

2023 Science Instructional Materials Evaluation Tool (IMET)

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*This criterion is not required.

Oregon State Board of Education Adopted [K-12 Science Instructional Materials Criteria](#) (January 2023)

Part 1: Oregon Science Baseline Criteria [K-HS]

Criterion 1.1: Alignment to Three-Dimensional (3D) Learning

Description: Materials reflect the 3D focus of the Oregon Science Standards to integrate the disciplinary core ideas (DCI), science and engineering practices (SEP), and crosscutting concepts (CCC) within and across grade-levels and/or grade-bands.

1.1: Alignment	Score	2 points	1 point	0 points
<i>Metric 1: 3D Integration</i> Materials consistently and explicitly integrate all of the disciplinary core ideas, science and engineering practices, and crosscutting concepts that meet the full intent of grade-level and/or grade-band standards by the end of instruction.		- Across the majority of the materials there are consistent opportunities for students to meet the full intent of grade-level and/or grade-band standards by the end of instruction. AND - Learning progressions include <u>all aspects of the three dimensions</u> with consistent integration of the science and engineering practices, crosscutting concepts, and disciplinary core ideas.	- Materials present inconsistent opportunities for students to meet the full intent of grade-level and/or grade-band standards by the end of instruction. OR - Learning progressions include the integration of the disciplinary core ideas and <u>one of the following</u>: - science and engineering practices - crosscutting concepts.	- Materials <u>do not include</u> opportunities for students to meet the full intent of grade-level and/or grade-band standards by the end of instruction. AND - Learning progressions <u>do not include</u> the three dimensions with consistent integration of the science and engineering practices, crosscutting concepts, and disciplinary core ideas.
<i>Metric 2: Nature of Science</i> Materials explicitly align with the nature of science and the intersection of those understandings with science and engineering practices, disciplinary core ideas, and crosscutting concepts (NGSS: Appendix H).		- Materials incorporate grade-band Connections to Nature of Science and Engineering within individual lessons or activities throughout the unit(s). Elements from <u>all of the following categories</u> are included: - Nature of Science elements associated with SEPs - Nature of Science elements associated with CCCs	- Materials incorporate grade-band Connections to Nature of Science and Engineering within individual lessons or activities throughout the unit(s). Elements from <u>one of the following categories</u> are included: - Nature of Science elements associated with SEPs - Nature of Science elements associated with CCCs	Materials <u>do not incorporate</u> grade-band Connections to Nature of Science and Engineering within individual lessons or activities throughout the unit(s).
<i>Metric 3: Transdisciplinary Connections</i> Materials include meaningful connections across disciplines to create learning opportunities for greater depth and complexity to address relevant engineering, scientific, and societal challenges (i.e. STEM, mathematics, social science, language arts, health, career connected learning).		Materials consistently provide clear and specific learning that includes meaningful connections across disciplines (i.e. STEM, mathematics, social science, language arts, health, career connected learning). AND	- Materials provide learning that includes connections across disciplines (i.e. STEM, mathematics, social science, language arts, health, career connected learning). OR - Materials provide opportunities that address relevant engineering, scientific,	- Materials <u>do not provide</u> learning opportunities that include connections across disciplines. AND - Materials <u>do not provide</u> opportunities that address relevant engineering, scientific, and societal challenges (e.g.

1.1: Alignment	Score	2 points	1 point	0 points
		Materials provide opportunities that address relevant engineering, scientific, and societal challenges (e.g. climate change, emerging technologies, food security, clean water access, consumption and production).	and societal challenges (e.g. climate change, emerging technologies, food security, clean water access, consumption and production).	climate change, emerging technologies, food security, clean water access, consumption and production).
TOTAL	_ / 6	Meets Expectations (5-6 points)	Partially Meets Expectations (3-4 points)	Does Not Meet Expectations (0-2 points)

Criterion 1.2: Science Phenomena & Engineering Design-Based Engagement

Description: Materials center science phenomena and engineering design problems that drive student learning and engage students as directly as possible in authentic and relevant experiences.

