Parent Guide

Kindergarten Science Curriculum

Diocese of Cleveland

Below is a list of the skills your child will be taught in Kindergarten.
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)	
	Develop an awareness of the scientific process (hypothesis, experiment, conclusion).
	Ask, explore, and generate "what if" questions.
	Use the five senses to make observations about the natural world.
	Make an observation and communicate through a detailed drawing.
	Recognize that new observations can lead to a new hypothesis.
	Know that building requires a plan, the ability to work together, trial and error.
Scientific Interpretation (Diocesan Curriculum)	
	Explore that objects can be sorted as "natural" or "man-made."
	Make pictographs and use them to describe observations and draw conclusions.
	Recognize that people are more likely to accept your ideas if you can give valid reasons for them.
Scientific Tools and Safety (Diocesan Curriculum)	
	Explore that each kind of tool has an intended use, which can be helpful or if misused can be harmful.
	Use appropriate safety procedures when completing scientific investigations/experiments.
	Recognize that numbers can be used to count collections of things.
	Identify and use appropriate tools and simple equipment/instruments to safely gather scientific data.
	Measure the lengths of objects using U.S. customary and metric units of measurement.
Ethical Practices Reflecting Catholic Social Justice Teaching (Diocesan Curriculum)	
	Interact with living things and the environment in ways that promote respect.
	Demonstrate ways responsible science practices affect people in accordance with social justice teachings.

Ethical Practices Reflecting Catholic Social Justice Teaching (Continued)	
	Explore that some materials can be used over and over again
	Explore technology that affects our everyday life.
	Develop an awareness of careers in science.
Earth and Space Science – Daily and Seasonal Changes	
	Weather changes are long-term and short-term.
	a. Weather changes occur throughout the day and from day to day.
	b. Air is a nonliving substance that surrounds Earth and wind is air that is moving.
	c. Wind, temperature and precipitation can be used to document short-term weather changes that are observable.
	d. Yearly weather changes (seasons) are observable patterns in the daily weather changes.
	The moon, sun and stars can be observed at different times of the day or night.
	a. The moon, sun and stars are in different positions at different times of the day or night.
	b. Sometimes the moon is visible during the night, sometimes the moon is visible during the day, and at other times, the moon is not visible at all.
	c. The observable shape of the moon changes in size very slowly throughout each day of every month.
	d. The sun is visible only during the day.
	e. The sun's position in the sky changes in a single day and from season to season.
	f. Stars are visible at night.
	g. Some stars are visible in the evening or morning.
	h. Some stars are brighter than others.
Life Science – Physical and Behavioral Traits of Living Things	
	Living things are different from nonliving things.
	a. Living things include anything that is alive or has ever been alive.
	b. Living things have specific characteristics and traits. Living things grow and reproduce.
	c. Living things are found almost everywhere in the world.
	d. There are different kinds of living things in different places.
	Living things have physical traits and behaviors, which influence their survival.
	a. Living things are made up of a variety of structures.
	b. Some structures and behaviors influence the survival of living things.
Physical Science – Properties of Everyday Objects and Materials	
	Objects and materials can be sorted and described by their properties.
	a. Objects can be sorted and described by the properties of the materials from which they are made.
	b. Some of the properties can include color, size and texture.
	Some objects and materials can be made to vibrate to produce sound.
	a. Sound is produced by touching, blowing or tapping objects.
	b. Sounds that are produced vary depending on the properties of objects.
	c. Sound is produced when objects vibrate.
	d. Use standard measuring tools (e.g., thermometer, ruler).
	e. Use non-standard measuring tools (e.g., linking cubes, paper clips).

Literacy in Science & Technical Subjects – Reading Informational Text	
	With prompting and support, ask and answer questions about key details in a text.
	With prompting and support, identify the main topic and retell key details of a text.
	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
	With prompting and support, ask and answer questions about unknown words in a text.
	With prompting and support, describe the relationship between illustrations and the text in which they appear.
	With prompting and support, identify basic similarities in and differences between two texts on the same topic.
Literacy in Science & Technical Subjects – Writing	
	Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
	Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events; tell about the events in the order in which they occurred, and provide a reaction to what happened.
	With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.
	Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).
	With guidance and support from adults, 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 kindergarten topics and texts with peers and adults in small and larger groups.
	Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).
	Continue a conversation through multiple exchanges.
	Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
	Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
	Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
	Add drawings or other visual displays to descriptions as desired to provide additional detail.
	Speak audibly and express thoughts, feelings, and ideas clearly.

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.