

Standard A Science Connections that reveal God’s creation

DIOCESAN REQUIREMENT
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Observation –Awareness of changes in their God given environment (seasonal changes in nature, growth of infants, chemical changes from water to ice).
2. Identify what God has created (plants, animals, humans, rocks, rainbows, rivers – living and non-living).
3. Sequence of events – metamorphosis of butterflies and frogs.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				Assessment
	1	2	3	4	

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious: Students are taught to take care of the gifts that they have been given by God. This is called stewardship. God creates the plants and the animals.</p>	<p>A. Place pictures in a proper sequence of events according to God’s plan (e.g. life cycles of insect/animal development). B. Take pictures of changes in objects over the year, or within specific units (e.g. trees, classroom animals, weather, melting ice, etc.). C. Develop simple discussion questions about changes in our God-given environment.</p>	<p>Life Science: Core Idea 1: Organisms have structures and functions that facilitate their life processes, growth, and reproduction. A. Structure and function B. Growth and development of organisms Earth and Space Science Core Idea 3:Earth’s surface continually changes from the cycling of water and rock driven by sunlight and gravity. A. The roles of water in Earth’s surface processes B. Formation and alteration of rocks and landforms C. Weather and climate Physical Science Core Idea 2: Forces due to fundamental interactions underlie all matter structures and transformation balance or imbalance of forces determines stability and change within all systems. C. Transformation of matter</p>
<p>Religious Resources: RC: Creed #3 God is the creator RC: Prayer Life #10 B: Genesis 1:1-2:4 The Creation Story Genesis 3:1-24 The Garden of Eden .</p>	<p>Prayer: Praise God for creating us and our world. Remember to thank God for the plants and animals he created in His beautiful world.</p>	

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Standard B The Nature of Science as created by God and Discovered by man

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Awareness of vocations that are related to science.
2. Investigate how science careers impact our life.
3. Determine what kind of career works with plants, animals, humans, rivers, rocks, etc.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious: Students are taught to take care of the gifts that they have been given by God.</p> <p>This is called stewardship.</p> <p>God gives all of us gifts and talents to use.</p>	<p>A. Guest Speakers (science career)</p> <p>B. Dress up day (science related career) Role play a science related career in learning centers (astronaut, doctor, nurse, researcher).</p> <p>C. Describe how men and women in science related careers (e.g. computer tech, medical) impact our lives in a good way.</p>	<p>Engineering and Technology Core Idea 4: In today’s modern world everyone makes technological decisions that affect or are affected by technology on a daily basis. Consequently, it is essential for all citizens to understand the risks and responsibilities that accompany such decisions.</p> <p>B. Interactions of technology and environment</p> <p>C. Analyzing issues involving technology and society</p>
<p>Science Examples: RC: Life in Christ #9 God loves everyone Tell a story -Mother Theresa (physical and spiritual needs of the poor) Tell stories about St. Catherine of Siena (Patron of Nurses) and St. Cosmas (Patron of Doctors)</p>	<p>Prayer: Remember to thank God for the people in science who help us every day.</p> <p>Ask God for gifts and talents to help us to do our work.</p>	

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Standard C Science Inquiry that reflects God’s created order

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Predict what will happen by using prior knowledge God has given you – compare and categorize.
2. Use basic science tools for observation and measurement.
3. Compare objects (color, weight, size) and classify.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis:</p> <p>Students are taught to take care of the gifts that they have been given by God.</p> <p>This is called stewardship.</p> <p>God gave man the gift to think and learn.</p>	<p>A. Predict what will happen using magnets and dominos using the gift from God to think and to learn.</p> <p>B. Use basic science tools (invented using God’s gift of intelligence) to explore the God-given environment (e.g. magnifying glass, insect box, thermometers, etc.).</p> <p>C. Classify and compare common classroom objects for the same color, weight, or size.</p>	<p>Engineering and Technology</p> <p>Core Idea 1: The study of the designed world is the study of designed systems, processes, materials, and products and of the technologies and the scientific principles by which they function.</p> <p>C. Using tools and materials</p>
<p>Religious Resources:</p> <p>RC: Life in Christ #12 God gives us everything</p> <p>B. Matt. 14: 22-33 Jesus Walks on Water</p> <p>Talk about St. Albert the Great (Patron Saint of Science)</p>	<p>Prayer:</p> <p>Remember to thank God for our human ability to compare things and to predict outcomes.</p> <p>Remember to thank God for giving us the basic tools of science.</p>	

