5th Grade

Guidelines for Human Sexuality Education

Based on the understanding that human sexuality education is a right and responsibility of parents, teachers whose curricular material includes human sexuality content are obligated to work together with parents to ensure that parents know what is being taught to their children and how it is being covered.

In grade 5, the curricular areas that address human sexuality education include:

Standard F – Cell reproduction.

Standard H – Taking care of our body (hygiene).

Please consult with your principal and/or pastor to determine the local directives on parental collaboration that are aligned with directives outlined in the May 4, 2011 letter from Bishop William Patrick Callahan. A copy of that letter can be found in the front pocket of this curriculum binder.

Grade: 5 **Subject:** Science

Standard A Science Connections that reveal God's creation

DIOCESAN REQUIREMENTS CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Problem solve to determine the data needed to answer questions. Begin to study scientific procedure. Collect and analyze data.
2. Describe God's plan for different systems. Organize the information from the simplest to more complex (e.g. cells to organisms, populations to ecosystems, etc.).

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: Students are taught that God wills the interdependence of His creation. God wills that human persons are stewards of his creation. Students are taught that the beauty of the universe is discovered progressively through the laws of nature which do not change.	A. Select a scientific occurrence, (such as a rainbow, a solar eclipse, or airplanes in flight): • Determine what kind of data is necessary to explain the occurrence. • Make a relationship between the evidence and an explanation. • Recognize alternative explanations. • Develop description, explanation, predictions and models using evidence.	**Life Science:** Core Idea 1: Organisms have structures and functions that facilitate their life processes, growth, and reproduction B. Growth and Development of 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 C. Ecosystems dynamics, stability, and resilience **Physical Science** Core Idea 1: 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
Religious Resources: CCC: 299 God's creation is good CCC: 301 God loves his creation CCC: 290 God gave a beginning to everything except himself CCC: 314 God is master of the world Read and discuss St. Rose of Lima (Patron of Gardens) Read and discuss St. Ambrose (Patron of Beekeepers, social insects) **B:** Genesis 9:13-17 Rainbow in the sky	**Parent Involvement** It is strongly recommended that all parents attend or view the presentation *Growing in Love:* *Fertility Appreciation* between the 4th and 6th grade **Prayer:** Thank God for the gifts of creation and God's plan that relies on the interdependence of all creation. Thank God for our inquisitive mind that formulates questions and works to find evidence to support our predictions.	

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Grade: 5 **Subject:** Science

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

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Describe how our knowledge of plant growth has changed in the last 100 years.
2. Identify some changes in the medical field in the last 100 years.
3. Name technological creations in the last 100 years.
4. How has God contributed to the changes and how have these discoveries changed God's plan for us?

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: Students are taught that God wills the interdependence of His creation. Nothing in creation is self-sufficient. All creatures exist to be dependent on each other, to complete each other, in service of each other. Students are taught that the beauty of the universe is discovered progressively through the laws of nature which do not change.	A. Name inventions that have helped is improved our lives. What part does God have in these new inventions? B. Name inventions that were intended for good but have been used for bad? How can we stop the inappropriate or bad use of new inventions?	**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. A. Products, processes, and systems B. Nature of technology C. Using tools and materials Core Idea 3: People are surrounded and supported by technological systems. Effectively using and improving these systems is essential for long-term survival and prosperity. A. Identifying and modeling technological systems B. Life cycles and maintenance of technological systems
Religious Resources: **CCC: 1960** Natural law helps us to know what is right and to avoid the bad or evil Tell the story about St. Albert the Great (Patron of Scientists)	**Prayer:** Remember to thank God for our ability to learn. Remember to thank God for those who study areas of science to progressively make new discoveries by using the laws of nature which do not change.	

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Grade: 5 **Subject:** Science

Standard C Science Inquiry that reflect God's created order

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Using God's gift of curiosity, identify a question to investigate and conduct research to find an answer to the question.
2. Predict outcomes using inferences and draw conclusions based on prior work.
3. Collect data as evidence to answer your question.
4. Analyze the data in a factual way that may support your prediction or may contradict your prediction. Always be truthful in your findings.

