

6TH 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 6, the curricular areas that address human sexuality education include:

Standard B – Genetics.

Standard F – Genetics and growth and development.

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. Explain how a solution to a problem should involve a study of the faith as well as reason using good stewardship and the common good to determine tradeoffs and compromise involving ecology and the environment.
2. Describe how a scientific thought has changed over time (e.g. solar system, nutrition guidelines, etc.) and give reasons why these ideas have changed.
3. Using God’s plan, identify organisms in specific environments that have competitive or mutually beneficial interactions.

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: RC: Life in Christ – Dignity 3 & 4 Vocations 4 CCC: 290 God created the heavens & earth CCC: 299 God saw that his creation was good CCC: 301 God cares for his creation CCC: 314 God guides his creation http://www.americancatholic.org/Messenger/Oct2007/default.asp St. Anthony Press Read and discuss St. Albert the Great (Patron of Scientists)</p>	<p>A. In what ways does the sun affect the Earth and all of God’s creations on Earth? B. Explain how natural disasters (‘acts of God’) can affect the land, sea, and skies along with the plants and animals.</p> <p>Prayer: Ask God for the gift of wisdom which allows us to make good choices when faced with difficult decisions. Thank God for his plan of creation that provides environments that support and nurture organisms.</p>	<p>Life Science: 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</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 and the Solar System</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. A. Defining and researching technological problems B. Generating and evaluating solutions C. Optimizing and making tradeoffs</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. Explain how the people, cultures, and environmental conditions led to scientific developments in plant growth, hybrid plants, and hybrid crops.
2. Identify evidence that is used in determining the history of God’s creation, the Earth.
3. Study specific chemical changes and explain how they benefit the world God gave us.

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.</p>	<p>A. Discuss the pros and cons of fertilizer as it affects produce, the environment, populations, and God’s plan of life. B. How do fossils contribute to the study of science?</p>	<p>Life Science: Core Idea 4: Biological evolution explains the unity and diversity of species. A. Evidence of common ancestry and diversity B. Genetic variation within a species C. Natural selection and adaptation D. Biodiversity and humans</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. A. Continental drift, plate tectonics, and Earth’s internal heat B. Earth’s materials C. Earth’s history</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</p>
<p>Science: RC: Life in Christ-Sin/Choices #10 Stewardship B: 1 Corinthians 12:4-11 Everyone has a different gift: wisdom, healing, prophecy, etc.</p> <p>Read and discuss St. Catherine of Siena (Patron of Nurses)</p>	<p>Prayer: Thank God for the gift of knowledge and understanding that allows some scientists to determine the best conditions for maximum crop production. Thank God for His gifts of elements that can be combined to make useful mixtures and solutions in this world.</p>	

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Standard C Science Inquiry that reflect God’s created order

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Design an experiment that addresses a student generated question.
2. Predict an outcome to the experiment.
3. Collect evidence to support an answer to the question.
4. Analyze the data and answer the question.

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Text Alignment	Quarter / Date Taught				
	1	2	3	4	Assessment

EMPHASIS & RESOURCES	ACTIVITIES	COMMON CORE STANDARDS
<p>Religious Emphasis: Scientific study ought to inspire the respect, awe and submission of man’s intellect and willingness to tell the truth of Catholic Church Teaching.</p>	<p>A. Using your God given gift of intelligence, describe an experiment that would determine which fabric would be best for winter clothing. B. What kind of evidence would you need for determining the effectiveness of laundry detergent?</p>	<p>Engineering 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</p>
<p>Religious Resources: B: John 8:32 The truth will set you free. CCC: 2292-2295 Use research, experiments, and inventions for the common good. Diocesan Virtues Program – Fortitude Read about and discuss Robert Grosseteste (creator of the steps of scientific method)</p>	<p>Prayer: Thank God for the gift of sight to see physical and chemical changes during experimentation. Thank God for the gift of ‘free will’ to choose different paths to use in collecting experimental evidence.</p>	

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Standard D Physical Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
Using God’s gift of energy,
1. Describe the sun’s role as the source of earth’s energy.
2. Compare and contrast electromagnetic and mechanical energy.
3. Create a model that illustrates and explains potential and kinetic energy.
4. Describe and investigate the electromagnetic spectrum.
5. Using the change of states of matter model, describe situations where the effects of these changes appear in real life situations.

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EMPHASIS & RESOURCES	ACTIVITES	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: B: John 2:1 – 11 Turning water into wine Read about and discuss: Bede, the Venerable (moon’s cycles and spring equinox) Thomas Bradwardine (mechanics, velocity and acceleration) The Society of Jesus /Jesuits (experimental physics, mathematics, astronomy)</p>	<p>A. How is conversion of energy like conversion through faith?</p> <p>B. Identify technological devices that are attempting to harness the energy of the sun.</p> <p>Prayer: Thank God for the gift of the Sun which provides heat, light, and energy to our world. Thank God for the gift of energy and for the medical scientists that study energy in humans.</p>	<p>Life Science: 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</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 on of hundreds of billions of galaxies in the Universe. A. The Universe B. Gravity, energy, and matter in the Universe C. Earth and the Solar System</p> <p>Physical Science 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. Relationships between energy and forces.</p>

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Standard E Earth and Space Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Describe the affects of heat and cooling on the movement of water in the ocean.
2. Analyze the impact of ocean currents on weather and climate (including ideas such as El Nino, hurricanes, and the melting of polar ice caps).

