Science Learning Standards

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Division of Teaching, Learning & School Improvement

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Vision

All students prepared for post-secondary pathways, careers, and civic engagement.

Mission

Transform K–12 education to a system that is centered on closing opportunity gaps and is characterized by high expectations for all students and educators. We achieve this by developing equity-based policies and supports that empower educators, families, and communities.

Values

- Ensuring Equity
- Collaboration and Service
- Achieving Excellence through Continuous Improvement
- Focus on the Whole Child

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Equity Statement

Each student, family, and community possesses strengths and cultural knowledge that benefits their peers, educators, and schools.

Ensuring educational equity:

- Goes beyond equality; it requires education leaders to examine the ways current policies and practices result in disparate outcomes for our students of color, students living in poverty, students receiving special education and English Learner services, students who identify as LGBTQ+, and highly mobile student populations.
- Requires education leaders to develop an understanding of historical contexts; engage students, families, and community representatives as partners in decision-making; and actively dismantle systemic barriers, replacing them with policies and practices that ensure all students have access to the instruction and support they need to succeed in our schools.

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Today's Time:



Project Goals and Process

Including revision timeline and expected products



What's New in Content

Science



Making Connections

Objectives:

Participants will be provided with a brief overview of the process used for the revision project and changes to the science standards.

Project Goals: Refine and clarify…

- Provide a consistent format for all standards documents
- Consistent coding/numbering system
- Prioritize and Clarify the language of specific standards
- Revisions include necessary content updates; emerging knowledge needs and alignment of existing standards

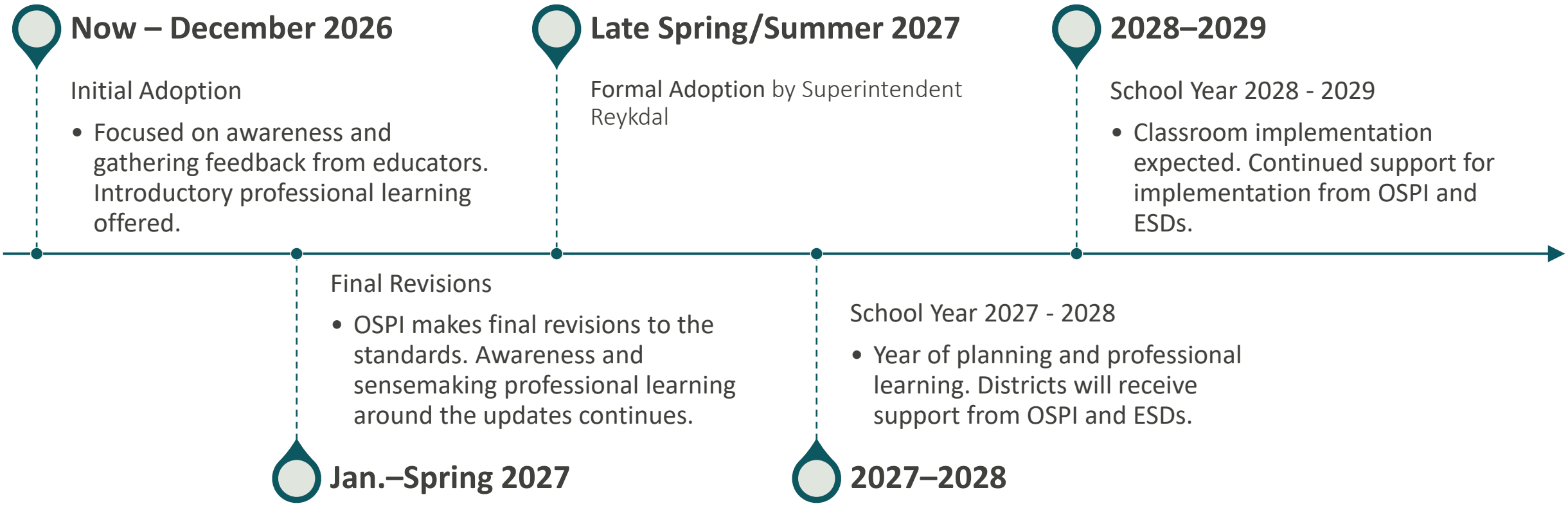
State Learning Standards Review and Revision Cycle

Per RCW 28A.655.070, the Superintendent of Public Instruction will periodically revise the state learning standards. The following detail provides the review and revision cycle overview

Year		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
Months and Subject Areas		Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec	Jan-July	Aug-Dec
	English Language Arts *(including media literacy and digital citizenship)* *Adopted 2011*	▶	◌	◌	◌																				
	Mathematics *(including data science)* *Adopted 2011*	▶	◌	◌																					
	Financial Education *Adopted 2016*	▶	◌	◌	◌																				
	Science *(including Environment and Sustainability)* *Adopted 2013*			▶	◌	◌																			
	World Languages *Adopted 2015*			▶	◌	◌																			
	Health & Physical Education *Adopted 2016*			▶	◌	◌																			
	Social Studies *Adopted 2018*					▶	◌	◌																	
	Computer Science *Adopted 2018*						▶	◌	◌																
	Educational Technology *Adopted 2018*						▶	◌	◌																
	Arts *Adopted 2017*											▶	◌	◌											

▶	◌						
Standards Under Review	Engagement & Revision	Initial Adoption & Implementation	Professional Learning & Transition	Final State Adoption	Full Implementation in Schools	Statewide Summative Assessment	Next Review Begins

