**Unit 5**

**Physical Science: Energy**

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| Standard 7.P.1 | Academic Vocabulary |
| 7.P.2.1  Explain how kinetic and potential energy contribute to the mechanical energy of an object.  7.P.2.2  Explain how energy can be transformed from one form to another (specifically potential energy and kinetic energy) using a model or diagram of a moving object (roller coaster, pendulum, or cars on ramps as examples).  7.P.2.3  Recognize that energy can be transferred from one system to another when two objects push or pull on each other over a distance (work) and electrical circuits require a complete loop through which an electrical current can pass.  7.P.2.4  Explain how simple machines such as inclined planes, pulleys, levers and wheel and axles are used to create mechanical advantage and increase efficiency.  -Potential/Kinetic Energy  -Model Energy Transformations  -Transformations/Conversions  -Work and Machines | Potential Energy  Kinetic Energy  Mechanical Energy  Energy Transformation  Diagram of Moving object (Roller coaster, car on a ramp)  Work  Electrical circuits  Electrical current  Simple Machines  Inclined plane  Pulley  Lever  Wheel and Axle  Mechanical Advantage  Mechanical Efficiency  Compound Machines (Scissors and Bicycle)    Energy Transformation   1. Thermally 2. Mechanically 3. Electrically 4. Electromagnetic waves |