



Grade 5 Science Year At-A-Glance

Theme: Transforming Matter and Energy

Students connect energy and matter and apply their understanding to exploring how the Earth's surface changes.

<u>Quarter 1</u>	Unit 1: Energy (about 14 days)	Unit 2: Matter (about 18 days)	Unit 3: Motion (about 17 days)
<u>Quarter 2</u>	Unit 4: Energy and Earth's Processes (about 23 days)		Unit 5: Electricity (about 19 days)
<u>Quarter 3</u>	Unit 6: Sound (about 18 days)	Unit 7: Light (about 18 days)	Begin Unit 8: Energy and Matter as Resources (about 6 days)
<u>Quarter 4</u>	Complete Unit 8: Energy and Matter as Resources (about 11 days)	SOL Review and Post-SOL Reteaching (about 31 days)	Family Life Education (about 5 days)

Unit guides will be released prior to the start of each quarter.

Note: Science and Engineering Practices (SEPs), SOL 5.1a-f, should be embedded throughout the year rather than taught in isolation.

Quarter	Unit	Suggested Time	Standards of Learning
Quarter 1	<u>Unit 1: Energy</u>	about 14 days Assessment Window Week of 09/08/25	<p>5.2 The student will investigate and understand that energy can take many forms. Key ideas include</p> <ul style="list-style-type: none"> a) energy is the ability to do work or to cause change; b) there are many different forms of energy; c) energy can be transformed; and d) energy is conserved.
	<u>Unit 2: Matter</u>	about 18 days Assessment Window Week of 10/06/25	<p>5.7 The student will investigate and understand that matter has properties and interactions. Key ideas include</p> <ul style="list-style-type: none"> a) matter is composed of atoms; b) substances can be mixed together without changes in their physical properties; and c) energy has an effect on the phases of matter.
	<u>Unit 3: Motion</u>	about 17 days Assessment Window Week of 10/27/25	<p>5.3 The student will investigate and understand that there is a relationship between force and energy of moving objects. Key ideas include</p> <ul style="list-style-type: none"> a) moving objects have kinetic energy; b) motion is described by an object's direction and speed; c) changes in motion are related to net force and mass; d) when objects collide, the contact forces transfer energy and can change objects' motion; and e) friction is a force that opposes motion.

Quarter	Unit	Suggested Time	Standards of Learning
Quarter 2	<u>Unit 4: Energy and Earth's Processes</u>	about 23 days Assessment Window Week of 12/08/25	<p>5.8 The student will investigate and understand that Earth constantly changes. Key ideas include</p> <ul style="list-style-type: none"> a) Earth's internal energy causes movement of material within the Earth; b) plate tectonics describe movement of the crust; c) the rock cycle models the transformation of rocks; d) processes such as weathering, erosion, and deposition change the surface of the Earth; and e) fossils and geologic patterns provide evidence of Earth's change.
	<u>Unit 5: Electricity</u>	about 19 days Assessment Window Week of 01/19/26	<p>5.4 The student will investigate and understand that electricity is transmitted and used in daily life. Key ideas include</p> <ul style="list-style-type: none"> a) electricity flows easily through conductors but not insulators; b) electricity flows through closed circuits; c) static electricity can be generated by rubbing certain materials together; d) electrical energy can be transformed into radiant, mechanical, and thermal energy; and e) a current flowing through a wire creates a magnetic field.

Quarter	Unit	Suggested Time	Standards of Learning
Quarter 3	<u>Unit 6: Sound</u>	about 18 days Assessment Window Week of 02/16/26	<p>5.5 The student will investigate and understand that sound can be produced and transmitted. Key ideas include</p> <ul style="list-style-type: none"> a) sound is produced when an object or substance vibrates; b) sound is the transfer of energy; c) different media transmit sound differently; and d) sound waves have many uses and applications.
	<u>Unit 7: Light</u>	about 18 days Assessment Window Week of 03/16/26	<p>5.6 The student will investigate and understand that visible light has certain characteristics and behaves in predictable ways. Key ideas include</p> <ul style="list-style-type: none"> a) visible light is radiant energy that moves in transverse waves; b) the visible spectrum includes light with different wavelengths; c) matter influences the path of light; and d) radiant energy can be transformed into thermal, mechanical, and electrical energy.
	Begin <u>Unit 8: Energy and Matter as Resources</u>	about 6 days	<p>5.9 The student will investigate and understand that the conservation of energy resources is important. Key ideas include</p> <ul style="list-style-type: none"> a) some sources of energy are considered renewable and others are not; and b) individuals and communities have means of conserving both energy and matter; and c) advances in technology improve the ability to transfer and transform energy.

Quarter	Unit	Suggested Time	Standards of Learning
Quarter 4	<u>Complete Unit 8: Energy and Matter as Resources</u>	about 11 days Assessment Window Week of 04/20/26	<p>5.9 The student will investigate and understand that the conservation of energy resources is important. Key ideas include</p> <ul style="list-style-type: none"> a) some sources of energy are considered renewable and others are not; and b) individuals and communities have means of conserving both energy and matter; and c) advances in technology improve the ability to transfer and transform energy.
	<u>SOL Review and Post SOL Reteaching</u>	about 31 days	
	<u>Family Life Education</u>	about 5 days	