Next Steps in Timeline



Main steps of process

OSPI staff review of content area changes since last adoption

OSPI staff consult with content area stakeholders

ET, CS

Educator/ Stakeholder Feedback survey

SS

Standards drafted, and educator feedback opportunities



S

Initial Standards released for PD and preliminary use

ELA

M

One school year for staff PD before must use with students

Final Adoption of Learning Standards by Superintendent

FE

OSPI staff make final updates to Learning Standards

Initial Adoption survey responding to Initial Standards

OSPI staff and working groups make updates & craft Initial Standards

Public Comment survey responding to Draft Standards

H, PE, WL

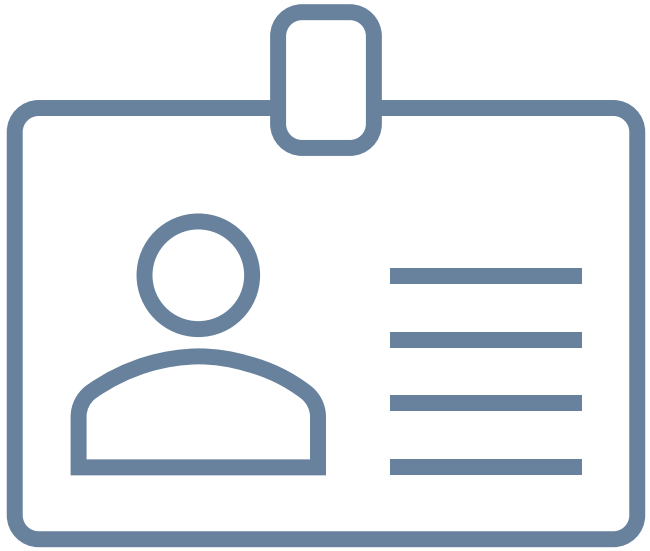
Draft Standards released for Public Comment

Consistent Format For All Documents

Example Documents released include:

- Excel spreadsheet – sort and filterable, glossary, crosswalk from previous standards
- Word document – introductory information and standards
- What's New – one page summary
- Key Shift/Experiences – deeper explanation document if needed
- Frequently Asked Questions – updated on website
- Surveys – collecting feedback at multiple stages of timeline

Naming Structure-Need



Current learning standards have different kinds of coding systems.

This is a burden for district staff, administrators, and teachers who work with more than one or two content areas.

Solution: Standardized Naming Structure

Structure that is *as similar as possible* for all sets of learning standards.

- **Content:** ELA, M, FE, S, PE, H, WL, SS, A, CS
- **Grade:** a single grade, if a grade band show range of the band: middle school (MS), Kindergarten to second grade (K–2)
- **Domain:** ex R = Reading, Q = Quantity, PS = Physical Science
- **Category:** a capital number or letter (*some content areas will not have this level)*
- **Standard:** a number, and may include a lowercase letter as an indicator

Standardized Coding Structure

Previous Coding (NGSS)

HS-LS2-1



2026 Coding

S.HS.LS2.1



Prioritized Learning Standards



Priority Learning Standards are the most essential academic skills and concepts students need to succeed from one grade level to the next.



The Priority Learning Standards identify the universal set of standards that each and every student should have the opportunity to learn and be able to do.



Priority Learning Standards were identified using the following criteria:

Endurance: Will this skill or knowledge still be valuable beyond a single test, school year, or post-high school?

Leverage: Is this skill or knowledge useful across multiple subjects (for example, writing or critical thinking)?

Readiness: Does this skill or knowledge prepare students for success in the next grade level, course, or post-high school option?

Specific Science Prioritization

- **Maintained clear K–12 learning progressions.** Standards that were prioritized reflect a coherent learning progression for almost all Disciplinary Core Ideas (DCIs), leaving no vertical alignment gaps.
- **Curated standards** within a grade level (K–5) or discipline (6–12) to support a balanced and manageable set of expectations for students and educators.
- **Focused on standards** that had the **strongest connections** across disciplines and grade levels.

Supporting Learning Standards



The standards that are not identified as “Priority” standards still provide an important role for the learning system.



Supporting standards support, connect, and/or enhance the Priority standards.



Educators teach these standards within the context of the priority standards.



Supporting standards complement prioritized standards by expanding opportunities for students to investigate phenomena and engage in science and engineering practices.



Science Learning Standards Updates

Goals of the Revision for Science

Environmental and Sustainability Education	Expand environmental and sustainability learning by adding a dedicated Environmental and Sustainability Education (ESE) domain across all grade levels.
Key Experiences	Highlight key learning experiences that every student should have at every grade level.
Clarification Statements	Expand and revise clarification statements to better illustrate what three-dimensional science learning looks like in practice.
Assessment Boundaries	Provide clearer guidance for teaching and assessment by refining assessment boundaries and clarifying grade-level expectations.
Prioritize	Identify Priority Learning Standards that preserve K–12 learning progressions and support student success across grades and disciplines.

What's New: NGSS Community & Key Experience Tags

Still NGSS! Washington's revised science standards maintain the Next Generation Science Standards (NGSS) and the vision of three-dimensional science learning. The revisions strengthen and clarify implementation, rather than replacing NGSS. *The only new content additions are Environmental and Sustainability standards.*

New Key Experience Tags help educators identify standards that provide strong opportunities for:

Student-Led Investigations [INV]	Student-Led Engineering Design [ENG]	Science Outdoors [OTDR]	Climate Learning [CLIM]	Environmental & Sustainability Education [ESE]

What's New In The Science Standards?



Embedded Environmental & Sustainability Education (ESE) Standards are now integrated across K–12 science and include one new standard per grade level in K-5 and per discipline in middle and high school.



Updated Clarification Statements emphasize phenomena-centered learning, place-based and community-connected examples, and students actively doing science and engineering.



Refined Assessment Boundaries provide clearer guidance about grade-level expectations and what may be assessed on WCAS, while not limiting classroom instruction or student exploration.

