Washoe County School District K-5 Science
2020 Instructional Materials Evaluation Rubric
(Certified Teaching Professional Form)

Category 1: Designed for Three-Dimensional Learning

Criterion 1A: Phenomena and Problems

Instructional materials focus on students making sense of phenomena or designing solutions to problems which drives student learning.

- Students are engaged with phenomena or problems that can be explained or solved through the application of the three-dimensions.
- A good phenomenon builds on everyday student experiences and targets grade appropriate learning goals.
- Anchoring, investigative and everyday phenomena may be present.
- Engineering lessons require students to use elements of the science core ideas together with elements of core ideas from engineering design to solve problems.

Less of this:	**More** of this:
Phenomena are just for the initial hook.	Phenomena drives the learning.
Phenomena are fun or flashy to engage students.	Phenomena that builds on everyday experiences supports engagement.
Phenomena are brought in after students develop the science ideas so they can apply what they learned.	The development of science ideas is anchored in investigations of phenomena.
Engineering problems are unrelated to the science learning.	Engineering involves designing solutions to problems that arise from phenomena.

Examples of Evidence:

- ◊ Photographs of trash washed up on a beach that leads into a unit on waves in 4th grade physical science unit. (A first-hand experience, video, photograph or data set to start a learning sequence that becomes the "why" for further study grounded in everyday student experiences.)
- ◊ A time lapse video of a badger decomposing is shown to start a life science unit on matter and energy in ecosystems. Students return to the video throughout to explain what is happening.
- ◊ Garbage from the lunchroom is examined to start a unit on matter and how it changes in the 5th grade physical science unit.
- ◊ 3rd grade students explore balloons, aluminum cans, styrofoam beads, and transparent tape to make observations and generate questions about static electricity in the physical science unit, lesson 3.
- ◊ Students address the problem of communicating at a distance without sound following a study of light in the 1st grade physical science unit.

Specific Evidence from Materials
Each unit contains an anchoring phenomenon to drive learning. Unit 1, Plants and Animals, is guided by the notion that Beavers change land and water. P1 of the lesson guide.

Each lesson in Unit 1, contains lesson phenonmena to help students build their understanding of the Performance Expectation, support understanding of the Anchoring Phenomenon, and drive 3D learning. P.2-4 of the lesson guide. Ex: Lesson 1, Some plants and animals need water. The anchoring phenomenon is also made explicit to students in the Science Jounral, p.3 for Unit 1, and students are asked to record what they know and wonder about the unit's phenomenon. The science journals, unit 1 p. 7, also directs students to engage in observing phenomena with a discussion and observation of colored pictures.
The lesson guide also notes the anchoring phenomenon of each lesson to help students connect back to the anochring phenomenon and ultimately use to explain the phenomenon. P.4-5, Example: lesson 1, Students conclude that some plants may become trees that wild animals like beavers use for shelter.
The Grade K Review Guide has a graphic of how the curriculum uses the idea of phenomenon to make science more meaningful to students, p.6. It notes the presence of lesson phenomenon (evidence discussed above) coupled with local phenomenon, described as simple and engaging activities called "Try It!, See It!, and Research It!) Ex: See It! On p 30 of the lesson guide asks teachers to ask questions, "Have you ever had a pet? Do you know someone with a pet? What do pets need? How do pets get what they need?" before engaging in slides about visiting an animals shelter.
The Grade K review guide notes that students are given Engineering investigations to guide students through real-world problems while following the engineering-design process, p 8. In lesson 7 of Unit 1, students engage in an engineering task, proposing ways to reuse paper to construct a paper mache object, p101. The guide states that, "as students communicate solutions verbally and in sketches, they engage in essential aspects of engineering design."

To what extent do the materials support Criterion 1A? Include your reasoning.
The materials somewhat support Criterion 1A: Phenomena and Problems. Students are engaged with phenomena or problems that can be explained or solved through the application of the three-dimensions. A good phenomenon builds on everyday student experiences and targets grade appropriate learning goals. Anchoring, investigative, and everyday phenomena is present and attended to throughout the lessons. Engineering lessons somewhat require students to use elements of the science core ideas together with elements of core ideas from engineering design to solve problems. The engineering design process is not discovered in detail nor does the lesson ask teachers to point out the phases, their meanings, or even directly discuss that they are engaging in an engineering design task.

