

**Standard A** Science Connections that reveal God’s creation

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Interactions in the environment using the natural resources God gave us.
2. Experience the light and warmth from the sun to explain how it affects habitats.

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

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b></p> <p>Students are taught that there is a distinction between human people and animals, even though humans are classified as part of the ‘animal kingdom’. The greatest human distinction is that the human person is created with an immortal soul and a spiritual awareness to think and to choose.</p>	<p>A. In God’s plan, how does the sun affect different habitats?</p> <p>B. Make a model of environmental interactions that reveals God’s order and design.</p> <p>C. Name and show examples of Solar power.</p> <hr/> <p><b>Parent Involvement</b></p> <p>It is strongly recommended that all parents attend or view the presentation  <i>Embrace Parenthood:                      Teaching the way of Love</i>                      before their child completes second grade.</p>	<p><b>Life Science</b></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: 40px;">B. Flow of matter and energy transfer in ecosystems.</p> <p><b>Earth and Space Science</b></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 one of hundreds of billions of galaxies in the Universe.</p> <p style="padding-left: 40px;">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: 40px;">D. Weather and climate</p>
<p><b>Religious Resources:</b></p> <p><b>RC:</b> Creed #5 God is the creator</p> <p><b>B:</b> Genesis 2:18-25 Adam and Eve                      Genesis 4:1-16 Cain and Abel                      Genesis 1:3-4 – Let there be light.</p> <p><b>CCC:</b> 41 – We perceive our Creator from the greatness of created things.</p>	<p><b>Prayer:</b></p> <p>Remember to thank God for light.</p> <p>Remember to thank God for the Sun and its warmth that we need to live.</p>	

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

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Read non-fiction books related to science discovery topics.
2. Investigation Skills – using the gifts God gave you, research in books, on the computer, or use other resources to report on the vocation of being a scientist.
3. Identify careers in technology.

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

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b></p> <p>Students are taught that there is a distinction between the human person and animals, even though humans are classified as part of the ‘animal kingdom.’ The greatest distinction is that the human person is created with an immortal soul and a spiritual awareness to think and to choose.</p>	<p>A. Use the internet, newspapers, and magazines to identify careers in Science.</p> <p>B. Dress up as your future career and tell the class how scientific discoveries will affect your job.</p> <hr/> <p><b>Parent Involvement</b></p> <p style="text-align: center;">It is strongly recommended that all parents attend or view the presentation <i>Embrace Parenthood: Teaching the Way of Love</i> before their child completes second grade.</p>	<p><b>Earth and Space Science</b> Core Idea 4: Human activities are constrained by and, in turn, affect all other processes at Earth’s surface.     B: Natural Resources     C: Human impacts on the Earth</p> <p><b>Engineering and Technology</b> 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.     A. Products, processes, and systems     B. Nature of technology     C. Using tools and materials</p>
<p><b>Religious Resources:</b> CCC: 337-341 Everything owes its existence to God. RC: Creed #4,5 All creation is dependent on other parts of creation.</p> <p>Talk about St. Albert the Great (Patron of Scientists)</p>	<p><b>Prayer:</b> Thank God for the people who write books and invent computers to help us learn.</p> <p>Praise God for the habitats He created.</p>	

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**Standard C** Science Inquiry that reflects God’s created order

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Using the gifts God gave you, form simple hypothesis, draw conclusions and communicate the findings of science investigations.
2. Use tools to compare, measure, and/or test hypotheses in order to answer questions.
3. List and chart observations and note changes according to God’s plan.

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

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b></p> <p>Students are taught that there is a distinction between the human person and animals, even though humans are classified as part of the ‘animal kingdom.’ The greatest distinction is that the human person is created with an immortal soul and with spiritual powers to think and to choose.</p> <hr/> <p><b>Religious Resources:</b>  <b>CCC:</b> 2292-2295 Research, experiment, inventions                      Tell stories about St. Barbara (patron of mathematicians), Fr.Christopher Clavius (mathematics &amp; astronomy), and St. Bede the Venerable (the most learned man of his day)</p>	<p>A. Use line, bar, and pictographs to show weather data, plant growth data, or change over time (money in piggy bank, number of books you read).                      B. Use rulers, balances, or special tools to measure.</p> <hr/> <p><b>Parental Involvement</b>                      It is strongly recommended that all parents attend or view the presentation  <i>Embrace Parenthood:</i>  <i>Teaching the Way of Love</i>                      before their child completes second grade.</p> <hr/> <p><b>Prayer:</b>                      Thank God for creating us as human people who can think, learn, and solve problems.                      Thank God for the people who have invented tools to help us work.</p>	<p><b>Engineering and Technology</b>                      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.                      A. Products, processes, and systems                      B. Nature of Technology                      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.                      A. Defining and researching technological problems                      B. Generating and evaluating solutions</p>

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# Standard D Physical Science as created by God

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Compare and contrast qualities of Matter - solids, liquids, and gases.
2. Use tools to demonstrate how light can be reflected, refracted or absorbed.
3. Study God’s laws of force and motion.
4. Investigate sound.
5. Use tools to measure of physical properties - such as volume, temperature, and weight.