Where to Find the Revised Science Standards Resources

https://ospi.k12.wa.us/student-success/learning-standards-instructional-materials/washington-state-learning-standards-review

Shortened URL for ease:

https://tinyurl.com/RevisedSci

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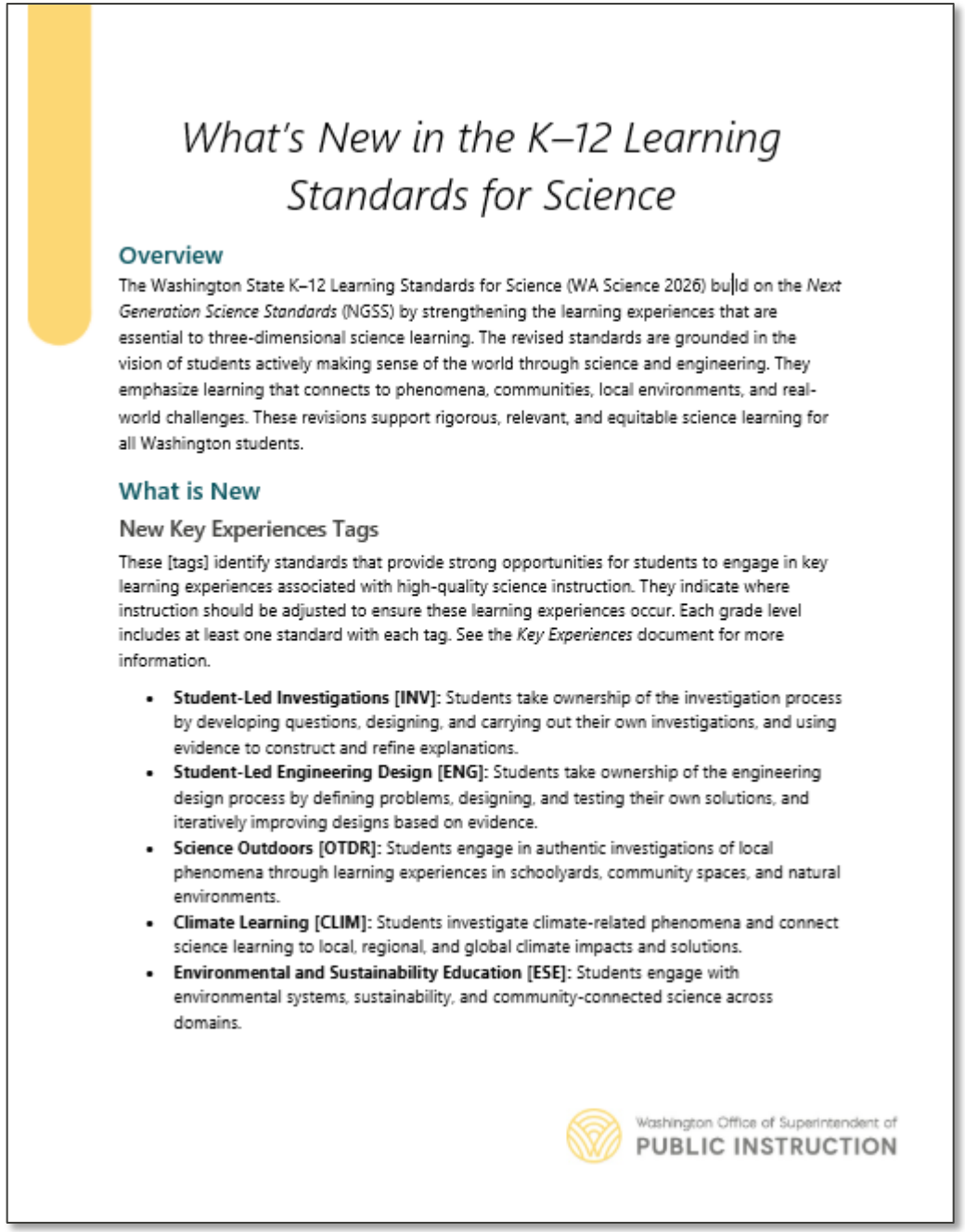


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What's New Document

This overview document provides a high-level look at the revisions to the 2026 WA Science Standards.

Use when first introducing the standards and as a reference document.



What's New in the K–12 Learning Standards for Science

Overview

The Washington State K–12 Learning Standards for Science (WA Science 2026) build on the *Next Generation Science Standards* (NGSS) by strengthening the learning experiences that are essential to three-dimensional science learning. The revised standards are grounded in the vision of students actively making sense of the world through science and engineering. They emphasize learning that connects to phenomena, communities, local environments, and real-world challenges. These revisions support rigorous, relevant, and equitable science learning for all Washington students.

What is New

New Key Experiences Tags

These [tags] identify standards that provide strong opportunities for students to engage in key learning experiences associated with high-quality science instruction. They indicate where instruction should be adjusted to ensure these learning experiences occur. Each grade level includes at least one standard with each tag. See the *Key Experiences* document for more information.

- **Student-Led Investigations [INV]:** Students take ownership of the investigation process by developing questions, designing, and carrying out their own investigations, and using evidence to construct and refine explanations.
- **Student-Led Engineering Design [ENG]:** Students take ownership of the engineering design process by defining problems, designing, and testing their own solutions, and iteratively improving designs based on evidence.
- **Science Outdoors [OTDR]:** Students engage in authentic investigations of local phenomena through learning experiences in schoolyards, community spaces, and natural environments.
- **Climate Learning [CLIM]:** Students investigate climate-related phenomena and connect science learning to local, regional, and global climate impacts and solutions.
- **Environmental and Sustainability Education [ESE]:** Students engage with environmental systems, sustainability, and community-connected science across domains.

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Environmental & Sustainability Education (ESE) Standards

Environmental and Sustainability Education (ESE) is now a dedicated science domain in grades K–12

One standard per grade level in K–5. Three standards in both MS and HS.