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: Students are taught that the beauty of the universe is discovered progressively through the laws of nature which do not change.	A. Read about Gregor Mendel, Austrian monk and biologist, and his investigations using plant breeding. B. Investigate and explain the works of Robert Grosseteste, Catholic Bishop, that have evolved into 'the scientific method.' **Parent Involvement** It is strongly recommended that all parents attend or view the presentation *Growing in Love* *Fertility Appreciation* between the 4th and 6th grade	**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. 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
Religious Resources: **CCC**: 1960 Natural law helps us to know what is good and avoid what is bad or evil **CCC**: 2292-2295 Use research, experiments and inventions for good. Diocesan Virtues Program - Fortitude	**Prayer:** Thank God for the ability to make responsible and moral conclusions in our scientific studies. Ask God for the knowledge to understand and use scientific inquiry in an appropriate manner.	

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Grade: 5 **Subject:** Science

Standard D Physical Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Explain how energy is converted from electrical to sound and light to electrical.
2. Produce and observe the effects of static electricity.
3. Create projects in which series and parallel circuits are used. Describe the flow of electricity through these circuits.
4. Describe and investigate magnetic fields, and create electromagnets.

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: Students are taught that the beauty of the universe is discovered progressively through the laws of nature which do not change.	A. Name and explain invisible forces, created by God, that are present and can be made visible through experimentation and observation (such as electricity and magnetic fields). B. Study and explain God's gift of lightning as it relates to positive and negative charges.	**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. A. Fundamental interactions B. Motion and stability C. Transformation of matter 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 B. Energy for life and practical use. The special role of food and fuel C. Relationship between energy and forces
Religious Resources: **B: Genesis 1:3-5** Let there be light – It was good **RC:** Creed #8 God created both visible and the invisible Read and discuss St. Agricola (Patron of Weather)	**Prayer:** Thank God for light, wind, heat and electricity. Thank God for people who can transform sources of energy into useful products that work for us.	

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Grade: 5 **Subject:** Science

Standard E Earth and Space Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Describe and illustrate earth cycles, including the water and nitrogen cycles.
2. Prepare a presentation explaining the sources of our drinking water, and human effects on its quality.
3. Identify renewable and non-renewable resources.

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: Students are taught that God wills the interdependence of His creation. Nothing in creation is self-sufficient. All creatures exist to be dependent on each other, to complete each other, in service of each other. Students are taught that the beauty of the universe is discovered progressively through the laws of nature which do not change.	A. Discuss resources that God gives the farmers to help crops grow. What practices do farmers use that may help or hurt the ground water, air quality, erosion of top soil, or depletion of nutrients in the soil? B. What industries are involved in using or replenishing our natural resources? What actions do they take to care for the environment that God gave us?	**Earth and Space Science** 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 B. Formation and alteration of rocks and landforms C. Weather and climate D. Biogeology Core Idea 4: Human activities are constrained by and, in turn, affect all other processes at Earth's surface. A. Natural hazards B. Natural resources C. Human Impact on the Earth D. Global climate change
Religious Resources: CCC: 2415 Take care of God's creation CCC: 2402 Be good stewards of creation CCC: 1803-1809 Use the cardinal virtues to care for God's creation http://www.americancatholic.org/Messenger/Oct2007/default.asp *St. Anthony Messenger Press*, October 2007 http://www.usccb.org/depts.shtml Read and discuss St. Isidore (Patron of Farmers)	**Prayer:** Ask God for the ability to understand how to be a good steward in the use of renewable and non-renewable resources. Thank God for his plan in creating earth cycles	

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Grade: 5 **Subject:** Science

Standard F Life and Environmental Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Differentiate between and give examples of cells, organ systems, and organisms.
2. Categorize organisms in order from simplest to most complex.
3. Categorize populations of organisms by their function in the God-given environment (decomposer, producer, consumer).