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

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b> The human person is created with an immortal soul and a spiritual awareness to think and to choose.</p> <hr/> <p><b>Parental Involvement</b> It is strongly recommended that all parents attend or view the presentation <i>Embrace Parenthood: Teaching the Way of Love</i> before their child completes second grade.</p>	<p>A. Observe melting ice or melting gelatin. B. Use measurement tool (measuring cups, thermometer, scale) in comparing solids, and liquids. C. Use prisms and crystals to observe changes to God’s gift of light. D. Mix solids and liquids to create new substances (glue/water, bluing/water). E. Investigate God’s plan of magnetism using push and pull magnets.</p>	<p><b>Physical Science</b> Core Idea 1: Macroscopic states and characteristic properties of matter depend on the type arrangement and motion of particles at the molecular and atomic scales. A. Atomic structure of matter 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. A. Fundamental interactions. B. Motion and stability. Core Idea 3: Transfers of energy within and between systems never change the total amount of energy, but energy tends to become more dispersed; energy availability regulates what can occur in any process. A. Descriptions of energy.</p>
<p><b>Religious Resources:</b> CCC: 1147 Visible creation CCC: 1957 Song &amp; Music B: Genesis Chapters 6-7 Noah’s Ark Read about Dominican Theodoric of Freiberg (first to give correct explanation of the rainbow)</p>	<p><b>Prayer:</b> Remember to thank God for the gift of light to see and the rainbow He gave us as a promise of the future.  Remember to thank God for the tools he gives us to study light and the forces of motion.</p>	

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# Standard E Earth and Space Science as created by God

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Weather - Explain water movement through God’s planned water cycle.
2. Identify and describe different ways that people use the Earth’s resources.
3. Earth Science - Investigate different rocks, minerals, and soils.
4. Understand fossils and the history of where they come from.
5. Investigate the Universe created by God - Space Science.

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

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b> The human person is created with an immortal soul with spiritual awareness to think and choose.</p> <p><b>Religious Resources:</b>  <b>CCC:</b> 373, Stewards of Gods’ Creation  <b>CCC:</b> 2415 Use Creation for Common Good  <b>RC:</b> Life in Christ #16, #17 We must care for all that God has given us</p> <p><b>B:</b> Matt 13:18-23 The Parable of the Seeds                      Matt 2:11 Gifts of the Magi                      Talk about St. Isidore (Patron of Farmers)</p>	<p>A. Examine and compare rocks and soil. Discuss likeness and differences.                      B. Study weather and make a weather chart.                      C. Discuss how people use God’s gift of the land and God’s gift of water (for work or play). How do these reveal God’s order and design?                      D. Observe or create a plaster mold of fossils.</p> <p><b>Parental Involvement</b>                      It is strongly recommended that all parents attend or view the presentation  <i>Embrace Parenthood:</i>  <i>Teaching the Way of Love</i>                      before their child completes second grade.</p> <p><b>Prayer:</b>                      Remember to thank God for the water cycle that gives us fresh water to live.                      Thank God for fossils that help us study the past.</p>	<p><b>Earth and Space Science</b>                      Core Idea 2: Earth is a complex and dynamic 4.6 billion-year-old system of rock, water, air, and life.                      B. Earth’s materials                      C. Earth’s history                      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                      C. Weather and climate                      Core Idea 4: Human activities are constrained by and, in turn, affect all other processes at Earth’s surface.                      B. Natural resources</p>

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**Standard F** Life and Environmental Science as created by God

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Investigate the life cycle of a plant and a animal. How does this reveal God’s order and design?
2. Compare living and non-living things and describe how living things need non-living things.
3. Give a general description of the major body systems that God created. Include the respiratory, circulatory, nervous, and digestive systems.
4. Classify and group animals into basic scientific groupings (reptile, amphibian, mammal, etc.).