Criterion 1B: Integrating the Three-Dimensions

Instructional materials integrate elements of the Science and Engineering Practices, Crosscutting Concepts and Disciplinary Core Ideas.

- Students develop and use multiple grade-appropriate elements of each dimension.
- The dimensions are integrated to work together and are not taught in isolation.
- Learning experiences integrate multiple different pairings of the dimensions to build understanding of the targeted performance expectations.
- Engineering is integrated with at least once per domain of science.

Less of this:	**More** of this:
Students only engage in a single practice element in a lesson.	The lesson helps students use and develop multiple practice elements.
Lessons teach the dimensions separately or only address them at the general level.	Lessons integrate grade-appropriate elements for each dimension.
Engineering lessons focus on trial and error activities that don't require science or engineering knowledge.	Grade-appropriate elements of engineering design and science core ideas are integrated with the other dimensions.
Engineering consists of challenges or step-by-step directions to build something.	Engineering is integrated into the grade-appropriate science core ideas and use explanations of phenomena to design solutions.

Examples of Evidence:

- ◊ 4th grade students conduct an investigation using fair tests in which variables are controlled and the number of trials considered, including collecting measurements and representing data in tables, with balls and ramps to determine cause and effect relationships of speed and energy in unit 2 lesson 4.
- ◊ Students ask questions about waves moving objects and collaboratively investigate how to make different looking waves in water and analyze how these waves affect a floating object in the physical science unit.
- ◊ 3rd grade students generate, test and refine solutions to keep two moving objects from touching each other by applying ideas learned about magnets in lesson 9.
- ◊ With teacher guidance, kindergarten students conduct an investigation with peers to compare the effects of different directions of pushes and pulls on playground balls, student chairs and erasers on different surfaces in the physical science unit, lesson 3.

Specific Evidence from Materials
The lesson guide contains sections, with corresponding standards for the science and engineering practices, crosscutting concepts, and disciplinary core ideas of each lesson, p12. The digital materials contain a link, under the "unit overview" for "3D learning." Each of the three dimensions, Science and Engineering Practices, Cross Cutting Concepts, and Disciplinary Core Ideas there is a list of the subcatergories covered in each section. Each list also contains a link to "Complete NGSS Corelations" which takes you to a checklist of each of the three areas for reach lesson in the unit, where the frequency ranges from touching on the subcategories from one to several times.

The Unit Overview, Unit 1, also contains a section on "3D Learning Progressions." For each lesson, it is specified in an objective format the Science and Engineering Practices, Cross Cutting Concepts, and Disciplinary Core Idea. Example:
What Do Plants Need?
Performance Expectation: K-LS1-1
Lesson Phenomena: Some plants need more water. Some need less water.
Disciplinary Core Idea: Students determine that some plants need more water, while some need less water in their understanding that plants need water and light to live and grow. (LS1.C)
Cross Cutting Concept: Students visit a virtual garden center to look for a plant for the classroom as they identify patterns and use symbols to compare plant needs.
Science and Engineering Practice: Students use observations to choose one of the plants for the classroom and explain their choice to the class.
In lesson 7, Unit 1, students are guided through an engineering task to design and make a paper mache object and reuse newspaper. Students are asked to use the word "recycle" to communicate how people take care of the earth. *This is more of a step by step instruction to build something, does not tie the engineering design solution closely enough to the science core idea.

To what extent do the materials support Criterion 1B? Include your reasoning.
The materials fully support Criterion 1B: Integrating the Three-Dimensions. Students develop and use multiple grade-appropriate elements of each dimension. The dimensions are integrated to work together and are not taught in isolation. The learning experiences integrate multiple different pairings of the dimensions to build understanding of the targeted performance expectations. Engineering is integrated atleast once per domain of science. However the task presented in Unit 1 is more of a step by step instruction to build something; ie a paper mache product and paper pulp. This activity does not tie the engineering design solution closely enough to the science core idea.

Criterion 1C: Coherence

Instructional materials help students develop increasingly sophisticated understandings within and across grade-levels.

- Lessons fit together to target a set of performance expectations with multiple opportunities for students to revise understandings over time.
- Instructional materials make connections between lessons, units and grade levels.
- Lessons build on students' prior learning in all three dimensions.
- Students engage in learning experiences with explicit connections to other science disciplines and other subjects with intention.

