



School Year: Semester 1 2020

Course Name	Physical Science-General	Course Code	40.9170011-C-3 Science 8 A / 40.0170011-B Science 8 A
School Name	Henderson Middle School	Teacher Name	Dr. Hillsworth Charles
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Course Description

The Science Georgia Standards of Excellence are designed to provide foundational knowledge and skills for all students to develop proficiency in science. The Project 2061's Benchmarks for Science Literacy and the follow up work, A Framework for K-12 Science Education were used as the core of the standards to determine appropriate content and process skills for students. The Science Georgia Standards of Excellence focus on a limited number of core disciplinary ideas and crosscutting concepts which build from Kindergarten to high school.

The standards are written with the core knowledge to be mastered integrated with the science and engineering practices needed to engage in scientific inquiry and engineering design. Crosscutting concepts are used to make connections across different science disciplines. The Science Georgia Standards of Excellence drive instruction. Hands-on, student-centered, and inquiry-based approaches should be the emphasis of instruction.

The standards are a required minimum set of expectations that show proficiency in science. However, instruction can extend beyond these minimum expectations to meet student needs. At the same time, these standards set a maximum expectation on what will be assessed by the Georgia Milestones Assessment System. Science consists of a way of thinking and investigating, as well a growing body of knowledge about the natural world. To become literate in science, students need to possess sufficient understanding of fundamental science content knowledge, the ability to engage in the science and engineering practices, and to use scientific and technological information correctly. Technology should be infused into the curriculum and the safety of the student should always be foremost in instruction.

The Eighth Grade Georgia Standards of Excellence for science are designed to give all students the necessary skills for a smooth transition from elementary physical science standards to high school physical science standards. The purpose is to give all students an overview of common strands in physical science including, but not limited to, the nature of matter, conservation of energy, energy transformations, and conservation of matter, kinematics, and dynamics. These standards are not intended in any way to take the place of the high school physical science standards.

Eighth grade students keep records of their observations, use those records to analyze the data they collect, recognize patterns in the data, use simple charts and graphs to represent the relationships they see, and find more than one way to interpret their findings. They develop conceptual understanding of the laws of conservation of matter and conservation of energy, are able to explain the characteristics of the motion of an object (speed, acceleration) and the way that forces may change the state of motion of an object. They use what they observe to explain the difference between physical and chemical changes and cause and effect relationships between force, mass, and the motion of objects. Students in eighth grade construct explanations based on evidence on the difference and similarities between electromagnetic and mechanical waves. Eighth graders plan and carry out investigations, describe observations, and show information in graphical form. The students replicate investigations and compare results to find similarities and differences.

S8P1.

Obtain, evaluate, and communicate information about the structure and properties of matter.

- a. Develop and use a model to compare and contrast pure substances (elements and compounds) and mixtures. (Clarification statement: Include heterogeneous and homogeneous mixtures. Types of bonds and compounds will be addressed in high school physical science.)
- b. Develop and use models to describe the movement of particles in solids, liquids, gases, and plasma states when thermal energy is added or removed.
- c. Plan and carry out investigations to compare and contrast chemical (i.e., reactivity, combustibility) and physical (i.e., density, melting point, boiling point) properties of matter.
- d. Construct an argument based on observational evidence to support the claim that when a change in a substance occurs, it can be classified as either chemical or physical. (Clarification statement: Evidence could include ability to separate mixtures, development of a gas, formation of precipitate, change in energy, color, and/or form.)
- e. Develop models (e.g., atomic-level models, including drawings, and computer representations) by analyzing patterns within the periodic table that illustrate the structure, composition, and characteristics of atoms (protons, neutrons, and electrons) and simple molecules.
- f. Construct an explanation based on evidence to describe conservation of matter in a chemical reaction including the resulting differences between products and reactants. (Clarification statement: Evidence could include models such as balanced chemical equations.)

S8P2.

Obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transform from one form to another within a system.

- Analyze and interpret data to create graphical displays that illustrate the relationships of kinetic energy to mass and speed, and potential energy to mass and height of an object.
- Plan and carry out an investigation to explain the transformation between kinetic and potential energy within a system (e.g., roller coasters, pendulums, rubber bands, etc.).
- Construct an argument to support a claim about the type of energy transformations within a system [e.g., lighting a match (light to heat), turning on a light (electrical to light)].
- Plan and carry out investigations on the effects of heat transfer on molecular motion as it relates to the collision of atoms (conduction), through space (radiation), or in currents in a liquid or a gas (convection).

