

7th 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 7, the curricular areas that address human sexuality education include:

Standard F – Endocrine system – glands and function.

Male reproductive system – organs and functions

Female reproductive system – organs and functions.

Egg cell and development.

Sperm cell and development.

Menstrual cycle.

Development of a human person.

Standard H – Bioethics.

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.

Standard A Science Connections that reveal God’s creation

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Collect evidence to show that models already developed were constructed from evidence available at the time (e.g. solar systems, medical theories, etc.) and describe how these models changed as new evidence was made available.
2. Use models and explanations available today to defend or challenge a prediction of future earthquakes and events in the natural world.

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 that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there an is objective, unchanging truth which is distinct from scientific theory.</p>	<p>A. Investigate God’s plan for the creation of the Hawaiian Islands.</p> <p>B. Explain how geothermal energy found in Iceland has been harnessed.</p> <p>C. Identify Earth’s surface changes due to plate tectonics.</p>	<p>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.</p> <ul style="list-style-type: none"> A. Continental drift, plate tectonics, and Earth’s internal heat B. Earth’s materials C. Earth’s history <p>Core Idea 3: Earth’s surface continually changes from the cycling of water and rock driven by sunlight and gravity</p> <ul style="list-style-type: none"> A. The roles of water in Earth’s surface processes B. Formation and alteration of rocks and landforms C. Weather and climate D. Biogeology <p>Core Idea 4: Human activities are constrained by and, in turn, affect all other processes at Earth’s surface.</p> <ul style="list-style-type: none"> A. Natural hazards B. Natural resources C. Human impacts on the Earth D. Global Climate Change
<p>Religious Resources: CCC: 341 The beauty of creation reflects the beauty of the creator. CCC: 290 God created everything CCC: 314 God guides his creation B: Genesis 1:2-3 Darkness covered the earth and God said ‘let there be light’ RC: Creed #8 God created everything</p> <p>Read and discuss Copernicus</p>	<p>Prayer:</p> <p>Thank God for individual curiosity that motivates scientists to use scientific reasoning in explaining weather related phenomena.</p> <p>Praise God for his gift of geothermal energy that can be harnessed for the good of all humans.</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. The study of nature can be done in scientific and non-scientific ways. How would a scientific study of tomato plant differ from a non-scientific study?
2. Explain laws of motion, laws of conservation of energy, and electromagnetic laws.

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 that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory.</p>	<p>A. Use the scientific method to discover how friction affects a variety of surfaces.</p> <p>B. Investigate materials that absorb sound and light waves.</p> <p>C. Identify technological devices you use at home and at school.</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. A. fundamental interactions B. Motion and stability C. Transformation of matter Core Idea 4: Our understanding of wave properties, together with appropriate instrumentation, allows us to use waves, particularly electromagnetic and sound waves, to investigate nature on all scales, far beyond our direct sense perception. A. Wave properties B. Electromagnetic radiation C. Direction and interpretation, instrumentation</p>
<p>Religious Resources: CCC: 314 God guides creation RC: Creed #8 God created everything RC: Life in Christ – Love #1 God reveals his love through creation. B: Gen 1: 1-2:3 The story of creation B: Ex 7:14-10:29 The plagues Read and discuss St. Thomas Aquinas (Patron of Academics) Read and discuss St. Albert the Great (Patron of Scientists)</p>	<p>Prayer:</p> <p>Thank God for giving some people the ability to understand how objects interact to form useful tools and equipment.</p> <p>Thank God for revealing laws of nature to be consistent in all settings.</p>	

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Standard C Science Inquiry that reflect God’s created order

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Use the scientific method to investigate an issue related to plants or animals.
2. Predict your results and verify with data.
3. Use computer software and other technologies to organize, process, and present the data from your experiment.
4. Journal daily about your research thoughts and observable changes in your research.

