

State Learning Standards Review

CSTP Teacher Feedback Event

March 15-16 2024

Angela Allen, Associate Director of Learning Standards

Kara Todd, Special Projects and Assessment Coordinator



Tribal Land Acknowledgement

I/we acknowledge we are gathered upon the ancestral lands of the Seattle area's Federally Recognized Indian Tribe – the Muckleshoot Indian Tribe, who historically lived throughout the areas between the Cascade Mountains and Puget Sound, what is also known as the Salish Sea.

Agenda for our time today

Overview of
project

Project
Process &
Products

Next steps

Project Overview



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.



Washington Office of Superintendent of
PUBLIC INSTRUCTION



Vision

Mission

Values

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

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.

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



Washington Office of Superintendent of
PUBLIC INSTRUCTION

Why this? Why now?

- Standards are reviewed and revised for a variety of reasons:
 - New research about how students learn
 - New events or updated knowledge about a content area
 - Changes in the skills/knowledge employers tell us are most important
 - To ensure standards are suitable for specific grade levels
 - To stay current with our ever-changing technological society
- Most states review and revise their standards every 5-10 years.
- It has been 10–12 years since our ELA, math, and science standards have been revisited.

Why OSPI?

- OSPI is directed by the Legislature (RCW [28A.655.070](#)) to:
 - (a) Periodically revise** the state learning standards, as needed, based on the student learning goals in RCW [28A.150.210](#)...
 - (b) Review and prioritize** the state learning standards and identify, with clear and concise descriptions, the grade level content expectations to be assessed on the statewide student assessment and used for state or federal accountability purposes. The review, prioritization, and identification shall result in more focus and targeting with an emphasis on depth over breadth in the number of grade level content expectations assessed at each grade level.

Standards Review Project Goals



- **Refine, prioritize, and clarify** the existing standards.
- Develop **wraparound guidance** for educators that clarifies opportunities for:
 - Cultural responsiveness
 - Universal design
 - Language development
 - Social emotional learning
 - Cross-content integration
- Establish a **uniform process for the periodic review** of the state learning standards.
- Develop a multi-year **plan to support educators** in learning about and using the revised learning standards and accompanying resources and tools.

Refine, prioritize, clarify...



Provide a consistent format for all standards documents



Prioritize the standards within the grade-level or grade-band

Identify the standards that will be universally taught to all students at that grade level or grade band across the state



Clarify the language of specific standards



Refine, prioritize, clarify...

- **Math** continuing to use Common Core Mathematics Standards
 - including Data Science standards
- **Science** continuing to use Next Generation Science Standards
 - including Environment and Sustainability Education standards and climate science connections
- **ELA** amending the Common Core ELA/Literacy Standards, and filling gaps
 - including Media Literacy and Digital Citizenship standards

Prioritization

- Focus on narrowing and streamlining standards; being responsive to educator feedback and established district need
- Identify a universal set of standards that all students should have the opportunity to develop mastery; supporting all students having access and addressing inequities especially for highly mobile students
- Support important interventions being provided – starting at whole class level
- Focus is identification of the essential learning for all students – “prioritized standards”
- Supporting standards will be identified to help support the development of student learning of the prioritized standard
- State Assessment data **will not** determine priority standards. Assessments will be adjusted, as needed, after adoption

Wraparound guidance...

- “Implementation Guide” or “Teaching Guide” or “???? Guide”
- Similar formatting across content areas
- Explain/unwrap/unpack the individual standards
- Add examples and other supports as needed
- Show connections to previous and future learning
- Bundle/group related standards within the content area that can authentically be taught together

Wraparound guidance...

- Show opportunities for...
 - Cultural responsiveness
 - Universal Design for Learning
 - Language development connections
 - Tribal and indigenous learning
 - Social emotional learning
 - Cross-content integration
 - including, but not limited to: Climate Science, and Environment and Sustainability Education

Internal Project Team

- ELA, math, science content experts from Elementary, Secondary, and Assessment divisions
- Bilingual Education
- Climate Science
- Dual Language Education
- Environment and Sustainability Education
- Media Literacy & Digital Citizenship
- Multilingual Education
- Office of Native Education
- Tribal Language
- Social Emotional Learning
- Special Education
- Many others









Process and Products



Uniform process for periodic review

- Repeat every 7-9 years?
- Need to produce artifacts so the process is institutional knowledge, and publicly available knowledge
 - Timelines
 - Formal project plan
 - Communication plan

Stages/phases of process

Symbol	Meaning
	Review phase: OSPI staff gathers information (including surveys of educators, reviewing research and other states), drafts updates, gets feedback from educators.
	Adoption phase: Standards documents available for public comment in August 2024. Final drafts to Superintendent in December 2024 for formal adoption.
	Professional Learning and Transition phase: When educators are learning and digesting the new learning standards and other supporting documents.
	Implementation phase: First school year when instruction delivered to students must be based on the new learning standards.
	Statewide summative assessment: First possible school year when new learning standards would be on state summative assessment.
	Next revision begins with a review phase. ▶

Washington State Learning Standards

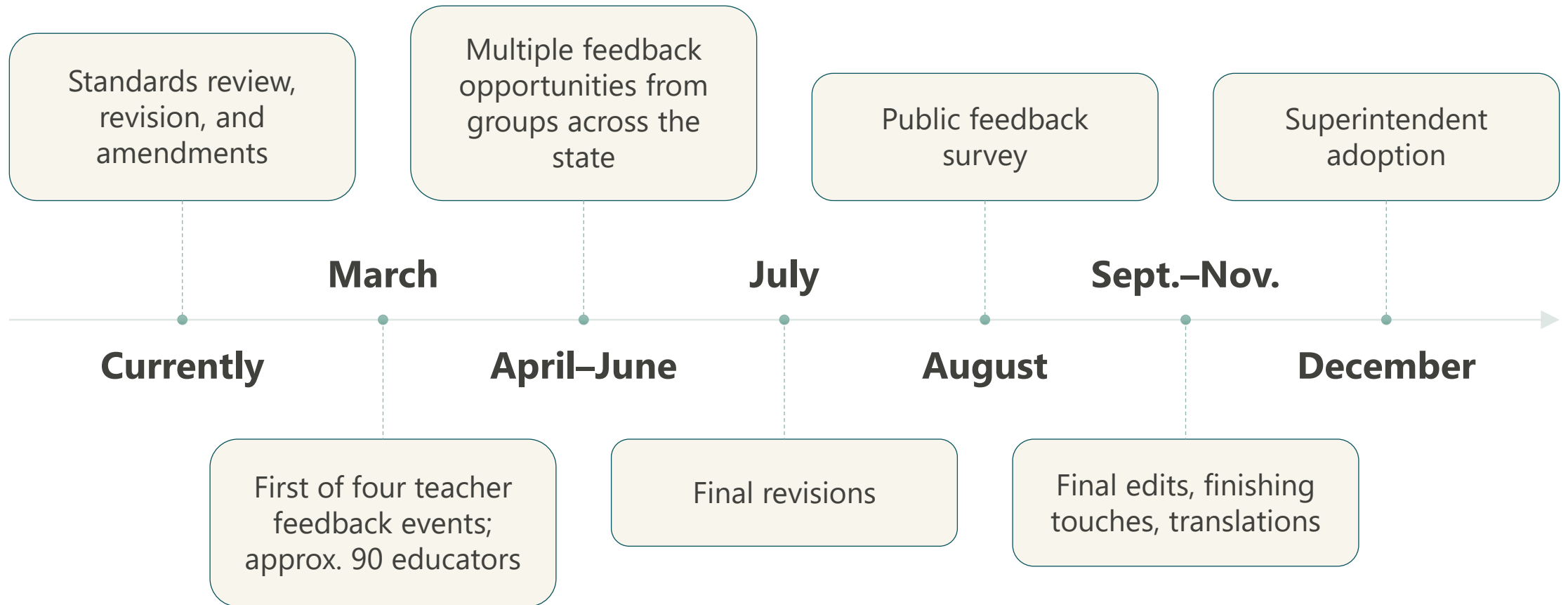
	Start Standards Review		Implemented in Schools
	State Adoption Target (OSPI)		Statewide Summative Assessment
	Professional Learning/Transition		Next Revision Begins

State Learning Standards Review and Revision Cycle

In accordance with RCW 28A.655.070, the Superintendent of Public Instruction will periodically revise the state learning standards. The projected review and revision cycle is below.

Content Area		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	English Language Arts <i>(including Media Literacy & Digital Citizenship)</i> <i>Adopted 2011</i>	▶	🎯	👤	🏫		📄		🔄			
	Mathematics <i>(including Data Science)</i> <i>Adopted 2011</i>	▶	🎯	👤	🏫		📄		🔄			
	Science <i>(including Environment and Sustainability Education)</i> <i>Adopted 2013</i>	▶	🎯	👤	🏫		📄		🔄			
	Health & Physical Education <i>Adopted 2016</i>		▶	🎯	👤	🏫				🔄		
	World Languages <i>Adopted 2015</i>		▶	🎯	👤	🏫				🔄		
	Financial Education <i>Adopted 2016</i>		▶	🎯	👤	🏫				🔄		
	Social Studies <i>Adopted 2018</i>			▶	🎯	👤	🏫				🔄	
	Arts <i>Adopted 2017</i>			▶	🎯	👤	🏫				🔄	
	Computer Science <i>Adopted 2018</i>			▶	🎯	👤	🏫				🔄	
	Educational Technology <i>Adopted 2018</i>			▶	🎯	👤	🏫				🔄	

Timeline for Math, Science, and ELA



Plan to support educators

- Using feedback from various stakeholders, multiple options will be created to support districts, schools, and classrooms to implement the new standards which may include, but not be limited to:
 - On Demand Courses or Learning
 - Webinars
 - Conference presentations
 - Open Educational Resources
 - Connections to other resources and supports
 - Using existing structures, i.e., ESDs, Fellows, Regional Support Networks

And also...

- CCSS in Literacy for Spanish and ASL
- More alignment with the WIDA English Language Development (ELD) framework
 - Reading/ Writing/ Speaking/Listening will be able to be cross-walked/ aligned to Key Language Uses and Language Features
 - Language strand can now be aligned to the proficiency level descriptors

Products and Outcomes

Working Name	Intended Use/Description	Audience
WA Learning Standards adoption document	A streamlined, uniform presentation of the learning standards. Priority standards clearly visible.	Public, education community, legislators, etc.
Family Grade Level Resource Guide	Short explanations of the prioritized learning standards in each grade level, including how to foster/encourage/help at home.	Parents, families, care-givers, public, education community
Teacher Implementation Guides	Many details to support teachers in unpacking and using the learning standards, with integration and connections across subject areas.	Teachers, district staff, other instructional staff
Crosswalk documents	Identify changes from original adopted standards language. New version on the left, old version on the right with mark-up.	Teachers, district staff, other instructional staff, curriculum review staff

Template examples

9-10TH GRADE

Reading

Under Construction: Coming Soon!

