**JMS Lesson Plan**

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| **Teacher:** | Shelly Vincent | | **Subject:** | | Science | |
| **Date:** | **Beginning:** 12/11/2017**Ending:**  12/21/2017 | | **Grades:** | | 8th | |
| **Learning**  **Targets:** | I can obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transform from one form to another within the system. | | **Connects with:** | | **ELA – Short Constructed Response CSET** | |
| **Standard(s):** | S8P2 a. Analyze and interpret data to create graphical displays that illustrate the relationships of  kinetic energy to mass and speed, and potential energy to mass and height of an object.  S8P2b. Plan and carry out an investigation to explain the transformation between kinetic and  potential energy within a system (e.g., roller coasters, pendulums, rubber bands, etc.).  S8P2c. Construct an argument to support a claim about the type of energy transformations within a  system [e.g., lighting a match (light to heat), turning on a light (electrical to light)].  S8P2d. Plan and carry out investigations on the effects of heat transfer on molecular motion as it  relates to the collision of atoms (conduction), through space (radiation), or in currents in a  liquid or a gas (convection). | | | | | |
| **DOK Level** | **Activities / Assignments / Questions** | | | **Assessment** | | |
| **­­**  **Key Terms** | Energy, kinetic energy, potential energy, law of conservation of energy, solar cell, temperature, degree, thermometer, heat, thermal energy, calorie, joule, specific heat, conduction, conductor, insulator, convection, radiation, kinetic theory of matter | | | Formative | | Selected Response  Constructed Response  Verbal  Rubric  Other |
|  |  | | |  | |  |
| **2** | Bell Ringer – warm ups (GoFar)  USA Test Prep – quiz and anchor activities  Whole Group – Energy Transformation  Lab Stations (investigate, explore, research)  Reinforcement worksheets | | | Formative  Summative | | Selected Response -  Constructed Response –  Verbal  Rubric  Other |
| **3** | Lab Stations (assess, illustrate, write)  Lab – Cinnamon Toast worksheet  USA Test Prep – Benchmark and anchor activities  Go Far activities  USA Test Prep – post test | | | Formative  Summative | | Selected Response  Constructed Response –  Verbal  Rubric- 2 point SCR  Other – Lab sheet  Other – |
| **4** | | CSET - student constructs an argument to support a claim about the type of energy transformation within a system (lighting a match, turning on a switch, etc.) | | Formative  Summative | | Selected Response  Constructed Response -  Verbal  Rubric – 2 point  Other –  Other – |
| **Resources:** | Textbook – Physical Science (McDougal Littell)  CSET  USA Test Prep  Go Far questions | | | | | |

**Monday-** Snow/Teacher Workday

**Tuesday-** Energy Transformation Lab Stations (investigate, research, explore)

**Wednesday** – Energy Transformation Lab Stations (assess, illustrate, write)

**Thursday** – Winter Benchmark

Anchor activities – USA Test Prep

**Friday** – Quiz S8P2 a,b,c,d (USA Test Prep)

CSET – energy transformations within a system

**Monday –** Review Standard S8P2a,b,c,d

**Tuesday –** Unit Test S8P2

**Wednesday –** Lab: Cinnamon Toast (Conduction, Convection & Radiation)

Reinforcement Worksheets – Energy Transformation and Forms of Energy

**Thursday –** USA Test Prep (pretest S8P3) and Newton Laws of Motion (https://youtu.be/JGO\_zDWmkvk)

**Friday –** Holiday Break Begins