

Campbell County Schools
Fourth Grade- Science
3rd Nine Weeks-at-a-Glance

The following skills should be the focus for this Nine Weeks:

Ongoing	
Embedded Inquiry	GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data. <ul style="list-style-type: none"> • SPI 0407.Inq.1 Select an investigation that could be used to answer a specific question. GLE 0407.Inq.2 Select and use appropriate tools and simple equipment to conduct an investigation. GLE 0407.Inq.3 Organize data into appropriate tables, graphs, drawings, or diagrams. GLE 0407.Inq.4 Identify and interpret simple patterns of evidence to communicate the findings of multiple investigations. GLE 0407.Inq.5 Recognize that people may interpret the same results in different ways. GLE 0407.Inq.6 Compare the results of an investigation with what scientists already accept about this question.
Embedded Technology and Engineering	GLE 0407.T/E.1 Describe how tools, technology, and inventions help to answer questions and solve problems. <ul style="list-style-type: none"> • SPI 0407.T/E.1 Select a tool, technology, or invention that was used to solve a human problem. GLE 0407.T/E.2 Recognize that new tools, technology, and inventions are always being developed. <ul style="list-style-type: none"> • SPI 0407.T/E.2 Recognize the connection between a scientific advance and the development of a new tool or technology. GLE 0407.T/E.3 Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem. GLE 0407.T/E.4 Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies. GLE 0407.T/E.5 Apply a creative design strategy to solve a particular problem generated by societal needs and wants.
Standard 7: The Earth	
Geologic Change	GLE 0407.7.1 Investigate how the earth's geological features change as a result of erosion (weathering and transportation) and deposition. <ul style="list-style-type: none"> • SPI 0407.7.1 Design a simple model to illustrate how the wind and movement of water alter the earth's surface.
Earth Resources	GLE 0407.7.2 Evaluate how some earth materials can be used to solve human problems and enhance the quality of life. <ul style="list-style-type: none"> • SPI 0407.7.2 Analyze how different earth materials are utilized to solve human problems or improve the quality of life.
Standard 8: The Atmosphere	
Water Cycle	GLE 0407.8.1 Recognize the major components of the water cycle. <ul style="list-style-type: none"> • SPI 0407.8.1 Identify the basic features of the water cycle and describe their importance to life on earth.
Weather and Climate	GLE 0407.8.2 Differentiate between weather and climate. <ul style="list-style-type: none"> • SPI 0407.8.2 Distinguish between weather and climate.
Standard 11: Motion	
Motion	GLE 0407.11.3 Investigate the relationship between the speed of an object and the distance traveled during a certain time period. <ul style="list-style-type: none"> • SPI 0407.11.3 Determine the relationship between speed and distance traveled over time.

Embedded Inquiry - Checks for Understanding

- ✓ **0407.Inq.1** Identify specific investigations that could be used to answer a particular question and identify reasons for this choice.
- ✓ **0407.Inq.2** Identify tools needed to investigate specific questions.
- ✓ **0407.Inq.3** Maintain a science notebook that includes observations, data, diagrams, and explanations.
- ✓ **0407.Inq.4** Analyze and communicate findings from multiple investigations of similar phenomena to reach a conclusion.

Embedded Technology Checks for Understanding

- ✓ **0407.T/E.1** Explain how different inventions and technologies impact people and other living organisms.
- ✓ **0407.T/E.2** Design a tool or a process that addresses an identified problem caused by human activity.
- ✓ **0407.T/E.3** Determine criteria to evaluate the effectiveness of a solution to a specified problem.
- ✓ **0407.T/E.4** Evaluate an invention that solves a problem and determine ways to improve the design.

Standard 1 – Cells Checks for Understanding

- ✓ **0407.1.1** Use illustrations or direct observations to compare and contrast the basic structures of plant and animal cells.
- ✓ **0407.1.2** Create a basic model of the cell that illustrates different cell structures and describes their functions.

Standard 2 – Interdependence Checks for Understanding

- ✓ **0407.2.1** Analyze how an increase or decrease in competition or predation affects an ecosystem.
- ✓ **0407.2.2** Design a simple experiment to illustrate the effects of competition, predation, and interdependency among living things.