One prioritized ESE standard at every grade level/discipline

ESE standards connect science learning to environmental systems, sustainability, communities, and real-world decision-making

Organized Into Five Categories:

- 💧 Water & Air Quality
- 🌎 Natural Resources & Sustainable Systems
- 🌱 Food, Agriculture & Regeneration
- ⚡ Energy & Transportation
- 🦋 Ecosystems & Biodiversity

Key Experiences and Tags

Tag	Key Experience	What Students Experience
[INV]	Student-Led Investigations	Students ask questions, design investigations, analyze evidence, and build explanations for phenomena.
[ENG]	Student-Led Engineering Design	Students identify problems, test ideas, improve solutions, and learn through iteration and redesign.
[OTDR]	Science Outdoors	Students investigate real-world phenomena in schoolyards, communities, and outdoor environments.
[CLIM]	Climate Learning	Students use evidence to understand climate impacts, explore solutions, and consider resilient futures.
[ESE]	Environmental & Sustainability Education	Students connect science learning to environmental systems, community challenges, and sustainable decision-making.

Key Experience Tags: Bringing the Vision of the NGSS to Life

Ensure students engage in all five Key Experiences each year of their K–12 education.

Support students doing science and engineering that matters to them.

Highlight standards that offer especially strong opportunities for high-quality science learning.

Do not add new standards or requirements.

Help educators identify, plan for, and elevate local and global phenomena.

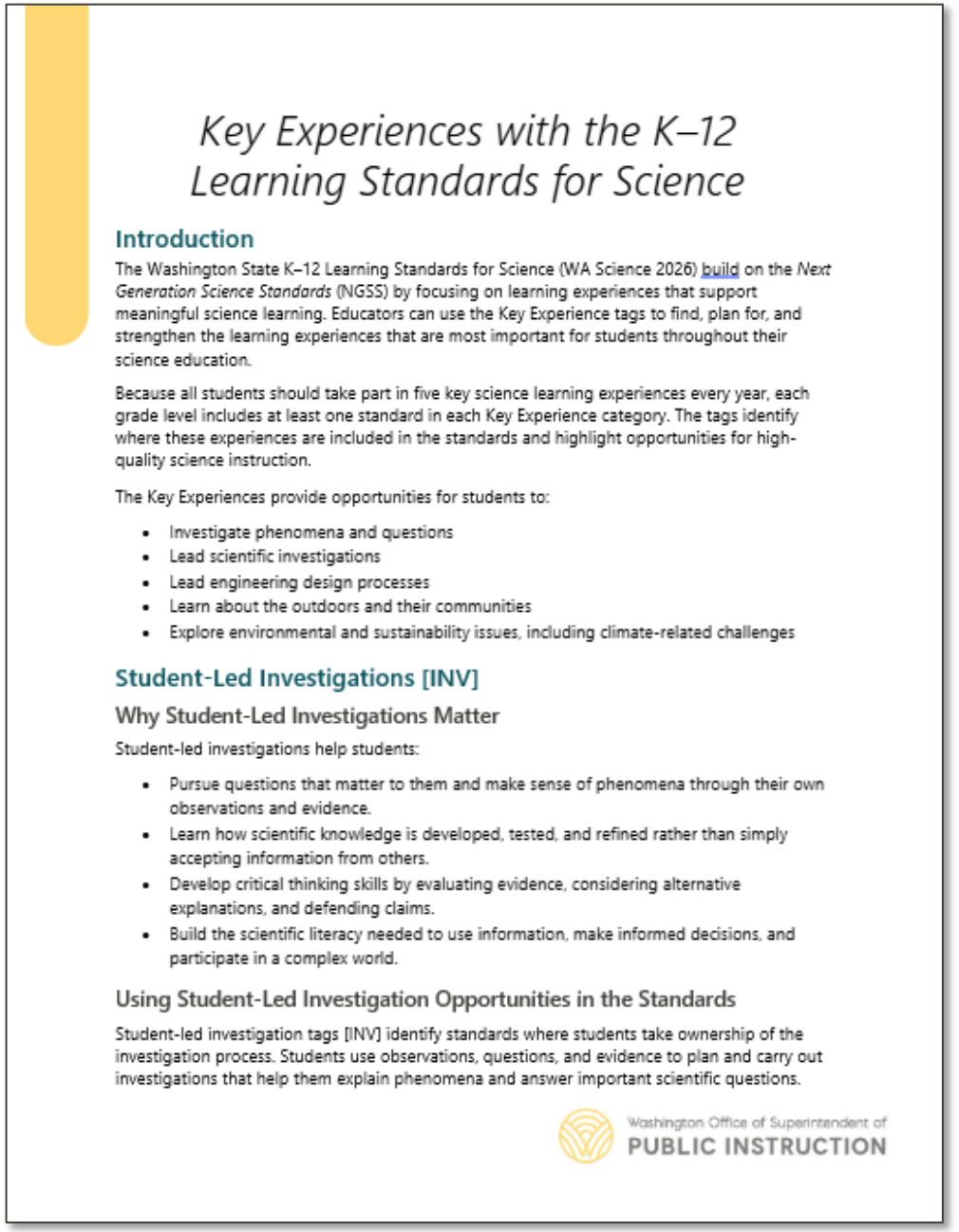
Tag-specific resources coming after final adoption!

Key Experiences Document

This document provides descriptions of the five Key Experiences and why they matter for high-quality science instruction.

- Use to understand the goal of each Key Experience.
- Use to start determining the current alignment of instructional materials and pedagogy with the Key Experiences.

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Key Experiences with the K–12 Learning Standards for Science

Introduction

The Washington State K–12 Learning Standards for Science (WA Science 2026) build on the *Next Generation Science Standards* (NGSS) by focusing on learning experiences that support meaningful science learning. Educators can use the Key Experience tags to find, plan for, and strengthen the learning experiences that are most important for students throughout their science education.

Because all students should take part in five key science learning experiences every year, each grade level includes at least one standard in each Key Experience category. The tags identify where these experiences are included in the standards and highlight opportunities for high-quality science instruction.