Writing

Priority: **WA.ELA-Literacy.W.9-10.0**

Students write in a variety of genres for a range of communicative situations, producing clear and coherent writing in which the voice, development, organization, and language use are appropriate to genre, task, purpose, and audience.

Products of Writing

WA.ELA-LITERACY.W.9-10.1 Communicate information, ideas, arguments, and experience through writing, images, videos, and multimodal texts to affect an audience's ideas, understanding, perspectives, and/or actions.

- a. Compose descriptions within a variety of genres and purposes across content areas.
- b. Write persuasively within a variety of genres and purposes across content areas.
- c. Write narratives in a variety of genres with one or multiple plotlines, that develop the narrator and/or character's perspectives, and include relevant descriptive details to establish and develop a theme.
- d. Write informative/explanatory texts in a variety of genres that examine and explain substantive ideas, concepts, and information clearly and accurately, using formatting, graphics, and multimedia when useful and appropriate to the genre to aid comprehension.
- e. Write arguments in a variety of genres on topics or texts, supporting claims with valid reasoning and sufficient evidence while attending to the needs of the audience.

WA.ELA-LITERACY.W.9-10.2 Write to process and reflect, respond to reading and learning, explore and develop ideas, record observations, experiment with language, and make personal sense of the world, events, and experiences.

Plan and Generate Ideas

WA.ELA-LITERACY.W.9-10.3 Plan writing projects using a variety of strategies to manage materials, time, and tools, monitor progress toward the stated goal, and communicate needs as the project progresses.

- a. Examine/restate/analyze the prompt/assignment/ communicative situation.
- b. Plan sequence of activities and schedule time based on the prompt, assignment, and/or purpose of the project and due dates.
- c. Manage materials for the writing project.
- d. Adjust to feedback and shifts in focus and timeline when needed.

KINDERGARTEN

Reading

Under Construction: Coming Soon!

Writing

Priority: **WA.ELA-Literacy.WK.0**

Students use a combination of drawing, visually representing, dictating, and writing in a variety of genres for a range of communicative situations.

Products of Writing

WA.ELA-LITERACY.WK.1 With guidance and support, communicate information, ideas, opinions, and/or experiences through drawing, visually representing, dictating, writing, and multimodal texts.

- a. Compose descriptions (e.g., of objects, people, places).
- b. Draw, visually represent, dictate, and write to invite others into community, resolve conflicts, and/or persuade.
- c. Tell the story of a single event or several loosely linked events in order and provide a reaction to what happened.
- d. Inform others about students' observations and explanations of their world by naming a topic and supplying some information about the topic.
- e. Express and state opinions or preferences within a variety of genres.

WA.ELA-LITERACY.WK.2 With guidance and support, make personal sense of information, ideas, opinions, emotions, and/or experiences by using a combination of drawing, visually representing, dictating, and writing.

Plan and Generate Ideas

WA.ELA-LITERACY.WK.3 With guidance and support from adults, identify the materials and order of steps needed to complete the writing task or project.

- a. Examine and restate the prompt or task and, when possible, make connections to personal interests, perspectives, and/or experiences.

WA.ELA-LITERACY.WK.4 With guidance and support, generate and organize ideas, including appropriate use of tools.

- a. Generate and/or select topics from experience, imagination, reading, conversations, and/or desire to communicate to a variety of audiences.
- b. Create and organize ideas through drawing, graphic organizers, orally telling stories, and/or collaborative conversation in response to mentor texts and/or questions about events, information, opinions, and/or preferences.

To come later: Strand-specific Extended Glossaries:

- define and describe key concepts in each strand and give examples when appropriate specific to the grade band

Composing: Composing is a synonym for the creation of written texts, but also includes the creation of multimodal texts (see definition below). The word “composing” emphasizes the arrangement of language and multimodal elements into artistic forms that convey the composer’s message and affect audiences.

Genres: Genres are cultural and social creations that help composers achieve their purposes within communicative situations. Genres are recognizable but flexible structures that have developed over time because they prove useful. Genres help composers generate ideas and make decisions as they compose. Genres also shape audiences’ expectations, helping them more quickly orient to the composer’s purposes and the composition’s structures, features, and conventions. Examples of genres include science fiction, haiku, news articles, postcards, short stories, lab reports, ad slogans, mission statements, and social media posts.

Communicative situation: The communicative situation brings together a composer’s message and purposes with an audience’s needs and expectations. The communicative situation may include time, place, culture(s), and relationships that give the communication meaning. Some communicative situations are general: An author writes a novel for readers who want to be entertained. Many communicative situations are more specific: The host of a Superbowl party sends a text message to a friend asking them to bring cheese dip. The communicative situation influences the composer’s decisions about genre, voice, techniques, language use, etc. For example, the host of the Superbowl party would not write a novel with chapter headings to solicit snacks, and most authors would not include emojis in their novels or publish them through a messaging app.

Sample of Crosswalk Document

Reading for Understanding

Standard Code	2024 WA ELA- Literacy Standard	CCSS Code	2011 CCSS ELA-Literacy Standard
R9-10.1a	Identify textual evidence to support analysis of what the text, including images, videos, and other multimodal texts , says explicitly as well as inferences drawn from the text and its context .	RL.9-10.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
		RI.9-10.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
R9-10.2a	Describe the theme or central idea of a text, including images, videos, and other multimodal texts , and analyze its	RL.9-10.2	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is

Template Examples

KINDERGARTEN

STANDARDS FOR MATHEMATICAL PRACTICE

- 1 Make sense of problems and persevere in solving them.
- 2 Reason abstractly and quantitatively.
- 3 Construct viable arguments and critique the reasoning of others.
- 4 Model with mathematics.
- 5 Use appropriate tools strategically.
- 6 Attend to precision.
- 7 Look for and make use of structure.
- 8 Look for and express regularity in repeated reasoning.

COUNTING AND CARDINALITY

Know number names and the count sequence.

Priority: K.CC.A.1

Count to 100 by ones and by tens.

Priority: K.CC.A.2

Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

Priority: K.CC.A.3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Count to tell the number of objects.

Priority: K.CC.B.4

Understand the relationship between numbers and quantities; connect counting to cardinality.

HIGH SCHOOL CREDITS 1 & 2

Standards for Mathematical Practice

- 1 Make sense of problems and persevere in solving them.
- 2 Reason abstractly and quantitatively.
- 3 Construct viable arguments and critique the reasoning of others.
- 4 Model with mathematics.
- 5 Use appropriate tools strategically.
- 6 Attend to precision.
- 7 Look for and make use of structure.
- 8 Look for and express regularity in repeated reasoning.

Number & Quantity

The Real Number System

Extend the properties of exponents to rational exponents

Priority N.RN.A.1

Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

Priority N.RN.A.2

Rewrite expressions involving radicals and rational exponents using the properties of exponents. Use properties of rational and irrational numbers.

Use properties of rational and irrational numbers

Priority N.RN.B.3

Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.



Math Implementation Guide

Standard

Learning Standard:	
Clarifications and Examples	
Supporting Standard(s)	
Learning Progression	
What learning came before your grade?	What learning comes after your grade?

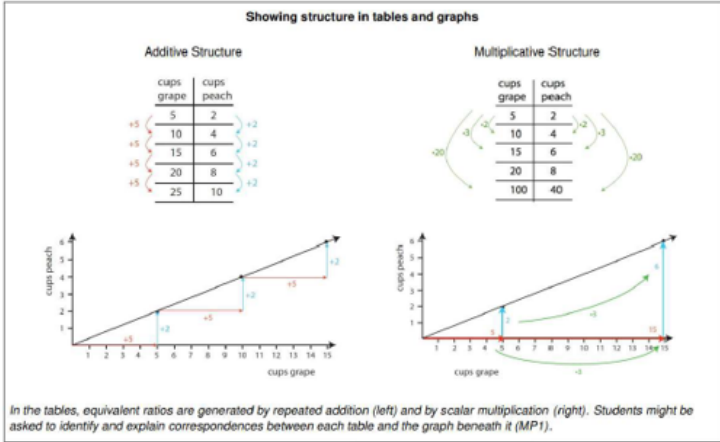
Standards Connections

Culturally Responsive Education (CRE)
Text TBD
Multilingual Learners (MLL)
Text TBD
Social Emotional Learning (SEL)
Text TBD
Since Time Immemorial (STI)
Text TBD
Universal Design for Learning (UDL)
Text TBD
Content Integration (may be multiple subjects)
Text TBD
Climate Connections or Other
Text TBD
Environmental Science Integration or Other
Text TBD

Content Standard: 6.RP.A.3.a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

Clarifications and Examples

- Students explore a relationship in context to determine missing values and make conclusions.



Content Standard: 6.RP.A.3.b. Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?

Clarifications and Examples

- A variety of strategies may be used to solve problems in context.
- Students could use newspapers, store ads, or online ads to find examples of unit rate problems and determine what makes a better buy.

Serena's family is driving across the state to visit relatives. They drove 385 miles in 7 hours. At what rate did Serena's family drive? How many miles would they have gone if they drove for 9 hours?

Template Examples: Elementary

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

Where Do Plants and Animals Live and Why Do They Live There?

Priority: K-ESS3-1

Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. (climate science connection)

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive. (supporting K-ESS3-1)

K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. (supporting K-ESS3-1) (climate science connection)

Priority: 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. (*engineering*) (climate science connection)

ENVIRONMENTAL AND SUSTAINABILITY EDUCATION

Sustainability

1.ESE.1 Students explore the connections between ecological, social, and economic systems and understand the actions humans take to solve environmental problems in class, at school, and home.

The Natural and Built Environment

1.ESE.2 Students engage in place-based inquiry to understand the connections between natural and human-built environments.

Personal and Civic Responsibility

Priority: 1.ESE.3

Students apply the knowledge, skills, and vision necessary to make personal and collective decisions and implement solutions for sustainable communities.



Template Examples: Secondary

Matter and Its Interactions

How do atomic and molecular interactions explain the properties of matter that we see and feel?

MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures. (climate science connection)

Priority: MS-PS1-2

Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

Priority: MS-PS1-3

Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. (climate science connection)

MS-PS1-4 Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. (climate science connection)

MS-PS1-5 Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.

Priority: MS-PS1-6

Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. (*engineering*)

LS3 Heredity: Inheritance and Variation of Traits

How are characteristics of one generation passed to the next? How can individuals of the same species and even siblings have different characteristics?

HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may results from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.

Priority HS-LS3-3

Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.



