

	Week	Unit	Topics by week	Lab or simulation
Quarter 1	1	Unit 1: Atomic Structure	Investigation 1: Atomic Structure Experience 1: Particle Nature of Matter	IP: What causes colors in fireworks? EP: What is sugar made of? GIL: Elements- The Building Blocks of Matter
	2		Finish Investigation 1: Atomic Structure Experience 1: Particle Nature of Matter Begin Investigation 1: Atomic Structure Experience 2: Modeling Atoms	GIL: Bean Bag Isotopes SIM: PhET- Build an Atom SIM: PhET- Isotopes & Atomic Mass
	3		Finish Investigation 1: Atomic Structure Experience 2: Modeling Atoms Begin Investigation 1: Atomic Structure Experience 3: Emission Spectra & Bohr Model	EP: How do we know water is present on Mars. GIL: Evaluate Atomic Spectra
	4		Finish Investigation 1: Atomic Structure Experience 3: Emission Spectra & Bohr Model Begin Investigation 1: Atomic Structure Experience 4: Modern Atomic Theory Experience 5: Electron in Atoms	EP: How do guests decide where to stay in a hotel? (e- configuration) GIL: Model Electron Configuration
	5		Investigation 1: Atomic Structure Experience 4: Modern Atomic Theory Experience 5: Electron in Atoms	PBA: Evaluate Atomic Structure with Flame test
	6	Finish Unit 1: Atomic Structure Begin Unit 2: The Periodic Table	Finish Investigation 1 Begin Investigation 2: The Periodic Table Experience 1: The Periodic Table: An Overview	EP: Coin Categories: How can categorizing and arranging objects help us make predictions about their properties?
	7	Unit 2: The Periodic Table	Finish Investigation 2: The Periodic Table Experience 1: The Periodic Table: An Overview Begin Investigation 2: The Periodic Table Experience 2: the Periodic Table and Atomic Structure	EP: What's so special about silicon? GIL: Elemental metals, nonmetals, and metalloids Interactivity: Periodic Properties
	8		Finish Investigation 2: The Periodic Table Experience 2: the Periodic Table and Atomic Structure Begin Investigation 2: The Periodic Table Experience 3: Periodic Trends	EP: What can periodic trends tell us? (Salt Bubbles) GIL: Periodic trends and properties
	9		Investigation 2: The Periodic Table Experience 3: Periodic Trends	VL: Predict Reactivity using periodic trends
Fall Break				
Quarter 2	10	Finish Unit 2: The Periodic Table Begin Unit 3: Chemical Bonding	Finish Investigation 2: The Periodic Table Investigation 3: Chemical Bonding Experience 1: Ionic Bonds	EP: What happens when you mix an explosive metal with a poisonous gas. GIL: Characteristics of Ionic Bonds Interactivity: Ions and Electroplating
	11	Unit 3: Chemical Bonding	Finish Investigation 3: Chemical Bonding Experience 1: Ionic Bonds Begin Investigation 3: Chemical Bonding Experience 2: Metallic Bonds	GIL: Investigate Metallic Bonds
	12		Finish Investigation 3, Experience 2 Begin Investigation 3: Chemical Bonds Experience 3: Covalent Bonds	VR: Chemical Bonding EP: How are covalent compounds different from ionic? GIL: Investigate Covalent Bonds PhET: Molecular Polarity
	13		Experience 3: Covalent Bonds	PhET: Molecular Shapes
	14	Finish Unit 3: Chemical Bonding Begin Unit 4: Physical Properties of Materials	Finish Investigation 3: Chemical Bonds Begin Investigation 4: Physical Properties of Materials Experience 1: States of Matter	EP: Why do solid water and solid carbon dioxide behave so differently? OEIL: Correlate Materials and Bond Type VL: States of Matter
	15	Unit 4: Physical Properties of Materials	Investigation 4: Physical Properties of Materials Experience 1: States of Matter	PhET: States of Matter Basics
	16		Finish Investigation 4: Understanding Chemical Reactions Experience 1: States of Matter Begin Investigation 4: Understanding Chemical Reactions Experience 3: Comparing Ionic and Molecular Compounds	VR: Physical Properties of Materials EP: What have you noticed about crystals? GIL: Melt Ionic and Covalent Compounds VL: Tough Tools
	17		Investigation 4: Physical Properties of Materials Experience 4: Comparing metals and nonmetals	EP: How does aluminum foil compare with plastic wrap? GIL: Modeling Metals, Ceramics, and Polymers