Standard 3 – Flow of Matter and Energy Checks for Understanding

- ✓ **0407.3.1** Create a food web that illustrates the energy relationships between plants and animals and the key issues or assumptions found in the model.
- ✓ **0407.3.2** Classify organisms as carnivores, herbivores, or omnivores.
- ✓ **0407.3.3** Identify how a variety of organisms meet their energy needs.

Standard 4 – Heredity Checks for Understanding

- ✓ **0407.4.1** Design a simple demonstration that illustrates the relationship between reproduction and survival of a species.
- ✓ **0407.4.2** Study the life cycles of a variety of organisms and determine whether these processes illustrate complete or incomplete metamorphosis.

Standard 5 – Biodiversity and Change Checks for Understanding

- ✓ **0407.5.1** Classify animals according to their physical adaptations for obtaining food, oxygen, and surviving within a particular environment.
- ✓ **0407.5.2** Describe how animal behaviors such as migration, defense, means of locomotion, and hibernation enable them to survive in an environment.
- ✓ **0407.5.3** Investigate tropisms that plants exhibit in response to changes in their environment.
- ✓ **0407.5.4** Gather fossil information to draw conclusions about organisms that exist today.
- ✓ **0407.5.5** Analyze the common causes of extinction and explain how human actions sometimes result in the extinction of a species.

Standard 6 – The Universe Checks for Understanding

- ✓ **0407.6.1** Chart the movements of the sun, moon, and earth to develop an explanation for the phases of the moon and solar and lunar eclipses.
- ✓ **0407.6.2** Sequence the major phases of the moon during a lunar cycle.

Standard 7 – The Earth Checks for Understanding

- ✓ **0407.7.1** Prepare a demonstration to illustrate how wind and water affect the earth's surface features.
- ✓ **0407.7.2** Design an investigation to demonstrate how erosion and deposition change the earth's surface.
- ✓ **0407.7.3** List factors that determine the appropriate use of an earth material.
- ✓ **0407.7.4** Use data from a variety of informational texts to analyze and evaluate man's impact on non-renewable resources.

Standard 8 – The Atmosphere Checks for Understanding

- ✓ **0407.8.1** Prepare a model that illustrates the basic features of the water cycle.
- ✓ **0407.8.2** Use long term weather data to distinguish between weather and climate.
- ✓ **0407.8.3** Use an illustration to predict and draw conclusions about how weather and climate affect the water cycle.

Standard 9 – Matter Checks for Understanding

- ✓ **0407.9.1** Use appropriate tools to measure and compare the physical properties of various solids and liquids.
- ✓ **0407.9.2** Compare the causes and effects of various physical changes in matter.

Standard 10 – Energy Checks for Understanding

- ✓ **0407.10.1** Design an investigation to demonstrate how different forms of energy release heat or light.
- ✓ **0407.10.2** Design an experiment to investigate how different surfaces determine if light is reflected, refracted, or absorbed
- ✓ **0407.10.3** Gather and organize information about a variety of materials to categorize them as translucent, transparent, or opaque.

Standard 11 – Motion Checks for Understanding

- ✓ **0407.11.1** Identify the position of objects relative to fixed reference points.
- ✓ **0407.11.2** Design an investigation to identify factors that affect the speed and distance traveled by an object in motion.
- ✓ **0407.11.3** Complete a coordinate graph to describe the relative positions of objects.
- ✓ **0407.11.4** Plan and execute an investigation that demonstrates how friction affects the movement of an object.
- ✓ **0407.11.5** Design and implement an investigation to determine that the speed of an object is equal to the distance traveled over time.

Standard 12 – Forces in Nature

- ✓ **0407.12.1** Explore the interactions between an electrically charged object and other materials.
- ✓ **0407.12.2** Design an experiment to investigate how a simple electromagnet affects common objects.
- ✓ **0407.12.3** Describe how electricity passes through a simple circuit that includes a battery, wire, switch, and bulb.