GSE High School Physical Science Curriculum Map

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	Introduction	Properties of Matter	Reactions	Energy	Force and Motion	Waves	Energy Capstone
Estimated Time	1 week	7 weeks	8 weeks	8 weeks	6 weeks	4 weeks	2 weeks
Crosscutting Concepts	All	• Structure and function • Patterns • Scale, proportion and change • Energy and matter	• Energy and matter • Stability and change • Energy and matter	• Energy and matter • Systems and system models • Stability and change • Energy and matter	• Cause and effect • Systems and system models • Stability and change • Energy and matter	• Patterns • Energy and matter	• Systems and system models • Cause and effect • Energy and matter
Anchoring Phenomenon	Operation of a car or rocket	Year-long phenomena: Operation of a car or rocket.					
	Operation of a car or rocket	Elements and compounds to make a car or rocket operate https://goo.gl/LODHSo	Changes in altitude affect gases, resulting in surprising effects https://goo.gl/mbgKv8	Turning on your classroom lights requires many transformations of energy https://goo.gl/9IIwL0	Car stop - seatbelts and airbags https://goo.gl/aiFnyY	Doppler Effect https://goo.gl/Gv6Mw7	Model and explain the operation of a car or rocket
Core Ideas	All	• Structure of atoms and elements • Trends in the Periodic Table • Compounds: properties, bonds and naming	• Atomic and molecular motion • Conservation of matter • Solutions • Acids and bases	• Heat energy • Electricity and magnetism • Nuclear energy • Fission and fusion • Radioactive decay • Energy transformations	• Forces and motion • Newton's laws • Simple machines • Gravitational force • Energy	• Electromagnetic and mechanical waves • Reflection, refraction, interference, and diffraction • Doppler effect • Energy	All
Science and Engineering Practices		Obtaining, evaluating, and communicating information					
	• Plan and carry out investigations • Ask questions • Develop and use models	• Develop and use models • Analyze and interpret data • Construct explanations	• Plan and carry out investigations • Develop and use models • Ask questions and design problems • Analyze and interpret data • Construct explanations	• Develop and use models • Use mathematical and computational thinking • Engage in argument from evidence • Construct explanations • Analyze and interpret data • Plan and carry out investigations	• Plan and carry out investigations • Construct explanations • Analyze and interpret data • Use mathematical and computational thinking	• Analyze and interpret data • Ask questions • Develop and use models • Construct explanations	All
GSE	All	**SPS1**a,b,c; **SPS2**a,b,c; **SPS7**a	**SPS5**a,b; **SPS3**a,b; **SPS6**a,b,c,d,e; **SPS7**a	**SPS4**a,b,c; **SPS10**a,b,c; **SPS7**a,b,c,d	**SPS7**a; **SPS8**a,b,c,d	**SPS7**a; **SPS9**a,b,c,d,e	All