Science Implementation Guide

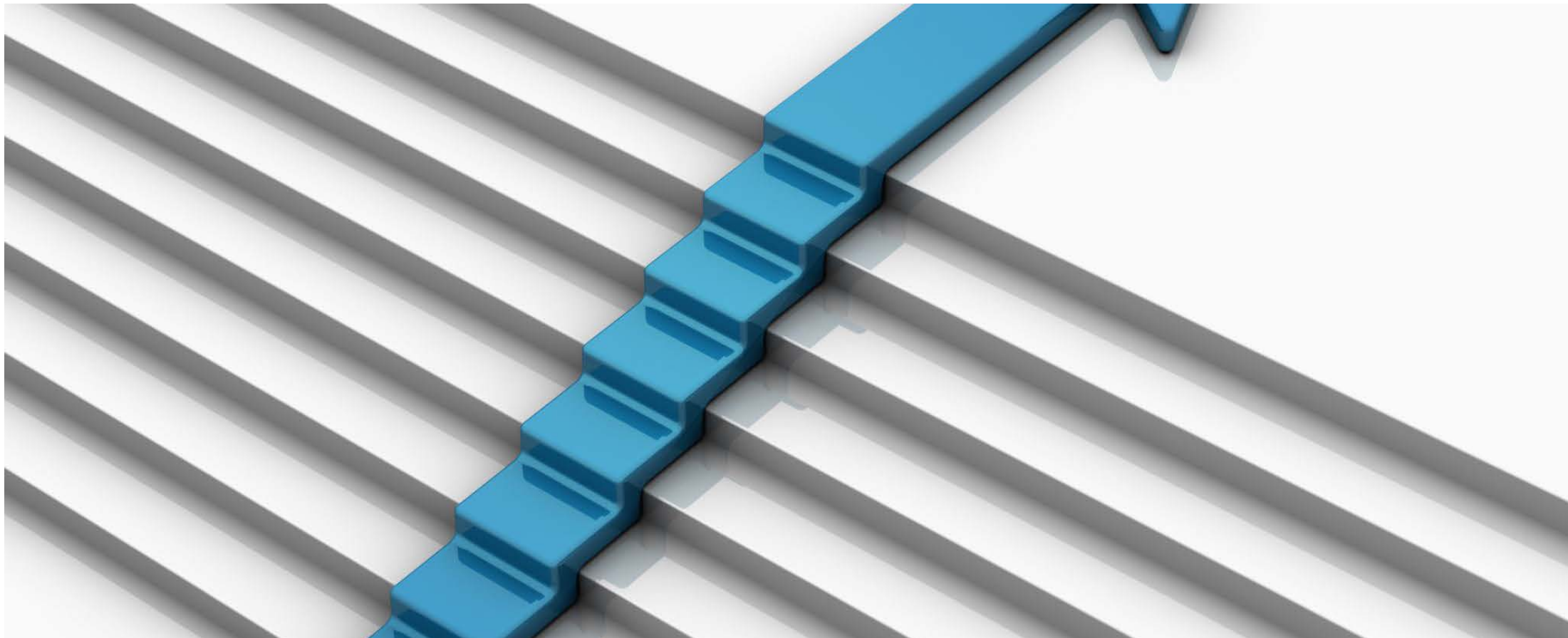
Standard 3-LS1-1

Learning Standard: Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.		
Three Dimensions of This Standard		
Science and Engineering Practices (SEPs): What science behaviors will students be doing ?	Disciplinary Core Ideas (DCIs): What facts and concepts will students end up knowing ?	Crosscutting Concepts: What sensemaking lenses and tools will students use for thinking ?
Developing and Using Models Develop models to describe phenomena.	LS1.B: Growth and Development of Organisms Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.	Patterns Patterns of change can be used to make predictions.
Clarifications for This Standard		
<ul style="list-style-type: none"> The emphasis is on showing common patterns of change all organisms go through during their life. Emphasis is not on memorizing life cycles of certain organisms. Where possible, life cycles of local plants and animals should be explored, or those of particular student interest. 		
Assessment Boundaries		
<ul style="list-style-type: none"> Assessment does not include specific mechanisms of birth, growth, reproduction, death. Assessment of plant life cycles is limited to those of flowering plants. This means using 		

Standards Connections

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Text TBD
Social Emotional Learning (SEL)
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Since Time Immemorial (STI)
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Content Integration (may be multiple subjects)
Text TBD
Climate Connections or Other
Text TBD
Environmental Science Integration or Other
Text TBD

Next Steps



Next meeting opportunities

- Series of 3 virtual meetings
- April – Review feedback revisions to the learning standards document, focus on feedback for implementation documents
- May – Review previous meetings feedback and updated documents, focus on feedback for family/caregiver guides
- June – Review previous meetings feedback and updated documents, focus on equity review and professional learning needs of educators

Known LS Project Next Steps

- Building documents and getting feedback
- Supporting and creating professional development for educators around the standards with multiple opportunities depending on educator and district needs, using partnerships

Contact Us



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

Please reach out to us with additional questions and thoughts:

standards.review@k12.wa.us



Mathematics

Purpose

- Common Core State Standards for Mathematics
- K-8
 - Prioritize
 - Clarify and Interconnect
- High School
 - Year 1 & 2 Standards
 - Clarify and Interconnect
- Data Science standards across grade levels – GAISE II

Intent of Common Core Math

- Toward greater focus and coherence
- Clarity and specificity
- Stressing conceptual understanding
- Continually returning to organizing principles



Construction of Domains

Common Core State Standards – Mathematics

Standards Progressions

Kindergarten	1	2	3	4	5	6	7	8	HS
Counting and Cardinality									Number and Quantity
Number and Operations in Base Ten					Ratios and Proportional Relationships				
			Number and Operations - Fractions		The Number System				
Operations and Algebraic Thinking						Expressions and Equations			Algebra
								Functions	Functions
Geometry						Geometry			Geometry
Measurement and Data						Statistics and Probability			Statistics and Probability



Intent of Math Standards Review

- Coherence and conceptual understandings
- Clarity and multiple means of engagement, understanding
- K-8: touch-ups and back to intent

- HS: **Write expressions in equivalent forms to solve problems.**

CCSS.MATH.CONTENT.HSA.SSE.B.3

Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. *

CCSS.MATH.CONTENT.HSA.SSE.B.3.A

Factor a quadratic expression to reveal the zeros of the function it defines.

CCSS.MATH.CONTENT.HSA.SSE.B.3.B

Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.



Intent of Math Standards Review

- Coherence and conceptual understandings
- Clarity and multiple means of engagement, understanding
- K-8: touch-ups and back to intent

- HS: **Write expressions in equivalent forms to solve problems.**

CCSS.MATH.CONTENT.HSA.SSE.B.3

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Factor a quadratic expression to reveal the zeros of the function it defines.

CCSS.MATH.CONTENT.HSA.SSE.B.3.B

Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.



High School Mathematics Standards

Defining the 3rd Credit of Mathematics

Ways of thinking

Seeing relevance in mathematics

Supporting student pathways

Identifying the Content Standards for Credits 1 & 2

Guided by determining the math that all students need

Slicing standards as necessary to focus on grade level content

Classifying Content Standards to Support Student Pathways

Four potential pathways: Calculus, Statistics, Quantitative Reasoning, Industry

Develop with 3rd credit definition to follow 1st & 2nd credit content

Role of Data Science

Standards for Mathematical Practice

+ Inquiry

+ Content Integration

+ Age-appropriate Tech tools

- Vehicle for robust and rich math engagement across all grades and connecting math content



Equity

- Within the standard language:
 - K-6: "Flexibly, accurately, efficiently" instead of "fluently"
- In the Implementation Guide/Unpacking document
 - Clarifying standard language to increase:
 - Modes of engagement
 - Opportunities to demonstrate understanding
 - UDL
 - Language supports
 - Culturally responsive pedagogy
 - Content integration

Survey Results

- Educator Survey
 - Perception of too many standards
 - If resources demonstrated interconnected math standards
 - 87.8% of respondents: moderately or very helpful
 - If resources facilitated responsive and inclusive instruction
 - 80.4% of respondents: moderately or very helpful
- Feedback so far:
 - Clarifications were a revelation (in-development)
 - Appreciated everything in one place
 - Data Science on point

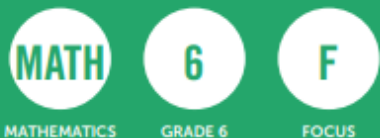
Research and Comparative Documents

- Student Achievement Partners (SAP)
- National Council of Teachers of Mathematics (NCTM)
- National Council of Supervisors of Mathematics (NCSM)
- Association of State Supervisors of Mathematics (ASSM)
- American Statistical Association (ASA)
- Multiple state collaborations (OR, NM, CA, NJ, KY, MN, WI)
- Arizona Progressions
- Data Science 4 Everyone

Team Thoughts and Process

- K-8 Approach
 - Follow nationally recognized, respected, and used resources to define prioritization
 - Consistency within and across systems
 - District to district
 - State to state
 - Resource alignment

CCSS WHERE TO FOCUS GRADE 6 MATHEMATICS



This document shows where students and teachers should spend the large majority of their time in order to meet the expectations of the Standards.

Not all content in a given grade is emphasized equally in the Standards. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these areas is also necessary for students to meet the Standards for Mathematical Practice.

To say that some things have greater emphasis is not to say that anything in the Standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade.

Students should spend the large majority¹ of their time on the major work of the grade (■). Supporting work (□) and, where appropriate, additional work (○) can engage students in the major work of the grade.^{2,3}

MAJOR, SUPPORTING, AND ADDITIONAL CLUSTERS FOR GRADE 6

Emphases are given at the cluster level. Refer to the Common Core State Standards for Mathematics for the specific standards that fall within each cluster.

Key: ■ Major Clusters □ Supporting Clusters ○ Additional Clusters

- 6.RP.A | ■ Understand ratio concepts and use ratio reasoning to solve problems.
- 6.NS.A | ■ Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- 6.NS.B | ○ Compute fluently with multi-digit numbers and find common factors and multiples.
- 6.NS.C | ■ Apply and extend previous understandings of numbers to the system of rational numbers.
- 6.EE.A | ■ Apply and extend previous understandings of arithmetic to algebraic expressions.
- 6.EE.B | ■ Reason about and solve one-variable equations and inequalities.
- 6.EE.C | ■ Represent and analyze quantitative relationships between dependent and independent variables.
- 6.G.A | □ Solve real-world and mathematical problems involving area, surface area, and volume.
- 6.SP.A | ○ Develop understanding of statistical variability.
- 6.SP.B | ○ Summarize and describe distributions.

