

**Illinois School for the Deaf
Course Curriculum**

Course Title: Science Grades 3-5 Cycle: Year 1

Course Agenda:

Topic	Length of Unit	NGSS Standards	ELA CCSS Standards – Reading Informational Text			ELA CCSS Standards – Writing
			Grade 3	Grade 4	Grade 5	Grade 4
The Scientific Method (Problem, hypothesis, materials, procedure, data, results, conclusions, applications)	Approx. 3 weeks	3-5-ETS1-1., 3-5-ETS1-2., 3-5-ETS1-3.	RL.3.1, RL.3.2, RL.3.3, RL.3.4, RL.3.5, RL.3.6, RL.3.7, RL.3.8, RL.3.9, RL.3.10	RL.4.1, RL.4.2, RL.4.3, RL.4.4, RL.4.5, RL.4.6, RL.4.7, RL.4.8, RL.4.9, RL.4.10	RL.5.1, RL.5.2, R.5.3, RL.5.4, RL.5.5, RL.5.6, RL.5.7, RL.5.8, RL.5.9, RL.5.10	W.4.1, W.4.2, W.4.3, W.4.4, W.4.5, W.4.6, W.4.7, W.4.8, W.4.9, W.4.9a, W.4.9b
Planets and the Solar System (Cycles/patters of the solar system, Order of the planets, Moon phases, Star patterns/ constellations)	Approx. 5 weeks	5-PS2-1., 5-ESS1-1., 5-ESS1-2.				
Ecosystems/Biomes (Food web, producers, decomposers, consumers, predators, prey, Tundra, desert, grassland, deciduous forest, coniferous forest, tropics, Recycling)	Approx. 5 weeks	5-PS3-1., 5-LS1-1., 5-LS2-1.				
Forces and Motion (How things move, Work and machines)	Approx. 5 weeks	3-PS2-1., 3-PS2-2., 3-PS2-3., 3-PS2-4., 4-PS3-1., 4-PS3-2., 4-PS3-3. ,4-PS3-4., 4-ESS3-1.				

Assessments: May include the following: daily classroom work, participation, homework, written and oral quizzes, tests, quarterly exams, final exam, projects, etc.

Course Materials: May include texts, workbooks, assigned reading materials, supplementary materials, etc.

3rd Grade Common Core Science Standards

- 3-PS2-1:** Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
- 3-PS2-2:** Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.
- 3-PS2-3:** Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.
- 3-PS2-4:** Define a simple design problem that can be solved by applying scientific ideas about magnets.
- 3-LS1-1:** Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- 3-LS2-1:** Construct an argument that some animals form groups that help members survive.
- 3-LS3-1:** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.
- 3-LS3-2:** Use evidence to support the explanation that traits can be influenced by the environment.
- 3-LS4-1:** Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
- 3-LS4-2:** Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
- 3-LS4-3:** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 3-LS4-4:** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
- 3-ESS2-1:** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- 3-ESS2-2:** Obtain and combine information to describe climates in different regions of the world.
- 3-ESS3-1:** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.
- 3-5-ETS1-1:** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2:** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- 3-5-ETS1-3:** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

4th Grade Common Core Science Standards

- 4-PS3-1:** Use evidence to construct an explanation relating the speed of an object to the energy of that object.
- 4-PS3-2:** Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
- 4-PS3-3:** Ask questions and predict outcomes about the changes in energy that occur when objects collide.
- 4-PS3-4:** Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.
- 4-PS4-1:** Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
- 4-PS4-2:** Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.
- 4-PS4-3:** Generate and compare multiple solutions that use patterns to transfer information.
- 4-LS1-1:** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 4-LS1-2:** Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.
- 4-ESS1-1:** Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.
- 4-ESS2-1:** Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
- 4-ESS2-2:** Analyze and interpret data from maps to describe patterns of Earth's features.

4-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

4-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

5th Grade Common Core Science Standards

5-PS1-1: Develop a model to describe that matter is made of particles too small to be seen.

5-PS1-2: Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.

5-PS1-3: Make observations and measurements to identify materials based on their properties.

5-PS1-4: Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

5-PS2-1: Support an argument that the gravitational force exerted by Earth on objects is directed down.

5-PS3-1: Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

5-LS1-1: Support an argument that plants get the materials they need for growth chiefly from air and water.

5-LS2-1: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

5-ESS1-1: Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.

5-ESS1-2: Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night and the seasonal appearance of some stars in the night sky.

5-ESS2-1: Develop a model using an example to describe ways to geosphere, biosphere, hydrosphere, and/or atmosphere.

5-ESS2-2: Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

3rd Grade ELA Common Core Standards

Key Ideas and Details

RI.3.1: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

RI.3.2: Determine the main idea of a text; recount the key details and explain how they support the main idea.

RI.3.3: 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.

Craft and Structure

RI.3.4: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*.

RI.3.5: Use text features and search tools to locate information relevant to a given topic efficiently.

RI.3.6: Distinguish their own point of view from that of the author of a text.

Integration of Knowledge and Ideas

RI.3.7: Use information gained from illustrations and the words in a text to demonstrate understanding of the text.

RI.3.8: Describe the logical connection between particular sentences and paragraphs in a text.

RI.3.9: Compare and contrast the most important points and key details presented in two texts on the same topic.

RI.3.10: By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2-3 text complexity band independently and proficiently.

4th Grade ELA Common Core Standards

Key Ideas and Details

RI.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RI.4.2: Determine the main idea of a text and explain how it is supported by key details; summarize the text.

RI.4.3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Craft and Structure

RI.4.4: Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.

RI.4.5: Describe the overall structure of events, ideas, concepts, or information in a text or part of a text.

RI.4.6: Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

Integration of Knowledge and Ideas

RI.4.7: Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.

RI.4.8: Explain how an author uses reasons and evidence to support particular points in a text.

RI.4.9: Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

RI.4.10: By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

5th Grade ELA Common Core Standards

Key Ideas and Details

RI.5.1: Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

RI.5.2: Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

RI.5.3: Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Craft and Structure

RI.5.4: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*.

RI.5.5: Compare and contrast the overall structure of events, ideas, concepts, or information in two or more texts.

RI.5.6: Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

Integration of Knowledge and Ideas

RI.5.7: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

RI.5.8: Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

RI.5.9: Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

RI.5.10: By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4-5 text complexity band independently and proficiently.

4th Grade Common Core ELA Writing Standards

Text Type and Purposes

W.4.1: Write opinion pieces on topics or texts supporting a point of view with reasons and information.

W.4.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W.4.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Production and Distribution of Writing

W.4.4: Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

W.4.5: With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W.4.6: With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Research to Build and Present Knowledge

W.4.7: Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W.4.8: Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

W.4.9a: Apply *grade 4 Reading standards* to literature.

W.4.:9b: Apply *grade 4 Reading standards* to informational texts.