



Four Winds Nature Program: Alignment with Learning Standards

Over the last several years, Four Winds has developed new place-based science instructional units that align with the *Next Generation Science Standards* (NGSS). These units are posted online at nearbynature.fwni.org. The NGSS are based on *A Framework for K-12 Science Education*, which articulates a vision “in which students, over multiple years of school, actively engage in scientific and engineering practices and apply crosscutting concepts to deepen their understanding of the core ideas in these fields. The learning experiences provided for students should engage them with fundamental questions about the world and with how scientists have investigated and found answers to those questions.” We agree! And *Nature Program* units can be an important part of a school’s science curriculum, helping children reach the performance expectations as they explore nearby nature.

The *Next Generation Science Standards* (NGSS) define three major dimensions to be integrated in science education for grades k-12:

- Dimension 1: Scientific and Engineering Practices
- Dimension 2: Crosscutting Concepts that unify the study of science and engineering through their common application across fields, and
- Dimension 3: Disciplinary Core ideas in four areas: physical sciences; life sciences; earth and space sciences; and engineering, technology, and applications of science.

In addition to the science standards, *Nature Program* lessons also support many aspects of the *Common Core State Standards -- English Language Arts and Mathematics*.

Supplemental materials available online for each unit include:

- Unit summary
- Vocabulary for children
- List of related children’s books
- Helpful ideas for spending time outside with students
- A science journal activity related to the lesson
- Integration resources for language arts, mathematics and other nature-based learning

Next Generation Science Standards and The Nature Program

Each month’s *Nature Program* unit begins by introducing a natural phenomenon that children can explore, observe, wonder about, question, and discuss. The learning activities address several NGSS Disciplinary Core Ideas per the grade band endpoints in *A Framework for K-12 Science Education*. In addition to learning important science content, *Nature Program* students engage in the NGSS Science Practices (Dimension 1) by:

1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating and communicating information

Nature Program students reflect on the Crosscutting Concepts (Dimension 2).

1. Patterns
2. Cause and effect
3. Scale and proportion
4. Systems and system models
5. Energy and matter
6. Structure and function
7. Stability and change

Common Core and The Nature Program

In addition to the NGSS alignment, each month’s *Nature Program* lesson includes activities that support the *Common Core State Standards*. Below is a chart that identifies the *English Language Arts* standards included in each workshop. There are frequent opportunities to address *CCSS-Mathematics* in each unit as well. Mathematics is the language of science, so we frequently have kids counting insect legs, looking for patterns, taking measurements, creating graphs and charts, and more.

Activity	Common Core Standards
Puppet shows and slide shows	<p>Common Core Reading for Informational Texts</p> <ul style="list-style-type: none"> • Standard 1: Refer to details and examples in a text. • Standard 4: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. • Standard 7: Use information gained from illustrations and the words in a text to demonstrate understanding of the text. <p>Common Core Speaking and Listening</p> <ul style="list-style-type: none"> • Standard 1: Participate in collaborative conversations. • Standard 2: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
Discussions at the end of activities	<p>Common Core Speaking and Listening</p> <ul style="list-style-type: none"> • Standard 1: Participate in collaborative conversations.
Making and sharing journal entries	<p>Common Core Writing</p> <ul style="list-style-type: none"> • Standard 1: Write opinion pieces. • Standard 3: Write narratives in which they recount two or more appropriately sequenced events. • Standard 3: Write narratives to develop real or imagined experiences or events. • Standard 10: Write routinely over extended time frames and shorter time frames for a range of tasks, purposes, and audiences. <p>Common Core Speaking and Listening</p> <ul style="list-style-type: none"> • Standard 4: Tell a story or recount an experience with appropriate facts and relevant, descriptive details. • Standard 5: Add drawings or other visual displays to descriptions as desired to provide additional detail.
Closing thoughts	<p>Common Core Speaking and Listening</p> <ul style="list-style-type: none"> • Standard 4: Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly. • Standard 6: Speak audibly and express thoughts, feelings, and ideas clearly.
Throughout the workshop	<p>Common Core Language</p> <ul style="list-style-type: none"> • Standard 6: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases...and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

