

Catholic Identity Standards

1.0 Catholic identity standards. The student understands and integrates the content of what is learned into their faith and daily life.

Ways to Grow

- 1.0A recognize that every human life is sacred because each person is created and loved by God
- 1.0B describe ways to take part in/be responsible to the community by discerning and using our God-given gifts
- 1.0C recognize and oppose unjust social structures and work toward justice for all
- 1.0D see God at work in all things and as expressed in the sacraments
- 1.0E connect scripture, tradition, and the models of Mary and the saints to guide, grow, and deepen faith

Scientific and Engineering Practices

1.1 The student asks questions, identifies problems, and plans and safely conducts classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models.

- 1.1A ask questions and define problems based on observations or information from text, phenomena, models, or investigations
- 1.1B use scientific practices to plan and conduct simple descriptive investigations and use engineering practices to design solutions to problems
- 1.1C identify, describe, and demonstrate safe practices during classroom and field investigations
- 1.1D use tools to observe, measure, test, and compare
- 1.1E collect observations and measurements as evidence
- 1.1F record and organize data using pictures, numbers, words, symbols, and simple graphs
- 1.1G develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem

Scientific and Engineering Practices

1.2 The student analyzes and interprets data to derive meaning, identify features and patterns, and discover relationships or correlations to develop evidence-based arguments or evaluate designs.

- 1.2A identify basic advantages and limitations of models such as their size, properties, and materials
- 1.2B analyze data by identifying significant features and patterns
- 1.2C use mathematical concepts to compare two objects with common attributes
- 1.2D evaluate a design or object using criteria to determine if it works as intended

Scientific and Engineering Practices

1.3 The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions.

- 1.3A develop explanations and propose solutions supported by data and models
- 1.3B communicate explanations and solutions individually and collaboratively in a variety of settings and formats
- 1.3C listen actively to others' explanations to identify important evidence and engage respectfully in scientific discussion

Scientific and Engineering Practices

1.4 The student knows the contributions of scientists and recognizes the importance of scientific research and innovation for society.

- 1.4A explain how science or an innovation can help others
- 1.4B identify scientists and engineers such as Katherine Johnson, Sally Ride, and Ernest Just and explore what different scientists and engineers do

Recurring Concepts and Themes

1.5 The student uses recurring themes and concepts to make connections across disciplines.

- 1.5A identify and use patterns to describe phenomena or design solutions
- 1.5B investigate and predict cause-and-effect relationships in science
- 1.5C describe the properties of objects in terms of relative size (scale) and relative quantity
- 1.5D examine the parts of a whole to define or model a system
- 1.5E identify forms of energy and properties of matter
- 1.5F describe the relationship between structure and function of objects, organisms, and systems
- 1.5G describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same

Matter and its Properties

1.6 The student knows that objects have physical properties that determine how they are described and classified.

| Applied Standards | | Supporting Standards | |
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| 1.6A | classify objects by observable physical properties, including, shape, color, and texture, and attributes such as larger and smaller and heavier and lighter | 1.6B | explain and predict changes in materials caused by heating and cooling |
| 1.6C | demonstrate and explain that a whole object is a system made of organized parts such as a toy that can be taken apart and put back together | | |

Force, Motion, and Energy

1.7 The student knows that forces cause changes in motion and position in everyday life.

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| 1.7A | explain how pushes and pulls can start, stop, or change the speed or direction of an object's motion | 1.7B | plan and conduct a descriptive investigation that predicts how pushes and pulls can start, stop, or change the speed or direction of an object's motion |
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Force, Motion, and Energy

1.8 The student knows that energy is everywhere and can be observed in everyday life.

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| 1.8A | investigate and describe applications of heat in everyday life such as cooking food or using a clothes dryer | | |
| 1.8B | describe how some changes caused by heat may be reversed such as melting butter and other changes cannot be reversed such as cooking an egg or baking a cake | | |

Earth and Space

1.9 The student knows that the natural world has recognizable patterns.

1.9.DS1 display a sense of wonder and delight about the natural universe and its beauty*

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| 1.9A | describe and predict the patterns of seasons of the year such as order of occurrence and changes in nature | | |
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Earth and Space

1.10 The student knows that the natural world includes earth materials that can be observed in systems and processes.

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| 1.10A | investigate and document the properties of particle size, shape, texture, and color and the components of different types of soils such as topsoil, clay, and sand | | |
| 1.10B | investigate and describe how water can move rock and soil particles from one place to another | | |
| 1.10C | compare the properties of puddles, ponds, streams, rivers, lakes, and oceans, including color, clarity, size, shape, and whether it is freshwater or saltwater | | |

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| 1.10D | describe and record observable characteristics of weather, including hot or cold, clear or cloudy, calm or windy, and rainy or icy, and explain the impact of weather on daily choices | |
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Earth and Space

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| 1.11 The student knows that earth materials and products made from these materials are important to everyday life. | | |
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| 1.11.DS2 share concern and care for the environment as part of God's creation* | | |
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| 1.11A | identify and describe how plants, animals, and humans use rocks, soil, and water | |
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| 1.11B | explain why water conservation is important | |
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| 1.11C | describe ways to conserve water such as turning off the faucet when brushing teeth and protect natural sources of water such as keeping trash out of bodies of water |
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Organisms and Environments

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| 1.12 The student knows that the environment is composed of relationships between living organisms and nonliving components. | | |
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| 1.12A | classify living and nonliving things based upon whether they have basic needs and produce young | |
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| 1.12B | describe and record examples of interactions and dependence between living and nonliving components in terrariums or aquariums | |
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| 1.12C | identify and illustrate how living organisms depend on each other through food chains | |
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Organisms and Environments

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| 1.13 The student knows that organisms resemble their parents and have structures and undergo processes that help them interact and survive within their environments. | | |
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| 1.13A | identify the external structures of different animals and compare how those structures help different animals live, move, and meet basic needs for survival | |
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| 1.13.IS4 | give examples of the beauty evident in God's creation* |
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| 1.13B | record observations of and describe basic life cycles of animals, including a bird, a mammal, and a fish | |
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| 1.13C | compare ways that young animals resemble their parents |
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