	18		Assessment Investigation 4 Final Exam review	
19		Final Exams		
Winter Break				

	Week	Unit	Topics by week	Lab or simulation
Quarter 3	20	Unit 5: Chemical Quantities	Investigation 5: Chemical Quantities Experience 1: The Mole Concept	EP: How can you measure matter? GIL: Describe Small-Scale Matter Using the Mole
	21		Finish Investigation 5, Experience 1 Investigation 5: Chemical Quantities Experience 2: Molar Relationships	VRE: Chemical Quantities EP: Can you inflate a balloon with vinegar and baking soda? GIL: Mole Ratios Interactivity: Mole Road Map
	22		Finish Investigation 5: Chemical Quantities	
	23	Unit 6: Chemical Reactions	Begin Investigation 6: Chemical Reactions Experience 1: Modeling Chemical Reactions	GIL: Evaluate Chemical Reactions PhET: Balancing Equations
	24		Finish Investigation 6, Experience 1 Begin Investigation 6: Chemical Reactions Experience 2: Predicting Outcomes of Chemical Reactions	EP: What is the outcome of a decomposition reaction? GIL: Types of Chemical reactions VR: Chemical Reactions VL: Reactivity of Metals
	25		Finish Investigation 6, Experience 2 Begin Investigation 6: Chemical Reactions Experience 3: Reactions in Aqueous Solution	EP: How do substances combine to make new substances in our everyday life? GIL: Predict Chemical Reactions Interactivity: Cation Meet Anion
	26		Finish Investigation 6, Experience 3	PBA: Identifying Evidence of a Chemical Reaction
	27	Finish Unit 6: Chemical Reactions Begin Unit 9: The Behavior of Gases	Unit 6 Assessment Investigation 9: The Behavior of Gases Experience 1: Properties of Gases	EP: Can gas make an object move? GIL: Compressibility
	28	Unit 9: The Behavior of Gases	Finish Investigation 9: The Behavior of Gases Experience 1: Properties of Gases Begin Investigation 9: The Behavior of Gases Experience 2: The Gas Laws	VR: The Behavior of Gases  EP: How can you blow up a ballon inside a bottle without blowing air into it? GIL: Relationship between gas variables
	29		Finish Investigation 9: The Behavior of Gases Experience 2: The Gas Laws	
Spring Break				
Quarter 4	30	Unit 9: The Behavior of Gases	Begin Investigation 9: The Behavior of Gases Experience 3: Ideal Gas Law	EP: What causes a marshmallow to shrink and expand? GIL: Ideal Gas Law VL: Gas Behavior in Popping Candy PheT: Gas Properties
	31	Finish Unit 9: The Behavior of Gases Unit 12: Reaction Rates and Equilibrium	Assess Investigation 9: The Behavior of Gases  Begin Investigation 12: Reaction Rates and Equilibrium Experience 1: Rates of Reactions	EP: How can you make a reaction go faster? GIL: Reaction Rates: Iodine Clock
	32	Unit 12: Reaction Rates and Equilibrium	Finish Investigation 12: Reaction Rates and Equilibrium Experience 1: Rates of Reactions	VRE: Reaction Rates  EP: What makes a match catch fire? GIL: Collision Theory Interactivity: Reaction Rates and Activation Energy
	33		Begin Investigation 12: Reaction Rates and Equilibrium Experience 2: The Process of Chemical Reactions	EP: What is happening during equilibrium? GIL: Explore Chemical Equilibrium
	34		Investigation 12: Reaction Rates and Equilibrium Experience 3: Reversible Reactions	VL: Equilibrium Shifting
	35	Finish Unit 12: Reaction Rates and Equilibrium Begin Unit 17: Nuclear Processes	Assess Investigation 12: Reaction Rates and Equilibrium Begin Investigation 17: Nuclear Processes Experience 1: Radioactivity and Half Lives	EP: Making Radiation Visible GIL: Radioactive Decay VL: Geological Variation and Radon Levels
	36	Unit 17: Nuclear Processes	Finish Investigation 17, Experience 1 Being Investigation 17: Nuclear Processes Experience 2: Fission and Fusion	EP: Making Gold from other elements GIL: Nucealr Energy Interactivity: Comparing Nuclear and Chemical Reactions VRE: Nuclear Processes
	37		Investigation 17: Nuclear Processes Experience 3: Nuclear Technologies Final Exam Review	EP: Rad Risks GIL: Nuclear Radiation and Shielding
	38		Final Exam	
				Legend
				GIL: Guided Inquiry Lab
				OEIL: Open Ended Inquiry Lab
				SIM: Simulation/Virtual Lab
				PBA: Problem Based Assessment