



CURRICULUM UPDATES

Science and World Languages

• 2022-2023 CURRICULUM DEPARTMENT •



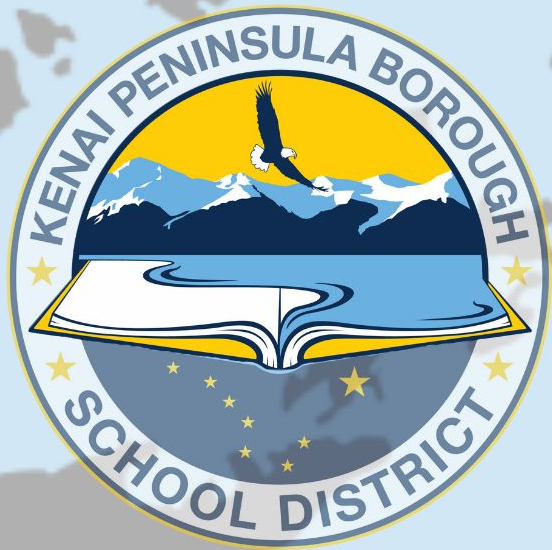
Objectives (Science)

- Introduce the nuances of the new Science Standards of Alaska (SSA's)
- Explain the differences between old GLE's and the new SSA's
- Identify instructional shifts the standards will require teachers to make to ensure student success



To ensure that by the end of 12th grade all students :

- appreciate the beauty and wonder of science;
- hold sufficient knowledge of science and engineering to engage in community discussions;
- use their skills to carefully make decisions as consumers of scientific and technological information;
- possess skills to enter careers of their choice, including (not limited to) the STEM fields.”



Students use the

Science and Engineering Practices

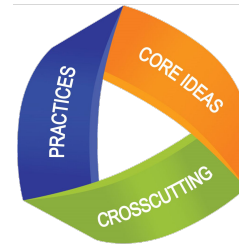
to make sense of phenomena

in the world around them and apply

Crosscutting Concepts

to deepen their understanding of

Core Ideas in science.





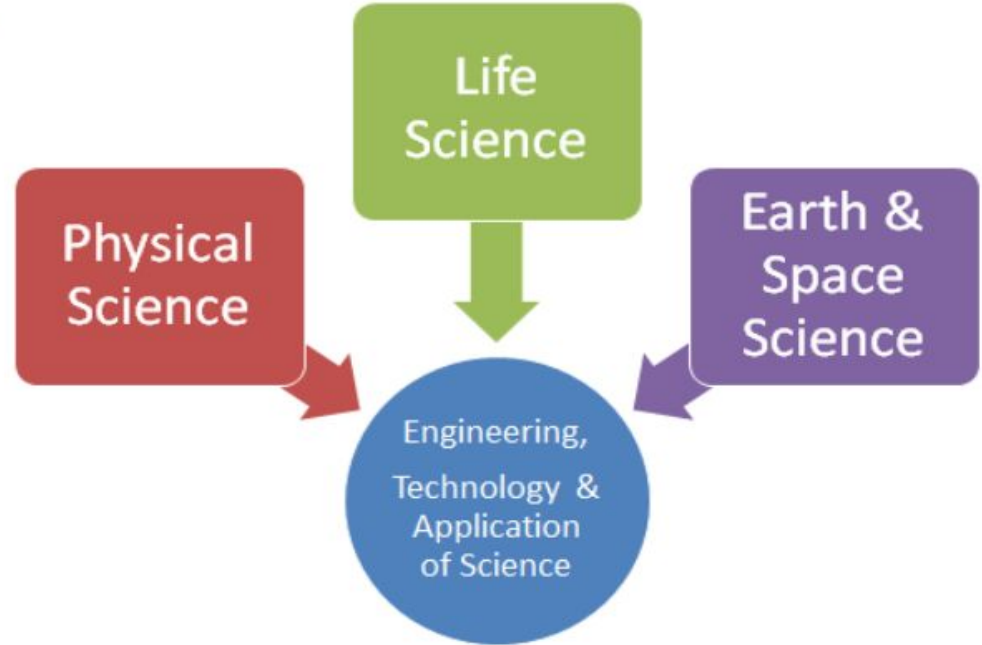
8 Science and Engineering Practices

- Asking questions and defining problems
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations and designing solutions
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

Disciplinary Core Ideas

Disciplinary Core Ideas are the necessary fundamental ideas for understanding a given science discipline.

- Tools for understanding and investigating complex ideas and solving problems
- Relate to societal and personal concerns
- Taught at multiple grade levels at progressive levels of depth and complexity





The Shift from...

“Students will understand that...”

TO...

“Students who demonstrate understanding...”



Storylines

- Sequence of lessons
- Driven by student questions
- Goal is to explain phenomenon
- Each piece adds to their explanation
- Each piece creates new questions
- Builds core ideas and cross cutting concepts



Phenomena are...

