**Curriculum Map/Pacing Guide**

School: Hazard Middle School Grade Level: 6th Grade

Subject: Science

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| **Ky Standard** | **Content/Topic** | **Skill/Time Period** | **Assessment** |
| **MS. Engineering Design Standards will be embedded throughout all units.**  MS-ETS-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4, ETS1.A, ETS1.8, ETS1.C | **Science Skills**  -scientific method  - Experiments  - Skills  - Measurements  - Variables  - Questioning  -Labs  - Tools  -Calculators (finding density, mass and volume)  - STEM  -Flocabulary  -Brain Pop | **Time: 8 weeks+**  -Being able apply the steps of the scientific method.  - Difference between qualitative and quantitative data.  - Identifying and applying observation, classifying, and inferring skills.  - Identifying variables in an experiment.  - Being able to write a hypothesis of a testable question and then writing and following procedures of an experiment.  - Being able to use tools (ruler, scale, graduated cylinder, beaker, thermometer, dropper, microscopes and calculators.  - Being able to use the metric system, the units for mass, volume, and length and how to use the specific tools correctly to find those measurements.  - Using correct formulas to find density, mass and volume.  - Being able to work in groups to plan, construct, and test models. | **Formative Assessments:**   * Scientific Method Foldable * Scientific Method question sheet * Scientific Method Quiz * Hypothesis foldable * Testable question foldable * Variable worksheet/notes * Variable Quiz * Science Skills Notes * Outdoor quantitative and qualitative data activity * Measurement Foldable * Tools Foldable * Science Process Review Sheet * Flocabulary (scientific tools, scientific method, density) * Brain Pop (Scientific method, science tools, mass/volume/density, metric system) * Mass/Volume/Density Quiz * Science Tools Quiz * Metric Ruler measurement lab * Measuring mass lab * Penny Raft Challenge * Marshmallow Challenge * Measurement Volume Lab * Microscope Lab   **Summative Assessments**   * Scientific Method Test * Science Skills including being able to show how to use the tools * Study Island Diagnostic Test |
| **(Structure & Properties of Matter)**  06- PS1-1  06-PS1-3  06-PS1-4  PS1.A  PS1.B  PS3.A  **(Forces & Interactions)**  06-PS2-1  06-PS2-2  PS2.A | **Physical Science**  -Matter-Structure  -Physical & Chemical Properties/Reactions  -Energy  -Forces & Motion | **Unit 1: Matter-Structure and Properties**  **Time: 1st 9 Weeks**  -Being able to identify the states of matter, their structure and purpose.  - To identify the physical and chemical properties and changes of matter.  **Unit 2: Forces and Energy**  - Recognize the different forms of energy and how energy can transform from one form to another.  - Identify the relationship between force and energy transfers in an energy system.  -Describe how the kinetic energy of a moving object I related to its mass.  **Unit 3: Atoms and Molecules**  -Develop models to describe the atomic composition of simple molecules and extended structures. | **Formative Assessments**  **Unit 1: Matter-Structure and Properties**   * Matter structure, properties foldable * Physical & chemical changes foldable * Flocabulary (Matter, Physical/Chemical properties, reactions) * Lemon lab/Reactions & Density Combined * Properties of Matter worksheet * Physical/Chemical Worksheet * Matter Exit Slip * Matter quiz   **Summative Assessments**   * Matter-Structure Test   **Unit 2: Forces and Energy**  **Formative Assessments**   * Types of energy foldable * Newtons laws graphic organizer * Force vocabulary Foldable * Potential/Kinetic Energy ball drop lab * Energy Exit Slip * Types of energy Quiz * Newtons Laws quiz * Newtons 3rd law balloon lab * Flocabulary (Energy and Motion) * Study Island (Motion)   **Summative Assessments**   * Force and Energy Test   **Unit 3: Formative Assessments**   * Atom foldable * Flocabulary atom-periodic table * Atom quiz * Atom model sheet * Element foldable * Element lab * Periodic table quiz * Molecule Foldable * Building a molecule * Molecule quiz   **Summative Assessments**   * **Atom/Element Test** |
