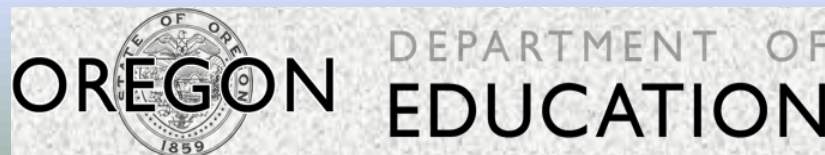


Alignment of Oregon Science Standards

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)

2009 Oregon Science Standards that are not aligned to any New 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..

Grade: Kindergarten

- 2009 Oregon Science Standards provide foundational skills to approach the rigor and specific content of NGSS.
- NGSS is more specific to plant and animal survival, and moves deeper into constructing an argument.
- NGSS moves beyond observation to describing patterns. Observation is an element/precursor to planning and carrying out investigations.
- NGSS shifts from exploring questions to asking questions, requires greater specificity, and expects students to obtain and communicate information.
- Temperature patterns (2009 ORSS 2nd Grade Earth/Space Science Standard) shifts to K and 3rd Grade in NGSS.
- NGSS Engineering Design Standards are K-2 grade-band specific.

NGSS PE	2009 ORSS	NGSS Content	NGSS Practice	NGSS CCC	Notes on Alignment
<i>K-PS2 Motion and Stability: Forces and Interactions</i>					
K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	K.2P.1 1.2P.1 K.3S.2 2.4D.2	P D	P D	N	Content for 2009 ORSS K-1 combined is strongly aligned. Cause and effect is newly stated and implied previously in 2009 ORSS 1.2P.1.
K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	K.3S.1 1.3S1 1.3S.2 2.3S.1 2.3S.2 K.2P.1 1.2P.1	P D	P D D D	N	
<i>K-PS3 Energy</i>					
K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.	K.1E.1 K.3S.2	S	S	N	
K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	K.1E.1 K.4D.1	S	S	N	NGSS are task specific.
<i>K-LS1 From Molecules to Organisms: Structures and Processes</i>					
K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.	K.1L.1 1.2L.1 K.3S.1 K.3S.2	S D	P P	N	Practices together are strongly aligned.
<i>K-ESS2 Earth's Systems</i>					
K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.	K.2E.1 K.3S.2 2.3S.2	P	P D	D	NGSS move beyond observation into patterns.

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)

2009 Oregon Science Standards that are not aligned to any New Oregon Science Standard (NGSS) are included at the end of the document.
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Grade: Kindergarten

NGSS PE	2009 ORSS	NGSS Content	NGSS Practice	NGSS CCC	Notes on Alignment
K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	2.1L.1	D/P	N	N	NGSS are more specific to plant and animal survival and moves deeper into constructing an argument.
<i>K-ESS3 Earth and Human Activity</i>					
K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.	K.1L.1 1.2L.1	P D/P	N	N	
K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	2.2E.2 K.3S.1	D/P	P	N	NGSS shift from exploring to asking questions, requires greater specificity, and expects students to obtain and communicate information.
K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.		N	N	N	
<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	2009 ORSS Engineering Design K-2 content combined with Science Inquiry create a strong alignment with NGSS. All of these are partially aligned because they are based on a grade K-2 band. Structure and function is a core idea in 2009 ORSS and is 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	
2009 ORSS not aligned to any NGSS:					
K.1P.1 Compare and contrast characteristics of living and non-living things.					