The Key Experiences provide opportunities for students to:

- Investigate phenomena and questions
- Lead scientific investigations
- Lead engineering design processes
- Learn about the outdoors and their communities
- Explore environmental and sustainability issues, including climate-related challenges

Student-Led Investigations [INV]

Why Student-Led Investigations Matter

Student-led investigations help students:

- Pursue questions that matter to them and make sense of phenomena through their own observations and evidence.
- Learn how scientific knowledge is developed, tested, and refined rather than simply accepting information from others.
- Develop critical thinking skills by evaluating evidence, considering alternative explanations, and defending claims.
- Build the scientific literacy needed to use information, make informed decisions, and participate in a complex world.

Using Student-Led Investigation Opportunities in the Standards

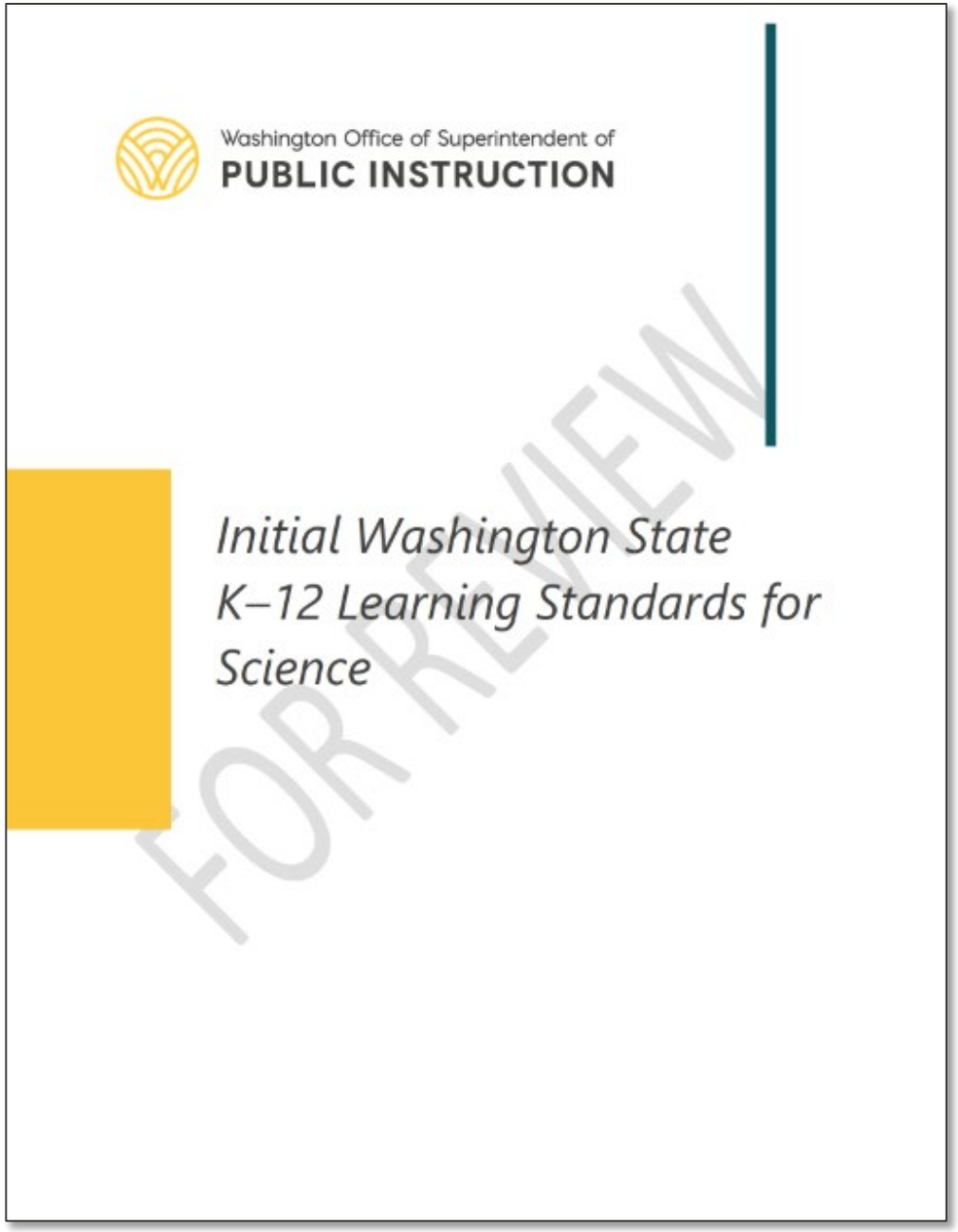
Student-led investigation tags [INV] identify standards where students take ownership of the investigation process. Students use observations, questions, and evidence to plan and carry out investigations that help them explain phenomena and answer important scientific questions.

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The Standards Document

This document contains the official front matter and all standards listed in grade-level order.

- Use the front matter to gain a comprehensive understanding of the revised science standards.
- Use this format of the standards for readability.



Revised Clarification Statements

Clarification statements were expanded and revised to better communicate the intent of the standards and **what student centered, three-dimensional science learning looks like in practice.**

- Increased emphasis on student sensemaking, rather than learning science as isolated facts.
- Greater attention to students asking questions, developing explanations, and using evidence to build understanding.
- Stronger focus on investigating local and relevant phenomena that connect science to students' lives and communities.
- More examples of phenomenon-driven, place-based, and community-connected learning experiences.

Grade 5 Previous vs. New Clarification Statements

S.5.PS1.2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.

