SCIENCE OVERVIEW
GRADE: KINDERGARTEN
Lemont-Bromberek CSD 113A

What is the story a kindergartener is able to tell by the end of the year?
Scientists observe the natural world. They look for evidence of patterns as they observe and investigate. Scientists use patterns to make predictions. We discovered evidence of patterns in the ways objects move, the ways organisms respond to meet their needs, and in weather.

UNITS of STUDY	SCIENTIFIC & ENGINEERING PRACTICES *The actual doing of science and engineering piques student interest*	DISCIPLINARY CORE IDEAS *Key ideas that build conceptually throughout the K-8 experience*	CROSSCUTTING CONCEPTS *Important themes that pervade science, engineering and mathematics*
LIFE SCIENCE *Interdependent Relationships in Ecosystems*	**Developing and Using Models**: Use a model to represent relationships in the natural world. **Analyzing and Interpreting Data**: Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. **Engaging in Argument from Evidence**: Construct an argument with evidence to support a claim. **Obtaining, Evaluating, and Communicating Information**: Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.	**Organization for Matter and Energy Flow in Organisms**: All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. **Biogeology**: Plants and animals can change their environment. **Natural Resources**: Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. **Human Impacts on Earth Systems**: Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. **Developing Possible Solutions**: Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.	**Patterns**: Patterns in the natural and human designed world can be observed and used as evidence. **Cause and Effect**: Events have causes that generate observable patterns. **Systems and System Models**: Systems in the natural and designed world have parts that work together
PHYSICAL SCIENCE *Forces & Interactions*	**Planning and Carrying Out Investigations:** With guidance, plan and conduct an investigation in collaboration with peers. **Analyzing and Interpreting Data**: Analyze data from tests of an object or tool to	**Force & Motion**: Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. **Types of Interactions**: When objects touch or collide, they push on one another and can	**Cause and Effect**: Simple tests can be designed to gather evidence to support or refute student ideas

	determine if it works as intended.	change motion. **Relationship Between Energy and Forces:** A bigger push or pull makes things go faster. **Defining Engineering Problems** A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.	
EARTH/SPACE SCIENCE *Weather*	**Asking Questions and Defining Problems**: Ask questions based on observations to find more information about the designed world. **Planning and Carrying Out Investigations**: Make observations (firsthand or from media) to collect data that can be used to make comparisons. **Analyzing and Interpreting Data**: Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. **Constructing Explanations and Designing Solutions**: Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. **Obtaining, Evaluating, and Communicating Information**: Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world	**Conservation of Energy and Energy Transfer**: Sunlight warms Earth's surface. **Weather and Climate**: Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. **Natural Hazards:** Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events **Defining and Delimiting an Engineering Problem :** Asking questions, making observations, and gathering information are helpful in thinking about problems.	**Patterns**: Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. **Cause and Effect**: Events have causes that generate observable patterns.