| **(Matter & Energy in Organisms & Ecosystems)**  06-LS2-1  06-LS2-3  06-LS1  06-LS1-4  LS2.A  LS2.B  **(Interdependent Relationships in Ecosystems)**  06-LS2-2  LS2.A | **Life Science**  -Biodiversity  -Ecosystems  -Food Webs  -Interactions between organisms with living/non-living environments  -Matter & energy transfer in ecosystems  -Cells to Systems | **Time: 2nd 9 weeks**  **Unit 4: Biodiversity**  -Identify similarities and differences among different kinds of organisms based on the structure of their cells.  - Compare sexual and asexual reproduction.  - Understand how life has evolved over time.  **Unit 5: Matter & Energy transfer in ecosystems**  -Recognize how matter and energy transfer through living organism and the environment.  -Interactions between organisms with living/non-living environments.  **Unit 7: Cells to systems**  -Recognized that the body is a group of interacting systems composed of groups of specialized cells.  -Identify the cellular hierarchy in multicellular organisms, including major organ systems and their functions. | **Unit 5: Formative Assessments**  **Unit 6: Formative Assessments**  -abiotic/biotic factors foldable  -parts of an ecosystem foldable  -food chain/ food web foldable  -outside abiotic/biotic activity  -food chain/food web activity  -energy flow through ecosystem foldable with video  - Stations  -Flocabulary “Food Chains, Ecosystem, Photosynthesis, and Adaptations”  -Study Island “Matter and Energy transfer in Ecosystem”  -Ecosystem Quiz  **Summative Assessments:**   * Biome ResearchProject * Test   **Unit 7: Formative Assessments:**   * Prokaryote/Eukaryote Foldable/Video “Ameba Sisters” |
| **(Earth’s Systems**)  06-ESS2-1  06-ESS2-4  ESSS.A  ESS2.C  (**History of Earth)**  06-ESS2.2  06-ESS2.3  ESS2.A  ESS2.B  ESS2.C  **(Weather & Climate**)  06-ESS2-8  06-ESS2-6  ESS2.C  ESS2.D | **Earth Science**  -Earth Materials & systems  -Plate Tectonics  -Earth’s Water systems/surface processes  -Earth geological history  -Weather & Climate | **Time: 3rd 9weeks**  **Unit 8: Climate and Human Activity**  Model how water cycles around the planet, powered by the sun’s energy and the force of gravity.  **Unit 9: Earth’s Materials & Plate Tectonics**  -Model how Earth’s landforms can be created and then broken down by weathering and erosion.  -Relate the internal convection of Earth’s mantle to the movement of the tectonic plates.  -Use evidence to support an explanation of past changes on Earth, using rock formations and fossils as the basis for evidence. | **Unit 8:**  **Formative Assessments**   * Climate Change, Human Activity on Climate, Water Cycle Flocabulary * Earth’s systemsfoldable * Earth’s spheres web quest * Outside Activity * Water Cycle Activity/Notes * Climate Change Notes * Global Effects Notes * Climate Change Web quest * Quiz * -Study Island   **Summative Assessments:**  Test  Project “Design a Green Island”  **Unit 9: Formative Assessments**:   * Rock Cycle Notes/Web quest * Rock Processes Notes * Weathering and erosion activity * Earth’s internal structure notes/activity * Plate Boundary Puzzle Piece activity/foldable * Plate Tectonics Notes/activity * Pangea/Fossils Activity * Flocabulary Online lessons * Study Islands Online lessons   **Summative:**  -Test |
| **(Space Systems)**  06-ESS1-1  06-ESS1-2  06-ESS1-3  ESS1.A  ESS1.B | **Space Science**  -Universe System  -Stars  -Planets  -Patterns | **Time: 4th 9 weeks**  **Unit 10: Satellites**  -Model the Earth-sun-moon system to explain the role of gravity in motions within solar system and resulting patterns seen on Earth.  -Describe how waves carry energy and can be used to send information. | **Formative Assessments**  Pre-Assessment  Earth sun moon foldable  Eclipse Notes  Flocabulary (moon phases, solar system, planets, eclipse)  Moon Phases foldable/notes  Quizzes  TI-Inspired Calculator (It’s Just a Lunar Phase)  Planet Notes in NB  Solar system escape room (group work)  Moon Phases escape room (group work)  Gravity/Waves Notes  Waves Activity  **Summative Assessment**  Test  Planet Poster/Model Project |