1.2: Phenomena & Engineering Design	Score	2 points	1 point	0 points
Metric 1: Conceptual Understanding Phenomena and/or problems: - target learning goals across the three dimensions; - connect to grade-level and/or grade-band disciplinary core ideas; - create shared student experiences as entry points to learning.		- Materials connect phenomena and/or problems to grade-level and/or grade-band learning goals across the three dimensions and to the appropriate disciplinary core ideas. AND - Phenomena and/or problems create shared student experiences as entry points to learning.	- Materials connect phenomena and/or problems to grade-level and/or grade-band learning goals across the three dimensions and to the appropriate disciplinary core ideas. OR - Phenomena and/or problems create shared student experiences as entry points to learning.	- Phenomena and/or problems <u>do not connect</u> to grade-level and/or grade-band learning goals and appropriate disciplinary core ideas AND - Phenomena and/or problems <u>do not create</u> shared student experiences as entry points to learning.
Metric 2: Sense-making/Problem Solving Materials center opportunities for students to: - communicate their thinking through reflection and explanation; - apply scientific understandings to make sense of phenomena and design solutions to problems.		- Materials provide students with opportunities to communicate their thinking through reflection and explanation. AND - Materials provide students with opportunities to apply scientific understanding to make sense of phenomena and design solutions to problems.	- Materials provide students with opportunities to communicate their thinking through reflection and explanation. OR - Materials provide students with opportunities to apply scientific understanding to make sense of phenomena and design solutions to problems.	- Materials <u>do not provide</u> students with opportunities to communicate their thinking through reflection. AND - Materials <u>do not provide</u> students with opportunities to apply scientific understanding to make sense of phenomena and design solutions to problems.
Metric 3: Authentic Application Materials include meaningful contexts for students to practice key skills and build important concepts by: - making connections to their daily lives, including to their homes, neighborhoods, and communities; - build upon students’ cultural funds of knowledge.		- Materials include meaningful contexts that connect to and build upon students’ prior knowledge, cultures, home and community experiences. AND - Teacher materials include relevant and practical suggestions for connecting science learning to students’ lives and/or interests and to their communities.	- Materials include meaningful contexts that connect to and build upon students’ prior knowledge, cultures, home and community experiences. OR - Teacher materials include relevant and practical suggestions for connecting science learning to students’ lives and/or interests and to their communities.	- Materials <u>do not include</u> meaningful contexts that connect to and build upon students' prior knowledge, cultures, home and community experiences. AND - Teacher materials <u>do not include</u> relevant and practical suggestions for connecting science learning to students’ lives and/or interests and to their communities.
TOTAL	_ / 6	Meets Expectations (5-6 points) Partially Meets Expectations (3-4 points) Does Not Meet Expectations (0-2 points)		

Criterion 1.3: Learning Progressions & Coherent Storylines

Description: Materials integrate conceptual understanding linked to empirical evidence and explanations that allow students’ understanding to deepen and become more complex over time across the three dimensions (NGSS: [Appendix E](#), [Appendix F](#), and [Appendix G](#)).

1.3: Learning Progressions & Coherence	Score	2 points	1 point	0 points
Metric 1: Coherent Storylines Materials explicitly identify: • how grade-appropriate 3D learning builds within a lesson or unit; • how learning builds across grade-levels, grade-bands, and/or within a high school course(s).		• Materials explicitly identify coherent learning sequences that build toward students’ deeper understanding of the disciplinary core idea through the engagement of engineering practices and crosscutting concepts <u>within each of the following</u>: ○ Lesson and/or unit ○ Grade-level and/or high school course ○ Across grade-levels, grade-bands, and/or high school course(s)	• Materials explicitly identify coherent learning sequences that build toward students’ deeper understanding of the disciplinary core idea through the engagement of engineering practices and crosscutting concepts <u>within one of the following</u>: ○ Lesson and/or unit ○ Grade-level and/or high school course ○ Across grade-levels, grade-bands, and/or high school course(s)	• Materials <u>do not</u> explicitly identify coherent learning sequences that build toward students’ deeper understanding of the disciplinary core idea through the engagement of engineering practices and crosscutting concepts.
Metric 2: Developmental Progression Materials include multiple opportunities for students to build and apply knowledge and skills over time (i.e. lessons, units, grade-level and/or grade-bands) through the integration of disciplinary core ideas, science and engineering practices, and the crosscutting concepts (NGSS: Appendix E, Appendix F, and Appendix G).		• Materials provide opportunities for students to increase the sophistication of their thinking and apply their knowledge related to unfamiliar contexts and phenomena within the disciplinary core ideas, science and engineering practices, and the crosscutting concepts over time <u>within each of the following</u>: ○ Lesson and/or unit ○ Grade-level and/or high school course ○ Across grade-levels, grade-bands, and/or high school course(s)	• Materials provide students opportunities for students to increase the sophistication of their thinking and apply their knowledge related to unfamiliar contexts and phenomena within the disciplinary core ideas, science and engineering practices, and the crosscutting concepts over time <u>within one of the following</u>: ○ Within each lesson or unit ○ Within each grade-level and/or high school course ○ Across grade-levels, grade-bands, and/or high school courses	• Materials <u>do not</u> provide students opportunities to increase the sophistication of their thinking or apply their knowledge related to unfamiliar contexts and phenomena within the disciplinary core ideas, science and engineering practices, and the crosscutting concepts over time.
Metric 3: Student Agency Materials include opportunities for student-driven learning sequences through questions and discourse that center students' lived experiences as they relate to the phenomenon and/or		• Teacher materials provide guidance for structuring student choice in a way that promotes agency while also aligning with the goals for science learning. AND	• Teacher materials provide guidance for structuring student choice in a way that promotes agency while also aligning with the goals for science learning. OR	• Teacher materials <u>do not</u> provide guidance for structuring student choice in a way that promotes agency while also aligning with the goals for science learning.

