

NCPS Science Overview- Grade 2 Parent Guide

These scientific and engineering practices are developed in each unit throughout the year:

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

Science Topics	Student Learning Expectations
Weather	<p>Students will be observing temperature, rainfall, wind, and clouds, and recording their observations in their weather journal. Students will develop an understanding of patterns and variations in local weather and the purpose of weather forecasting to prepare for, and respond to, severe weather.</p> <p>Through class discussion and explorations students will</p> <ul style="list-style-type: none"> ● make and use weather instruments. ● create weather maps using symbols. ● observe different weather conditions, including what role the sun plays in these conditions. ● diagram the water cycle
Life Cycles of Plants and Animals	<p>Students will observe both plants and animals as they progress through a life cycle.</p> <p>Through class discussion and explorations students will</p> <ul style="list-style-type: none"> ● compare and contrast the changes in structure and behavior that occur during the life cycles of animals that undergo metamorphosis with those that do not. ● analyze recorded observations to compare the metamorphosis stages of different animals and make predictions based on observed patterns. ● observe different types of soils and identify its “ingredients” ● plant seeds, record growth observations, and make conclusions about a plant’s lifecycle.
Computer Science	<p>Students will explore combining mathematics and computers to investigate numerical relationships while learning about the sequence and structure required in computer programs.</p> <p>Through class discussion and explorations students will</p> <ul style="list-style-type: none"> ● work collaboratively to design and develop a video game. ● apply mathematical strategies to make characters move on a grid. ● make extensive use of logic as they create a working game using an event-based model. ● Analyze data from tests of two programs designed to solve the

	same problem to compare the strengths and weaknesses of how each performs.
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