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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.</p>	<p>A. Identify God’s plan of cycles of</p> <ul style="list-style-type: none"> • Water. • Nitrogen. • Energy. • Rocks. <p>B. How are the cycles connected?</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>Science Resources: B: Matthew 16:1-3 Red sky at night ... Red sky in the morning... B: Ecclesiastes 3:1-8 Everything has its time B: Ecclesiastes 3:11 Past and future are in their minds Read and discuss St. Isadore (Patron of Farmers) – nitrogen cycle Read and discuss John the Baptist (the use of water)</p>	<p>Prayer: Thank God for his plan to naturally recycle our water resources. Thank God for his plan of rebuilding the earth’s surface through the rock cycle.</p>	

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Standard F Life and Environmental Science as created by God

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Choose and present an ecosystem that shows ecological balances and imbalances, and describes the flow of energy through the system.
2. Present a theory of how stewardship of our natural resources will impact our lives and the lives of those around us.

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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: RC: Creed #7 God gave Adam and Eve everything they needed RC: Life in Christ – Sin/Choices #10 Stewardship and #12 Stewardship http://www.usccb.org/depts.shtml</p> <ul style="list-style-type: none"> • Justice, Peace, and Human Development • Pro Life Activities – Respect for Life • Science and Human Values <p>Read and discuss St. Peter (Patron of Fishermen) – as it relates to weather's affect on the occupation and the resources Read and discuss St. Francis (Patron of Ornithologists) Read and discuss Blessed Kateri Tekawitha – as she relates to wise use of natural resources</p>	<p>A. Study the growth and development of plants and animals. B. Identify the influence of stewardship on the environment that God gave us. C. Name ecosystems and identify how living things adapt to the environment within each ecosystem.</p> <p>Prayer: Praise God for all living things.</p> <p>Thank God for the variety of ecosystems and the different species that inhabit the ecosystems.</p>	<p>Life Science Core Idea 1; Organisms have structures and functions that facilitate their life processes, growth, and reproduction.</p> <ul style="list-style-type: none"> A. Structure and function B. Growth and development of organisms C. Organization for matter and energy flow in organisms <p>Core Idea 2: Organisms have mechanisms and processes for passing traits and variations of traits from one generation to the next.</p> <ul style="list-style-type: none"> A. Inheritance traits B. Variation of traits <p>Core Idea 3: Organisms and populations of organisms obtain necessary resources from their environment which includes other organisms and physical factors.</p> <ul style="list-style-type: none"> A. Independent relationships in ecosystems B. Flow of matter and energy transfer in ecosystems C. Ecosystems dynamics, stability, and resilience <p>Core Idea 4: Biological evolution explains the unity and diversity of species</p> <ul style="list-style-type: none"> A. Evidence of Common Ancestry and diversity B. Genetic variation within a species C. Natural selection and adaptation D. Biodiversity and humans

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Standard G Science Applications that reflect God’s goodness

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Explore scientific careers including the skills, academic preparation, and technological knowledge required.
2. Design a machine or model for a specific purpose that is made up of two or more simple machines.
3. Gather information on recent scientific and/or technological discoveries using a variety of resources to identify positive and negative stewardship efforts on the God-given environment.

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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: RC: Life in Christ – Sin/Choices #10 Stewardship CCC: 2292-2295 Use research, inventions, and experiments for the good of others.</p>	<p>A. Research a machine and explain what need it filled and how it works. Also identify the inventor and describe the gifts God gave him to create the machine. B. List the scientific inventions found in the classroom. Which inventions are absolutely necessary? C. Identify areas of need that could use a new invention to make the world a better place.</p> <p>Prayer: Thank God for giving scientists and inventors special gifts that can be used to help the world. Thank God for the gifts of persistence and perseverance which are needed when trying to perfect a new invention.</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. 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 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.</p>

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Standard H Personal, Social, and Moral Aspects of Science

DIOCESAN REQUIREMENTS
CONCEPTS, SKILLS, & CATHOLIC FAITH CONNECTIONS
1. Identify some State laws that are meant to protect our personal safety. What scientific evidence was used to determine the need for the State law, and how was the public made aware of the new law?
2. Because we have technology, should we always use technology?

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<p>Religious Resources: RC: Life in Christ – Conscience/Dignity #1 - #2 We have dignity and self-respect RC: Life in Christ – Love #2 We must care for our body Read and discuss St. Camillus del Lellis (Patron of A.I.D.S) Read and discuss Venerable Matt Talbott (Patron of Alcohol and Addictions) St. Paul, Oscar Romero - Morality</p>	<p>Prayer: Thank God for advances in medical technology that are available we need them. Thank God for personal hygiene products that were invented to make us look good, smell good, and feel good.</p>	<p>Engineering and Technology 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 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</p>

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