

Physical Science	
Matter	<ul style="list-style-type: none"> SC.CM.PS.01.02 <i>Read and interpret the periodic table, recognizing the relationship of the chemical and physical properties of the elements to their position on the periodic table.</i>
	<ul style="list-style-type: none"> SC.CM.PS.02.03 <i>Describe chemical reactions in terms of reactants and products.</i>
	<ul style="list-style-type: none"> SC.CM.PS.02.04 <i>Describe the factors that affect the rate of chemical reactions.</i>
Force	<ul style="list-style-type: none"> SC.CM.PS.03 Describe and explain the effects of multiple forces acting on an object.
	<ul style="list-style-type: none"> SC.CM.PS.03.01 <i>Understand and apply the relationship $F=ma$ in situations in which one force acts on an object.</i>
	<ul style="list-style-type: none"> SC.CM.PS.03.02 <i>Recognize that equal and opposite forces occur when one object exerts a force on another.</i>
	<ul style="list-style-type: none"> SC.CM.PS.03.03 <i>Describe the forces acting on an object, based on the motion of that object.</i>
	<ul style="list-style-type: none"> SC.CM.PS.04.01 <i>Describe the relationship of mass and distance to gravitational force.</i>
Energy	<ul style="list-style-type: none"> SC.CM.PS.05 Describe differences and similarities between kinds of waves, including sound, seismic, and electromagnetic, as a means of transmitting energy.
	<ul style="list-style-type: none"> SC.CM.PS.05.01 <i>Recognize that waves of all kinds have energy that can be transferred when the waves interact with matter.</i>
	<ul style="list-style-type: none"> SC.CM.PS.05.02 <i>Apply the concepts of frequency, wavelength, amplitude, and energy to electromagnetic and mechanical waves.</i>
	<ul style="list-style-type: none"> SC.CM.PS.06 Describe and analyze examples of conservation of energy.
	<ul style="list-style-type: none"> SC.CM.PS.06.01 <i>Recognize that heat energy is a by-product of most energy transformations.</i>
	<ul style="list-style-type: none"> SC.CM.PS.06.02 <i>Describe ways in which energy can be transferred, including chemical reactions, nuclear reactions, and light waves.</i>
	<ul style="list-style-type: none"> SC.CM.PS.06.03 <i>Explain the difference between potential and kinetic energy.</i>
	<ul style="list-style-type: none"> SC.CM.PS.06.04 <i>Analyze the flow of energy through a system by applying the law of conservation of energy.</i>
Life Science	
Organisms	<ul style="list-style-type: none"> SC.CM.LS.01 Describe, explain, and compare the structure and functions of cells in organisms.
	<ul style="list-style-type: none"> SC.CM.LS.01.01 <i>Describe how biological systems can maintain equilibrium (homeostasis).</i>
	<ul style="list-style-type: none"> SC.CM.LS.01.02 <i>Identify unique structures in cells from plants, animals, and prokaryotes.</i>
	<ul style="list-style-type: none"> SC.CM.LS.01.03 <i>Identify cell organelles and state how their activities contribute to a particular type of cell carrying out its functions.</i>
	<ul style="list-style-type: none"> SC.CM.LS.01.04 <i>Explain the role of the cell membrane in cell transport.</i>
	<ul style="list-style-type: none"> SC.CM.LS.01.05 <i>Distinguish between active and passive transport, including diffusion and osmosis, explaining the mechanics of each.</i>
	<ul style="list-style-type: none"> SC.CM.LS.01.06 <i>Describe photosynthesis as a chemical process and part of the carbon cycle.</i>
	<ul style="list-style-type: none"> SC.CM.LS.01.07 <i>Explain how the development of tools and technology, including microscopes, has aided in the understanding of cells and microbes.</i>
Heredity	<ul style="list-style-type: none"> SC.CM.LS.02 Explain laws of heredity and their relationship to the structure and function of DNA.
	<ul style="list-style-type: none"> SC.CM.LS.02.01 <i>Describe the structure of DNA and the way that DNA functions to control protein synthesis.</i>
	<ul style="list-style-type: none"> SC.CM.LS.02.02 <i>Recognize and understand the differences between meiosis and mitosis in cellular reproduction.</i>
	<ul style="list-style-type: none"> SC.CM.LS.02.03 <i>Recognize that changes in DNA (mutations) and anomalies in chromosomes</i>

