Curriculum Map

6th Grade Science

| Time: when topic will be taught and how long will be spent on topic | Standard: Indiana Academic Standard being Taught | Topic: Content being taught and Materials used |
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| **August** |  | **Methods of Science**   * iLearn BOY Science Resource * Methods of Science (NOS in book) |
| **September**  Chapter One (1 weeks)  Chapter Two (3 weeks) |  | **Chapter One** - Speed, Acceleration, and Velocity   * Describing Motion (Lesson One) * Speed and Velocity (Lesson Two) * Distance/Time Graphs   **Chapter Two** - Energy and Energy Transformations   * Forms of Energy (Lesson One) * Energy Transformations (Lesson Two) |
| **October** | **MS-PS4-1**. Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave  **MS-PS4-2.** Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. | **Chapter Three** - Waves   * Introduction to Waves (Bill Nye Video) * What Are Waves? (Lesson One) * Wave Properties (Lesson Two) * Wave Interactions (Lesson Three) |
| **November** | **MS-PS4-1**. Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave  **MS-PS4-2.** Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.  **MS-PS4-3**. Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals. [Clarification Statement: Emphasis is on a basic understanding that waves can be used for communication purposes. Examples could include using fiber optic cable to transmit light pulses, radio wave pulses in Wi-Fi devices, and conversion of stored binary patterns to make sound or text on a computer screen.] | **Chapter Four** - Sound and Light   * Sound (Lesson One) * Light (Lesson Two) * Mirrors, Lenses, and the Eye (Lesson Three) |
| **December** | **MS-ESS1-1**. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.  **MS-ESS1-2**. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. | **Chapter Five - Exploring Space**   * Observing the Universe (Lesson One)   + Electromagnetic Spectrum   + Types of satellites   **Chapter Six** - The Earth-Sun-Moon System   * Earth’s Motion (Lesson One) * Earth’s Moon (Lesson Two) * Eclipses and Tides (Lesson Three)   + Lunar Phases |
| **January** | **MS-ESS1-2**. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.  **MS-ESS1-3**. Analyze and interpret data to determine scale properties of objects in the solar system. | **Chapter Seven -** The Solar System   * The Structure of the Solar System (Lesson One) * The Inner Planets (Lesson Two) * The Outer Planets (Lesson Three) * Dwarf Planets and Other Objects (Lesson Four) |
| **February** | **MS-LS1-6.** Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.  **MS-LS2-1.** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.  **MS-LS2-3**. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. | **Chapter Eight -** Matter and Energy in the Environment   * Abiotic Factors (Lesson One) * Cycles of Matter (Lesson Two) * Energy in Ecosystems (Lesson Three) |
| **March** | **MS-LS2-1.** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.  **MS-LS2-2**. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems  **MS-LS2-4.** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.  **MS-LS2-5.** Evaluate competing design solutions for maintaining biodiversity and ecosystem services. | **Chapter Nine -** Populations and Communities   * Populations (Lesson One) * Changing Populations (Lesson Two) * Communities (Lesson Three) |
| **April** |  | **Chapter Ten** - Biomes and Communities   * Land Biomes (Lesson One) * Aquatic Ecosystems (Lesson Two) * How Ecosystems Change (Lesson Three) |
| **May** |  | Testing Review |