

**Youngstown City Schools
Grade 4 Science Pacing Guide
Grading Period 3**

Strand/ Content Statement	Duration	Clear Learning Targets	Curriculum Resources	Vocabulary/Concepts
<p style="text-align: center;">PHYSICAL SCIENCE</p> <p>Energy can be transformed from one form to another or can be transformed from one location to another. (4.PS.2)</p>	<p style="text-align: center;">Weeks 1-4</p>	<p>"I Can..."</p> <ul style="list-style-type: none"> -observe situations, conduct demonstrations and record data about the energy transfer from hot objects to cold objects as heat, resulting in a temperature change. -make predictions about the heat conductivity of different materials. 	<p><u>Curriculum Units:</u></p> <ul style="list-style-type: none"> • Exploring Heat Energy <p><u>Textbook Resources:</u> MacMillan 2010</p> <p><u>Discovery Education:</u> www.discoveryeducation.com</p> <ul style="list-style-type: none"> • Heat Transmission: Conduction, Convection, Radiation [2:35] • Basics of Physics: Exploring Heat - The following clips: Heat and Temperature [2:30] • Temperature Scales [3:27] • Measuring Heat [3:27] • Heat Transfer [2:18] • Warm to Cold: The Movement of Heat [1:47] <p><u>Ohio Department of Education - Science:</u> http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</p> <p>AIR Practice Site</p>	<p>Conductor Energy Heat Insulator Temperature Transformation</p>

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<p style="text-align: center;">PHYSICAL SCIENCE</p> <p style="text-align: center;">Energy can be transformed from one form to another or can be transferred from one location to another. (4.PS.2)</p>	<p style="text-align: center;">Weeks 5-9</p>	<p>"I Can..."</p> <ul style="list-style-type: none"> -demonstrate and explain that electric circuits require a complete loop of conducting materials through which electrical energy can be transferred. -demonstrate and explain how electrical energy in circuits can be transformed to other forms of energy, including light, heat, sound and motion. - demonstrate and explain that when a wire conducts electricity, the wire has magnetic properties and can push and/or pull magnets. 	<p><u>Resources:</u></p> <ul style="list-style-type: none"> • Open and Closed Circuits • Conductors vs. Insulators • How Electric Current Produces Energy <p><u>Textbook Resources:</u> MacMillan 2010</p> <p><u>Discovery Education:</u> www.discoveryeducation.com</p> <ul style="list-style-type: none"> • Electricity and Magnetism: Current Electricity(16:58) • Hot Line: All About Electricity (15:00) • A First Look: Electricity (20:00) <p><u>Websites/Simulations</u></p> <ul style="list-style-type: none"> • Resource for Electricity http://www.southerncompany.com/learningpower/images/h204kids.swf • Static Electricity- http://phet.colorado.edu/en/simulation/balloons http://phet.colorado.edu/en/simulation/travoltage • Circuits http://phet.colorado.edu/en/simulation/circuit-construction-kit-ac-virtual-lab http://www.bbc.co.uk/schools/podsmmission/electricity • Circuits, Conductors and Insulators http://www.bbc.co.uk/schools/scienceclips/ages/8_9/circuits_conductors.shtml • Lemon Battery http://www.bbc.co.uk/schools/podsmmission/electricity/pod.shtml • Electromagnet http://phet.colorado.edu/en/simulation/magnets-and-electromagnets • Magnets and Electromagnets http://www.fossweb.com/modules3-6/MagnetismandElectricity/index.html <p><u>Ohio Department of Education - Science:</u> http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</p> <p><u>AIR Practice Site</u></p>	<p>Electricity</p> <p>Electrical Conductivity</p> <p>Electrical Conductor</p> <p>Electrical Insulator</p> <p>Electrical Circuit</p> <p>Electrical Energy</p> <p>Energy Transfer</p> <p>Flow</p> <p>Forms of Energy (Light, heat, sound and motion)</p> <p>Magnetism</p>
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