HIGHLIGHTS OF MAJOR WORK IN GRADES K–8

K–2	Addition and subtraction – concepts, skills, and problem solving; place value
3–5	Multiplication and division of whole numbers and fractions – concepts, skills, and problem solving
6	Ratios and proportional relationships; early expressions and equations
7	Ratios and proportional relationships; arithmetic of rational numbers
8	Linear equations and linear functions

REQUIRED FLUENCIES FOR GRADE 6

6.NS.B.2	Multi-digit division
6.NS.B.3	Multi-digit decimal operations



Team Thoughts and Process

- High School Approach
 - Follow nationally recognized, respected, and used resources to define prioritization
 - Isolating standards that every student should engage within Year 1 & 2
 - Specify how bridging Algebra and Functions standards show up in Year 1 & 2 vs. 3+
 - Looking at existing work to dig into
 - Launch Years, NCTM's Essential Concepts, eligible G10 assessment content

Content from CCSSM Widely Applicable as Prerequisites for a Range of College Majors, Postsecondary Programs and Careers*

This table¹ lists clusters and standards with relatively wide applicability across a range of postsecondary work. Table 1 is a **subset** of the material students must study to be college and career ready (CCSSM, pp. 57, 84). Curricular materials, instruction, and assessment must give especially careful treatment to the domains, clusters, and standards in Table 1, including their interconnections and their applications—amounting to a majority of students’ time.

Number and Quantity	Algebra	Functions	Geometry	Statistics and Probability	Applying Key Takeaways from Grades 6–8**
<p>N-RN, Real Numbers: Both clusters in this domain contain widely applicable prerequisites.</p> <p>N-Q*, Quantities: Every standard in this domain is a widely applicable prerequisite. Note, this domain is especially important in the high school content standards overall as a widely applicable prerequisite.</p>	<p>Every domain in this category contains widely applicable prerequisites.^o</p> <p>Note, the A-SSE domain is especially important in the high school content standards overall as a widely applicable prerequisite.</p>	<p>F-IF, Interpreting Functions: Every cluster in this domain contains widely applicable prerequisites.^o</p> <p>Additionally, standards F-BF.1 and F-LE.1 are relatively important within this category as widely applicable prerequisites.</p>	<p>The following standards and clusters are relatively important within this category as widely applicable prerequisites:</p> <p>G-CO.1 G-CO.9 G-CO.10 G-SRT.B G-SRT.C</p> <p>Note, the above standards in turn have learning prerequisites within the Geometry category, including:</p> <p>G-CO.A G-CO.B G-SRT.A</p>	<p>The following standards are relatively important within this category as widely applicable prerequisites:</p> <p>S-ID.2 S-ID.7 S-IC.1</p> <p>Note, the above standards in turn have learning prerequisites within 6-8.SP.</p>	<p>Solving problems at a level of sophistication appropriate to high school by:</p> <ul style="list-style-type: none"> • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m³, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6-8.SP). • Performing rational number arithmetic fluently.



Template Examples

KINDERGARTEN

STANDARDS FOR MATHEMATICAL PRACTICE

- 1 Make sense of problems and persevere in solving them.
- 2 Reason abstractly and quantitatively.
- 3 Construct viable arguments and critique the reasoning of others.
- 4 Model with mathematics.
- 5 Use appropriate tools strategically.
- 6 Attend to precision.
- 7 Look for and make use of structure.
- 8 Look for and express regularity in repeated reasoning.

COUNTING AND CARDINALITY

Know number names and the count sequence.

Priority: K.CC.A.1

Count to 100 by ones and by tens.

Priority: K.CC.A.2

Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

Priority: K.CC.A.3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Count to tell the number of objects.

Priority: K.CC.B.4

Understand the relationship between numbers and quantities; connect counting to cardinality.

Sub-standards
still standards.
In Implementation docs

SMPs in each grade

Priority Standards
indicated

HIGH SCHOOL CREDITS 1 & 2

Standards for Mathematical Practice

- 1 Make sense of problems and persevere in solving them.
- 2 Reason abstractly and quantitatively.
- 3 Construct viable arguments and critique the reasoning of others.
- 4 Model with mathematics.
- 5 Use appropriate tools strategically.
- 6 Attend to precision.
- 7 Look for and make use of structure.
- 8 Look for and express regularity in repeated reasoning.

Number & Quantity

The Real Number System

Extend the properties of exponents to rational exponents

Priority N.RN.A.1

Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

Priority N.RN.A.2

Rewrite expressions involving radicals and rational exponents using the properties of exponents. Use properties of rational and irrational numbers.

Use properties of rational and irrational numbers

Priority N.RN.B.3

Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Template Examples

Sub-standards still standards. In Implementation docs

Includes standards for Years 1 and 2

Year 3+ standards dependent on a student's HSBP



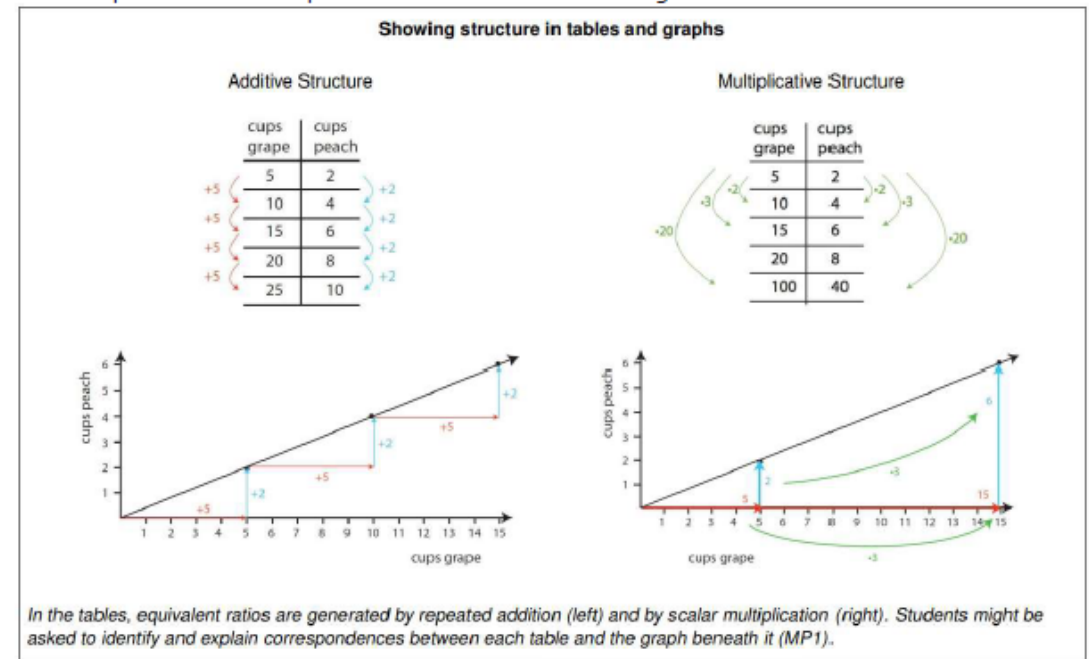
Implementation Document-Coming

- Will include:
 - Overview of math for given grade
 - Expanding on SMP by domain
 - Clarification of the standard
 - Supports for responsive teaching: UDL, language support, Since Time Immemorial, content integration, culturally responsive pedagogy, etc.

Content Standard: 6.RP.A.3.a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

Clarifications and Examples

- Students explore a relationship in context to determine missing values and make conclusions.



Content Standard: 6.RP.A.3.b. Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?

Clarifications and Examples

- A variety of strategies may be used to solve problems in context.
- Students could use newspapers, store ads, or online ads to find examples of unit rate problems and determine what makes a better buy.

Serena's family is driving across the state to visit relatives. They drove 385 miles in 7 hours. At what rate did Serena's family drive? How many miles would they have gone if they drove for 9 hours?

Implementation Document-Coming

Standards Connections

Culturally Responsive Education (CRE)

- Promote persistence and reasoning during problem solving.
- Facilitate debate and/or collaborative problem solving for tasks with multiple entry points.
- Center students' assets and experiences as valuable mathematical perspectives that are legitimate and enrich collaborative problem solving and discourse.
- Build positive math identities through validating students' math knowledges and expressions of understanding, asking clarifying questions to discuss mistakes.
- Center mistakes and different approaches to problem solving as legitimate diverse math knowledges and ways of thinking that are sources of learning from each other.

Multilingual Learners (MLL)

Questions to consider for facilitating language supports:

- How can an activity be designed to encourage discussion and debate between students, either as a class or in small groups?
- How can an activity be designed to encourage students to describe their observations and explain their mathematical models?
- How can an activity be designed to allow students to revise their thinking based on hearing and reflecting on the thinking of their peers or justifying their initial reasoning?
- How can students be supported in selecting precise vocabulary in context of their argument or explanation?
- How can the activity be designed to embrace students' heritage language when communicating their mathematical thinking?

Social Emotional Learning (SEL)

Universal Design for Learning (UDL)

Questions to consider for removing barriers and increase relevance for students:

- How can an activity be designed so a student can connect their interest and lived experience to the learning through seeing relatable patterns in ratios and proportions in their lives?
- How can an activity remain rigorous and relatable for the student by decreasing the complexity and increase the value for the student (*see example in 6.RP.A.2*)
- What modes of information delivery can be used so students have multiple ways to access content? (*see example in 6.RP.A.3*)
- How can graphic organizers be used throughout the unit to help students see similarities in different math concepts, and identify differences?
- How can students use graphic organizers to build their math schema and support executive functioning when students need to determine a solution path for a problem?
- What supports can be created to help students know for the different types of concepts, which set of steps they've created should they use?



Implementation Document-Coming

Content Integration (may be multiple subjects)

- Financial Education Standards 6.SS.1-4: Exploring spending and savings plans as rates, 6.SS.8: Exploring how external factors influence spending decisions.
- Health Education Core Ideas: Nutrition H1.N1.6, H1.N4.6, Comparing components of nutrition or caloric intake/expenditure.
- Social Studies Standards: E.6-8.1: Explore the economic decisions and influences of distribution of resources across regions and communities.

Climate Connections or Other

Our changing climate impacts different communities in different ways, and there are many potential solutions students can explore. While incorporating these climate impacts and solutions, teachers should focus on what is most important within their community (e.g., farmland restoration, biomass power, conservation agriculture, grid flexibility, reducing food waste, seaweed farming, water distribution efficiency, etc.).

Providing guidance to support students in connecting climate impacts and solutions could look like:

- Facilitating a class discussion to determine what the students define as a pressing climate impact and solution and allowing student-driven research to explore and examine the solution within their community, including using student-collected ratios, proportional relationships, and data science. Example: The ratio of compost to garbage collected during a food waste audit.
- Designing an activity or unit for students to connect student lived experiences to a relatable climate impact and potential solutions through ratios, proportional relationships, and data science. Example: The proportion of renewable energy to nonrenewable energy used by the school.
- Explicitly connecting the climate impact and solution to grade-appropriate climate science ideas. Example: Reducing food waste will reduce the amount of greenhouse gas emissions created by the decomposing compost.