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

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory.</p> <p>Religious Resources: CCC: 2293 Scientific research, experiment, inventions are to benefit all CCC: 2493-2497 Serve the common good through research, inventions, experiments B: John 5:30 I can do nothing on my own</p> <p>Diocesan Virtues Program – Fortitude</p> <p>Read and discuss Bishop Grosseteste (Founder of scientific thought) Read and discuss Gregor Mendel (Austrian monk – genetics)</p>	<p>A. Create plant and animal cell models.</p> <p>B. Classify plants and animals according to Earth’s biomes.</p> <p>C. Identify factors that would indicate a coming ice age.</p> <p>Prayer:</p> <p>Thank God for common procedures to use in analyzing results of experiments.</p> <p>Thank God for trustworthy and honest researchers who tell the truth when publicizing experimental results.</p>	<p>Engineering and Technology Core Idea 2: Engineering design is a creative and iterative process for identifying and solving problems in the face of constraints.</p> <p style="padding-left: 20px;">A. Defining and researching technological problems B. Generating and evaluating solutions C. Optimizing and making tradeoffs</p> <p>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.</p> <p style="padding-left: 20px;">A. Identifying and modeling technological systems B. Life cycles and maintenance of technological systems C. Control and feedback</p>

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Standard D Physical Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Describe and devise investigations to illustrate Newton’s Laws of inertia, $F=MA$, and equal and opposite attractions.
2. Study the properties and states of matter.
3. Demonstrate potential and kinetic energy.

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EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory.</p>	<p>A. Identify materials that conduct static electricity and demonstrate the static electricity.</p> <p>B. Demonstrate the difference of floating objects in fresh water vs. salt water.</p> <p>C. Investigate to determine why prisms make rainbows.</p>	<p>Physical Science: 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 B. Properties 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 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</p>
<p>Religious Resources:</p> <p>CCC: 341 The beauty of creation reflects the beauty of the creator.</p> <p>CCC: 2293 Science and technology are precious resources for the benefit of all.</p> <p>RC: Creed #8 God made creation with perfect order.</p>	<p>Prayer: Praise God for an ordered world with laws of motion, electromagnetic laws, and energy laws.</p> <p>Thank God for energy transfer and the people who know how to make it happen.</p>	

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Standard E Earth and Space Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Create a model describing the underlying structures of the earth, including rocks, minerals, and forces that cause changes in the earth’s surface. Analyze the geologic and life history of the earth, including change over time.
2. Categorize earth structures as geosphere, biosphere, hydrosphere, and atmosphere, and describe the properties of each.
3. Create an activity that demonstrates stewardship of renewable and non-renewable resources.

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	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory.</p> <p>Religious Resources: CCC: 2415 Take care of God’s creation CCC: 1803-1809 Use the Cardinal virtues to care for God’s creation CCC: 2402 Be good stewards of God’s creation RC: Creed #8 God made creation with perfect order B: Lev 25:23 The land is mine and you are the tenants Read and discuss St. Isidore (Patron of Farmers)</p>	<p>A. Describe God’s gift of the Universe and all (currently known) objects in it.</p> <p>B. Identify Pangaea and what caused the Earth’s land masses to move.</p> <p>C. Explain the role of weather in the changing surface of the Earth.</p> <p>Prayer: Praise God for his gift of abundant water to fill our needs on Earth. Thank God for the Sun and its energy to heat our planet and provide energy for plants grow.</p>	<p>Earth and Space Science 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. A. The Universe B. Gravity, energy, and matter in the Universe C. Earth & the Solar System Core Idea 2: Earth is a complex and dynamic 4.6 billion-year-old system of rock, water, air, and life. A. Continental drift, plate tectonics, and Earth’s internal heat 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 role of water in Earth’s surface processes B. Formation and alteration of rocks and landforms C. Weather and climate D. Biogeology</p>

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Standard F Life and Environmental Science as created by God.

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Identify cell models and the contents of the protoplasm.
2. Study the systems and functions of God’s gift of the human body.
3. Illustrate and cite examples of how changes in the local God-given environment have affected various species of plants and animals.
4. How have plants and animals adapted to changes in the environment over time?

