

GSE Science 8th Grade Pacing Guide

These are bundles of core ideas from the Georgia Standards of Excellence related to an anchoring phenomenon.

This document is part of a framework that includes lessons and resources.

Instructional Segment	Principles of Energy and Matter	Structure and Properties of Matter	Waves	Forces	Motion
Estimated Time	7 weeks	7 weeks	7 weeks	7 weeks	8 weeks
Crosscutting Concepts	<ul style="list-style-type: none"> Systems and system models Scale, proportion, and quantity Energy and matter 	<ul style="list-style-type: none"> Structure and function Energy and matter 	<ul style="list-style-type: none"> Cause and effect Structure and function Energy and matter 	<ul style="list-style-type: none"> Cause and effect Structure and function Energy and matter 	<ul style="list-style-type: none"> Cause and effect Energy and matter
Anchoring Phenomenon	Year-Long Phenomenon: Human need for energy				
	Power Up: Lights Out https://www.georgiapower.com/about-energy/energy-sources/nuclear/plantmap.html	Dinner is ready You are what you eat	Best seats in the house https://youtu.be/W0zxbIRpEIM	Seeing is believing: railroad car implosion Aurora Borealis Electrical force fields: safety first	Vehicular motion Crashes Runaway truck ramps
Core Ideas	<ul style="list-style-type: none"> Energy Energy transformations Matter (structure and composition) Kinetic and potential energy Heat transfer (conduction, radiation, and convection) Electric and magnetic forces (electromagnets) 	<ul style="list-style-type: none"> Structure and properties of matter Mixtures and solutions Elements and compounds Matter (structure and composition) Thermal energy Energy transformations States of matter Chemical and physical properties and changes Conservation of matter 	<ul style="list-style-type: none"> Waves properties (frequency, amplitude, wavelength, and energy) Energy (electromagnetic spectrum) Light and sound Wave propagation (reflection, refraction, absorption, diffraction and transmission) Lenses characteristics 	<ul style="list-style-type: none"> Matter (structure and composition) Energy transformations Forces (friction, gravitational, electrical, and magnetic) Force fields Conductors and insulators 	<ul style="list-style-type: none"> Force and motion Speed and acceleration Speed and distance Newton's Laws of Motion Balance and unbalanced forces Energy transformations Kinetic and potential energy
Science and Engineering Practices	Obtain, Evaluate, and Communicate Information				
	<ul style="list-style-type: none"> Plan and carrying out investigations Engage in arguments from evidence 	<ul style="list-style-type: none"> Develop and use models Engage in arguments from evidence 	<ul style="list-style-type: none"> Develop and use models Construct explanations and design solutions 	<ul style="list-style-type: none"> Plan and carry out investigations Engage in arguments from evidence 	<ul style="list-style-type: none"> Construct explanations and design solutions
GSE	S8P1e; S8P2a,b,c,d; S8P5c	S8P1a,b,c,d,e,f; S8P2c,d	S8P4a,b,c,d,e,f,g	S8P1e; S8P2c; S8P5a,b,c	S8P3a,b,c; S8P2a,b