Less of this:	**More** of this:
Lessons are unrelated.	Lessons are presented in a logical sequence to develop understandings.
Lessons build on prior learning but only for the DCIs.	Lessons work together with students' foundational knowledge and practice from prior lessons and grade levels.
Science domains are taught in isolation.	When appropriate, science domains are integrated to show connections.
Other subjects, when included, are not intentionally chosen to support grade-level standards.	Grade-level appropriate standards from ELA, math or other subject areas are integrated with science learning.

Examples of Evidence:

- ◊ In the first unit, students address the physical science standards around the phenomena of garbage and partially address a life science standard related to decomposers. In the second unit on ecosystems, students extend and apply their understanding of decomposers which leads to an engineering problem about materials such as plastics that do not decompose.
- ◊ 5th grade students are investigating water sources around the Earth and make connections to properties of matter in both the physical science and earth science units and prior learning about weather and climate from 3rd grade.
- ◊ 2nd grade students plan and conduct an investigation with water and earth materials as a whole class in one lesson and then in the next lesson students work with a small group to plan and conduct another investigation with wind and earth materials to further learning of core ideas and practices.
- ◊ Students apply ELA learning to write a set of directions for conducting an investigation in the earth science unit, lesson 6.
- ◊ Students use line plots to analyze climate data in grade 3, unit 4.

Specific Evidence from Materials
The lesson guide notes the lesson progression for each lesson in unit 1, explains what students will learn and do in Kindergarten, how it relates to other lessons in the unit, and how it will be used as foundational knowledge for later on in 5th grade when students learn that plants get the materials they need for growth chiefly from air and water. P.15 P.13 of the lesson guide also notes the connection to Common Core ELA standards, speaking and listening K.SL.2, and Common Core Math Standards, describe and compare measureable attributes K.MD.2.

The seven lessons in Unit 1 help students build to an understanding of how beavers change land and water to design a space for them to live at a fictional location, Critter Creek Park. In the Unit Overview there is a link to a document that details the Unit's progress and upholds the coherence of the phenomenon, DCIs, CCC, SEP, PE, and connections to the phenomenon.

To what extent do the materials support Criterion 1C? Include your reasoning.
The materials fully support Criterion 1C: Coherance. The lessons fit together to target a set of performance expectations with multiple opportunities for students to revise their understandings over time. The instructional materials make connections between lessons, units, and gradelevels. The lessons build on students' prior learning with the three dimensions. Students engage in learning experiences with explicit connections to other science disciplines and other subjects with intention.

Category 2: Instructional Supports

Criterion 2A: Assessing the Three-Dimensions

Instructional materials support monitoring student progress in all three dimensions.

- Multiple and varied assessments allow students to demonstrate learning in all three dimensions including application of knowledge in performance tasks.
- Formative assessments, including teacher, self and peer assessments, are embedded throughout to inform instruction.
- Assessments are unbiased and elicit direct, observable evidence from all students.
- A phenomena or problem drives tasks, and information from the task is required to complete it.
- Rubrics and scoring guidelines are provided for interpreting student performance including sample student responses

Less of this:	**More** of this:
Checks for understanding elicit only a few student responses or rely primarily on group projects.	Individual student artifacts are used to measure student understanding of each dimension.
Only summative assessments that measure the end point of understanding are provided.	Formative assessments provide feedback to adjust instruction and inform students of their progress.
Assessments are primarily rote memorization of facts and terminology.	Assessments reflect application of all three dimensions including tasks that are driven by phenomena or problems.
Only multiple-choice tests are given.	Multiple measures and types of assessment are used throughout.

Examples of Evidence:

- ◊ As students are engaged in a performance task in unit 3, lesson 2, there are indicators for teachers to look for and information about possible responses. This information is embedded in the lesson.
- ◊ In unit 1, there are two performance assessments, peer feedback throughout, exits slips, a summative assessment, and a prewrite.
- ◊ Individual student learning is assessed using written work that answers the driving question of the unit. (Earth Science, p. 76)

Specific Evidence from Materials
The Science Journal for Unit 1, contains two performance assessments, in the middle and end of the units. P.70 asks students to choose an animal, look at the handout “Animal Needs” and draw a food their animal eats and draw what else the animal needs. The performance assessment on p. 128-134 follows a similar format, but asks students to take their knowledge a step further to make a claim with evidence and make a poster to tell people how to keep the park clean. The lesson guide notes the performance assessment, provides an answer key, and rubric for scoring the science and engeering concepts, crosscutting concepts, and the DCIs. The criteria covers three ranges of student responses and assigns a numerial value; proficient, emergent, and not present.

