

Grade Level/Course: 4 th Grade		Concepts: Energy Study in the Classroom	
Area of Emphasis/Topic/Theme/Unit: Using the standard curriculum, students will learn about energy, its forms and conservation of energy.		Suggested Teaching Time Frame: Winter	
Concept(s)/Generalization(s)/Essential Question(s): Electricity; Rocks and Minerals; Vertebrate/Invertebrate Study; Technology Integration; Scientific Process			
What?	How will you know?	How will you get there?	
Standards/Benchmarks	Assessment of Standards Assessed	Learning Strategies/Activities	Resources
<p><i>Energy Trip Ticket:</i> 4.D2.3, EE A1, EE C3</p> <p><i>Energy Dominoes:</i> 4.D1.1, 4.D2.3, EE A1, EE A2</p> <p><i>What Do You Eat:</i> D.42.1, EE A1</p> <p><i>Digging for Coal:</i> 4.E1.3, 4.E1.10, EE A1, EE A2, EE A4</p> <p><i>A Home Energy Audit:</i> 4.C1.1, 4.D2.3, EE A1, EE B1, EE B2</p>	<p><i>Energy Trip Ticket:</i> Conserve energy tickets during the activity</p> <p><i>Energy Dominoes:</i> Vocabulary and idea activity</p> <p><i>What Do You Eat:</i> Food chain and food web creation and understand differences between</p> <p><i>Digging for Coal:</i> Compare before and after “cookie” when mining for coal</p> <p><i>A Home Energy Audit:</i> Completion of energy audit data sheets</p>	<p><i>Energy Trip Ticket:</i> Identify ways to conserve energy/build awareness</p> <p><i>Energy Dominoes:</i> Correct usage of new vocabulary and ideas taught</p> <p><i>What Do You Eat:</i> Chain gang puzzle and food web creation</p> <p><i>Digging for Coal:</i> Coal mining cooking activity</p> <p><i>A Home Energy Audit:</i> At home energy audit activity</p>	<p><i>Energy Trip Ticket:</i> Teach with Energy, 1992</p> <p><i>Energy Dominoes:</i> Alliance to Save Energy, Green School</p> <p><i>What Do You Eat:</i> Energy Conservation from New York</p> <p><i>Digging for Coal:</i> KEEP Guide Book For Teachers</p> <p><i>A Home Energy Audit:</i> Energy Conservation from New York</p>
Area of Emphasis: Energy Usage and Conservation		Big Idea #: Energy	

Grade Level/Course: 5 th Grade		Concepts: Energy Study in the Classroom	
Area of Emphasis/Topic/Theme/Unit: Using the standard curriculum, students will learn about energy, its forms and conservation of energy.		Suggested Teaching Time Frame: Winter	
Concept(s)/Generalization(s)/Essential Question(s): Solar Energy; Renewable/Non-renewable Energy; Weather; Heat Energy; Energy Concepts Technology Integration; Scientific Process			
What?	How will you know?	How will you get there?	
Standards/Benchmarks	Assessment of Standards Assessed	Learning Strategies/Activities	Resources
<p><i>The Invisible Force:</i> 5.D2.3, 5.D2.7, 5.D3.1, EE A1, EE B5, EE B6</p> <p><i>Exploring Heat:</i> 5.D2.3, 5.D2.6, EE A1, EE A2</p> <p><i>Waterwheels, Windmills:</i> 5.D2.1, 5.E1.1, EE A2, EE B5, EE C2</p> <p><i>Insulation:</i> 5.D2.3, 5.D2.6, EE A1, EE B1, EE B2</p> <p><i>Home Energy Use:</i> 5.D2.3, EE A1, EE B1, EE B2</p>	<p><i>The Invisible Force:</i> Identify differences between several forms of energy</p> <p><i>Exploring Heat:</i> Understand how heat is transferred between two materials</p> <p><i>Waterwheels, Windmills:</i> Demonstrate how wind and water can move turbines to create electricity</p> <p><i>Insulation:</i> Create an insulated container</p> <p><i>Home Energy Use:</i> Read, understand and interpret home electric/water meters</p>	<p><i>The Invisible Force:</i> Objects with energy activity sheet</p> <p><i>Exploring Heat:</i> Completion of laboratory activity</p> <p><i>Waterwheels, Windmills:</i> Create simple turbine and complete lab activity</p> <p><i>Insulation:</i> Lab activity using materials to create an insulator</p> <p><i>Home Energy Use:</i> Home electric/water meter usage activity guide</p>	<p><i>The Invisible Force:</i> Alliance to Save Energy, Green School</p> <p><i>Exploring Heat:</i> KEEP Guide Book for Teachers</p> <p><i>Waterwheels, Windmills:</i> KEEP Guide Book for Teachers</p> <p><i>Insulation:</i> Energy Conservation from New York</p> <p><i>Home Energy Use:</i> Energy Conservation from New York</p>
Area of Emphasis: Energy Usage and Conservation		Big Idea #: Energy	