Chicago Ridge District 127.5
5th Grade Science Scope and Sequence

Unit	Disciplinary Core Ideas	Performance Expectations	SEP	CCC
Matter and Energy in Organisms and Ecosystems **Unit 1 Living Things and Ecosystems** Chapter 1 What Is an Ecosystem? Chapter 2 What Is the Role of Producers in an Ecosystem? Chapter 3 What Is the Role of Consumers in an Ecosystem? Chapter 4 What Is the Role of Decomposers in an Ecosystem? Chapter 5 How Do Matter and Energy Move in an Ecosystem? Chapter 6 What Makes an Ecosystem Healthy or Unhealthy?	**PS3.D: Energy in Chemical Processes and Everyday Life** (5-PS3-1) **LS1.C: Organization for Matter and Energy Flow in Organisms** *(secondary to 5-PS3-1)* (5-LS1-1) ***LS2.A: Interdependent Relationships in Ecosystems*** *(5-LS2-1)* **LS2.B: Cycles of Matter and Energy Transfer in Ecosystems** (5-LS2-1)	Support an argument that plants get the materials they need for growth chiefly from air and water. 5-LS1-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. 5-LS2-1 Use models to describe that that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. 5-PS3-1	**Develop a model to describe phenomena.** (5-LS2-1) **Use models to describe phenomena**. (5-PS3-1) **Support an argument with evidence, data, or a model.** (5-LS1-1) **Science explanations describe the mechanisms for natural events**. (5-LS2-1)	**Systems and System Models** (5-LS2-1) **Energy and Matter** (5-PS3-1) (5-LS1-1)

Chapter 7 How Do Ecosystems Change? Chapter 8 How Do Humans Change Ecosystems?				
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Earth's Systems **Unit 2 Earth Systems** Chapter 1 What Are Earth's Four Systems? Chapter 2 How Do Earth's Systems Produce Weather and Climate? Chapter 3 How Do Earth's Systems Change Earth's Surface? Chapter 4 How Do Farming and Industry Affect Earth's Systems? Chapter 5	**ESS2.A: Earth Materials and Systems** (5-ESS2-1) **ESS2.C: The Roles of Water in Earth's Surface Processes** (5-ESS2-2) **ESS3.C: Human Impacts on Earth Systems** (5-ESS3-1)	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. 5-ESS2-1 Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. 5-ESS2-2 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. 5-ESS3-1	**Develop a model using an example to describe a scientific principle.** (5-ESS2-1) **Describe and graph quantities such as area and volume to address scientific questions**. (5-ESS2-2)	**Scale, Proportion, and Quantity**(ESS2-2) **Systems and System Models**(5-ESS2-1), (5-ESS3-1) **Science Addresses Questions About the Natural and Material World** (5-ESS3-1)

How Do People's Everyday Lives Affect Earth's Systems? Chapter 6 What Can People Do To Protect Earth's Systems?				
Unit	**Disciplinary Core Ideas**	**Performance Expectations**	**SEP**	**CCC**
Structure and Properties of Matter **Unit 3 Changes in Matter** Chapter 1 What Is Matter Made Of? Chapter 2 Why Are Materials Different? Chapter 3 How Can Substances Be Identified? Chapter 4 How Do Scientists Know When Substances Change? Chapter 5 What Causes Substances to Change? Chapter 6 How Do Changes to Substances Affect Their	**PS1.A: Structure and Properties of Matter** (5-PS1-1) (5-PS1-2) (5-PS1-3) **PS1.B: Chemical Reactions** (5-PS1-4) (5-PS1-2)	Develop a model to describe that matter is made of particles too small to be seen. 5-PS1-1 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. 5-PS1-2 Make observations and measurements to identify materials based on their properties. 5-PS1-3 Conduct an investigation to determine whether the mixing of two or more substances results in new substances. 5-PS1-4	**Develop a model to describe phenomena.** (5-PS1-1) **Conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered.** (5-PS1-4) **Make observations and measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon.** (5-PS1-3) **Measure and graph quantities such as weight to address scientific and engineering questions and problems**. (5-PS1-2)	**Cause and Effect** (5-PS1-4) **Scale, Proportion, and Quantity** (5-PS1-1) **Scientific Knowledge Assumes an Order and Consistency in Natural Systems** (5-PS1-2)

Weights? Chapter 7 How Do Engineers Improve Materials?				
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Space Systems: Stars and the Solar System **Unit 4 Earth, the Moon, and the Stars** Chapter 1 What Does Gravity Do? Chapter 2 Why Is the Sun Brighter Than Other Stars? Chapter 3 Why Is There Day and Night? Chapter 4 How Do Shadows Change During the Day and Year? Chapter 5 How Do Stars Seem to Move During the Night and Year? Chapter 6 How Does the Moon Seem to Move and Change Shape?	**PS2.B: Types of Interactions** (5-PS2-1) **ESS1.A: The Universe and Its Stars** (5-ESS1-1) **ESS1.B: Earth and the Solar System** (5-ESS1-2)	Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth. 5-ESS1-1 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. 5-ESS1-2 Support an argument that the gravitational force exerted by Earth on objects is directed down. 5-PS2-1	**Represent data in graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships.** (5-ESS1-2) **Support an argument with evidence, data, or a model.** (5-ESS1-1), (5-PS2-1)	**Patterns** (5-ESS1-2) **Cause and Effect** (5-PS2-1) **Scale, Proportion, and Quantity** (5-ESS1-1)

Chapter 7 What Tools Do Scientists Use to Observe Space?				