

8th Grade Physical Science - Curriculum Overview

The first half of the year (first two quarters) is an introduction to chemistry

Quarter 1	Introduction to Matter – Matter and its Properties	Different States of Matter: Solid, Liquid, Gas, Plasma	Atoms and the Periodic Table	Chemical Bonds
	<ul style="list-style-type: none"> Describing Matter Measuring Matter Particles of Matter 	<ul style="list-style-type: none"> States of Matter Gas behavior: Gas Laws Changes in State 	<ul style="list-style-type: none"> Structure of the Atom Organization of Elements in the Periodic Table Metals Nonmetals Metalloids 	<ul style="list-style-type: none"> Valence Electrons Ionic Bonds Covalent Bonds
Quarter 2	Chemical Reactions	Acids, Bases, and Solutions	Carbon Chemistry	Exploring Materials
	<ul style="list-style-type: none"> Observing Chemical Reactions Writing Chemical Equations Controlling Chemical Equations 	<ul style="list-style-type: none"> Introduction to Solutions Concentration Solubility Describing Acids and Bases Acids and Bases in Solution 	<ul style="list-style-type: none"> Chemical Bonding Carbon Compounds 	<ul style="list-style-type: none"> Polymers and Composites Ceramics and Glass Radioactive Elements Metals and Alloys

The second half of the year (The third and fourth quarters) is an introduction to physical science

Quarter 3	Motion	Forces	Forces in Fluids	Work and Machines	Energy and Power
	<ul style="list-style-type: none"> Describing and Measuring Motion Acceleration 	<ul style="list-style-type: none"> The Nature of Forces Force, Mass, Acceleration Friction and Gravity Action and Reaction Newton's Laws 	<ul style="list-style-type: none"> Pressure Transmitting Pressure in a Fluid Floating and Sinking Bernoulli's Principle 	<ul style="list-style-type: none"> Definition of Work Mechanical Advantage and Efficiency Simple Machines 	<ul style="list-style-type: none"> The Nature of Energy Energy Conversion and Conservation Power
	Thermal Energy and Heat				
	<ul style="list-style-type: none"> Temperature and Thermal Energy The Nature of Heat Thermal Energy and States of Matter 				
Quarter 4	Characteristics of Waves	The Electromagnetic Spectrum	Sound	Light	Magnetism and Electromagnetism
	<ul style="list-style-type: none"> Properties of Waves Interaction of Waves 	<ul style="list-style-type: none"> Nature of Electromagnetic Waves Waves of the Electromagnetic Spectrum 	<ul style="list-style-type: none"> Nature of Sound Properties of Sound 	<ul style="list-style-type: none"> Reflection and Mirrors Refraction and Lenses Color 	<ul style="list-style-type: none"> Nature of Magnetism Electric Current and Magnetic Fields Electromagnets
	Electric Charges and Current	Electronics			
	<ul style="list-style-type: none"> Electric Charge and Static Electricity Circuits Electricity, Magnetism, and Motion Generating Electric Current 	<ul style="list-style-type: none"> Electronic Signals and Semiconductors Computers 			