<b>LOCAL LEVEL SCHOOL ELEMENTS</b>					
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	1	2	3	4	Assessment

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b> Students are taught that there is a distinction between the human person and animals, even though humans are classified as part of the ‘animal kingdom.’ The greatest distinction is that the human person is created by God with an immortal soul and a spiritual awareness to think and to choose.</p> <p><b>Religious Resources:</b>  <b>CCC:</b> 2415-2417 Respect all Creation  <b>CCC:</b> 341, 342 Creation Reflects God  <b>CCC:</b> 2288-2289 Take Care of your Health                      Diocesan Virtues Program - Respect  <b>B:</b> Luke 5:1-11 The Great Catch of Fish                      Matt. 18:10-14 The Good Shepherd                      Discuss St. Martha ( Patron of Cooks)</p>	<p>A. Label the respiratory, circulatory, digestive, and nervous systems on a paper model.                      B. Chart living and nonliving things – categorize life cycles.</p> <p><b>Parental Involvement</b>                      It is strongly recommended that all parents attend or view the presentation  <i>Embrace Parenthood:</i>  <i>Teaching the Way of Love</i>                      before their child completes second grade.</p> <hr/> <p><b>Prayer:</b>                      Remember to thank God for the plants and animals he gave us to live.                      Praise God for our lives and physical health.</p>	<p><b>Life Science</b></p> <p>Core Idea 1: Organisms have structures and functions that facilitate their life processes, growth, and reproduction.                      B. Growth and development of organisms                      C. Organization for matter and energy flow in organisms</p> <p>Core Idea 3: Organisms and populations of organisms obtain necessary resources from their environment which includes other organisms and physical factors.                      A. Independent relationships in ecosystems.</p> <p>Core Idea 4: Biological evolution explains the unity and diversity of species.                      D. Biodiversity and humans</p>

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**Standard G** Science Applications that reflect God’s goodness

<b>DIOCESAN REQUIREMENTS</b>
<b>CONCEPTS, SKILLS, &amp; CATHOLIC FAITH CONNECTIONS</b>
1. Name your most useful tool or technological devise. What makes it so useful?
2. Natural Resources - how are fuels such as wood, oil, coal, natural gas, or water used in our homes? How can we take care of the natural resources that God gave us?

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	1	2	3	4	Assessment

<b>EMPHASIS &amp; RESOURCES</b>	<b>ACTIVITIES</b>	<b>COMMON CORE STANDARDS</b>
<p><b>Religious Emphasis:</b> The human person is created with an immortal soul and a spiritual awareness to think and to choose.</p> <p><b>Religious Resources:</b> CCC: 2428, 2429, 2432, 2433 Work to benefit all</p>	<p>A. Through the use of stories, contrast and compare life in the past to life in the present.</p> <p>B. Identify different types of technology used in your home. How does technology make the jobs in your home easier to do?</p> <hr/> <p><b>Parental Involvement</b> It is strongly recommended that all parents attend or view the presentation <i>Embrace Parenthood: Teaching the Way of Love</i> before their child completes second grade.</p> <hr/> <p><b>Prayer:</b> Thank God for the gifts He has given us and people who make our life comfortable by inventing things like microwaves and air conditioning.</p> <p>Ask God to help us be good stewards of our natural resources.</p>	<p><b>Earth and Space Science</b> Core Idea 4: Human activities are constrained by and, in turn, affect all other processes at Earth’s surface. B. Natural resources</p> <p><b>Engineering and Technology</b> 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. A. Products, processes, and systems C. Using tools and materials</p> <p>Core Idea 2: Engineering design is a creative and iterative process for identifying and solving problems in the face of constraints. A. Defining and researching technological problems B. Generating and evaluating solutions. C. Optimizing and making tradeoffs.</p>

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**Standard H** Personal, Social, and Moral Aspects of Science

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. God gives us people and things to keep us safe. What are they?
2. God gives us people and things to keep us healthy. What are they?
3. How does exercise help us or harm us?
4. How has medical technology affected our lives?

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p><b>Religious Emphasis:</b> The human person is created with an immortal soul with spiritual awareness to think and to choose.</p>	<p>A. Discuss the way technology can be used in good ways and in bad ways. B. Identify objects that have been invented using the creative intelligence of inventors, to make you safer.</p>	<p><b>Life Science</b> Core Idea 1: Organisms have structures and functions that facilitate their life processes, growth, and reproduction. C: Organization for matter and energy flow in organisms. Core Idea 3: Organisms and populations of organisms obtain necessary resources from their environment which includes other organisms and physical factors. A. Independent relationships in ecosystems. <b>Engineering and Technology</b> 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. C. Analyzing issues involving technology and society.</p>
<p><b>Religious Resources:</b> <b>CCC:</b> 2493, 2494, 2497, 2499 Technology Progress for the Common Good. <b>B:</b> John 16:23 What ever you ask of the Father in my Name, He will give you. Discuss St. Clare of Assisi (Patron of T.V.)</p> <p>Discuss Mother Theresa (physical &amp; spiritual need of the poor) Discuss St. Rose of Lima (sold handmade goods to help the poor)</p>	<p><b>Parental Involvement</b> It is strongly recommended that all parents attend or view the presentation <i>Embrace Parenthood:</i> <i>Teaching the Way of Love</i> before their child completes second grade.</p> <p><b>Prayer:</b> Remember to thank God for our parents who take care of us and teach us right from wrong. Remember to thank God for computers and the awareness to use them safely in the right way.</p>	

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