Diocese of Greensburg Curriculum
Science Grade 3

Unit	Standards	Content	Skills
Weather and Climate (Earth Science)	**CCSS: ELA & Literacy in History/Social Studies, Science, & Technical Subjects K-5** **CCSS: Grade 3** **Reading: Informational Text** **Key Ideas and Details** **1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.** RI.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. **2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.** RI.3.2. Determine the main idea of a text; recount the key details and explain how they support the main idea. **3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.** RI.3.3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. **NGSS: Science Performance Expectations (2013)** **NGSS: Grade 3** **3.Weather and Climate** **Performance Expectations**	• Stages of water cycle • Natural resource • Climate • Weather • Temperature • Mass of an object • Volume of an object • Stages of matter - solid, liquid, gas • Density • Water vapor • Evaporation • Absorption • types of earth materials • waterwheel	The students will be able to: • Investigate the properties of water • Compare the way water interacts with different surfaces • Explore how sponges interact with water • Use standard and metric units to measure temperature • Create a water thermometer/use a thermometer • Observe the properties of water as it is heated, cooled, and frozen • Compare the density of water at different temperatures • Observe, collect and compare weather data • Identify the difference between weather and climate • Discuss engineering methods to deal with weather related hazards • Compare what happens when water is poured through different earth materials • Construct a waterwheel and use it to lift objects

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	3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. 3-ESS2-2. Obtain and combine information to describe climates in different regions of the world. 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.* 		
Ecosystems (Life Science)	**CCSS: ELA & Literacy in History/Social Studies, Science, & Technical Subjects K-5** **CCSS: Grade 3** **Reading: Informational Text** **Key Ideas and Details** **1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.** RI.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. **2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.** RI.3.2. Determine the main idea of a text; recount the key details and explain how they support the main idea. **3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.**	• Germination of seeds • Organisms • Life cycle • Hydroponic garden • Parts of a plant • Process of photosynthesis • Crustacean • Habitat of animals • Adaptation • Food chain • Articulated human skeletal system • Muscle • Bone • Joints	The students will be able to: • Conduct a seed hunt • Describe and compare seed properties • Examine and sort various seeds • Investigate the effect water has on seeds • Observe and record data over a period of time • Examine germinated seeds to determine similarities and difference • Set up a hydroponic garden and observe the life cycle of a bean plant • Compare the structure of a plant above ground and below ground • Observe and record the structures of a crustacean • Establish a feeding and maintenance schedule for a living organism

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	RI.3.3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. **NGSS: Science Performance Expectations (2013)** **NGSS: Grade 3** **3.Interdependent Relationships in Ecosystems** **Performance Expectations** 3-LS2-1. Construct an argument that some animals form groups that help members survive. 3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. 3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.* **3.Inheritance and Variation of Traits: Life Cycles and Traits** **Performance Expectations** 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. 3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from		• Investigate organism behaviors and map where it spends its time in a habitat • Describe adaptations of organisms in different environments • Observe the articulated human skeletal system in action • Explore joints and their role in movement • Build operational models of muscle-bone systems • Create and analyze fingerprint patterns • Analyze and interpret data from fossils to explain the relationship between organisms living today and in the past.

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	parents and that variation of these traits exists in a group of similar organisms. 3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. 		
Motion and Stability (Physical Science)	**CCSS: ELA & Literacy in History/Social Studies, Science, & Technical Subjects K-5** **CCSS: Grade 3** **Reading: Informational Text** **Key Ideas and Details** **1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.** RI.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. **2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.** RI.3.2. Determine the main idea of a text; recount the key details and explain how they support the main idea. **3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.**	• Force • Magnets (magnetic field) • Gravity • Motion of objects • Mixtures • States of matter - solid, liquid, gas • Solution • Balanced and unbalanced forces • Patterns of motion	The student will be able to: • Predict and conduct and investigation to determine how far a magnetic field extends • Explore and identify patterns of motion • Design wheel and axle systems and test systems with ramps • Make twirly birds and explore variables that change motion • Design a cart that can meet a specific goal or solve a problem • Use metric tools to refine observations by measuring mass and volume • Create mixtures and solutions • Investigate simple chemical reactions • Engage in science and engineering practices to collect data and answer questions

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