

6th Grade Science	Unit I: Think Like A Scientist
Essential Question	What is science and how do scientists learn about the world?
Academic Vocabulary	predictions, observations, hypothesis, experimentation, procedures, data, classify, analysis, conclusions, lab safety, scientific method, “thinking outside the box”
Unit Goals	Students will be able to: <ul style="list-style-type: none"> • Use lab equipment appropriately • Ask questions and define problems • Plan and carry out investigations • Construct and use observations to communicate findings • Analyze and interpret data • Engage in argument from evidence
NGSS	MS-PS3-3; MS-PS1-6; MS-PS3-3; MS-PS1-6
CCSS for Reading	RST.6-8.1; RST.6-8.7; RST.6-8.9
CCSS for Writing	WHST.6-8.9

6th Grade Science	Unit 2: Measurement
Essential Question	How do you use measurement in your everyday life?
Academic Vocabulary	metric system, measuring, unit, length, width, height, distance, meter, millimeter, centimeter, liter, milliliters, volume, meniscus, graduated, unmarked, mass, combined mass, grams, temperature, Celsius, degrees, estimate, actual, cubic, matter, ruler, graduated cylinder, beaker, thermometer, triple beam balance
Unit Goals	Students will be able to: <ul style="list-style-type: none"> • investigate what it means to measure length, temperature, mass, volume • understand how to use metric tools to measure length, temperature, mass, volume • determine how to use various units within the metric system • identify relative sizes of measurement units within the metric system including m, mm, cm, km; g; °C, L, mL, cm³
NGSS	5-PS1-3
CCSS for Reading	RST.6-8.1
CCSS for Writing	WHST.6-8

6 th Grade Science	Unit 3: Matter
Essential Questions	<p>How do molecular interactions explain the properties of matter that we see and feel?</p> <p>How does identifying properties help you sort matter?</p>
Academic Vocabulary	<p>atom, particles, neutron, proton, electron, electron cloud, nucleus, element, charge, positive, negative, neutral, molecule, vibrate, state(s), structure, solid, liquid, gas, characteristics, properties, heat, thermal, transfer, substance, mass, volume, definite, indefinite, boiling point, melting point, water cycle, evaporation, condensation, precipitation, vapor</p>
Unit Goals	<p>Students will be able to:</p> <ul style="list-style-type: none"> • explain how atoms are the particles that make up all matter • illustrate and label the structure and charges of an atom • identify the properties of matter and construct explanations of the behavior of particles in different states of matter • illustrate and label the particles of the different states of matter • distinguish what occurs to particles as they move from one state of matter to another state • analyze and interpret data to determine similarities and differences in findings
NGSS	MS-PS1-1; MS-PS1-4; MS-PS1-5
CCSS for Reading	RST.6-8.1; RST.6-8.3; RST.6-8.7
CCSS for Writing	WHST.6-8.7; WHST.6-8.8

6 th Grade Science	Unit 4: Energy
Essential Question	<p>How can energy be transferred from one object or system to another?</p>

Academic Vocabulary	energy, potential, kinetic, gravitational potential energy, elastic potential energy, mechanical, thermal, chemical, transfer (transformation), Conservation of Energy, position, stored, speed, work, mass, matter, particles, distance
Unit Goals	<p>Students will be able to:</p> <ul style="list-style-type: none"> • identify two basic kinds of energy and describe how different forms are related • choose the position where an object contains the most/least potential energy based upon its relative position • select the position where an object exerts the most/least amount of kinetic energy • investigate the transformations between potential and kinetic energy
NGSS	MS-PS3-1; MS-PS3-2; MS-PS3-3; MS-PS3-4; MS-PS3-5
CCSS for Reading	RST.6-8.1; RST.6-8.3; RST.6-8.7
CCSS for Writing	WHST.6-8.7; WHST.6-8.8