Parent Guide

Grade Two Science Curriculum

Diocese of Cleveland

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

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)	
	Share in the task of designing and implementing an investigation/experiment utilizing the scientific process (hypothesis, experiment, and conclusion).
	Predict how building or trying something new might affect other people and the environment.
	Communicate orally, pictorially, or in written form the design process used to make something.
	Ask, explore, and generate "how can I/we" or "how do you know" questions.
	Share explanations with others to provide opportunities to ask questions, examine evidence, and suggest alternative explanations.
	Describe that scientific experiments generally work the same way under the same conditions.
	Explain why scientists review and ask questions about the results of other scientists' work.
	Demonstrate that in science it is helpful to work with a team and share findings with others.
Scientific Interpretation (Diocesan Curriculum)	
	Use evidence to develop explanations of scientific investigations.
	Recognize that explanations are generated in response to data.
Scientific Tools and Safety (Diocesan Curriculum)	
	Use appropriate safety procedures when completing scientific investigations/experiments.
	Use the correct tools and simple equipment/instruments because it is vital to safe and effective work.
	Estimate and measure properties of objects in U.S. customary and metric units using tools.
	Use whole numbers to order, count, identify, measure, and describe.
Ethical Practices Reflecting Catholic Social Justice Teaching (Diocesan Curriculum)	
	Interact with living things and the environment in ways that promote respect.

Ethical Practices Reflecting Catholic Social Justice Teaching (Continued)	
	Compare/contrast the benefits and risks of developing and using technology.
	Investigate why people make new products or invent new ways to meet their individual wants and needs.
	Predict ways in which using the solution to a problem might affect other people and the environment.
	Discover how men and women everywhere have found practicing science rewarding both as a career and in their daily lives.
Earth and Space Science – Atmosphere	
	The atmosphere is made up of air.
	a. Air has properties that can be observed and measured.
	b. Air takes up space (has volume) and has mass.
	c. Heating and cooling of air (transfer of energy) results in movement of air (wind).
	d. The transfer of energy in the atmosphere causes air movement, which is felt as wind.
	e. Wind speed and direction can be measured.
	Water is present in the air.
	a. Water is present in the air as clouds, steam, fog, rain, ice, snow, sleet or hail.
	b. When water in the air cools (change of energy), it forms small droplets of water that can be seen as clouds.
	c. Water can change from liquid to vapor in the air and from vapor to liquid.
	d. The water droplets can form into raindrops.
	e. Water droplets can change to solid by freezing into snow, sleet or hail.
	f. Clouds are moved by flowing air.
Life Science – Interactions within Habitats	
	Living things cause changes on Earth.
	a. Living things function and interact with their physical environments.
	b. Living things cause changes in the environments where they live.
	c. Changes made by living things can be very noticeable or slightly noticeable, fast or slow.
	Some kinds of individuals that once lived on Earth have completely disappeared, although they were something like others that are alive today.
	a. Living things that once lived on Earth no longer exist.
	b. Their basic needs were no longer met.
Physical Science – Changes in Motion	
	Forces change the motion of an object.
	a. Motion can increase, change direction or stop depending on the force applied.
	b. The change in motion of an object is related to the size of the force.
	c. Some forces act without touching, such as using a magnet to move an object or objects falling to the ground.
	d. Forces change the motion of an object.
	Basic simple machines are of various types and have different uses (levers, wedges, screws, pulley, wheels, incline planes).
Literacy in Science & Technical Subjects – Reading Informational Text	
	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
	Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text.

	Literacy in Science & Technical Subjects – Reading Informational Text (continued)
	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
	Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
	Describe how reasons support specific points the author makes in a text.
	Compare and contrast the most important points presented by two texts on the same topic.
	By the end of year, read and comprehend informational text including science and technical texts in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.
	Literacy in Science & Technical Subjects – Writing
	Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
	Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.
	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
	Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
	Recall information from experiences or gather information from provided sources to answer a question.
	Literacy in Science & Technical Subjects – Speaking and Listening
	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
	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).
	Build on others' talk in conversations by linking their comments to the remarks of others.
	Ask for clarification and further explanation as needed about the topics and texts under discussion.
	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
	Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
	Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
	Produce 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.