Previous	New
Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances.	Emphasis is on measuring and graphing quantities to show that matter is conserved. Students may note/describe observed property changes when materials are heated, cooled, or mixed, but the focus of the standard is on students comparing the weight of substances before they are heated, cooled, or mixed to their weight after these steps are taken. Students should record the measurements before and after, calculate and record the difference, and graph data to make the comparisons visible. Students should be able to make the claim supported by weight evidence that matter is not lost; that a change from solid to liquid or liquid to solid (such as ice that melts) does not change the before and after weight, and that combining two substances (such as water and sugar) results in the combined weight of the two added together. Students do not need to know or explain the scientific terms and concepts of physical or chemical change.

High School Previous vs. New Clarification Statements

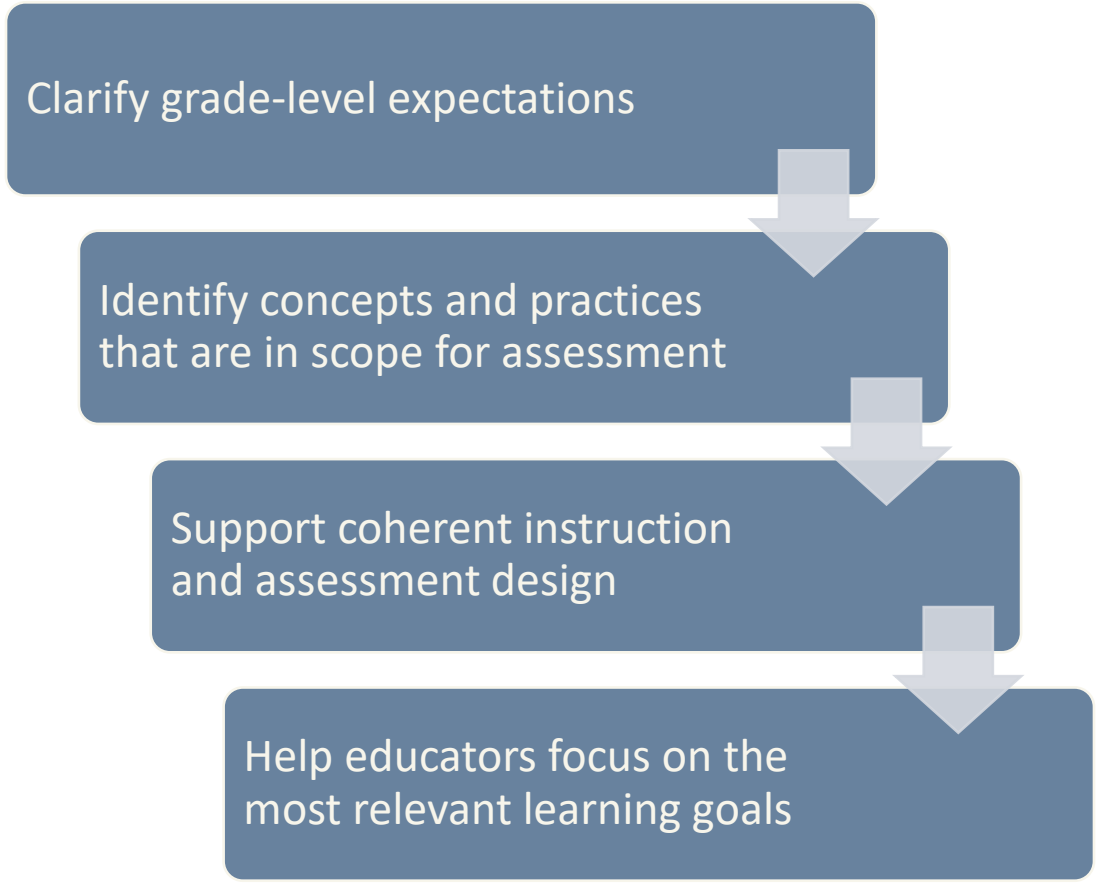
S.HS.PS1.8 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.

Previous	New
Emphasis is on simple qualitative models, such as pictures or diagrams, and on the scale of energy released in nuclear processes relative to other kinds of transformations.	Emphasis is on developing and using qualitative models (e.g., diagrams or visual representations) to show changes in the composition of the nucleus during fission, fusion, and radioactive decay. Models should illustrate how particles in the nucleus are rearranged and how interactions between the strong nuclear force and electrostatic repulsion influence nuclear stability. Focus is also on comparing the scale of energy released in nuclear processes to that in chemical reactions. Instruction emphasizes reasoning about these processes using models, rather than quantitative calculations.

Revised Assessment Boundaries

Assessment Boundaries Clarify Expectations, Not Learning Limits

Assessment boundaries identify the limits of what may be assessed on WCAS and help clarify the intended grade-level scope and rigor of a performance expectation.



Grade 2 Previous vs. New Assessment Boundaries

S.2.ESS2.1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.

Previous	New
None	Assessment does not include students making or calculating specific quantitative measurements of timescales. Assessment does not extend to an explanation of what causes these quick and slow events.

High School Previous vs. New Assessment Boundaries

S.HS.LS1.1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.

Previous	New
Assessment does not include identification of specific cell or tissue types, whole body systems, specific protein structures and functions, or the biochemistry of protein synthesis.	Assessment does not include identification of specific cell or tissue types, whole-body systems, specific protein structures and functions, or the biochemical mechanisms of transcription and translation. Assessment does not require use of codon tables, memorization of amino acids, or prediction of amino acid sequences from DNA sequences.

Sortable Standards Excel Spreadsheet

This multi-tab spreadsheet contains sortable information about the standards including what is new, clarification statements, assessment boundaries, a crosswalk with the NGSS, and a glossary.

Use this spreadsheet to look up specific information about individual or sets of standards, like a specific grade level.

The Standards Spreadsheet – excel file

Washington State K-12 Learning Standards for Science and Connections to WIDA, etc.