1.3: Learning Progressions & Coherence	Score	2 points	1 point	0 points
problem.		Materials provide opportunities and rationales for students to make choices in topics that center students’ lived experiences as they relate to the phenomenon and/or problem.	Materials provide opportunities and rationales for students to make choices in topics that center students’ lived experiences as they relate to the phenomenon and/or problem.	AND Materials <u>do not</u> provide opportunities and rationales for students to make choices in topics that center students’ lived experiences as they relate to the phenomenon and/or problem.
TOTAL	_ / 6	Meets Expectations (5-6 points)	Partially Meets Expectations (3-4 points)	Does Not Meet Expectations (0-2 points)

Part 2: Equitable Student Engagement and Cultural Pedagogy Criteria [K-HS]

Criterion 2.1: Engagement & Motivation

Description: Materials give opportunities for student-driven learning, and rigor is maintained across all options. Materials should focus on relevant topics, authentic contexts, and experiences, and give students the opportunity to make connections with their goals, interests, and values.

2.1: Engagement & Motivation	Score	2 points	1 point	0 points
<i>Metric 1: Relevance</i> Materials include relevant topics of student interest and strategic access to authentic contexts and tools that give students the freedom to make connections to their experiences, goals, and interests. Additionally, materials support the value of science as a sensible, useful, and worthwhile subject.		- Materials include opportunities to share science learning in ways that reflect a variety of student interests, identities, cultures, and their communities. AND - Materials offer opportunities for students to bring their own experiences, goals, and interests into the work they do.	- Materials include opportunities to share science learning in ways that reflect a variety of student interests, identities, cultures, and their communities. OR - Materials offer opportunities for students to bring their own experiences, goals, and interests into the work they do.	- Materials <u>do not provide</u> opportunities to share science learning in ways that reflect a variety of student interests, identities, cultures, and their communities. AND - Materials <u>do not include</u> opportunities for students to bring their own experiences, goals, and interests into the work they do.
<i>Metric 2: Collaborative Learning</i> Materials include tasks that provide students opportunities to engage in the process of learning collaboratively, as well as, opportunities to express their learning individually.		- Materials provide opportunities for teachers to use a variety of grouping strategies including whole group, small group, and individual instruction to support interaction among students. AND - Materials provide guidance for the teacher on how and when to use specific grouping strategies to support collaborative learning.	- Materials provide opportunities for teachers to use a variety of grouping strategies including whole group, small group, and/or individual instruction to support interaction among students. OR - Materials provide guidance for the teacher on how and when to use specific grouping strategies to support collaborative learning.	- Materials <u>do not provide</u> opportunities for teachers to use a variety of grouping strategies including whole group, small group, and/or individual instruction to support interaction among students. AND - Materials <u>do not provide</u> guidance for the teacher on how and when to use specific grouping strategies to support collaborative learning.
<i>Metric 3: Individual Student Adaptability</i> Materials include instructional strategies for supporting unfinished learning from prior grade levels and extensions for students who are ready to deepen their understanding of grade-level content.		- Materials include instructional strategies for supporting unfinished learning from prior grade-levels, including scaffolding strategies to support students as they work toward independence. AND - Materials include extensions for students	- Materials include instructional strategies for supporting unfinished learning from prior grade-levels, including scaffolding strategies to support students as they work toward independence. OR - Materials include extensions for students	- Materials <u>do not include</u> instructional strategies for supporting unfinished learning from prior grade-levels, including scaffolding strategies to support students as they work toward independence. AND - Materials <u>do not include</u> extensions for

2.1: Engagement & Motivation	Score	2 points	1 point	0 points
		who are ready to deepen their understanding of grade-level content.	who are ready to deepen their understanding of grade-level content.	students who are ready to deepen their understanding of grade-level content.
TOTAL	_ / 6	Meets Expectations (5-6 points)	Partially Meets Expectations (3-4 points)	Does Not Meet Expectations (0-2 points)

Criterion 2.2: Culturally Responsive Instructional Support

Description: Culturally responsive instruction refers to the explicit recognition and incorporation of students’ cultural knowledge, experience, and ways of being and knowing in science teaching, learning, and assessment.

