

**4th Grade
Energy Curriculum
Year at a Glance**

1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
<p>Big Idea: Intro to Electricity <i>Essential Question:</i> 1. How does energy have the ability to work or cause change?</p> <p>Big Idea: Energy <i>Essential Question:</i> 1. What is Energy? 2. What is the difference between potential and kinetic energy?</p>	<p>Big Idea: Sound Energy <i>Essential Question:</i> 1. Why is sound considered a form of energy? 2. How is energy produced from the vibration of an object?</p>	<p>Big Idea: Solar Energy <i>Essential Question:</i> 1. What are Florida's natural resources?</p>	<p>Big Idea: Energy Interdependence <i>Essential Question:</i> 1. How is the flow of the Sun's energy transferred along the food chain-from the producers to the consumers?</p>
<p>Key Vocabulary: Energy, Potential Energy, Circuit, Positive Charge, Negative Charge, Reaction, Electrons, Current, Electricity, Simple Circuit, Battery, Complete Circuit, Incomplete Circuit, Attraction, Power Stations, Turbines, Generators, Volt, Megawatt, Fuse, Static Electricity, Amperes (amps) / Energy, Kinetic energy, Potential energy, Electrical energy, Electromagnetic energy, Heat energy, Light energy, Mechanical energy, Solar energy, Sound energy, ramps, angles, measurement, investigate, construct, fastest, farthest, accuracy</p>	<p>Key Vocabulary: compression, waves, refraction, vibrations, substance, intensity sound energy, noise, decibels, frequency, amplitude, volume, pitch, transfer</p>	<p>Key Vocabulary: natural, resources, water, phosphate, coastline, tourist, population, economy, freshwater springs, agriculture, oil, limestone, silicon, wind, and solar energy</p>	<p>Key Vocabulary: producers, consumer, food chain, flow, energy, transfer, photosynthesis, cellular, symbiotic, chloroplasts</p>
Science: SC.4.P.10.1	Science: SC.4.P.10.3	Science: SC.4.E.6.6	Science: SC.4.L.17.3
Mathematics: MAFS.K12.MP.1	Mathematics: MAFS.4.NF.3.6	Mathematics: MAFS.4.NBT.2.5	Mathematics: MAFS.4.NBT.2.6
Mathematics: MAFS.4.NF.1.2	Language Arts: LAFS.4.L.3.4	Language Arts: LAFS.4.L.3.4	Language Arts: LAFS.4.L.3.4
Language Arts: LAFS.4.L.3.4		Language Arts: LAFS.4.RI.1.2	
<p>Big Idea: Potential and Kinetic Energy <i>Essential Question:</i> 1. Does kinetic energy cause motion and/or create change?</p>	<p>Big Idea: Hydropower and Wind Energy <i>Essential Question:</i> 1. How are moving water and air sources of energy? 2. How can water and air be used to make things move?</p>	<p>Big Idea: Renewable & Nonrenewable Energy <i>Essential Question:</i> 1. What are the differences between renewable or nonrenewable resources?</p>	<p>(Fuel and Transportation) Big Idea: Forms of Energy/Physical Science <i>Essential Question:</i> 1. What are the different forms of energy? 2. How does energy have the ability to work or cause change?</p>
<p>Key Vocabulary: energy, apply, heat, motion, force, net force, unbalanced, velocity, kinetic, potential, matter, friction, speed, increase, acceleration, deceleration, decrease, push and pull.</p>	<p>Key Vocabulary: wind energy, water energy, hydroelectric power, kinetic energy, sources, renewable, movement, wind turbines, atoms, molecules, reaction, Sir Isaac Newton, propelled, resistance, rotational energy</p>	<p>Key Vocabulary: renewable, nonrenewable, composition, structure, surface, energy, constructive, destructive, civilization, natural resources</p>	<p>Key Vocabulary: energy, work, kinetic energy, potential energy, chemical energy, electrical energy, electromagnetic energy, heat energy, light energy, mechanical energy, nuclear energy, solar energy, sound energy.</p>
Science: SC.4.P.10.2	Science: SC.4.P.10.4	Science: SC.4.E.6.3	Science: SC.5.P.10.1
Mathematics: MAFS.4.NBT.2.4	Mathematics: MAFS.4.NF.3.6	Mathematics: MAFS.4.NBT.2.6	Mathematics: MAFS.4.NF.3.5
Mathematics: MAFS.K12.MP.5.1	Language Arts: LAFS.4.L.3.4	Language Arts: LAFS.4.L.3.4	Mathematics: MAFS.4.NF.3.6
Language Arts: LAFS.4.L.3.4			Language Arts: LAFS.4.L.3.4