Parent Guide

Grade Three Science Curriculum

Diocese of Cleveland

Below is a list of the skills your child will be taught in Grade Three.

As parents, you are encouraged to support the work of your child's teacher in helping your child acquire each of these skills.

Capacities of the Literate Individual	
	They demonstrate independence.
	They build strong content knowledge.
	They respond to the varying demands of audience, task, purpose.
	They comprehend as well as critique.
	They value evidence.
	They use technology and digital media strategically and capably.
	They come to understand other perspectives and cultures.
Scientific Process and Inquiry	
Scientific Inquiry and Application (Ohio Revised Science Standards and Model Curriculum)	
	Observe and ask questions about the natural environment.
	Plan and conduct simple investigations.
	Employ simple equipment and tools to gather data and extend the senses.
	Use appropriate mathematics with data to construct reasonable explanations.
	Communicate about observations, investigations and explanations.
	Review and ask questions about the observations and explanations of others.
Scientific Process (Diocesan Curriculum)	
	Identify the scientific process and recognize the steps in the process (hypothesis, experiment, conclusion).
	Apply use of senses to investigations (sight, sound, touch, smell, and taste as well as prior knowledge).
	Follow step by step directions.
	Ask, explore, and generate testable questions collaboratively.
	Use a simple design plan to solve a problem and describe possible solutions.
	Discuss observations and measurements made by self and others.
	Communicate scientific findings to others through a variety of methods (written, oral, recorded and pictorial observations).
	Know that scientific inquiry generally works the same way under the same conditions.
Scientific Interpretation (Diocesan Curriculum)	
	Read and interpret simple tables and graphs produced by self/others.
	Record and organize observations (journals, charts and tables).
	Evaluate explanations/ observations with others to provide opportunities to ask questions, examine evidence and suggest alternative explanations.
Scientific Tools and Safety (Diocesan Curriculum)	
	Use appropriate safety procedures in conducting experiments to answer questions.
	Select appropriate tools to measure and record in metric and U.S. customary units.
	Identify and apply relevant safety procedures.
Ethical Practices Reflecting Catholic Social Justice Teaching (Diocesan Curriculum)	
	Interact with living things and the environment in ways that promote respect.
	Explain why keeping records of investigations and observations is important.

Ethical Practices Reflecting Catholic Social Justice Teaching (Continued)	
	Demonstrate the understanding that using technology can have helpful and/or harmful results.
	Demonstrate that in science it is helpful to work as a team and share findings with others.
	Review Safety Procedures.
Earth and Space Science – Earth's Resources	
	Earth's nonliving resources have specific properties.
	a. Soil is composed of pieces of rock, organic material, water and air, and has characteristics that can be measured and observed.
	b. Rocks have unique characteristics that allow them to be sorted and classified.
	c. Rocks form in different ways.
	d. Air and water are nonliving resources.
	Earth's resources can be used for energy.
	a. Many of Earth's resources can be used for the energy they contain.
	b. Renewable energy is an energy resource, such as wind, water or solar energy, that is replenished within a short amount of time by natural processes.
	c. Nonrenewable energy is an energy resource, such as coal or oil, that is a finite energy source that cannot be replenished in a short amount of time.
	Some of Earth's resources are limited.
	a. Some of Earth's resources become limited due to overuse and/or contamination.
	b. Reducing resource use, decreasing waste and/or pollution, recycling and reusing can help conserve these resources.
Life Science – Behaviors, Growth, and Change	
	Individuals of the same kind differ in their traits and sometimes the differences give individuals an advantage in surviving and reproducing.
	a. Plants and animals have physical features that are associated with the environments where they live.
	b. Plants and animals have certain physical or behavioral characteristics that improve their chances of surviving in particular environments.
	c. Individuals of the same kind have different characteristics that they have inherited.
	d. Different characteristics give individuals an advantage in surviving and reproducing.
	Plants and animals have life cycles that are part of their adaptations for survival in their natural environments.
	a. Over the whole earth, organisms are growing, reproducing, dying and decaying.
	b. The details of the life cycle are different for different organisms, which affects their ability to survive and reproduce in their natural environments.
Physical Science – Matter and Forms of Energy	
	All objects and substances in the natural world are composed of matter.
	a. Matter takes up space and has mass.
	Matter exists in different states, each of which has different properties.
	a. The most common states of matter are solids, liquids and gases.
	b. Shape and compressibility are properties that can distinguish between the states of matter.
	c. One way to change matter from one state to another is by heating or cooling.
	d. Matter exists in a variety of forms and can be classified by physical properties.
	d. Matter can be mixed and separated.
	Heat, electrical energy, light, sound and magnetic energy are forms of energy.
	a. There are many different forms of energy.
	b. Energy is the ability to cause motion or create change.

Literacy in Science & Technical Subjects – Reading Informational Text	
	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
	Determine the main idea of a text; recount the key details and explain how they support the main idea.
	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
	Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
	Compare and contrast the most important points and key details presented in two texts on the same topic.
	By the end of the year, read and comprehend informational texts, including science and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.
Literacy in Science & Technical Subjects – Writing	
	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
	Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
	Develop the topic with facts, definitions, and details.
	Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.
	Provide a concluding statement or section.
	With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.
	Conduct short research projects that build knowledge about a topic.
	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
Literacy in Science & Technical Subjects – Speaking and Listening	
	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
	Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
	Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
	Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
	Explain their own ideas and understanding in light of the discussion.
	Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
	Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Notes:

National Governors Association Center for Best Practices, Council of Chief State School Officers. *Common Core State Standards*. National Governors Association Center for Best Practices, Council of Chief State School Officers, Washington, D.C., 2010.