2.2: Culturally Responsive Instructional Support	Score	2 points	1 point	0 points
Metric 1: Asset-based Perspective Materials support educators to identify, value, and maintain a high commitment to students’ experiences from their homes and communities that are leveraged as resources for science teaching and learning.		• The materials include texts, images, and assignments that recognize and leverage contributions from non-dominant cultures that allow students to connect their everyday experiences to science lessons. AND • The teachers’ materials provide guidance on <u>at least two of the following</u>: ○ Ways to supplement or modify materials to enhance culturally responsive pedagogy ○ Ways to engage students and educators in culturally sensitive experiential learning ○ Ways to leverage students’ experiences from their home and community to science teaching and learning	• The materials include texts, images, and assignments that recognize and leverage contributions from non-dominant cultures that allow students to connect their everyday experiences to science lessons. OR • The teachers’ materials provide guidance on <u>at least two of the following</u>: ○ Ways to supplement or modify materials to enhance culturally responsive pedagogy ○ Ways to engage students and educators in culturally sensitive experiential learning ○ Ways to leverage students’ experiences from their home and community to science teaching and learning	• The materials <u>do not acknowledge</u> the expertise of diverse communities or the everyday users of science. AND • There is <u>no guidance</u> about connecting the curriculum to students’ lives.
Metric 2: Frames of Reference Materials utilize multiple frames of reference for developing and demonstrating science competence that correspond to a variety of cultural perspectives and experiences.		• Materials use asset-based language and do not include harmful biases, stereotypes, or positioning of marginalized communities (BIPOC, women, LGBTQ2SI+, and other historically underserved groups). AND • Materials provide opportunities to challenge dominant ways of knowing in all of the following: ○ Uses critical perspectives to understand science within a social	• Materials use asset-based language and do not include harmful biases, stereotypes, or positioning of marginalized communities (BIPOC, women, LGBTQ2SI+, and other historically underserved groups). OR • Materials provide opportunities to challenge dominant ways of knowing in all of the following: ○ Uses critical perspectives to understand science within a social	• Materials use <u>deficit-based</u> language and/or include harmful biases, stereotypes, or positioning of marginalized communities (BIPOC, women, LGBTQ2SI+, and other historically underserved groups). AND • Materials <u>do not provide</u> opportunities to challenge dominant ways of knowing in all of the following: ○ Uses critical perspectives to understand science within a social

2.2: Culturally Responsive Instructional Support	Score	2 points	1 point	0 points
		context ○ Presents examples of scientific thought and reasoning from both Western and non-Western cultures ○ Includes a variety of options to demonstrate scientific thinking through cultural perspectives, and/or student experiences.	context ○ Presents examples of scientific thought and reasoning from both Western and non-Western cultures ○ Includes a variety of options to demonstrate scientific thinking through cultural perspectives, and/or student experiences.	context ○ Presents examples of scientific thought and reasoning from both Western and non-Western cultures ○ Includes a variety of options to demonstrate scientific thinking through cultural perspectives, and/or student experiences.
Metric 3: Inclusive Cultural Views Materials include pathways to science competence that leverage cultural perspectives that affirm student identities and reflect knowledge of students' background experiences and social realities.		● Materials include instructional strategies to engage diverse learners using culturally responsive practices. AND ● Materials include resources for teachers to include knowledge of students' background experiences and social realities into instruction	● Materials include instructional strategies to engage diverse learners using culturally responsive practices. OR ● Materials include resources for teachers to include knowledge of students' background experiences and social realities into instruction.	● Materials <u>do not include</u> instructional strategies to engage diverse learners using culturally responsive instructional practices. AND ● Materials <u>do not include</u> resources for teachers to include knowledge of students' background experiences and social realities into instruction.
TOTAL	_ / 6	Meets Expectations (5-6 points)	Partially Meets Expectations (3-4 points)	Does Not Meet Expectations (0-2 points)

Part 3: Technical Usability Criteria [K-HS]

Criterion 3.1: Supports for Teachers

Description: The materials include opportunities for teachers to effectively plan and utilize materials with integrity and to further develop their own understanding of the content.

3.1: Supports for Teachers	Score	2 points	1 point	0 points
Metric 1: Supporting Guidance Materials provide teacher guidance with useful annotations and suggestions for how to utilize the student materials, visual models, and ancillary materials, with specific attention to engaging students to guide their scientific development.		- Materials provide course or grade-level and unit-level supporting guidance that assist teachers in presenting the student and ancillary materials as intended. AND - Materials provide supporting guidance within lessons, such as annotations or suggestions, that provide additional information within the context of the specific lesson objectives.	- Materials provide course or grade-level and unit-level supporting guidance that assist teachers in presenting the student and ancillary materials as intended. OR - Materials provide supporting guidance within lessons, such as annotations or suggestions, that provide additional information within the context of the specific lesson objectives.	- Materials <u>do not provide</u> course or grade-level and unit-level supporting guidance that assist teachers in presenting the student and ancillary materials as intended. AND - Materials <u>do not provide</u> supporting guidance within lessons, such as annotations or suggestions, that provide additional information within the context of the specific lesson objectives.
Metric 2: Science Knowledge for Teaching Materials contain adult-level explanations and examples of relevant science concepts so that teachers can improve their own knowledge of the subject.		- Materials contain adult-level explanations and examples of science concepts within a given course so that teachers can improve their own knowledge of the subject. AND - Materials contain adult-level explanations and examples of science concepts beyond a given course so that teachers can improve their own knowledge of the subject.	- Materials contain adult-level explanations and examples of science concepts within a given course so that teachers can improve their own knowledge of the subject. OR - Materials contain adult-level explanations and examples of science concepts beyond a given course so that teachers can improve their own knowledge of the subject.	- Materials <u>do not contain</u> adult-level explanations and examples of science concepts within a given course so that teachers can improve their own knowledge of the subject. AND - Materials <u>do not contain</u> adult-level explanations and examples of science concepts beyond a given course so that teachers can improve their own knowledge of the subject.
Metric 3: Home Connection Materials provide strategies to inform all partners—including students, parents, or caregivers—about the program and suggestions for how they can help support student progress and achievement.		Materials contain strategies to inform students, parents, and caregivers about the science concepts presented in a given course. AND	Materials contain strategies to inform students, parents, and caregivers about the science concept presented in a given course. OR	Materials <u>do not</u> contain strategies to inform students, parents, or caregivers about the science concepts presented in a given course. AND