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Standard D Physical Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Observation of God’s laws of objects in motion and at rest.
2. Predict physical changes.
3. Forces in Motion - Predict objects in motion and at a state of rest.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught to take care of the gifts that they have been given by God. This is called stewardship.</p> <p>God gave us the gift of intelligence to think and to learn.</p>	<p>A. Learn God’s law of density by doing sink or float experiments.</p> <p>B. Demonstrate pendulum motions.</p> <p>C. Explore God’s law of magnetism using magnets.</p> <p>D. Describe observable changes in objects and speculate as to what caused them (e.g. colored paper exposed to the sun, etc.).</p> <p>E. Determine how to put objects at rest into motion (swings, bat and ball, etc.) and describe what God gave us to cause the movement.</p>	<p>Physical Science Core Idea 2: Forces due to fundamental interactions underlie all matter structures and transformations balance or imbalance of forces determines stability and change within all systems.</p> <p>A. Fundamental interactions B. Motion and stability</p>
<p>Religious Resources:</p> <p>RC: Life in Christ #12 God gives us everything</p> <p>B: Genesis 6:11 to 8:19 Noah’s Ark</p> <p>Tell the story of Dominican Theodore of Freiburg (First to give correct explanation of the rainbow)</p>	<p>Prayer: Remember to thank God for the gift of motion because without motion we could not take care of ourselves.</p> <p>Remember to thank God for the gift of motion because without it we could not play games like baseball or football.</p>	

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Standard E Earth and Space Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Space Science - Observe, identify and describe various objects that God created and are found in the sky.
2. Identify basic landforms found in the local area.
3. Identify how local people use the land for work and recreation.
4. Weather - Data collection by observing and charting weather events.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious:</p> <p>Students are taught to take care of the gifts that they have been given by God. This is called stewardship. God created the earth and sky.</p>	<p>A. Observe and name land formations created by God.</p> <p>B. Discuss the importance of God’s gift of the Sun (heat, light). Discuss God’s other creations found in space (Moon and Stars).</p> <p>C. Chart God’s gift of the weather over a period of time.</p>	<p>Earth and Space Science</p> <p>Core Idea 1: Humans are a small part of a vast universe; planet Earth is part of the Solar System which is part of the Milky Way galaxy, which is on of hundreds of billions of galaxies in the universe.</p> <p style="padding-left: 20px;">A. The universe</p> <p style="padding-left: 20px;">C. Earth and the Solar System</p> <p>Core Idea 3: Earth’s surface continually changes from the cycling of water and rock driven by sunlight and gravity.</p> <p style="padding-left: 20px;">A. The roles of water in Earth’s surface processes</p> <p style="padding-left: 20px;">B. Formation and alteration of rocks and landforms</p> <p style="padding-left: 20px;">C. Weather and climate</p>
<p>Religious Resources:</p> <p>RC: Life in Christ #12 God gives us everything</p> <p>RC: Prayer Life #10 We thank God</p> <p>CCC: 2404, 2405 Use the land to benefit the greatest number</p> <p>B: Mark 1:9-11 Baptism of Jesus (river)</p> <p style="padding-left: 20px;">Exodus 19:16 to 20:21 Moses on the Mountain (mountain)</p> <p style="padding-left: 20px;">Matt 4:1-11 Jesus in the Desert (desert)</p> <p style="padding-left: 20px;">Matt 26:36-56 Jesus in the Garden (garden)</p>	<p>Prayer:</p> <p>Praise God for the sun so we can be warm.</p> <p>Thank God for the rivers and streams so we can fish and swim.</p> <p>Thank God for the farm land to grow our food.</p>	