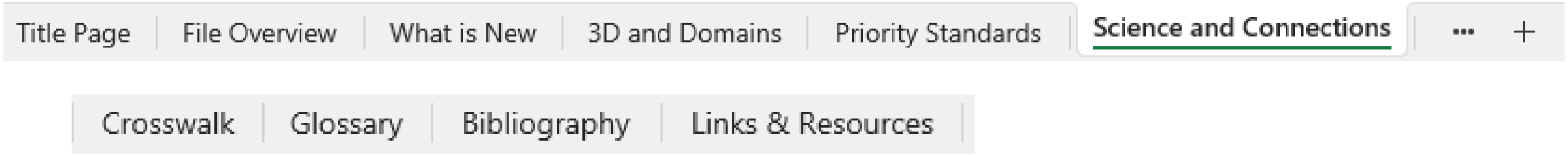
File Overview

October 2026 | v1.0

Full Code	Grade Level	Domain	Initial WA Standard	Tag	New in 2026	Priority	Clarification Statement	Assessment Boundary	WIDA (coming soon)
S.K.ESE.1	K	ESE	Use observations and shared experiences to describe how water supports and connects people, plants, animals, and places, explain why clean and available water matters for living systems, and communicate ways people and	[ESE]	Yes	Yes	Observations may include drinking, washing, plant growth, animal needs, and local water features such as streams or schoolyard gardens. Students may use drawings,	Assessment is limited to describing observable ways water supports living systems and how people care for water; detailed study of water	

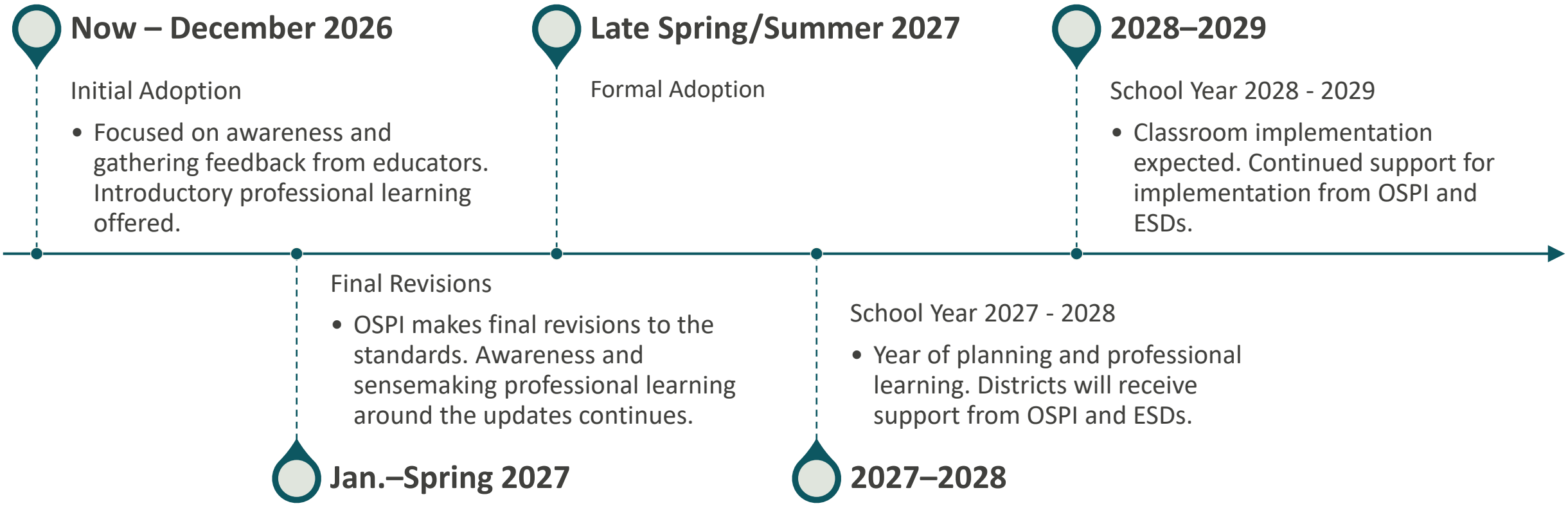
- Sort and Filter – by grade, by domain, by priority
- Glossary
- Bibliography
- WIDA Connections
- Other connected content standards
- OERs
- Assessment connections
- Crosswalk to previous standard codes

Using the spreadsheet features



- There are many tabs. Keep moving to the right to see all of them!
- File Overview—explains what is in each tab
- Change Log—explains what is new from the previous versions
- …and Connections—the new standards + connections to WIDA and more!

Next Steps in Timeline



OSPI Science Standards Office Hours

Getting Started with the Updated Science Standards	• Four Repeat Sessions – 10/20, 10/22, 10/26, 10/27 Times Vary
Exploring the New Environmental and Sustainability Standards in Science	• Four Repeat Sessions – 11/3, 11/4, 11/9, 11/10 Times Vary
Elementary Science Standards in Practice - Content Integration and High-Quality Instructional Materials	• One Session – 11/30 3:30 – 4:30 pm
Secondary Science Standards in Practice - Course Sequencing and High-Quality Instructional Materials	• One Session – 12/2 3:30 – 4:30 pm

AESD Science Standards Role-Specific Professional Learning Sessions

Science Revised Standards Awareness for Elementary	• Three Repeat Sessions – 11/12, 12/7, 1/12
Science Revised Standards Awareness for Secondary	• Three Repeat Sessions – 11/12, 12/8, 1/11
Science Revised Standards Awareness for District and Building Leaders	• Three Repeat Sessions – 11/19, 12/14, 1/14

Potential Actions to Take in the Initial Adoption Phase to Support Awareness and Feedback

Initial Adoption Goal: Ensure all science teaching staff, especially elementary educators are aware that the science standards have been revised and that they can provide feedback.