Environmental Science Integration or Other

- Environmental and Sustainable Standards ESE 1: building on knowledge of interconnections and interdependency of ecological, social, and economic systems.





English Language Arts

ELA CCSS (2011)

Structure of original CCSS

- Reading
 - Literary texts
 - Informational texts
 - Foundational skills
 - Writing
 - Speaking and listening
 - Language
- Anchor standards for each strand that define what high school graduates should know and be able to do for post-secondary success.
 - Grade-level standards are based on the anchors, including abc's that break down the "parts" of the anchors

What informed the ELA review and revision?



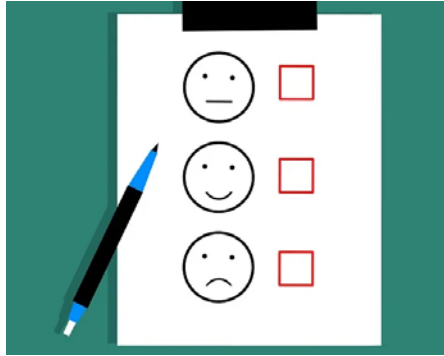
Leadership:

- **include media literacy & digital citizenship**

Professional organizations and resources

- American Association of School Librarians (AASL): [Standards Framework](#)
- NCTE's [Media Education in English Language Arts](#) Position Statement
- NCTE's Position Statement on [Definition of Literacy in a Digital Age](#)
- The National Association for Media Literacy Education (NAMLE) resource: "[Key Questions to Ask When Analyzing Media Experiences](#)"
- Center for Educational Equity: "[Preparing for Civic Responsibility in our Digital Age](#)"

What informed the ELA review and revision?

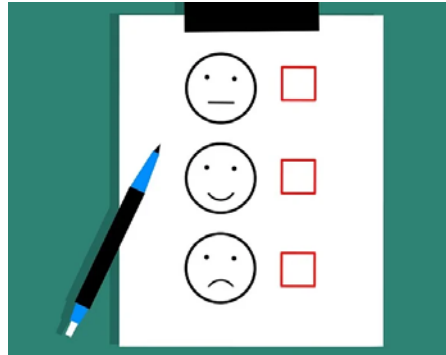


Survey results

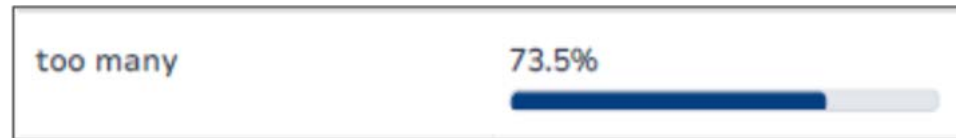
- **address AI by updating and adding to the writing process standards**

“I wonder if we need to clarify or add to the writing process standards...to address the rising prevalence of AI tools that can influence the writing process (i.e., ChatGPT). If we can address these within the language of the standards, we might ensure that we are teaching students how to use them ethically and appropriately.”

What informed the ELA review and revision?



Survey results



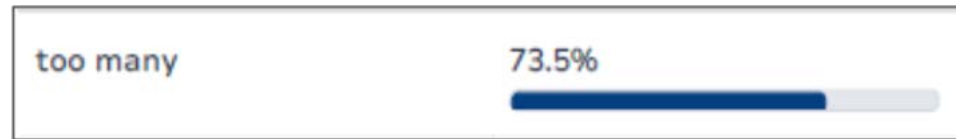
- **streamline by reorganizing categories**

“The high school writing standards 1-3 are listed as all separate skills writing for informational, argumentative, and narrative purposes; however, many of the subskills are repetitive listing similar items like “organization”, “development of ideas”, etc. It would be potentially more beneficial to have an “organization” writing standard and so forth and then add on any uniquely argumentative writing skills like “counter argument.””

What informed the ELA review and revision?



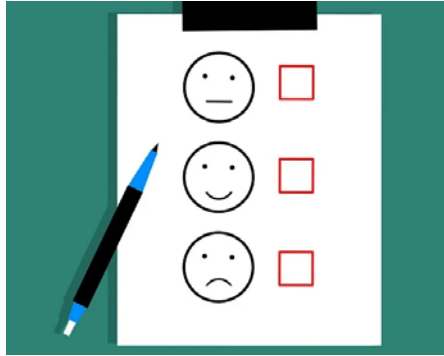
Survey results



- **streamline by reorganizing categories**

"...stop separating "informational" standards from "literature" – most of the standards are identical and including them as separate items is both redundant and overwhelming. Stop trying to distinguish between "central idea" and "main idea" – not only do families not understand the distinction, most teachers are also unclear (and to be honest, the point is that every piece of writing has a "point" regardless of the minutiae between types of writing)."

What informed the ELA review and revision?

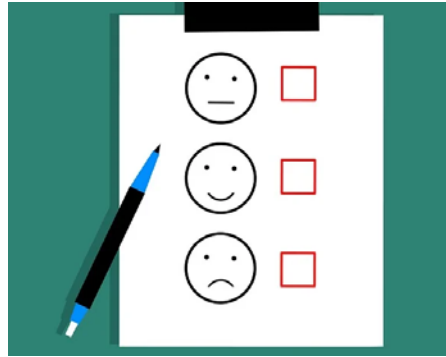


Survey results

- **convey perspectives to audience**
- **focus on storytelling**

“Students would benefit most from learning how to convey their perspectives clearly to an audience, and that is most captivating through the medium of storytelling. So while the concept of storytelling is hard to measure with scales and standardization, it is the type of ELA skill that would benefit the most students and transcend the digital era of robotic responses. The more compellingly a student can tell their story, the more likely they will accomplish what they want to accomplish in life...”

What informed the ELA review and revision?



Survey results

- **critical thinking, process-oriented**
- **reflect great teaching already happening**

"I teach critical thinking and none of the standards match – in a helpful way – what I ask my students to know and do with critical thinking. But this is just 1 example of how none of the standards really match – in a helpful way – what I (need to) ask my students to do; the standards are smart, and rigorous...but they are too myopic and technocratic. We need global standards that are process oriented and allow us to creatively measure and holistically encourage the development of the fundamentals of reading, writing, speaking, and thinking critically."

What informed the ELA review and revision?



Instructional usefulness

Frameworks for Success in Postsecondary Writing (2011)

--NCTE, NWP, CWPA

Flexible Writing

Processes

Critical Thinking

Rhetorical Knowledge

- audience
- purpose
- context
- genre

Habits of mind

- curiosity
- openess
- engagement
- creativity
- persistence
- responsibility
- flexibility
- metacognition



What informed the ELA review and revision?



Instructional usefulness

- **more focus on writing process**

A Report of the NCTE Review Team on the July 2009 Draft of the Common Core English Language Arts State Standards

"...accounting for writing processes presents certain technical difficulties for assessment. However, if these standards are meant to guide teachers and administrators, they must address what should be taught, not simply what is easy to assess..."

What informed the ELA review and revision?



Instructional usefulness

- **focus on literacy development within communities**

A Report of the NCTE Review Team on the July 2009 Draft of the Common Core English Language Arts State Standards

“Communicative competencies, especially in writing and reading, are stated as if they occur in solitary situations. That vision of literacy ignores the importance of talk as a context for reading and writing and the role of others in individuals' developments of these skills...”

What informed the ELA review and revision?



Research and scholarship in fields associated with ELA

- multilingual education
- media literacy and digital citizenship
- evidence-based practices in reading
- literary studies
- linguistics
- English education
- composition studies/rhetoric
- multicultural education

What informed the ELA review and revision?



Industry needs

ability to listen to both sides

make things understandable for lots of different people

understand who you are talking to

ability to serve community with respect and understanding by person-to-person communication

if it isn't relevant and compelling to audience, it isn't helpful

communicate on technical side and non-technical side

situational awareness

empathy more important than ever

Synthesizing our findings



language use within communities
flexible process
audience experience



Synthesizing our findings



language use within communities
genre
audience experience



Revisions to strands

ELA CCSS (2011)

1. Reading

Literary Text

Informational Text

Foundational Skills



2. Writing

3. Speaking & Listening

4. Language

WA ELA & Literacy (2024)

1. Reading

Literary and Non-Literary Text

Foundational Skills

2. Writing

3. Speaking, Listening, & Digital Forums

4. Language

5. Research and Media Literacy



Revisions to individual standards

- Humanize the standards:
- Embed “foundations” for media literacy in standards in all strands:
- Emphasize process:
- Expands the already-expanding definition of text to include: voice, gesture, images, videos, etc.

language use within communities
flexibility
process **genre**
audience experience

Revisions to individual standards

Language standards are more aligned to structured literacy:

- All the pieces from CCSS are still there, but sorted by size:
 - morphology and word study is all with the “word-sized pieces”
 - syntax is all with the “sentence-sized pieces”

What you can expect to see today

WA ELA & Literacy (2024)

1. Reading

Literary and Non-Literary Text -- proof of concept anchors and 9-10

Foundational Skills -- under construction

2. Writing -- anchors and K-12

3. **Speaking, Listening, & Digital Forums** --under construction

4. **Language** -- anchors and K, 1, 11-12

5. **Research and Media Literacy** -- anchors and K, 3, 7, 9-10, 11-12



Equity: Big picture priority standards

“0” standard in each strand

Priority: Writing

Students write in a variety of genres for a range of communicative situations, producing clear and coherent writing in which the voice, development, organization, and language use are appropriate to genre, task, purpose, and audience.

Priority: Language

Students demonstrate command of the English language and apply knowledge of how language functions in different contexts to make effective choices for meaning and style, and to comprehend more fully when reading, listening, or viewing.

Grade-specific priority standards

- Additional grade-specific priority standards within each strand will be identified.
- Because all ELA activities support each other, and different students have different access points grade-level priority standards will not be exclusive to a single strand.
- Grade-specific priority standards will always be understood as they relate to the big picture “0” standard for the strand.

And also...

- More alignment with the WIDA English Language Development (ELD) framework
 - Reading/ Writing/ Speaking/Listening will be able to be crosswalked/ aligned to Key Language Uses and Language Features
 - Language strand can now be aligned to the proficiency level descriptors

Standards Template

9-10TH GRADE

Reading

Under Construction: Coming Soon!

Writing

Priority: WA.ELA-Literacy.W.9-10.0

Students write in a variety of genres for a range of communicative situations, producing clear and coherent writing in which the voice, development, organization, and language use are appropriate to genre, task, purpose, and audience.

Products of Writing

WA.ELA-LITERACY.W.9-10.1 Communicate information, ideas, arguments, and experience through writing, images, videos, and multimodal texts to affect an audience's ideas, understanding, perspectives, and/or actions.

