**Curriculum Map/Pacing Guide**

School: Hazard Middle School Grade Level: 5th

Subject: Science

| **KY Standard** | **Content/Topic** | **Skill/Time Period** | **Assessment** |
| --- | --- | --- | --- |
| **ETS1.A: Defining and Delimiting Engineering Problems**  **3-5-ETS1-1**  **ETS1.B: Developing Possible Solutions**  **3-5-ETS1-2**  **3-5-ETS1-3**  **ETS1.C: Optimizing the Design Solution**  **3-5-ETS1-3** | **Science Skills/Engineering Design**  -Introduction to Science  ---skills, inquiry  -Science safety  -Scientific Method    \*These skills will be practiced/embedded throughout all units | **1st Nine Weeks**  -define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time or cost.  -generate & compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem  -plan & carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved | **Formative:**  -stem activities  -problem solving lab activity  -scientific method investigation  -scientific method foldable  **Summative:**  -Unit test/quizzes |
| **PS1.A: Structure and Properties of Matter**  **5-PS 1-1**  **5-PS 1-2**  **5-PS 1-3**  **PS1.B: Chemical Reactions**  **5-PS 1-4** | **Physical Science**   * Structure & Properties of Matter * Chemical Reactions * Energy | -Develop a model to describe that matter is made up of particles too small to be seen  -measure and graph quantities to provide evidence of the type of change that occurs when heating, cooling or mixing substances, the total weight of matter is conserved  -make observations and measurements to identify materials based on their properties  -conduct an investigation to determine whether the mixing of 2 or more substances results in new substances. | **Formative:**  -Atomic structure models  -Graphic organizer-properties of matter  -Physical & Chemical changes lab  -Ice cream lab-measuring temperature (TI-Nspire)  **Summative:**  -Unit test/quizzes |
| **PS 3.D: Energy in Chemical Processes and Everyday Life**  **5-PS3-1**  **LS 1.C: Organization for Matter and Energy Flow in Organisms**  **5-PS3-1**  **5-LS 1-1**  **LS 2.A: Interdependent Relationships in Ecosystems**  **5-LS 2-1**  **LS 2.B: Cycles of Matter and Energy Transfer in Ecosystems**  **5-LS 2-1** | **Life Science: Matter & Energy in Organisms & Ecosystems**   * Energy in Chemical Processes & Everyday Life * Organization for Matter & Energy FLow in Organisms * Interdependent Relationships in Ecosystems * Cycles of Matter & Energy Transfer in Ecosystems | **2nd 9 Weeks**  -Use models to describe that energy in animals’ food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the Sun.  -explain photosynthesis  -support an argument that plants get the materials they need for growth chiefly from air and water.  -develop a model to describe the movement of matter among plants, animals, decomposers and the environment. | **Formative:**  -diagrams  -flowcharts  -Use evidence to support arguments-writing prompt  -KNOW atom lab activity  **Summative:**  -Unit test/quizzes |
| **ESS2.A: Earth Materials and Systems**  **5-ESS2-1**  **ESS2.C: The Roles of Water in Earth’s Surface Processes**  **5-ESS2-2**  **ESS3.C: Human Impacts on Earth Systems**  **5-ESS3-1** | **Earth Science: Earth’s Systems**   * Earth Materials & Systems * The Roles of Water in Earth’s Surface Processes * Human Impacts on Earth Systems | **3rd Nine Weeks**  -develop a model using an example to describe ways the geosphere, biosphere, hydrosphere & atmosphere interact  -describe and graph the amounts & percentages of water & fresh water in various reservoirs to provide evidence about the distribution of water on Earth.  -obtain & combine information about ways individual communities use science ideas to protect Earth’s resources and environment. | **Formative:**  -Earth systems foldable  -water cycle models  -human impacts writing assignment  **Summative:**  Unit test/quizzes |
| **PS2.B: Types of Interactions**  **5-PS2-1**  **ESS1.A: The Universe & its Stars**  **5-ESS1-1**  **ESS1.B: Earth and the Solar System**  **5-ESS1-2** | **Space Systems: Stars & the Solar System**   * Types of Interactions * The Universe & its Stars * Earth & the Solar System | **4th Nine Weeks**  -support an argument that the gravitational force exerted by Earth on objects is directed down.  -support an argument that differences in the apparent brightness of the sun compared to other stars is due to relative distances from Earth  -represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. | **Formative:**  -gravitational force online activity  -Sun models  -star patterns activity  -moon phases diagram  -solar system model activity  **Summative:**  -Unit test/quizzes |