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

EMPHASIS & RESOURCES

Religious Emphasis:
Students are taught that God wills the interdependence of His creation. Nothing in creation is self-sufficient. All creatures exist to be dependent on each other, to complete each other, in service of each other.
Students are taught that the beauty of the universe is discovered progressively through the laws of nature which do not change.

Religious Resources:
RC: Creed #8 God gave Adam & Eve dominion over the earth.
RC: Creed #9 God created Adam & Eve in his likeness
RC: Moral Development #16 We make good choices through the use of virtues.
RC: Moral Development #26 We must be stewards of all of God's gifts.
RC: Moral Development #27 Farming is stewardship of the land, plants, & animals.

Diocesan Virtues Program – Respect

http://www.usccb.org/depts.shtml

Read and discuss St. Peter (Patron of Fishermen)
Read and discuss Blessed Kateri Tekakwitha (Environmentalist)

ACTIVITIES

A. Identify God's plan for a food chain to sustain life for plants and animals**.**

B. Explain energy exchanges in plant and animals**.**

C. Identify adaptations that God planned to protect animals from predators.

Parent Involvement
It is strongly recommended that all parents attend or view the presentation
Growing in Love
Fertility Appreciation
Between the 4th and 6th grade.

Prayer:
Thank God for His plan of interdependence of all creation.

Thank God for his gift of life - for us, for plants and for other animals.

COMMON CORE STANDARDS

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
C. Organization for matter and energy flow in organisms

Core Idea 2: Organisms have mechanisms and processes for passing traits and variations of traits from one generation to the next.
A. Inheritance traits
B. Variation of traits

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. Flow of matter and energy transfer in ecosystems
C. Ecosystems dynamics, stability, and resilience*:*

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Grade: 5 **Subject:** Science

Standard G

Science applications that reflect God's goodness

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Using a multi-media approach, identify examples of technology generated from scientific discoveries.
2. Discuss positive and negative influences of scientific and technological discoveries from a Catholic, moral perspective.

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: Students are taught that God wills the interdependence of His creation. Nothing in creation is self-sufficient. All creatures exist to be dependent on each other, to complete each other, in service of each other.	A. Identify scientific inventions made specifically for the space program that are being used in homes today. B. Name a scientist who has used God's gift of creativity to invent something you have at home.	**Engineering and Technology:** 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 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. A. Interactions of technology and society B. Interactions of technology and environment C. Analyzing issues involving technology and society
Religious Resources: RC: Moral Development #8 We must make good choices in using the internet and watching TV CCC: 2293-2296 Scientific research, experimentation, and inventions are for the good of all. B: Matthew 5:16 Let your light shine so that others may see your good work.	**Prayer:** Thank God for gifted people who can identify human needs and invent things to fulfill those needs. Thank God for people of integrity that chose to use inventions for the good of all people.	

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Grade: 5 **Subject:** Science

Standard H

Personal, Social, and Moral Aspects of Science

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Discuss our responsibility to keep safe and take care of our health. Identify the consequences of making good and bad choices.
2. Identify moral uses of scientific inventions.
3. Explain your social responsibility as a researcher.

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
Religious Emphasis: All creatures exist to be dependent on each other, to complete each other, in service of each other.	A. List actions we can take to keep safe. B. Identify actions that we can perform to show respect for our physical well being. C. Identify some moral and ethical issues associated with TV, cell phone cameras, internet activities, and MP3 players.	**Engineering Technology:** 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 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. A. Interactions of technology and society B. Interactions of technology and environment C. Analyzing issues involving technology and society
Religious Resources: **CCC:** 2493-2498 Use the media to inform, tell the truth, and provide a safeguard for the common good **RC:** Moral Development #8 Make good choices in using technology **RC:** Moral Development #26 Take care of all of God's gifts Read and discuss Venerable Matt Talbott (Patron of Alcohol/Addiction)	**Parent Involvement** It is strongly recommended that all parents attend or view the presentation *Growing in Love:* *Fertility Appreciation* between the 4th and 6th grade. **Prayer:** Thank God for his gift of 'free will' that allows you to make good decisions when faced with difficult choices. Thank God for scientists who design and create products to keep us safe.	

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