- Compose descriptions within a variety of genres and purposes across content areas.
- Write persuasively within a variety of genres and purposes across content areas.
- Write narratives in a variety of genres with one or multiple plotlines, that develop the narrator and/or character's perspectives, and include relevant descriptive details to establish and develop a theme.
- Write informative/explanatory texts in a variety of genres that examine and explain substantive ideas, concepts, and information clearly and accurately, using formatting, graphics, and multimedia when useful and appropriate to the genre to aid comprehension.
- Write arguments in a variety of genres on topics or texts, supporting claims with valid reasoning and sufficient evidence while attending to the needs of the audience.

WA.ELA-LITERACY.W.9-10.2 Write to process and reflect, respond to reading and learning, explore and develop ideas, record observations, experiment with language, and make personal sense of the world, events, and experiences.

Plan and Generate Ideas

WA.ELA-LITERACY.W.9-10.3 Plan writing projects using a variety of strategies to manage materials, time, and tools, monitor progress toward the stated goal, and communicate needs as the project progresses.

- Examine/restate/analyze the prompt/assignment/ communicative situation.
- Plan sequence of activities and schedule time based on the prompt, assignment, and/or purpose of the project and due dates.
- Manage materials for the writing project.
- Adjust to feedback and shifts in focus and timeline when needed.

KINDERGARTEN

Reading

Under Construction: Coming Soon!

Writing

Priority: WA.ELA-Literacy.WK.0

Students use a combination of drawing, visually representing, dictating, and writing in a variety of genres for a range of communicative situations.

Products of Writing

WA.ELA-LITERACY.WK.1 With guidance and support, communicate information, ideas, opinions, and/or experiences through drawing, visually representing, dictating, writing, and multimodal texts.

- Compose descriptions (e.g., of objects, people, places).
- Draw, visually represent, dictate, and write to invite others into community, resolve conflicts, and/or persuade.
- Tell the story of a single event or several loosely linked events in order and provide a reaction to what happened.
- Inform others about students' observations and explanations of their world by naming a topic and supplying some information about the topic.
- Express and state opinions or preferences within a variety of genres.

WA.ELA-LITERACY.WK.2 With guidance and support, make personal sense of information, ideas, opinions, emotions, and/or experiences by using a combination of drawing, visually representing, dictating, and writing.

Plan and Generate Ideas

WA.ELA-LITERACY.WK.3 With guidance and support from adults, identify the materials and order of steps needed to complete the writing task or project.

- Examine and restate the prompt or task and, when possible, make connections to personal interests, perspectives, and/or experiences.

WA.ELA-LITERACY.WK.4 With guidance and support, generate and organize ideas, including appropriate use of tools.

- Generate and/or select topics from experience, imagination, reading, conversations, and/or desire to communicate to a variety of audiences.
- Create and organize ideas through drawing, graphic organizers, orally telling stories, and/or collaborative conversation in response to mentor texts and/or questions about events, information, opinions, and/or preferences.

Standards Template

grade →

KINDERGARTEN

Reading

Under Construction: Coming Soon!

strand →

Writing

Big picture priority →

Priority: WA.ELA-Literacy.WK.0

Students use a combination of drawing, visually representing, dictating, and writing in a variety of genres for a range of communicative situations.

category →

Products of Writing

WA.ELA-LITERACY.WK.1 With guidance and support, communicate information, ideas, opinions, and/or experiences through drawing, visually representing, dictating, writing, and multimodal texts.

- a. Compose descriptions (e.g., of objects, people, places).
- b. Draw, visually represent, dictate, and write to invite others into community, resolve conflicts, and/or persuade.
- c. Tell the story of a single event or several loosely linked events in order and provide a reaction to what happened.
- d. Inform others about students' observations and explanations of their world by naming a topic and supplying some information about the topic.
- e. Express and state opinions or preferences within a variety of genres.



To come later: Strand-specific Extended Glossaries:

- define and describe key concepts in each strand and give examples when appropriate specific to the grade band

Composing: Composing is a synonym for the creation of written texts, but also includes the creation of multimodal texts (see definition below). The word “composing” emphasizes the arrangement of language and multimodal elements into artistic forms that convey the composer’s message and affect audiences.

Genres: Genres are cultural and social creations that help composers achieve their purposes within communicative situations. Genres are recognizable but flexible structures that have developed over time because they prove useful. Genres help composers generate ideas and make decisions as they compose. Genres also shape audiences’ expectations, helping them more quickly orient to the composer’s purposes and the composition’s structures, features, and conventions. Examples of genres include science fiction, haiku, news articles, postcards, short stories, lab reports, ad slogans, mission statements, and social media posts.

Communicative situation: The communicative situation brings together a composer’s message and purposes with an audience’s needs and expectations. The communicative situation may include time, place, culture(s), and relationships that give the communication meaning. Some communicative situations are general: An author writes a novel for readers who want to be entertained. Many communicative situations are more specific: The host of a Superbowl party sends a text message to a friend asking them to bring cheese dip. The communicative situation influences the composer’s decisions about genre, voice, techniques, language use, etc. For example, the host of the Superbowl party would not write a novel with chapter headings to solicit snacks, and most authors would not include emojis in their novels or publish them through a messaging app.





Science

Purpose

- Support equitable access to elementary science for every student, especially students historically underserved in science: students of color, multilingual learners, students living in poverty, students with disabilities, and students in rural areas.
- Allow for multiple pathways to reach standards end points.
- Emphasize rigorous learning experiences for all students.
- Include Environment and Sustainability Education standards with the science standards.
- Support using the NGSS, climate science, and environment and sustainability as springboards for integrated and meaningful learning experiences.

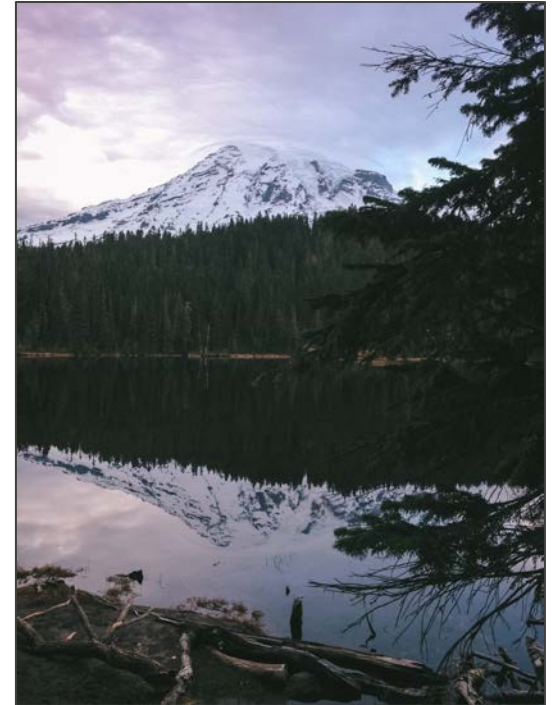
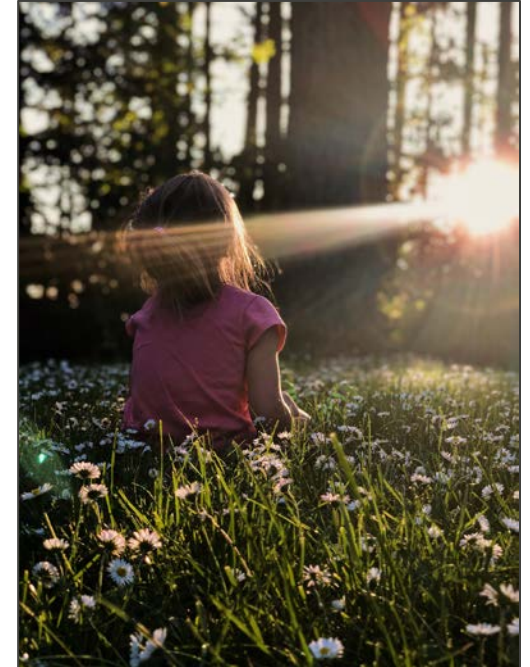


Photo by Leah Berman on Unsplash

Equity

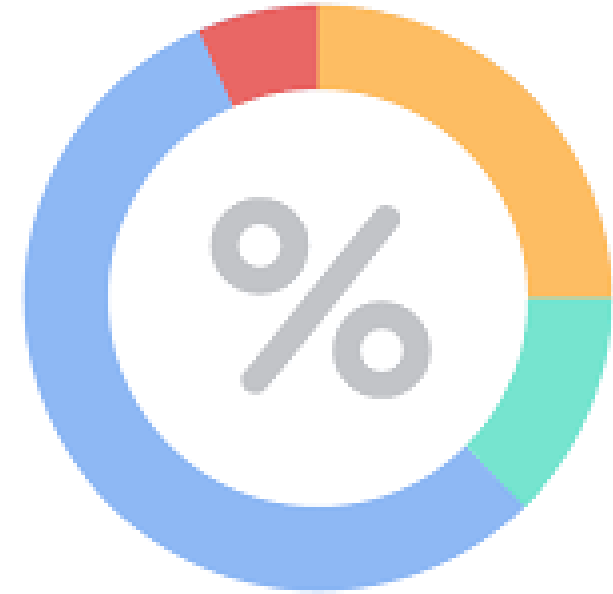
- Equitable access to both investigation and engineering for all students.
- Ensuring all students have equitable access to learn and develop the science and engineering practices.
- Implementation documents to support multiple ways of learning, integration, and inclusion for all learners.
- Support student access to learning climate science and environmental/sustainability in all grades.
- Focus on standards that support local relevance as well as student interest and identity.



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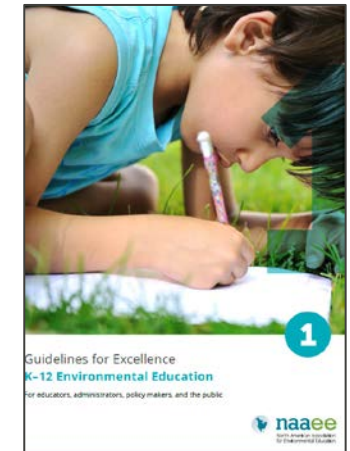
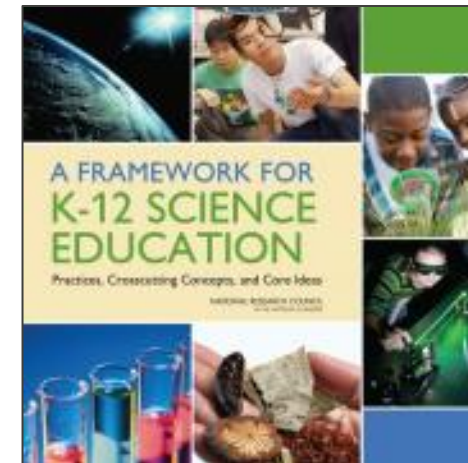
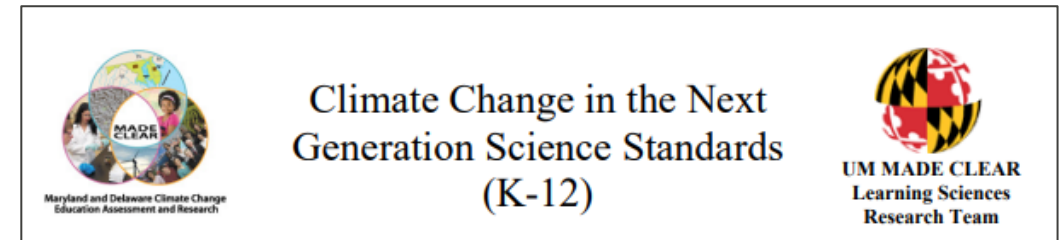
Survey Results

- Not enough time currently being allocated for science in elementary.
- More professional learning is needed for teachers K-12.
- Additional/improved clarifications for standards and supporting resources are needed.