3.1: Supports for Teachers	Score	2 points	1 point	0 points
		Materials contain suggestions for how parents and caregivers can help support student progress and achievement.	Materials contain suggestions for how parents and caregivers can help support student progress and achievement.	Materials <u>do not</u> contain suggestions for how parents and caregivers can help support student progress and achievement.
Metric 4: Content Editability Materials are designed to allow a teacher to differentiate content and varied modes of communication within lessons, tasks, or other activities for students.		- Materials provide teachers options to edit content to support differentiation within lessons, tasks, and other activities for students. AND - Materials provide guidance on how to utilize resources to support student communication and integration with technology if an option.	- Materials provide teachers options to edit content to support differentiation within lessons, tasks, and other activities for students. OR - Materials provide guidance on how to utilize resources to support student communication and integration with technology if an option.	- Materials <u>do not provide</u> teachers options to edit content to support differentiation within lessons, tasks, and other activities for students. AND - Materials <u>do not provide</u> guidance on how to utilize resources to support student communication and integration with technology if an option.
TOTAL	_ / 8	Meets Expectations (7-8 points)	Partially Meets Expectations (4-6 points)	Does Not Meet Expectations (0-3 points)

Criterion 3.2: Supports for Students

Description: Materials have explicit teacher support with suggestions (routines, strategies, etc.) for how they can meet the needs of individual learners. Support materials include live updates (data sources, current events, etc.).

3.2: Supports for Students	Score	2 points	1 point	0 points
Metric 1: Strategies for Special Populations Materials provide scaffolds to support students from special populations in their regular and active participation in scientific learning (i.e. students who are multilingual, students experiencing disabilities, and/or students identified as TAG).		- Materials provide scaffold language support for multilingual students to access grade-level science. AND - Materials provide instructional strategies and learning resources for students in special populations, such as students experiencing disabilities and/or students identified as TAG, to support active participation in grade-level science.	- Materials provide scaffold language support for multilingual students to access grade-level science. OR - Materials provide instructional strategies and learning resources for students in special populations, such as students experiencing disabilities and/or students identified as TAG, to support active participation in grade-level science.	- Materials <u>do not provide</u> scaffold language support for multilingual students to access grade-level science. AND - Materials <u>do not provide</u> instructional strategies and learning resources for students in special populations, such as students experiencing disabilities and/or students identified as TAG, to support active participation in grade-level science.
Metric 2: Student Differentiation Materials provide extensions and/or opportunities for all students to engage with grade-level science at varied levels of complexity.		- Materials provide opportunities for learners who could benefit from advanced applications of grade-level science at a higher level of complexity, rather than simply doing more problems than their classmates. AND - Materials can be updated by teachers to reflect relevant topics with different groups of students.	- Materials provide opportunities for learners who could benefit from advanced applications of grade-level science at a higher level of complexity, rather than simply doing more problems than their classmates. OR - Materials can be updated by teachers to reflect relevant topics with different groups of students.	- Materials <u>do not provide</u> opportunities for learners who could benefit from advanced applications of grade-level science at a higher level of complexity, and/or simply provide more problems than their classmates. AND - Materials <u>cannot be updated</u> to reflect relevant topics with different groups of students.
Metric 3: Emergent Bilingual Student Support Materials provide strategies and support for students who read, write, and/or speak in a language other than English to enable their full participation in scientific learning.		- Materials provide teachers with instructional strategies for emergent bilingual students to meaningfully participate in grade-level science. AND - Materials include student resources supporting reading, writing, and/or speaking in a language other than English through regular and active	- Materials provide teachers with instructional strategies for emergent bilingual students to meaningfully participate in grade-level science. OR - Materials include student resources supporting reading, writing, and/or speaking in a language other than English through regular and active participation	- Materials <u>do not provide</u> teachers with instructional strategies for emergent bilingual students to meaningfully participate in grade-level science. AND - Materials <u>do not include</u> student resources supporting reading, writing, and/or speaking in a language other than English through regular and active