<i>create changes in organisms.</i>
<ul style="list-style-type: none"> • SC.CM.LS.02.04 <i>Apply concepts of inheritance of traits, including Mendel's laws, Punnett squares, and pedigrees, to determine the characteristics of offspring.</i>
<ul style="list-style-type: none"> • SC.CM.LS.02.05 <i>Recognize the existence of technology that can alter and/or determine inherited traits.</i>
Diversity/Interdependence
<ul style="list-style-type: none"> • SC.CM.LS.03 Describe and analyze the effect of species, including humans, on an ecosystem.
<ul style="list-style-type: none"> • SC.CM.LS.03.01 <i>Predict outcomes of changes in resources and energy flow in an ecosystem.</i>
<ul style="list-style-type: none"> • SC.CM.LS.03.02 <i>Explain how humans and other species can impact an ecosystem.</i>
<ul style="list-style-type: none"> • SC.CM.LS.03.03 <i>Explain how the balance of resources will change with the introduction or loss of a new species within an ecosystem.</i>
<ul style="list-style-type: none"> • SC.CM.LS.04 Analyze how living things have changed over geological time, using fossils and other scientific evidence.
<ul style="list-style-type: none"> • SC.CM.LS.04.01 <i>Recognize that, over time, natural selection may result in development of a new species or subspecies.</i>
<ul style="list-style-type: none"> • SC.CM.LS.04.02 <i>Recognize that natural selection and its evolutionary consequences provide an explanation for the fossil record as well as an explanation for the molecular similarities among varied species.</i>
<ul style="list-style-type: none"> • SC.CM.LS.04.03 <i>Explain how biological evolution can account for the diversity of species developed over time.</i>
<ul style="list-style-type: none"> • SC.CM.LS.04.04 <i>Explain the relationship between genetics, mutations, and biological evolution.</i>
<ul style="list-style-type: none"> • SC.CM.LS.04.05 <i>Explain how our understanding of evolution has changed over time.</i>
Earth and Space Science
The Dynamic Earth
<ul style="list-style-type: none"> • SC.CM.ES.01.ALL Describe how the importance and use of resources has changed over time with changes in economic and technological systems.
<ul style="list-style-type: none"> • SC.CM.ES.01.01 <i>Predict consequences of increased consumption of renewable and non-renewable resources.</i>
<ul style="list-style-type: none"> • SC.CM.ES.02.ALL Analyze the relationship between global energy transfer and climate.
<ul style="list-style-type: none"> • SC.CM.ES.02.01 <i>Describe the effect of various gases in the atmosphere on the amount of energy retained by the Earth system.</i>
<ul style="list-style-type: none"> • SC.CM.ES.02.02 <i>Describe how solar radiation and the amount that reaches Earth is affected by stratospheric ozone.</i>
<ul style="list-style-type: none"> • SC.CM.ES.02.03 <i>Describe how differential heating of the Earth's surface, atmosphere, and oceans produces wind and ocean currents.</i>
<ul style="list-style-type: none"> • SC.CM.ES.03.ALL Analyze evidence of ongoing evolution of the Earth system.
<ul style="list-style-type: none"> • SC.CM.ES.03.01 <i>Describe methods of determining ages of rocks and fossils.</i>
<ul style="list-style-type: none"> • SC.CM.ES.03.02 <i>Use rock sequences and fossil evidence to determine geologic history.</i>
<ul style="list-style-type: none"> • SC.CM.ES.03.03 <i>Describe and analyze theories of Earth's origin and early history using scientific evidence.</i>
<ul style="list-style-type: none"> • SC.CM.ES.03.04 <i>Describe how earthquakes, volcanic eruptions, mountain building, and continental movements result from slow plate motions.</i>
<ul style="list-style-type: none"> • SC.CM.ES.03.05 <i>Describe how the evolution of life caused dramatic changes in the composition of the Earth's atmosphere, which did not originally contain oxygen.</i>
<ul style="list-style-type: none"> • SC.CM.ES.03.06 <i>Identify how volcanic eruptions and impacts of huge rocks from space can cause widespread effects on climate.</i>
The Earth in Space
•
The Universe
•
Scientific Inquiry
Forming the question/Hypothesis
<ul style="list-style-type: none"> • SC.CM.SI.01 Based on observations and scientific concepts, ask questions or form hypotheses that

can be answered or tested through scientific investigations.

Designing the Investigation

- SC.CM.SI.02 Design a scientific investigation that provides sufficient data to answer a question or test a hypothesis.

Collecting and Presenting Data

- SC.CM.SI.03 Collect, organize, and display sufficient data to facilitate scientific analysis and interpretation.

Analyzing and Interpreting Results

- SC.CM.SI.04 Summarize and analyze data, evaluating sources of error or bias. Propose explanations that are supported by data and knowledge of scientific terminology.