- **Local** - community, region, state, national, and global
- **Relevant** to conditions, issues, and current events
- **Observable** - students can model, predict, compare, analyze, measure
- **Connect** to a Performance Expectation
- **Anchor** and drive 3-Dimensional Learning throughout the study
- Phenomena LEAN toward the **Science Practices**
Problems LEAN towards **Engineering Practices**

3 Dimensional Science Lessons



Phenomena and problems are essential components of each unit.

Lessons are student-centered and students are DOING science

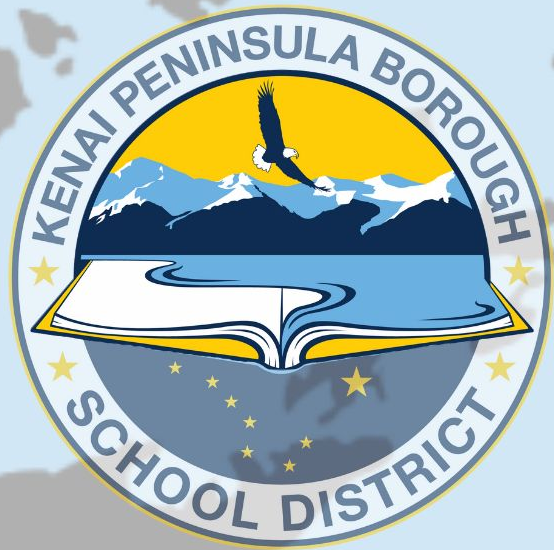
Phenomena and problems build understanding to Disciplinary Core Idea(s)

The Science Practices are routinely exercised in lessons



3-Dimensional Lesson Screening Tool

- The lesson contains a **phenomenon** (science) or a **problem** (engineering).
 No Partially Yes
- The lesson is **student-centered** and requires students to figure something out.
 No Partially Yes
- The phenomenon or problem builds to an understanding of a **Disciplinary Core Idea (DCI)** in one of the assessed Performance Expectations.
 No Partially Yes
- Students engage in one or more of the **Science and Engineering Practices (SEP)** to aid in making sense of the phenomenon or problem. (check all that apply)
 - Analyzing & Interpreting Data
 - Asking Questions
 - Constructing Explanations
 - Defining Problems
 - Designing Solutions
 - Developing & Using Models
 - Engaging in Argument from Evidence
 - Mathematics & Computational Thinking
 - Obtain, Evaluate, Communicate Information
 - Planning & Carrying Out Investigations
- Students use one or more of the **Crosscutting Concepts (CCC)** to aid in making sense of the phenomenon or problem. (check all that apply)
 - Cause & Effect
 - Energy & Matter
 - Patterns
 - Scale, Proportion, & Quantity
 - Stability & Change
 - Structure & Function
 - Systems & System Models



Objectives

- Introduce the features of the World Language Standards
- Identify instructional shifts the standards will require teachers to make to ensure student success

World-Readiness Standards for Learning Languages



The five “C” goal areas stress the application of learning a language beyond the instructional setting. The goal is to prepare learners to apply the skills and understandings measured by the standards, to bring a global competence to their future careers and experiences.



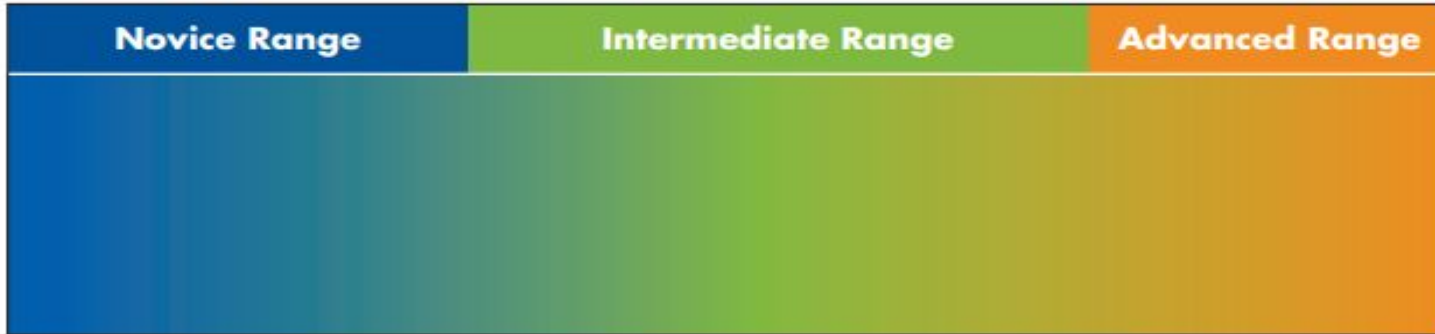
WORLD-READINESS STANDARDS FOR LEARNING LANGUAGES