3.2: Supports for Students	Score	2 points	1 point	0 points
		participation in grade-level science.	in grade-level science.	participation in grade-level science.
Metric 4: Student Editability* Digital materials include resources for students that are editable and allow for communication of understanding and thinking.		- Materials provide resources that are editable by students to communicate their understanding and scientific reasoning. AND - Teacher materials provide instructional guidance on how to use student resources to capture thinking and demonstrate proficiency in content.	- Materials provide resources that are editable by students to communicate their understanding and scientific reasoning. OR - Teacher materials provide instructional guidance on how to use student resources to capture thinking and demonstrate proficiency in content.	- Materials <u>do not provide</u> resources that are editable by students to communicate their understanding and scientific reasoning. AND - Teacher materials <u>do not provide</u> guidance on how to use student resources to capture thinking and demonstrate proficiency in content.
TOTAL	_ / 8	Meets Expectations (7-8 points) Partially Meets Expectations (4-6 points) Does Not Meet Expectations (0-3 points)		

Criterion 3.3: Digital Learning Design Elements*

Description: The materials are attentive to digital design elements specific to structure, support for users, and adaptability of materials.

3.3: Digital Learning Design Elements*	Score	2 points	1 point	0 points
Metric 1: Material Usability The organizational structure of the digital materials allows for intuitive navigation and meaningful interaction on a variety of devices.		- Materials integrate interactive tools and/or simulation software in ways that support student engagement in science. AND - Materials can be customized for local contexts on a variety of devices.	- Materials integrate interactive tools and/or simulation software in ways that support student engagement in science. OR - Materials can be customized for local contexts on a variety of devices.	- Materials <u>do not integrate</u> interactive tools and/or simulation software in ways that support student engagement in science. AND - Materials <u>cannot be customized</u> for local contexts.
Metric 2: Learning Resources The digital materials provide support for users in a variety of settings, including: - Professional learning resources to support educators’ use of the materials, - Robust supports to help families understand and utilize the materials while supporting their students at home, - Support for students working independently.		- Materials provide learning resources for teachers and/or students to collaborate with each other within either print or digital activities. AND - Materials provide resources for parents, caregivers, and students to understand and utilize the materials while working at home and/or independently from the teacher.	- Materials provide learning resources for teachers and/or students to collaborate with each other within either print or digital activities. OR - Materials provide resources for parents, caregivers, and students to understand and utilize the materials while working at home and/or independently from the teacher.	- Materials <u>do not provide</u> learning resources for teachers and/or students to collaborate with each other. AND - Materials <u>do not provide</u> resources for parents, caregivers and students to utilize using the resources independently.
Metric 3: Media Integration Digital and multimedia elements support, rather than distract from, intended learning outcomes and instructional content.		- Digital and multimedia elements support accurate representations of scientific objects. AND - Digital and multimedia elements are intentionally integrated and connected to learning outcomes.	- Digital and multimedia elements support accurate representations of scientific objects. OR - Digital and multimedia elements are intentionally integrated and connected to learning outcomes.	- Digital and multimedia elements <u>do not support</u> accurate representations of scientific objects. AND - Digital and multimedia elements are <u>not intentionally integrated and not connected</u> to learning outcomes.
Metric 4: Adaptability of Materials Digital materials are designed to allow teachers the ability to adjust and adapt documents and other included resources to meet student needs.		- Materials provide teacher guidance for adapting embedded resources to support student learning. AND - Materials provide guidance for using embedded technology to enhance student learning.	- Materials provide teacher guidance for adapting embedded resources to support student learning. OR - Materials provide guidance for using embedded technology to enhance student learning.	- Materials <u>do not provide</u> teacher guidance for adapting embedded resources to support student learning. AND - Materials <u>do not provide</u> guidance for using embedded technology to enhance student learning.

3.3: Digital Learning Design Elements*	Score	2 points	1 point	0 points
TOTAL	_ / 8	Meets Expectations (6-8 points)	Partially Meets Expectations (3-5 points)	Does Not Meet Expectations (0-2 points)

*This criterion is not required. Quality Indicators are provided for evaluation if digital components are included.

Part 4: Assessment Criteria [K-HS]

Criterion 4.1: Formative Assessment Process

- Description:** Instructional materials incorporate the formative assessment process:
- Materials employ clear learning goals and performance criteria to elicit evidence of student thinking.
 - Feedback informs the teaching and learning process.
 - Students have agency to monitor and adjust their own learning.