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Standard F Life and Environmental Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Explain the basic needs of the animals that God created.
2. Littering – How it affects our God-given environment and animals.
3. Compare - living things and non-living things .
4. Basic experimentation - Observe what a plant needs in order to grow.
5. Recognize how people depend on plants and animals in everyday life.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis:</p> <p>Students are taught to take care of the gifts that they have been given by God. This is called stewardship.</p> <p>God created living and non-living things. God made living and non-living things different.</p>	<p>A. Discuss animal habitats. Describe how littering affects the environment God has provided for the animals.</p> <p>B. Match animals with their young and describe how the babies are alike and different from their mothers.</p> <p>C. Plant seeds (seed window) and watch as God helps them grow.</p> <p>D. Discuss the differences between living and nonliving things like movement, breathing, and eating.</p>	<p>Life Science</p> <p>Core Idea 1: Organisms have structures and functions that facilitate their life processes, growth, and reproduction.</p> <p style="padding-left: 20px;">A. Structure and function</p> <p style="padding-left: 20px;">B. Growth and development of organisms</p> <p>Core Idea 2: Organisms have mechanisms and processes for passing traits and variations of traits from one generation to the next.</p> <p style="padding-left: 20px;">C. Variation of traits</p> <p>Core Idea 3: Organisms and populations of organisms obtain necessary resources from their environment which includes other organisms and physical factors.</p> <p style="padding-left: 20px;">A. Independent relationships in ecosystems</p> <p style="padding-left: 20px;">C. Ecosystems dynamics, stability, and resilience</p>
<p>Religious Resources:</p> <p>RC: Creed #3 God is the creator.</p> <p>RC: Life in Christ #12 God gives us everything.</p> <p>CCC: 2415 – 2418 (respect for creation)</p> <p>Talk about St. Isidore (Patron of Farmers)</p>	<p>Prayer:</p> <p>Remember to thank God for creating the plants and the animals.</p> <p>Ask God to give the animals a place to live that is just right for them .</p> <p>Praise God for giving us the things that plants and animals need to grow and be healthy, like water and sunlight.</p>	

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Standard G Science Applications that reflect God’s goodness

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Investigate how simple machines make work easier through the use of ramps, levers, etc.
2. Observe simple machines in action.
3. Use the gifts God gave you to problem solve to determine which simple machine would work best with specific tasks.

LOCAL LEVEL SCHOOL ELEMENTS					
Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught to take care of the gifts that they have been given by God. This is called stewardship.</p> <p>God gave us simple tools to help us in everyday life. God gave us the intelligence to think and to choose.</p>	<p>A. Using the gifts God has given us to measure objects using the balance scale and move objects by doing lifting activities.</p> <p>B. Use levers, pulleys and ramps to move an object.</p> <p>C. Solve a problem (using the intelligence God gave us) related to students’ experiences (e.g. where to put coats, dirty shoes, books).</p>	<p>Engineering and Technology Core Idea 1: The study of the designed world is the study of designed systems, processes, materials, and products and of the technologies and the scientific principles by which they function.</p> <p>C. Using tools and materials Core Idea 2: Engineering design is a creative and iterative process for identifying and solving problems in the face of constraints.</p> <p>A. Defining and researching technological problems. B. Generating and evaluating solutions</p>
<p>Religious Resources:</p> <p>RC: Life in Christ #11 Problem solving</p> <p>B: Luke 5:17-26 Through the Roof</p>	<p>Prayer: Thank God for the gift of simple machines to make our lives easier. Praise God for the gift of our intelligence to know how to use simple machines.</p>	

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Standard H Personal, Social, and Moral Aspects of Science

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Identify and discuss technology found in your Catholic school and home that keep students safe (e.g. smoke detector, bike helmet, airbags, etc.).

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	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught to take care of the gifts that they have been given by God. This is called stewardship. God is always there for us.</p>	<p>A. Participate in Fire Safety Week and learn how to be safe in a fire. B. Learn who Officer friendly is and discuss how he can keep you safe. C. Practice tornado drills and learn how to be safe in a tornado. D. Learn how to be safe from strangers in the Safe Environment Curriculum. E. Discuss how God is here to watch over us.</p>	<p>Engineering and Technology Core Idea 4: In today’s modern world everyone makes technological decisions that affect or are affected by technology on a daily basis. Consequently, it is essential for all citizens to understand the risks and responsibilities that accompany such decisions.</p> <p>A. Interactions of technology and society. B. Interactions of technology and environment. C. Analyzing issues involving technology and society.</p>
<p>Religious Resources: RC: Life in Christ #2 We are created in God’s image.</p>	<p>Prayer: Ask God to helping us to invent things to keep our homes safe. Thank God for our guardian angel who is there to help us. Praise God who is always there to help us in times of need.</p>	

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