GOAL AREAS	STANDARDS		
COMMUNICATION <i>Communicate effectively in more than one language in order to function in a variety of situations and for multiple purposes.</i>	Interpersonal Communication: Learners interact and negotiate meaning in spoken, signed, or written conversations to share information, reactions, feelings, and opinions.	Interpretive Communication: Learners understand, interpret, and analyze what is heard, read, or viewed on a variety of topics.	Presentational Communication: Learners present information, concepts, and ideas to inform, explain, persuade, and narrate on a variety of topics using appropriate media and adapting to various audiences of listeners, readers, or viewers.
CULTURES <i>Interact with cultural competence and understanding.</i>	Relating Cultural Practices to Perspectives: Learners use the language to investigate, explain, and reflect on the relationship between the practices and perspectives of the cultures studied.	Relating Cultural Products to Perspectives: Learners use the language to investigate, explain, and reflect on the relationship between the products and perspectives of the cultures studied.	
CONNECTIONS <i>Connect with other disciplines and acquire information and diverse perspectives in order to use the language to function in academic and career-related situations.</i>	Making Connections: Learners build, reinforce, and expand their knowledge of other disciplines while using the language to develop critical thinking and to solve problems creatively.	Acquiring Information and Diverse Perspectives: Learners access and evaluate information and diverse perspectives that are available through the language and its cultures.	
COMPARISONS <i>Develop insight into the nature of language and culture in order to interact with cultural competence.</i>	Language Comparisons: Learners use the language to investigate, explain, and reflect on the nature of language through comparisons of the language studied and their own.	Cultural Comparisons: Learners use the language to investigate, explain, and reflect on the concept of culture through comparisons of the cultures studied and their own.	
COMMUNITIES <i>Communicate and interact with cultural competence in order to participate in multilingual communities at home and around the world.</i>	School and Global Communities: Learners use the language both within and beyond the classroom to interact and collaborate in their community and the globalized world.	Lifelong Learning: Learners set goals and reflect on their progress in using languages for enjoyment, enrichment, and advancement.	

Performance Descriptors



Over time and with practice, learner's performance gradually takes on the characteristics of the next higher range of performance.



Modes of Communication



Three Modes of Communication

Interpersonal	Interpretive	Presentational
Active negotiation of meaning among individuals	Interpretation of what the author, speaker, or producer wants the receiver of the message to understand	Creation of messages to inform, explain, persuade, or narrate
Participants observe and monitor one another to see how their meanings and intentions are being communicated	One-way communication with no recourse to the active negotiation of meaning with the writer, speaker, or producer	One-way communication intended to facilitate interpretation by members of the other culture where no direct opportunity for the active negotiation of meaning between members of the two cultures exists
Adjustments and clarifications are made accordingly	Interpretation differs from comprehension and translation in that interpretation implies the ability to read (or listen or view) "between the lines," including understanding from within the cultural mindset or perspective	To ensure the intended audience is successful in its interpretation, the "presenter" needs knowledge of the audience's language and culture
Speaking and listening (conversation); reading and writing (text messages or via social media)	Reading (websites, stories, articles), listening (speeches, messages, songs), or viewing (video clips) of authentic materials	Writing (messages, articles, reports), speaking (telling a story, giving a speech, describing a poster), or visually representing (video or PowerPoint)

What are the parameters for the language learner's performance?

Domain	Examples	What it describes
Functions	<ul style="list-style-type: none"> Ask formulaic questions Initiate, maintain, and end a conversation Create with language Narrate and describe Make inferences 	Functions are the global tasks the learner can perform in the language
Contexts and Content	<ul style="list-style-type: none"> Oneself One's immediate environment General interest Work-related 	Contexts are situations within which the learner can function; Content is the topics which the learner can understand and discuss
Text Type	<ul style="list-style-type: none"> Words Phrases Sentences Questions Strings of sentences Connected sentences Paragraphs 	Text type controlled by the learner is that which the learner is able to understand and produce in order to perform the functions of the level

Benefits of Language Learning



Research shows that students benefit academically from the study of a second or subsequent language and gain positive attitudes about other cultures and languages.

(ACTFL) website

Language learning correlates with higher academic achievement on standardized test measures.

Language learning is beneficial in the development of students' reading abilities and can benefit ALL students.

Children who study foreign language statistically outperform non-language students in language, math, science and social studies."

- *Carolyn Taylor*



Seal of Biliteracy



The Seal of Biliteracy is an award given by the school district to qualifying juniors or seniors in recognition of students who have attained proficiency in two or more languages by high school graduation. The Seal also recognizes, supports, and endorses students' first/home languages.

The Seal is open to any student who qualifies, including immersion and non-immersion students, EL students, and exchange students.

The Seal encourages students to pursue biliteracy, honors the skills our students attain, and can be evidence of skills that are attractive to future employers and college admissions offices. It takes the form of a seal that appears on the diploma of the graduating senior and is also documented on their official transcript.

