

PHYSICAL SCIENCE



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Welcome to Physical Science! Our goal is to help you understand the ways your child will engage in science in this course. This letter will help you better understand the science expectations for physical science and the supporting resources to provide ideas of how to work with your child at home throughout the course. For additional support and questions, please contact your child's teacher.

In the physical science course, there are ten content standards designed to engage your child in student-centered instruction to make sense of phenomena and design solutions to problems focused on core physical science concepts and principles. Your child will use science and engineering practices and crosscutting concepts to explore and explain interactions and relationships of chemical and physical systems. Your child will develop an understanding of how these practices, concepts, and principles can be used to make sense of new phenomena and solve new problems.

SCIENCE CONCEPTS

PHYSICAL SCIENCE

Use patterns in data from the periodic table to model, explain and argue from evidence the properties of atoms, compounds, and families of elements, including changes in the nucleus during nuclear reactions

Ask questions to investigate, model, and explain changes in and conservation of matter during a chemical reaction and the formation and properties of solutions including acids and bases

Investigate, model, and explain based on the analysis and interpretation of data the transformations and flow of energy in a system and the relationships between force, mass, and motion of objects and systems of objects

Ask questions, investigate, and use data to model and explain the properties of waves and relationships between electricity and magnetism

How will your child be engaged in learning science?

Science and Engineering Practices

Students will engage in the following practices of scientific inquiry and engineering design to make sense of phenomena and solve problems in physical science: asking questions and defining problems, analyzing and interpreting data, developing and using models, constructing explanations, planning and carrying out investigations, engaging in argument from evidence, using mathematics and computational thinking, and obtaining, evaluating, and communicating information.

Crosscutting Concepts

Students will explore patterns, cause and effect, and systems and system models while examining physical science ideas. Students will identify and interpret patterns to help them model, explain, and argue cause and effect relationships, relationships between structure and function, and interactions involving energy and matter at the atomic, molecular, and system levels.

Phenomena

Phenomena are the real-world observable events to which students can apply the science ideas, concepts, and practices. Some examples of phenomena include hydrogen and oxygen are both gases at room temperature while water is a liquid, and the sound of a train's horn changes as it approaches and leaves a crossing.

Getting to know your child's teacher is important, and communication with the teacher throughout the year will support your child's individual growth while learning physical science. The resource links below are provided to help support learning at home as you engage your child in meaningful work while learning physical science. If at any time you have additional questions or need to request additional support, please reach out to your child's physical science teacher.



[GaDOE Inspire](#)



[Georgia Classroom](#)



[Georgia Standards](#)



[Georgia Milestone Resources](#)