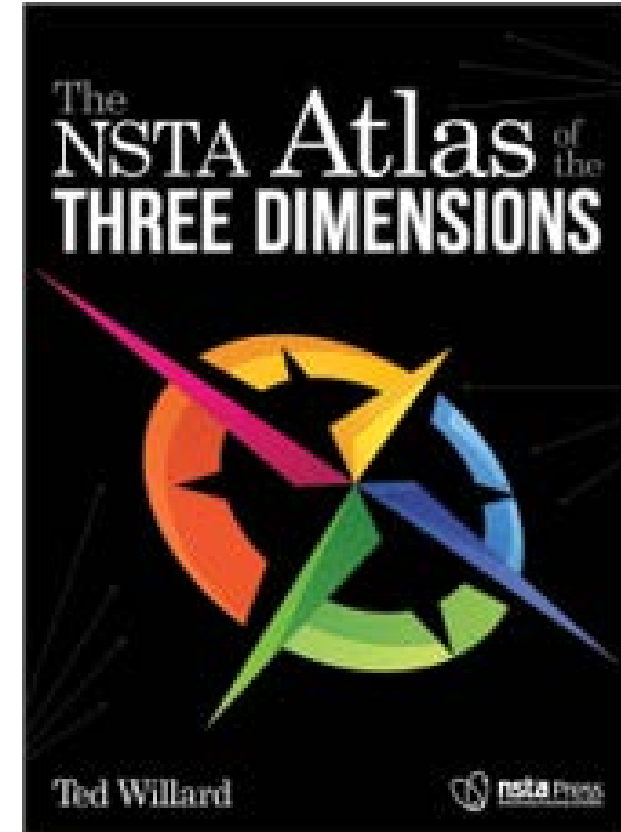
Research

- [Framework for K-12 Science Education](#)
- [Climate Change in the Next Generation Science Standards](#)
- [Guidelines for Excellence in Environmental Education, K-12 Learners](#)
- [Washington Environmental and Sustainability Literacy Plan](#) (see pages 5-8 and appendices)
- [Children and Nature Network](#)



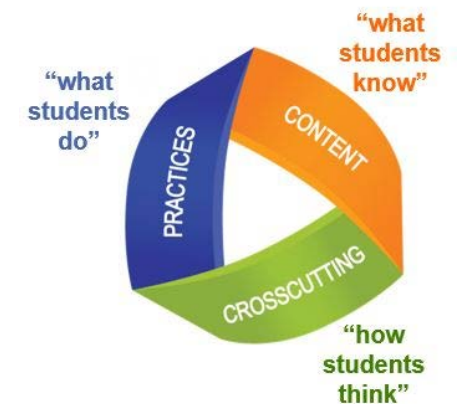
Comparative Document

- NSTA Atlas of the Three Dimensions
 - Maps all NGSS standards
 - Shows standard connections to other standards
 - Shows the flow of standards across K-12



Science Standards Format

- NGSS standards include a student performance expectation statement (PE) that describes in an overarching way what students should know and be able to do by the end of instruction.
- Each standard is 3-dimensional and integrates a **Science and Engineering Practice (SEP)**, a **Disciplinary Core Idea(s) (DCI)**, and a **Crosscutting Concept (CCC)**.
- These three dimensions integrated together are what make up the science standard and the discipline of science.



Quoted text from Peter A'Hearn

Students who demonstrate understanding can:

Performance Expectations

Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. 3-ESS2-1

▼ Clarification Statement and Assessment Boundary

Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.

Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.

SEPs

DCIs

CCCs

Science and Engineering Practices

Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Represent data in tables and various graphical displays (bar graphs and pictographs) to reveal patterns that indicate relationships. (3-ESS2-1)

Disciplinary Core Ideas

ESS2.D: Weather and Climate

- Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1)

Crosscutting Concepts

Patterns

- Patterns of change can be used to make predictions (3-ESS2-1)

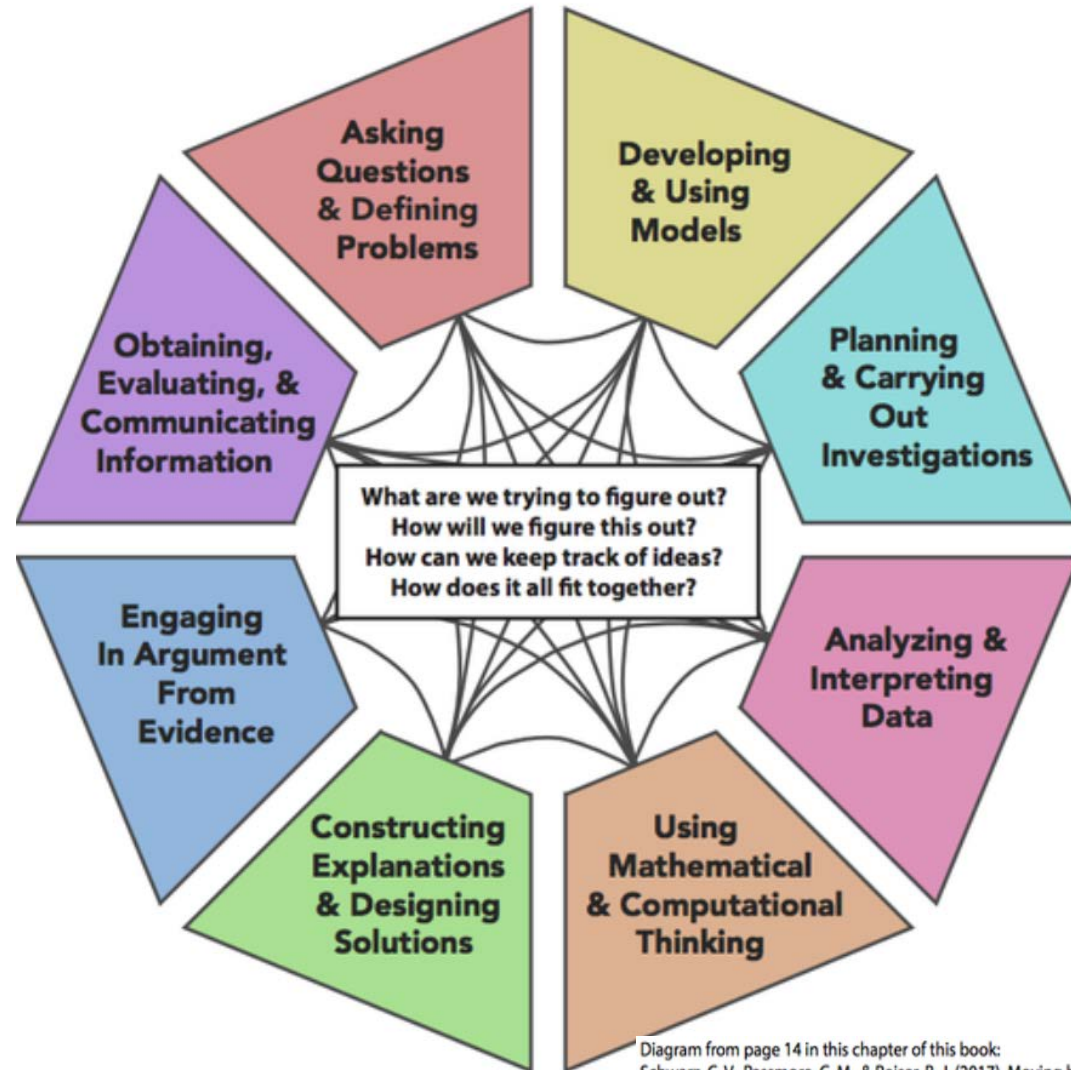
Standard as a
Performance
Statement

The 3
Dimensions

Elements of the
dimensions

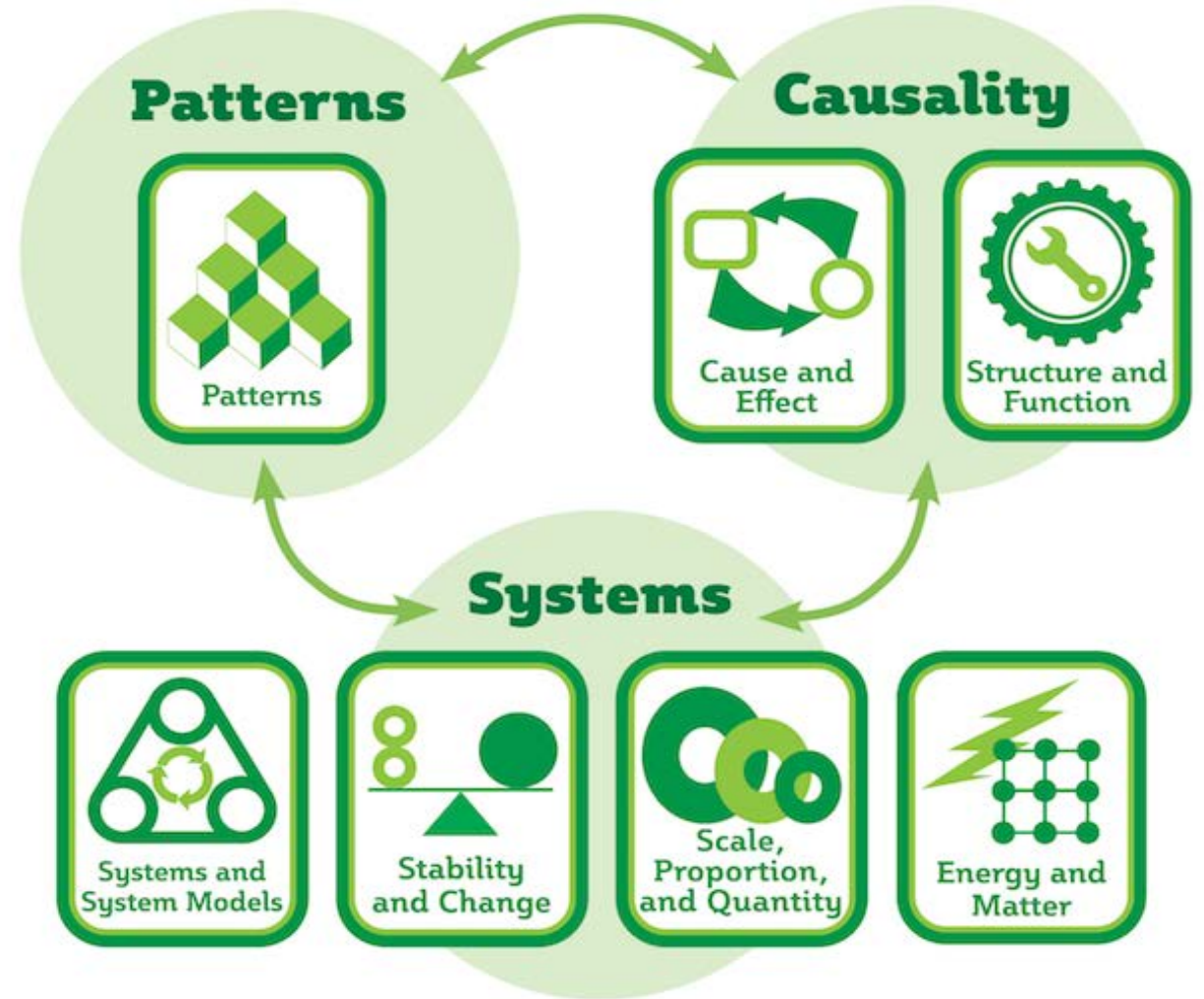
Science and Engineering Practices: **Scientific Behaviors** for Student Sensemaking

