

# 8<sup>th</sup> Grade Science Standards

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Benchmark#	Description	Assessed	Direct Link
SC.8.N.1.1	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.		<a href="#">Click Here</a>
SC.8.N.1.2	Design and conduct a study using repeated trials and replication.		<a href="#">Click Here</a>
SC.8.N.1.3	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.		<a href="#">Click Here</a>
SC.8.N.1.4	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.		<a href="#">Click Here</a>
SC.8.N.1.5	Analyze the methods used to develop a scientific explanation as seen in different fields of science.		<a href="#">Click Here</a>
SC.8.N.1.6	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.		<a href="#">Click Here</a>
SC.8.N.2.1	Distinguish between scientific and pseudoscientific ideas.		<a href="#">Click Here</a>
SC.8.N.2.2	Discuss what characterizes science and its methods.		<a href="#">Click Here</a>
SC.8.N.3.1	Select models useful in relating the results of their own investigations.		<a href="#">Click Here</a>
SC.8.N.3.2	Explain why theories may be modified but are rarely discarded.		<a href="#">Click Here</a>
SC.8.N.4.1	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.		<a href="#">Click Here</a>
SC.8.N.4.2	Explain how political, social, and economic concerns can affect science, and vice versa.		<a href="#">Click Here</a>
SC.6.P.11.1	Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.		<a href="#">Click Here</a>
SC.6.P.12.1	Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.		<a href="#">Click Here</a>
SC.6.P.13.1	Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.		<a href="#">Click Here</a>
SC.6.P.13.2	Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.		<a href="#">Click Here</a>
SC.6.P.13.3	Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.		<a href="#">Click Here</a>
SC.7.P.10.1	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.		<a href="#">Click Here</a>

SC.7.P.10.2	Observe and explain that light can be reflected, refracted, and/or absorbed.	<a href="#">Click Here</a>
SC.7.P.10.3	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.	<a href="#">Click Here</a>
SC.7.P.11.1	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.	<a href="#">Click Here</a>
SC.7.P.11.2	Investigate and describe the transformation of energy from one form to another.	<a href="#">Click Here</a>
SC.7.P.11.3	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.	<a href="#">Click Here</a>
SC.7.P.11.4	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.	<a href="#">Click Here</a>
SC.8.P.8.1	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.	<a href="#">Click Here</a>
SC.8.P.8.2	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.	<a href="#">Click Here</a>
SC.8.P.8.3	Explore and describe the densities of various materials through measurement of their masses and volumes.	<a href="#">Click Here</a>
SC.8.P.8.4	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.	<a href="#">Click Here</a>
SC.8.P.8.5	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.	<a href="#">Click Here</a>
SC.8.P.8.6	Recognize that elements are grouped in the periodic table according to similarities of their properties.	<a href="#">Click Here</a>
SC.8.P.8.7	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).	<a href="#">Click Here</a>
SC.8.P.8.8	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.	<a href="#">Click Here</a>
SC.8.P.8.9	Distinguish among mixtures (including solutions) and pure substances.	<a href="#">Click Here</a>
SC.8.P.9.1	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.	<a href="#">Click Here</a>
SC.8.P.9.2	Differentiate between physical changes and chemical changes.	<a href="#">Click Here</a>
SC.8.P.9.3	Investigate and describe how temperature influences chemical changes.	<a href="#">Click Here</a>