4.1: Formative Assessment Process	Score	2 points	1 point	0 points
Metric 1: Clarity of Learning Goals Materials are designed around clear learning goals and written in grade-appropriate, student-friendly language.		• Learning goals include performance/success criteria. AND • Learning goals are embedded and referred to throughout the unit and lesson content.	• Learning goals include performance/success criteria. OR • Learning goals are embedded and referred to throughout the unit and lesson content.	• Learning goals <u>do not include</u> performance/success criteria. AND • Learning goals <u>are not consistently</u> embedded and referred to throughout the unit and lesson content.
Metric 2: Elicitation of Evidence Instructional tasks and activities elicit a variety of evidence of student thinking, including opportunities for student self-assessment and reflection.		• Instructional tasks and activities elicit evidence of student thinking with a focus on possible pathways to a solution (rather than on the final answer or result). AND • Instructional tasks and activities are varied, accessible, scaffolded, and differentiated to support students’ demonstration of evidence.	• Instructional tasks and activities elicit evidence of student thinking with a focus on possible pathways to a solution (rather than on the final answer or result). OR • Instructional tasks and activities are varied, accessible, scaffolded, and differentiated to support students’ demonstration of evidence.	• Instructional tasks and activities <u>do not elicit evidence</u> of student thinking with a focus on possible pathways to a solution (rather than on the final answer or result). AND • Instructional tasks and activities <u>are not</u> varied, accessible, scaffolded, and differentiated to support students’ demonstration of evidence.
Metric 3: Interpretation of Feedback Materials facilitate the provision of meaningful and strengths-based feedback to move learning forward. • Student-to-student • Educator-to-student • Student-to-educator		• Instructional materials include teacher resources that highlight opportunities for feedback to be given to students by the teacher. AND • Instructional materials include strategies that promote a positive classroom culture for student-to-student and student-to-teacher feedback, as appropriate.	• Instructional materials include teacher resources that highlight opportunities for feedback to be given to students by the teacher. OR • Instructional materials include strategies that promote a positive classroom culture for student-to-student and student-to-teacher feedback, as appropriate.	• Instructional materials <u>do not include</u> teacher resources that highlight opportunities for feedback to be given to students by the teacher. AND • Instructional materials <u>do not include</u> strategies that promote a positive classroom culture for student-to-student and student-to-teacher feedback, as

4.1: Formative Assessment Process	Score	2 points	1 point	0 points
				appropriate.
Metric 4: Action & Adjustment Materials guide educators and students to act on feedback and determine the next steps for learning.		- Instructional materials ask students to reflect on their thinking and learning and/or assess their own learning AND - Instructional materials include a comprehensive set of both extensions and interventions for students who need additional supports.	- Instructional materials ask students to reflect on their thinking and/or assess their own learning. OR - Instructional materials include a comprehensive set of both extensions and interventions for students who need additional supports.	- Instructional materials <u>do not ask</u> students to reflect on their thinking and learning or assess their own learning. AND - Instructional materials <u>do not include</u> a comprehensive set of both extensions and resources/interventions for students who need additional supports.
TOTAL	_ / 8	Meets Expectations (7-8 points) Partially Meets Expectations (4-6 points) Does Not Meet Expectations (0-3 points)		

Criterion 4.2: Performance Assessments

Description: Materials center science phenomena and engineering design problems that align with the depth, breadth, and cognitive demand of the standards. High-quality performance assessments:

- affirm students’ funds of knowledge and interests.
- integrate the three dimensions to allow for multiple representations of thinking.
- can be iterated over time.

4.2 Performance Assessments	Score	2 points	1 point	0 points
Metric 1: Alignment Materials include performance tasks that show clear and full alignment to science standards and reflect the 3D focus by including the disciplinary core ideas, crosscutting concepts, and science and engineering practices present.		• Performance assessment tasks clearly align to the Oregon science standards at the appropriate grade-level (K-5) or grade-band (6-8, 9-12). AND • Performance assessment tasks fully address each dimension (i.e, disciplinary core ideas, crosscutting concepts, and science and engineering practices) in service of sense-making about a phenomenon or problem.	• Performance assessment tasks clearly align to the Oregon science standards at the appropriate grade-level (K-5) or grade-band (6-8, 9-12). AND • Performance assessment tasks address <u>at least two dimensions</u> (i.e, disciplinary core ideas, crosscutting concepts, and science and engineering practices) in service of sense-making about a phenomenon or problem.	• Performance assessment tasks <u>are not aligned</u> to the Oregon science standards at the appropriate grade-level (K-5) or grade-band (6-8, 9-12). OR • Performance assessment tasks <u>do not fully address</u> the three dimensions (i.e, disciplinary core ideas, crosscutting concepts, and science and engineering practices) in service of sense-making about a phenomenon or problem.
Metric 2: Cultural Affirmation Performance assessments utilize and affirm students’ interests and cultural backgrounds. Tasks are suitable for both group and individual engagement.		• Performance assessments utilize and affirm students’ interests and cultural background both for group and individual engagement. AND • Performance assessments represent the diversity of our state and local communities.	• Performance assessments utilize and affirm students’ interests and cultural background both for group and individual engagement. OR • Performance assessments represent the diversity of our state and local communities.	• Performance assessments <u>do not utilize and affirm</u> students’ interests and cultural background both for group and individual engagement. AND • Performance assessments <u>do not represent</u> the diversity of our state and local communities.
Metric 3: Authenticity Performance assessments allow students to work with relevant science phenomena, engineering design problems, and authentic audiences.		• Performance assessments require students to apply scientific concepts in authentic contexts. AND • Performance assessments include opportunities for students to engage with authentic audiences.	• Performance assessments require students to apply scientific concepts in authentic contexts. OR • Performance assessments include opportunities for students to engage with authentic audiences.	• Performance assessments <u>do not</u> require students to apply scientific concepts in authentic contexts. AND • Performance assessments <u>do not</u> include opportunities for students to engage with authentic audiences.
Metric 4: Clarity & Feedback Performance assessments use clear scoring criteria and		• Performance assessments use scoring criteria that are clear and	• Performance assessments use scoring criteria that are clear and understandable	• Performance assessments <u>have unclear or missing</u> scoring criteria.