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EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory.</p>	<p>A. What gifts has God provided for humans that allow us to survive in a variety of different climates and environments? B. How does the demonstration of stewardship impact the local environment and the use of natural resources? What happens to the local environment when stewardship is not demonstrated? C. Why are plants and animals necessary to sustain human life?</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 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, & resilience Core Idea 4: Biological evolution explains the unity and diversity of species A. Evidence of common ancestry and diversity B. Genetic variation with a species C. Natural selection and adaptation D. Biodiversity and humans</p>
<p>Religious Resources: CCC: 341 The beauty of creation reflects the beauty of the creator B: 1Cor. 12:1-31 We use our different gifts to work together RC: Life in Christ – Love #2 We are created in God’s image RC: Life in Christ – Dignity #1-4 Because we are made in God’s likeness, we have dignity RC: Creed #8 God made creation with perfect order Diocesan Virtues Program - Respect Resource for teachers: <u>Theology of the Body for Teens</u> Middle School Edition by Brian Butler, Jason Evert, Colin & Aimee MacIver <u>Fearfully and Wonderfully Made</u> by Philip Yancy <u>The Human Person</u> by Brian Bransfield</p>	<p>Prayer: Praise God for the miracle of life. Thank God for the resources he has provided that allow us to live and grow</p>	

Standard G Science Applications that reflect God’s goodness

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. What scientific applications help farmers, lawyers, or teachers do their jobs?
2. What scientific applications can you find in the kitchen of your home.
3. List the inventions that help keep our environment clean.

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EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Students are taught that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory.</p>	<p>A. Identify the occupations that require knowledge of an area of science to perform competently.</p> <p>B. Design a questionnaire to investigate a science or technology related career and send to a known person in that field.</p> <p>C. Illustrate or build a model of a machine that will meet a specified need and evaluate the benefits and drawbacks to their design.</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. 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 C. Optimizing and making tradeoffs 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 C. Control and feedback</p>
<p>Religious Resources: CCC: 2293 Science & technology are resources to benefit all RC: Life in Christ – Vocation #1 God has given each person special gifts RC: Life in Christ – Vocation #3 God has given each person special gifts B: Romans 12:4-8 We have gifts that differ <i>Renewing the Earth</i> – USCCB November 1991 http://www.americancatholic.org/Messenger/Oct2007/default.asp <i>St. Anthony Messenger Press</i>, October 2007</p>	<p>Prayer:</p> <p>Thank God for many people with different gifts who can use their gift at different times, when and where they are needed.</p> <p>Thank God for providing the natural resources necessary to built and create for the benefit of all.</p>	

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Standard H Personal, Social, and Moral Aspects of Science

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Identify personal care products that you use and determine how they relate to the field of science.
2. Using a service agency within your community, (Police, Fire Department, Library) explain the equipment used in the profession and how that equipment is related to the field of science.
3. Transplanting body parts (liver, heart, lungs, kidneys, etc.) has been related to some moral and ethical medical questions. Identify some of those dilemmas.

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<p>Religious Emphasis: Students are taught that creation reflects the infinite beauty of the Creator. Further, scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching. Students are taught that there is an objective, unchanging truth which is distinct from scientific theory</p> <p>Religious Resources: CCC: 2493-2497 Media transmits information for the common good RC: Life in Christ – Conscience #1-3 We have free will and a conscience to help us make good choices RC: Life in Christ – Sin/Choices #1 We have choices RC: Life in Christ – Sin/Choices #10-11 Stewardship http://www.usccb.org/depts.shtml</p> <ul style="list-style-type: none"> • Pro Life Activities – Respect for Life • Science and Human Values <p>National Catholic Bioethics Center http://www.ncbcenter.org/NetCommunity//Ethics</p>	<p>A. Using various media, identify different opinions regarding global issues (health, God-given environmental, safety). Present a credible Catholic science based solution to the issue.</p> <p>B. Discuss our moral responsibility to protect others and ourselves from dangers related to smoking, alcohol, travel, hurricanes, & tornados.</p> <p>Prayers: Thank God for our education and experience which helps us to make good decisions when faced with difficult choices. Thank God for people who protect us when we are in situations that are unfamiliar and out of our control.</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> <ul style="list-style-type: none"> A. Interactions of technology and society B. Interactions of technology and environment C. Analyzing issues involving technology and society

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