- The SEPs are the scientific behaviors that students engage in. They are student inputs, processes, and outputs.
- **Students** use them to define situations, acquire data and information, process and make sense of data, and develop explanations/solutions.



Crosscutting Concepts: Key Thinking Tools for Student Sensemaking

- The CCCs are the thinking lenses and tools that students use to make sense of data and interactions.
- Students use them for scientific reasoning and developing explanations.



Team Thoughts/Process

- Elementary-Specific:
 - Grade-level standards that require conceptual understanding and application of supporting standards.
 - Ensure equal student access to investigation and engineering learning experiences.
- Focus on Disciplinary Core Idea end points to move students coherently through K-12 and beyond.
- Focus on climate-connected standards attending to legislative mandates for the inclusion of climate learning in all content areas.
- Bringing in environmental and sustainability education.
- Priorities reflect student access to the distribution of science and engineering practices and crosscutting concepts across standards.

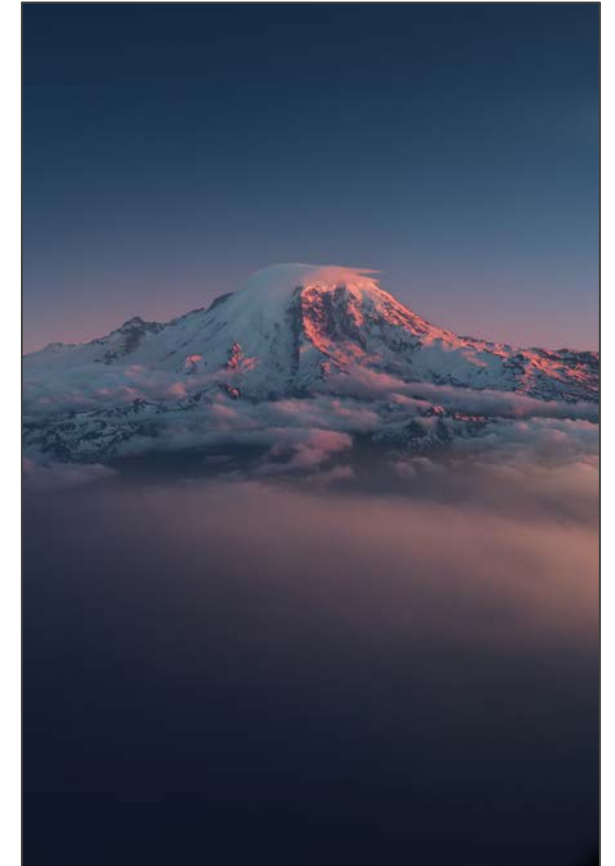
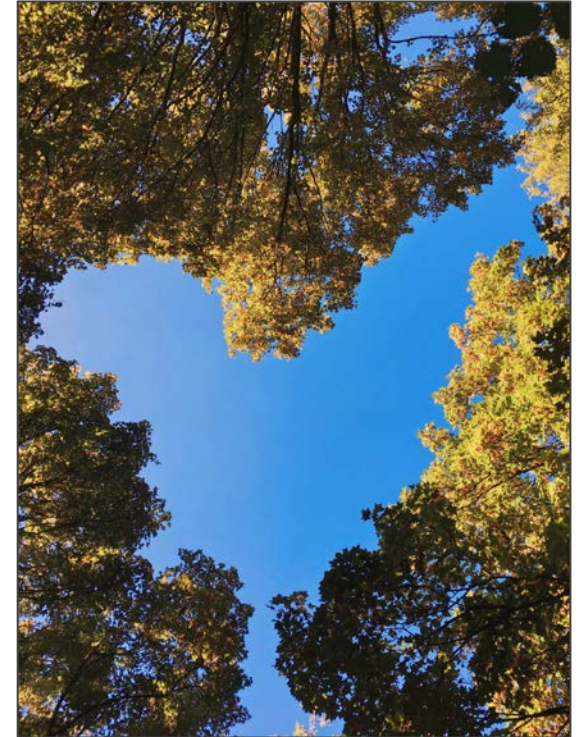


Photo by Jordan Steranka on Unsplash

Standards for Climate Science & Environmental and Sustainability Education

- Climate science and ESE integrate learning across science, mathematics, language arts, social studies, social-emotional learning, and tribal sovereignty.
- Climate-science connected standards are emphasized with a parenthetical reference (climate science connection).
- Environmental and Sustainability Education (ESE) Standards are now packaged with the science standards.
- ESE Standard 3 is prioritized because empowering students to solve local problems and lead positive change in their communities advances their learning outcomes and builds their sense of hope and agency.
 - Emphasis is on student voice and choice, along with local relevance.



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Template Examples: Elementary

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

Where Do Plants and Animals Live and Why Do They Live There?

Priority: K-ESS3-1

Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. (climate science connection)

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive. (supporting K-ESS3-1)

K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. (supporting K-ESS3-1) (climate science connection)

Priority: K-ESS3-3

Communicate solutions that will reduce the impact of humans on the land, water, air, and/or

ENVIRONMENTAL AND SUSTAINABILITY EDUCATION

Sustainability

1.ESE.1 Students explore the connections between ecological, social, and economic systems and understand the actions humans take to solve environmental problems in class, at school, and home.

The Natural and Built Environment

1.ESE.2 Students engage in place-based inquiry to understand the connections between natural and human-built environments.

Personal and Civic Responsibility

Priority: 1.ESE.3

Students apply the knowledge, skills, and vision necessary to make personal and collective decisions and implement solutions for sustainable communities.

Grade-level specific.
Supporting standards
listed under related
Priority ones

Grouped by TOPIC to
support integrated
units

DCIs may be
integrated together
thematically (life,
earth, physical)

Anchored by a
unifying
topic essential
question



Template Examples: Secondary

Matter and Its Interactions

How do atomic and molecular interactions explain the properties of matter that we see and feel?

MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures. (climate science connection)

Priority: MS-PS1-2

Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

Priority: MS-PS1-3

Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. (climate science connection)

MS-PS1-4 Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. (climate science connection)

MS-PS1-5 Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.

Priority: MS-PS1-6

Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical means. (engineering)

LS3 Heredity: Inheritance and Variation of Traits

How are characteristics of one generation passed to the next? How can individuals of the same species and even siblings have different characteristics?

HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may results from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.

Priority HS-LS3-3

Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

Listed in NGSS PE
order

Grade-banded in MS
and HS

Grouped by
Disciplinary Core Idea
(DCI)

Unifying DCI essential
question(s)



Teacher Implementation Guides

Will include:

- Front matter that summarizes the year of science at the grade level.
- A learning design example showing one way to provide unit context for the standards.
- Unpacked and clarified versions of the standards.
- Supports for related instructional elements such as UDL, supporting multilingual learners, content integration etc.

Standard 3-LS1-1

Learning Standard: Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.

Three Dimensions of This Standard

Science and Engineering Practices (SEPs): What science behaviors will students be doing ?	Disciplinary Core Ideas (DCIs): What facts and concepts will students end up knowing ?	Crosscutting Concepts: What sensemaking lenses and tools will students use for thinking ?
<u>Developing and Using Models</u> Develop models to describe phenomena.	<u>LS1.B: Growth and Development of Organisms</u> Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.	<u>Patterns</u> Patterns of change can be used to make predictions.

Clarifications for This Standard

- The emphasis is on showing common patterns of change all organisms go through during their life. Emphasis is not on memorizing life cycles of certain organisms.
- Where possible, life cycles of local plants and animals should be explored, or those of particular student interest.

Assessment Boundaries

- Assessment does not include specific mechanisms of birth, growth, reproduction, death.
- Assessment of plant life cycles is limited to those of flowering plants. This means using simple models of plant life cycles that begin with seeds and show the stages of growing into mature plants. This does not include knowing names or functions of specific plant reproduction parts such as stamen, pistil, ovary etc.
- Assessment does not include details of human reproduction.

Learning Progression

What learning of this Disciplinary Core Idea (DCI) came before your grade?	What learning of this Disciplinary Core Idea (DCI) comes after your grade?
Elementary school: <ul style="list-style-type: none"> • None- this is students' first introduction to this concept in elementary. • Students will not return to this DCI until middle school. 	Middle School: <ul style="list-style-type: none"> • Animals engage in characteristic behaviors that increase the odds of reproduction. (MS-LS1-4) • Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction. (MS-LS1-4) • <u>Genetic factors as well as local conditions affect the growth of the adult plant.</u> (MS-LS1-5)



Standards Connections

Culturally Responsive Education (CRE)
Text TBD
Multilingual Learners (MLL)
Text TBD
Social Emotional Learning (SEL)
Text TBD
Since Time Immemorial (STI)
Text TBD
Universal Design for Learning (UDL)
Text TBD
Content Integration (may be multiple subjects)
Text TBD
Climate Connections or Other
Text TBD
Environmental Science Integration or Other
Text TBD





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