Curriculum Overview

The following academic concepts will be covered. **THIS IS ONLY A GUIDE AND IS SUBJECT TO CHANGE.**

CURRICULUM OVERVIEW	
Unit – S8P1:	Students will examine the scientific view of the nature of matter.
Unit – S8P2:	Students will be familiar with the forms and transformations of energy.

BOARD-APPROVED INSTRUCTIONAL MATERIALS

Title	Georgia Science Grade 8
ISBN	987-0-07877846-9
Replacement Cost	\$68.00
Online book and/or resources	Georgia Science Grade 8
Online student access code (school specific)	ACCESS CODE:

GRADING SYSTEM: The DeKalb County School District believes that the most important assessment of student learning shall be conducted by the teachers as they observe and evaluate students in the context of ongoing classroom instruction. A variety of approaches, methodologies, and resources shall be used to deliver educational services and to maximize each student's opportunity to succeed. Teachers shall evaluate student progress, report grades that represent the student's academic achievement, and communicate official academic progress to students and parents in a timely manner through the electronic grading portal. **See Board Policy IHA.**

GRADING CATEGORIES	*GRADE PROTOCOL
Formative Assessment (Pre-Assessment) – 0% Assessment During Learning – 25% Guided, Independent, or Group Practice – 45% Summative Assessment or Assessment of Learning– 30%	A 90 – 100 ~ P (pass) B 80 – 89 ~ F (fail) C 71 – 79 D 70 F Below 70

Notes:

*English Learners (ELs) must not receive numerical or letter grades for the core content areas in elementary and middle school during their first year of language development. A grade of CS or CU must be assigned. This rule may be extended beyond the first year with approval from the EL Studies Program. English Learners must receive a grade for ESOL courses. Elementary schools will utilize P (pass) and F (fail) in Health/Physical Education, Music, World Languages, Visual Arts and Performing Arts.

DISTRICT EXPECTATIONS FOR SUCCESS	
STUDENT PROGRESS	Semester progress reports shall be issued four and a half, nine and thirteen and a half weeks into each semester. The progress of students shall be evaluated frequently and plans shall be generated to remediate deficiencies as they are discovered. Plans shall include appropriate interventions designed to meet the needs of the students. See Board Policy IH.
ACADEMIC INTEGRITY	Students will not engage in an act of academic dishonesty including, but not limited to, cheating, providing false information, falsifying school records, forging signatures, or using an unauthorized computer user ID or password. See the Code of Student Conduct - Student Rights and Responsibilities and Character Development Handbook.
HOMEWORK	Homework assignments should be meaningful and should be an application or adaptation of a classroom experience. Homework is at all times an extension of the teaching/learning experience. It should be considered the possession of the student and should be collected, evaluated and returned to the students. See Board Policy IHB.
MAKE-UP WORK DUE TO ABSENCES	When a student is absent because of a legal reason as defined by Georgia law or when the absence is apparently beyond the control of the student, the student shall be given an opportunity to earn grade(s) for those days absent. Make-up work must be completed within the designated time allotted. See Board Policy IHEA.
SCHOOL EXPECTATIONS FOR SUCCESS	

CLASSROOM EXPECTATIONS	<ul style="list-style-type: none"> ○ Come to Class Prepared and on time ○ Speak at the appropriate time. ○ Follow directions the first time they are given ○ Use appropriate language ○ Respect yourself and others at all times ○ Absolutely no bullying will be tolerated ○ Students must adhere to the DCSD Student Code of Conduct.
MATERIALS AND SUPPLIES	<ul style="list-style-type: none"> ○ HMS Agenda Planner ○ Loose leaf paper ○ Notebook ○ Blue or black ink pens ○ Pencils ○ Dividers ○ Color pencils, ○ Calculator ○ A Composition notebook.
EXTRA HELP	Tutorial Sessions: Available upon request/appointment at 8:00am.
PARENTS AS PARTNERS	



2830 Henderson Mill Road
Chamblee, GA 30341

08/17/2020

Dear Parents:

I am not providing hard copies of my syllabus to students, unless requested by the student. Please review my syllabus to understand the expectations and grading policies as set forth therein. Then please sign and return this sheet. Thank you.

PLEASE SIGN BELOW AND RETURN

I have read the syllabus.

Student Signature: _____

Parent/Guardian Signature: _____

Date: _____

Additional information to support continued contact:

Information	Parent/Guardian
Day Time Phone Number	
Cellular Phone Number	
Home Phone Number	
Email Address	