Georgia Department of Education

Educating Georgia's Future

8th GRADE SCIENCE



Image credit: Monkey Business Images, Shutterstock.com

Welcome to Eighth Grade! Our goal is to help you understand the ways your child will engage in science this year. This letter will help you better understand the science expectations for 8th Grade and the supporting resources to provide ideas of how to work with your child at home throughout the school year. For additional support and questions, please contact your child's science teacher.

In 8th Grade Science, there are five content standards. These standards are designed to engage your child in student-centered instruction to make sense of phenomena and design solutions to problems focused on common physical science concepts and principles. Your child will use the science and engineering practices and crosscutting concepts to explore and explain chemical and physical systems and processes. Your child will develop an understanding of how these practices, concepts, and principles can be used make sense of new phenomena and solve new problems.

8th GRADE SCIENCE CONCEPTS

PHYSICAL SCIENCE

Plan investigations, develop models, construct explanations and arguments based on evidence about the structure, properties, and conservation of matter
Plan investigations, analyze data and construct arguments to describe the transformation, transfer, and conservation of energy within systems.
Analyze data, construct explanations, and arguments to describe the relationships between force, mass, and the motion of objects.
Ask questions, analyze data, and develop models to describe the behavior of light waves, sound waves, and the relationships between wave properties and energy.
Plan investigations and construct arguments to describe gravitations, electric, magnetic forces and the fields of each force that exists between objects.

How will your child be engaged in learning science?

Science and Engineering Practices

Students will engage in making sense of phenomena and solving problems in science by asking questions and defining problems, planning and carrying out investigations, developing and using models, analyzing and interpreting data, engaging in argument from evidence, constructing explanations, and obtaining, evaluating, and communicating information.

Crosscutting Concepts

Students will explore patterns, cause and effect, and systems and system models while examining life science ideas. Students will explore energy and matter, stability and change, and structure and function between energy and matter in Earth's systems.

Phenomena

Phenomena are the real-world observable events to which students can apply the science ideas, concepts, and practices. Some examples of phenomena include photosynthesis transforms light energy into chemical energy, an empty grocery cart is easier to push than a full grocery cart, the planets stay in orbit around the sun without colliding with one another and we see lightning before we hear thunder during a storm.

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 science. The resource links below are provided to help support learning at home as you engage your child in meaningful work while learning science. If at any time you have additional questions or need to request additional support, please reach out to your child's science teacher.

GaDOE Inspire

Georgia Classroom

Georgia Standards

Georgia Milestone Resources