4.2 Performance Assessments	Score	2 points	1 point	0 points
allow for multiple iterations of student thinking based on feedback.		understandable to students. AND Performance assessments promote actionable feedback to students.	to students. OR Performance assessments promote actionable feedback to students.	AND Performance assessments <u>do not promote</u> feedback to students.
TOTAL	_ / 8	Meets Expectations (7-8 points)	Partially Meets Expectations (4-6 points)	Does Not Meet Expectations (0-3 points)

Criterion 4.3: Integrated Assessment System*

Description: Diagnostic, benchmark, and/or interim assessments are integrated into instructional materials in ways that support the learning process. Student results are interpreted relative to the performance expectations of the standards (i.e. criterion-referenced), as demonstrated by student evidence gathered in the learning environment, and recommend instructional next steps.

4.3: Integrated Assessment System*	Score	2 points	1 point	0 points
Metric 1: Assessment Design Diagnostic assessments are well-designed, rigorous, connected to standards, and offer multiple opportunities for demonstrations of knowledge.		- Diagnostic assessments measure student’s performance on grade-level or course-specific standards by integrating the three dimensions. AND - Diagnostic assessments provide opportunities to transfer learning to phenomena or solve problems within new contexts.	- Diagnostic assessments measure student’s performance on grade-level or course-specific standards by integrating the three dimensions. OR - Diagnostic assessments provide opportunities to transfer learning to phenomena or solve problems within new contexts.	- Diagnostic assessments <u>do not</u> measure student’s performance on grade-level or course-specific standards by integrating the three dimensions. AND - Diagnostic assessments <u>do not</u> provide opportunities to transfer learning to phenomena or solve problems within new contexts.
Metric 2: Data Quality The assessment system provides clear and actionable data that allow educators to respond to specific student strengths and opportunities for growth.		- Assessment results are clear and understandable. AND - Assessment results are designed to inform next steps in the learning and teaching process.	- Assessment results are clear and understandable. OR - Assessment results are designed to inform next steps in the learning and teaching process.	- Assessment results are <u>ambiguous or not easy to use</u>. AND - Assessment results <u>do not inform</u> any next steps in the learning and teaching process.
Metric 3: Responsiveness The assessment system is connected to resources designed to meet students’ specific opportunities for growth. Intervention and extension materials effectively accelerate student learning. (These resources serve to answer the question, “Now what?”)		- Assessment results connect to appropriate next steps such as extensions (to deepen understanding and application) AND interventions (to reinforce and, where needed, reteach concepts) AND - Assessment results can be easily used by both educators and students.	- Assessment results connect to appropriate next steps such as extensions (to deepen understanding and application) OR interventions (to reinforce and, where needed, reteach concepts) AND - Assessment results can be easily used by both educators and students.	- Assessment results <u>offer no</u> extensions or interventions AND - Assessment results can be used <u>only by</u> educators.
Metric 4: Family Engagement & Communication If the assessment system provides reports and/or diagnostic information to families, those resources are accessible in multiple languages that allow		- Assessment reports are easy to read and understandable by students and families. AND - Assessment reports are available in	- Assessment reports are easy to read and understandable by students and families. AND - Assessment reports provide resources	Assessment reports <u>are not</u> easy to read or understandable by students and families AND

4.3: Integrated Assessment System*	Score	2 points	1 point	0 points
families to effectively partner with their child(ren) in the learning process.		English and at least one additional language. AND Assessment reports provide resources that students and/or families can use to support any needed learning outside the classroom.	that students and/or families can use to support any needed learning outside the classroom.	Assessment reports <u>do not</u> provide resources that students and/or families can use to support any needed learning outside the classroom.
TOTAL	_ / 8	Meets Expectations (7-8 points)	Partially Meets Expectations (4-6 points)	Does Not Meet Expectations (0-3 points)

*This criterion is not required. Quality indicators are provided for evaluation if an integrated assessment system is present.