction as they occur and help inspire children by exploring careers in STEM fields.

Also, check out the National Science Teaching Association's parent page:

<https://www.nsta.org/science-resources-parents>

You'll find tips to support science learning at home, links to student competitions, recommendations for science trade books, and much more.