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| M. Angileri  10-16-17 | **6th grade science** | | **Lesson Plans: Structures of Matter #4** | | | | |
| NGSS Standard | **MS-PS3-1.**  [**PS3.A:**](http://www.nap.edu/openbook.php?record_id=13165&page=120)  S & E  CCC | | **Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.**  Definitions of Energy: [Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed.](http://www.nap.edu/openbook.php?record_id=13165&page=120)  [Construct and interpret graphical displays of data to identify linear and nonlinear relationships.](http://www.nap.edu/openbook.php?record_id=13165&page=61) [Scale, Proportion, and Quantity](http://www.nap.edu/openbook.php?record_id=13165&page=89) [Proportional relationships (e.g. speed as the ratio of distance traveled to time taken) among different types of quantities provide information about the magnitude of properties and processes.](http://www.nap.edu/openbook.php?record_id=13165&page=89) | | | | |
| Vocabulary: | | **Energy:** The ability to work or cause change.  **Kinetic Energy:** The energy an object has due to its motion.  **Mechanical Energy:** Kinetic or potential energy associated with the motion or position of an object.  **Thermal Energy:** The total energy of the particles in a substance or material.  **Chemical Energy:** The potential energy stored in chemical bonds.  **Electrical; Energy:** The energy of moving electric charges.  **Electromagnetic Energy:** The energy of light and other forms of radiation.  **Nuclear Energy:** The potential energy stored in the nucleus of an atom. | | | | | |
|  | | **MONDAY** | | **TUESDAY** | **WEDNESDAY Substitute** | **THURSDAY** | **FRIDAY** |
| Content Objective: | | SW demonstrate evaluation of their performance during first quarter by reflecting on their effort/outcomes. | | SW demonstrate knowledge of Kinetic energy by recounting past experiences to build connections. | SW demonstrate comprehension of the Nature of Energy by paraphrasing the text using a guided reading. | SW demonstrate application of kinetic energy by carrying out an investigation. | SW demonstrate application of kinetic energy by carrying out an investigation. |
| Language objective | | SW write to reflect on their performance during first quarter using sentence starters. | | SW write and orally share to give examples of kinetic energy and demonstrate it in an activity. | SW write to retell information from the Nature of Energy using sentence frames. | SW write to collect and interpret data about the influences in kinetic energy using the lab journal. | SW write to collect and interpret data about the influences in kinetic energy using the lab journal. |
| **Essential Question:** | | **Why are atomic models necessary?** | | **How does speed impact energy?** | **How does speed impact energy?** | **How does speed impact energy?** | **How does speed impact energy?** |
| In class today | | Review T-3 Writing Molecules  Folder organization:  Assessments, writing, NWEA  Vocabulary, Test Corrections, Writing  Student log in to grades  Writing Self-Assessment | | Journal Quick Write 5-10 Minutes “ What do you know about Kinetic Energy?”  APK: Assessing Prior Knowledge Activity and discussion  Hook Activity: Dominoes and Kinetic Energy | Read the Nature of Energy p. 140-145 together. Lead students through the Guided reading assignment together. | Day 1  Do Activity 1: Speed and Motion  Pre-activity discussion and data collection | Day 2  Do Activity 1: Speed and Motion  Evaluate data and post activity questions |
| Learning Target | | I can reflect on my performance in science class to set goals for learning. | | I can share what I know about kinetic energy with members of my group. | I can use the assigned text to answer questions in the guided reading activity. | I can collect and analyze data to look at factors that influence kinetic energy | I can collect and analyze data to look at factors that influence kinetic energy |