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)
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| **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)
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| **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)
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| **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)
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| **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
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| **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)
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| **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)
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| **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)
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| **April**  |  | **Chapter Ten** - Biomes and Communities* Land Biomes (Lesson One)
* Aquatic Ecosystems (Lesson Two)
* How Ecosystems Change (Lesson Three)
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| **May** |  | Testing Review |