**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
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| **(Structure & Properties of Matter)**06- PS1-106-PS1-306-PS1-4PS1.APS1.BPS3.A**(Forces & Interactions)**06-PS2-106-PS2-2PS2.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**
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| **(Matter & Energy in Organisms & Ecosystems)**06-LS2-106-LS2-306-LS106-LS1-4LS2.ALS2.B**(Interdependent Relationships in Ecosystems)**06-LS2-2LS2.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”
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| **(Earth’s Systems**)06-ESS2-106-ESS2-4 ESSS.A ESS2.C(**History of Earth)**06-ESS2.206-ESS2.3 ESS2.A ESS2.B ESS2.C**(Weather & Climate**)06-ESS2-806-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:**TestProject “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-ESS1-106-ESS1-206-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-AssessmentEarth sun moon foldableEclipse NotesFlocabulary (moon phases, solar system, planets, eclipse)Moon Phases foldable/notesQuizzesTI-Inspired Calculator (It’s Just a Lunar Phase)Planet Notes in NBSolar system escape room (group work)Moon Phases escape room (group work)Gravity/Waves NotesWaves Activity**Summative Assessment**TestPlanet Poster/Model Project |