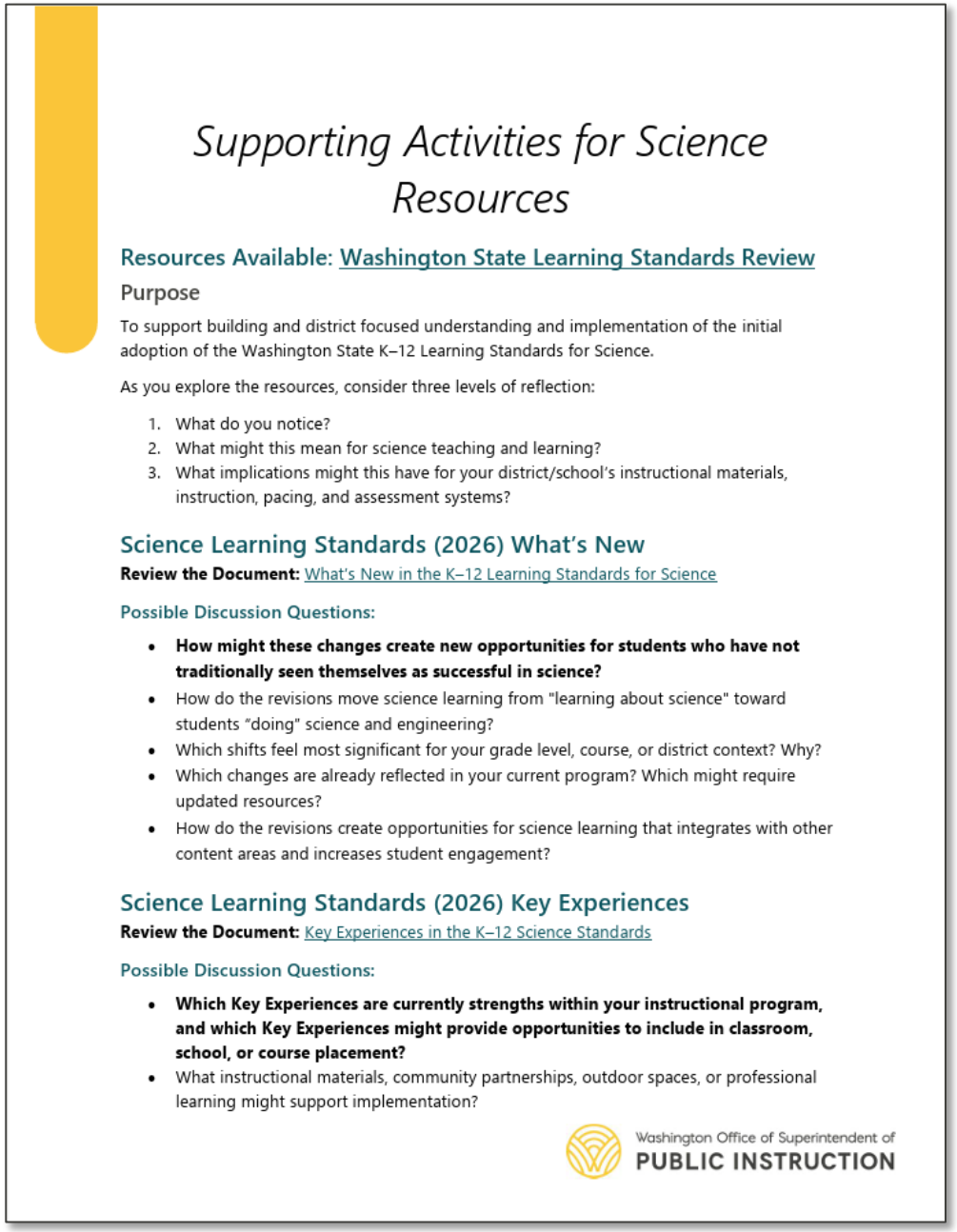
1. Send an email to all impacted staff with the links to all science standards resources and upcoming PL. (Can use 10/15 OSPI Science Standards Topic Brief)
2. Review the What's New document as a team and facilitate surfacing questions, concerns, and excitement. (PLC or Staff Meeting)
3. Review the Key Experiences document as a team and facilitate a discussion about current strengths and challenges in meeting the Key Experiences.
4. Utilize questions from our technical support document to lead conversations about each of the released science standards resources.

Supporting Activities for Science Resources

This document contains links to each of the standards documents as well as possible discussion questions to help make sense of the revisions.

- Use this doc during PLCs, staff meetings, PL days etc. to guide discussions about the available documents and the updates to the standards.

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Supporting Activities for Science Resources

Resources Available: Washington State Learning Standards Review

Purpose

To support building and district focused understanding and implementation of the initial adoption of the Washington State K–12 Learning Standards for Science.

As you explore the resources, consider three levels of reflection:

1. What do you notice?
2. What might this mean for science teaching and learning?
3. What implications might this have for your district/school's instructional materials, instruction, pacing, and assessment systems?

Science Learning Standards (2026) What's New

Review the Document: What's New in the K–12 Learning Standards for Science

Possible Discussion Questions:

- **How might these changes create new opportunities for students who have not traditionally seen themselves as successful in science?**
- How do the revisions move science learning from "learning about science" toward students "doing" science and engineering?
- Which shifts feel most significant for your grade level, course, or district context? Why?
- Which changes are already reflected in your current program? Which might require updated resources?
- How do the revisions create opportunities for science learning that integrates with other content areas and increases student engagement?

Science Learning Standards (2026) Key Experiences

Review the Document: Key Experiences in the K–12 Science Standards

Possible Discussion Questions:

- **Which Key Experiences are currently strengths within your instructional program, and which Key Experiences might provide opportunities to include in classroom, school, or course placement?**
- What instructional materials, community partnerships, outdoor spaces, or professional learning might support implementation?

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Survey Link/QR

Thank you! Your feedback helps make this work better.

https://survey.alchemer.com/s3/8904083/Initial-Standards-Science-Feedback



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