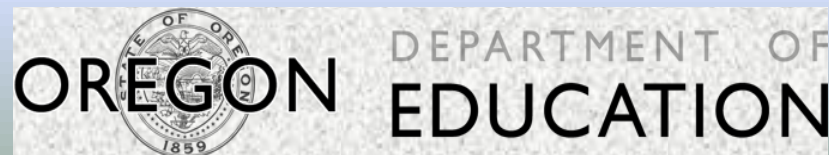


# Alignment of Oregon Science Standards

Crosswalk of 2009 Oregon Science Standards to  
2014 Oregon Science Standards (Next Generation Science Standards)



# Alignment of Oregon Science Standards

## *2014 Science Standards (Next Generation Science Standards) and 2009 Science Standards*

### Introduction

These pages show how the content, practices, and cross-cutting concepts (CCC) associated with the new Oregon Science Standards (NGSS) adopted in March 2014 align to the Oregon Science Standards adopted in February 2009. It is important to remember that the new Oregon Science Standards (NGSS) will be phased in so that districts can implement changes in local curriculum, provide appropriate professional development for teachers and administrators, and provide students with opportunities to learn the content, practices, and cross-cutting concepts prior to assessment. Oregon students will continue to be assessed on the Oregon 2009 Science Content Standards via OAKS Science until a new science assessment that aligns with the newly adopted standards is developed and becomes operational in 2018-2019.

### Purpose

The purpose of this document is to provide educators with a view of the alignment between the 2009 content standards currently required as part of each Oregon district's curriculum and instruction in the subject area of science, and those contained in the new 2014 Oregon Science Standards (NGSS). An examination of the content of these pages is meant to provide at least some clarification on the following issues:

- What content, practices, and cross-cutting concepts are new and have not previously been a part of Oregon's 2009 Science Standards?
- What content, practices, and cross-cutting concepts will now need to be part of the curriculum at an earlier (or later) grade level than where they are currently taught and assessed?
- In what instances are similar skills being addressed, but with a somewhat different emphasis or with different expectations regarding the degree of sophistication?

### Organization of the Alignment Tables

The rows in the table show whether there is a corresponding 2009 Oregon science standard(s) for each of the new 2014 Oregon science standards (NGSS) performance expectation (PE) in the areas of content, practices, and cross-cutting concepts (CCC). Codes designate the degree of alignment: S = Strong; P = Partial; D = Different Grade; N = New (not in any 2009 ORSS). The 2009 Oregon Science Standards that are not aligned to any new 2014 Oregon Science Standard (NGSS) are included at the end of the document. The bulleted statements at the beginning of the document provide summary information about the differences between the two sets of standards.

## Alignment of Oregon's 2014 Science Standards (NGSS) with 2009 Oregon Science Standards (2009 ORSS)

Degree of Alignment Codes: **S** = Strong; **P** = Partial; **D** = Different Grade; **N** = New (not in any 2009 ORSS)

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### Grade: 2

- Structure and Function is implied in the 2009 ORSS Core Idea for grade 2.
- The 2009 Oregon Life Science Standards partially align to NGSS Life Science Topic if you combine some of the Grade 1-3 Life Science Content Standards, but the **application** of content knowledge greatly increases the rigor for students' understanding.
- NGSS Engineering Design Standards are K-2 grade-band specific.
- NGSS add new requirements for answering scientific questions using informational text/ media.
- Properties of Magnetism (2009 ORSS 2<sup>nd</sup> Grade Physical Science Standard) shifts to 3<sup>rd</sup> Grade in NGSS.
- Matter and Interactions (2009 ORSS 1<sup>st</sup>/3<sup>rd</sup>/4<sup>th</sup> Grade Physical Science Standard) shifts to 2<sup>nd</sup> Grade in NGSS.
- Patterns of the Sun and Moon (2009 ORSS 2<sup>nd</sup> Grade Earth/Space Science Standard) shifts to 1<sup>st</sup> Grade in NGSS.
- Temperature Patterns (2009 ORSS 2<sup>nd</sup> Grade Earth/Space Science Standard) shifts to K and 3<sup>rd</sup> Grade in NGSS.

NGSS PE	2009 ORSS	NGSS Content	NGSS Practice	NGSS CCC	Notes on Alignment
<i>2-PS1 Matter and Its Interactions</i>					
2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	1.P1.1 1.1E.1 3.1P.1 2.3S.2 2.3S.1	D D/P D	S S	S	
2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	1.1P.1 3.1P.1 1.1E.1 2.4D.1 2.3S.3 3.3S.2	D D D	P P	N S	Cause and effect is newly stated and implied previously in 2009 ORSS 1.2P.1  Connections to engineering, technology, and application of science NGSS link to 2009 ORSS 2.4D.1
2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	1.1P.1 K.4D.2 2.3S.1 2.4D.1 2.4D.3	D D	P P P	D	
2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	1.P1.1 3.1P.1 4.2P.1 3.3S.3 4.3S.3	D D D	D D	N	Cause and effect is newly stated and implied previously in 2009 ORSS 3.1P.1 and 4.2P.1

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### Grade: 2

NGSS PE	2009 ORSS	NGSS Content	NGSS Practice	NGSS CCC	Notes on Alignment
<i>2-LS2 Ecosystems: Interactions, Energy, and Dynamics</i>					
2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.	2.1L.1 1.2L.1 3.3S.1	P D	P	N	Cause and effect is newly stated in NGSS and implied previously in 2009 ORSS.
2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	2.1L.1 2.2L.1 2.4D.1 2.3S.2 2.3S.3	P P	S P P	N	Structure and Function is implied in the 2009 ORSS Core Idea for grade 2.
<i>2-LS4 Biological Evolution: Unity and Diversity</i>					
2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.	2.1L.1 2.3S.1 2.3S.2 2.3S.3	S	S S S	N/A	There is no crosscutting concept for this NGSS standard.
<i>2-ESS1 Earth's Place in the Universe</i>					
2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	4.2E.1 2.3S.1 2.3S.3	D	P P	N	Stability and Change are implied in 2009 ORSS.
<i>2-ESS2 Earth's Systems</i>					
2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	2.3S.2 4.2E.1 2.4D.1 2.4D.3	D	P P	S	
2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.	2.3S.2 4.2E.1 2.4D.1	D/P	S S	S	
2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.	2.3S.2 1.1E.1 3.1P.1 4.1E.1	D/P D/P D/P	N	N	New requirements for answering scientific questions using informational text/ media.

## Alignment of Oregon's 2014 Science Standards (NGSS) with 2009 Oregon Science Standards (2009 ORSS)

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### Grade: 2

NGSS PE	2009 ORSS	NGSS Content	NGSS Practice	NGSS CCC	Notes on Alignment
<i>K-2-ETS1 Engineering Design</i>					
K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	K.3S.1 K.4D.1 1.4D.1. 2.4D.1 2.4D.3		P P D D D	P	Engineering Design content of the 2009 ORSS K-2 learning progression when combined with Science Inquiry creates a strong alignment. All of these are partially aligned because they are based on the NGSS grade k-2 band. Structure and function is a core idea in 2009 ORSS, and also addressed in K.4D.1
K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	K.4D.2 2.4D.3		P D	P	
K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	K.4D.1 2.3S.1 2.4D.3		P D D	P	