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| **GRADE LEVEL:** | | **Sixth Grade** | | |  |  |  |  |  |  |  | | | |  | |
| **COURSE / SUBJECT:** | | **Science** | | |  |  |  |  |  |  |  | | | |  | |
| **UNIT OF STUDY : Unit 4: Earth Science** | | | | | | |  |  |  |  |  | | | |  | |
| **THEME / ESSENTIAL QUESTION(S):** | | | | |  |  |  |  |  |  |  | | | |  | |
| * **What are the different properties of Earth’s layers?** * **How is the Earth built up and torn down?** * **What are Plate Tectonics?** * **How does the atmosphere impact the Earth?** | | |  |  |  |  |  |  |  |  |  | | | |  | |
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| **STANDARDS** | | | | | **ENDURING UNDERSTANDINGS *What are the long term, big-ideas of content that I want students to understand?*** | | | **KNOWLEDGE / SKILLS *What do I want Students to Know & Be Able to Do?*** | | | | | | | **PACING Lesson # # of Days** | |
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| **ESS1.A - The Universe and its stars**  **ESS1.B - Earth and the Solar System**  **ESS1.C - The History of planet Earth**  **ESS2.A - Earth materials and systems**  **ESS2.B - Plate tectonics and large-scale system interactions**  **ESS2.C - The roles of water in the Earth’s surface processes**  **ESS2.D - Weather and CLimate**  **ESS3.A - Natural Resources**  **ESS3.B - Natural Hazards**  **ESS3.C - Human Impacts on Earth Systems**  **Standard: 1.** Recognize, interpret, and be able to create models of the earth’s common physical features in various mapping  representations, including contour maps.  **Standard: 2.** Describe the layers of the earth, including the lithosphere, the hot convecting mantle, and the dense metallic core.  **Standard: 3.** Differentiate among radiation, conduction, and convection, the three mechanisms by which heat is transferred through the earth’s system.  **Standard: 4.** Explain the relationship among the energy provided by the sun, the global patterns of atmospheric movement, and the  temperature differences among water, land, and atmosphere.  **Standard: 5.** Describe how the movement of the earth’s crustal plates causes both slow changes in the earth’s surface (e.g., formation of mountains and ocean basins) and rapid ones (e.g., volcanic eruptions and earthquakes).  **Standard: 6.** Describe and give examples of ways in which the earth’s surface is built up and torn down by natural processes,  including deposition of sediments, rock formation, erosion, and weathering. | | | | | * **Earth’s layers have different properties.** * **The Earth is built up and torn down by the processes of weathering, erosion, rock formation and deposition of sediments.** * **The theory that the lithosphere is divided into plates that are always moving is called Plate Tectonics.** * **Earth’s atmosphere is a blanket of gases that supports and protects life.** | | | * The innermost layer of the earth is the core, which is divided into two parts. * The inner core is a ball of hot solid metal. * The outer core is a ball of liquid metals. * The mantle is the layer of the Earth between the core and the crust that is made of hot rock and has both solid and liquid properties. * The cool solid layer is part of the lithosphere and the hotter layer is part of the asthenosphere. * The outermost layer of the earth is the crust and includes dry land and ocean. * Weathering is the process of being broken down into smaller pieces. * Erosion is the removal and transportation of weathered materials; the pieces of rock are carried away. * Deposition is the dropping or settling of eroded material. * Tectonic plates have different boundaries that create different geological effects. * Thermal energy is transferred in three ways: conduction, convection, and radiation. * The Earth is heated unevenly by the sun, which causes the winds to blow. * Wind causes currents that dictate climate. | | | |  | |  | **March-April** | |
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| **ASSESSMENT: *HOW WILL I KNOW WHAT MY STUDENTS HAVE LEARNED? WHAT WILL BE THE EVIDENCE?*** | | | | | | | | | |  |  | | | |  | |
| * **Plate Tectonics Lab** * **Weather Newscast** * **Model of the Earth** * **Final Test** | | |  |  |  |  |  |  |  |  |  | | | |  | |
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| **TECHNOLOGY & RELATED CONTENT INTEGRATION:** | | | | | |  |  |  |  |  |  | | | |  | |
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