

First Nine Weeks		
Week(s)	Topics & Objectives	Standards
1	Scientific Method	<p>1. Develop and demonstrate an understanding of scientific inquiry using process skills.</p> <p>a. Form a hypothesis, predict outcomes, and conduct a fair investigation that includes manipulating variables and using experimental controls. (DOK 3)</p> <p>b. Distinguish between observations and inferences. (DOK 2)</p> <p>c. Use precise measurement in conjunction with simple tools and technology to perform tests and collect data. (DOK 1)</p> <p>Tools (English rulers [to the nearest one-sixteenth of an inch], metric rulers [to the nearest millimeter], thermometers, scales, hand lenses, microscopes, balances, clocks, calculators, anemometers, rain gauges, barometers, hygrometers)</p> <p>Types of data (height, mass, volume, temperature, length, time, distance, volume, perimeter, area)</p> <p>d. Organize and interpret data in tables and graphs to construct explanations and draw conclusions. (DOK 2)</p> <p>e. Use drawings, tables, graphs, and written and oral language to describe objects and explain ideas and actions. (DOK 2)</p> <p>f. Make and compare different proposals when designing a solution or product. (DOK 2)</p> <p>g. Evaluate results of different data (whether trivial or significant). (DOK 2)</p> <p>h. Infer and describe alternate explanations and predictions. (DOK 3)</p>
2	Scientific Method	See week 1
3	Scientific Method/Lab Tools	See week 1
4	Metric System/Intro to Matter	<p>See week 1</p> <p>2. Analyze chemical and physical changes and interactions involving energy and forces that affect motion of objects.</p> <p>a. Recognize that atoms of a given element are all alike but atoms of other elements have different atomic structures. (DOK 1)</p> <p>b. Distinguish physical properties of matter (e.g., melting points, boiling points, solubility) as it relates to changes in states. (DOK 2)</p> <ul style="list-style-type: none"> • Between solids, liquids, and gases through models that relate matter to particles in motion • Solubility in water of various solids to activities (e.g., heating, stirring, shaking, crushing) on the rate of solution • Use of solubility differences to identify components of a mixture (e.g., chromatography)

5	Density/Elements	See week 4
6	Energy and Matter	See week 4 2g. Predict and explain factors that affect the flow of heat in solids, liquids, and gases. <ul style="list-style-type: none"> • Insulating factors in real life applications (e.g., building, construction, clothing, animal covering) • Conduction, convection, or radiation factors used to enhance the flow of heat
7	States of Matter	See week 6
8	States of Matter	See week 6
9	Matter/9 weeks exam	See week 6
Second Nine Weeks		
Week(s)	Topics & Objectives	Standards
10	Forces	2. Analyze chemical and physical changes and interactions involving energy and forces that affects motion of objects. c. Investigate and describe the effects of forces acting on objects (DOK2) <ul style="list-style-type: none"> • Gravity, friction, magnetism, drag, lift, and thrust • Forces affecting the motion of objects
11	Forces	See week 10
12	Light and Color	2 e. Apply the laws of reflection and refraction to explain everyday phenomena. (DOK 2) <ul style="list-style-type: none"> • Properties of reflection, refraction, transmission, and absorption of light • Images formed by plane, convex, and concave lenses and mirrors, and reflecting and refracting telescopes

		<ul style="list-style-type: none"> • Objects that are opaque, transparent, or translucent
13	Light/Lens/Mirrors	See week 12
14	Light/Lens/Mirrors	See week 12
15	Ecosystems	<p>3. Explain the organization of living things, the flow of matter and energy through ecosystems, the diversity and interactions among populations, and the natural and human-made pressures that impact the environment.</p> <p>a. Describe and predict interactions and the effects of these interactions on population growth to include the effects on available resources (DOK 2)</p> <ul style="list-style-type: none"> • How cooperation, competition, and predation affect population growth • Effects of overpopulation within an ecosystem on the amount of resources available.
16	Ecosystems	See week 15
17	Ecosystems	See week 15
18	Ecosystems/9 weeks exams	See week 15