In Unit 1, lesson 1, in the "Making Sense of the Phenomenon" section of Master Lesson Guide, students are provided with a statement and continuum with a slider to indicate if they: don't know, still learning, understand, or are an expert.

To what extent do the materials support Criterion 2A? Include your reasoning.
The materials mostly support Criterion 2A: Assessing the Three-Dimensions. There are multiple and varied assessments to allow students to demonstrate learning in all three dimensions including application of knowledge in performance tasks. The formative assessments, including teacher, self and peer assessments, are embedded throughout to inform instruction. Assessments are unbiased and elicit direct, observable evidence from all students. A phenomena or problem drives tasks, and information from the task is required to complete it. Rubrics and scoring guidelines are provided for interpreting student performance, however they do not include students sample responses. While the lesson guide does provide an answer key for questions it does not provide the teacher with specific resources to support students if they do or do not understand the concepts.

Criterion 2B: Instructional Experiences

Instructional materials support equitable access to science knowledge and practice for all students.

- Students engage with direct (preferably first-hand), shared experiences that are relevant and authentic, serve as the basis for learning and meet the developmental needs of elementary students.
- Students' questions, prior experiences and diverse backgrounds related to the phenomenon or problem drive learning.
- Materials provide an opportunity to learn by allowing for the development of scientific understandings over time using multiple modalities.
- Materials provide opportunities for students to make connections to and explore the natural world outside the classroom.

Less of this:	**More** of this:
The lesson focuses on a topic that some students have experienced.	Direct experiences in the classroom provide access and equity for all students.
Student questions and prior experiences are not connected to the learning.	Materials provide supports for connecting students' own questions to the targeted learning.
Students read about what others have done.	Students learn through concrete experiences.
Only one or two modalities are used.	Multiple modalities are used throughout each instructional segment.

Examples of Evidence:

- ◊ Students develop physical models of a landfill as open and closed systems to observe during the 5th grade garbage unit.
- ◊ Students identify components of garbage disposal in their homes and communities which connects the phenomena that started the unit.
- ◊ Students conduct a first-hand investigation of erosion and deposition using a stream table, observe time-lapse videos of landslides, engage in a virtual investigation, read accounts of earth changes by wind and record changes to the playground after a snow event in the 4th grade earth science unit.
- ◊ Students raise trout from eggs in the classroom and make observations over time as part of their study of traits in the life science unit.

Specific Evidence from Materials
In Unit 1, students visit a virtual garden center and pet store to figure out what animals need to live and survive, through a video. Students are most commonly taught through presentations slides and quick videos. Example: Lesson 1, "What Do Plants Need?" Lesson 2, "What Do Animals Need?" Students are asked questions about their experiences in each "Observing Phenomena section of each lesson in Unit 1. Example: In lesson 1, students are asked, "Do you have a plant at home? How often does your plant need water? In Lesson 2, students are asked, "Does your family have a pet? How do you take care of your pet?" The topic of the lessons in Unit 1, what plants, animals, and people need, where plants and animals are found, how they change the earth, and people changing

and taking the care of the earth are all relatable topics that students have experienced personally or observed around them.
For the slides, there is section titled, "Connections to Your Life," where prompting questions are listed to engage students in the lesson. Example: Lesson 2, the teacher asks, "Think about birds you have seen outdoors. What do they eat? Do they get their own food? Or do you see people feeding them?"

To what extent do the materials support Criterion 2B? Include your reasoning.
The materials mostly support Criterion 2B: Instructional Experiences. Student engage with direct, shared experiences that are relevant and somewhat authentic which serve as a basis for learning and meet some of the developmental needs of elemtary students. Students routinely engage in slides and videos and are learning from the experiences of others instead of doing hands on investigations or engaging in first hand, concrete experiences.

Criterion 2C: Student Sense-making

Instructional materials support equitable access to science knowledge and practice for all students.

- Materials support student sense-making at both an individual and group level.
- Classroom discourse focuses on expressing and clarifying student reasoning with opportunities for students to share ideas and feedback with each other that supports the iterative and collaborative co-construction of explanations.
- Materials include supports for oral and written language processing to involve students in scientific discourse for sense-making including a language-in-use approach.

Less of this:	**More** of this:
The teacher tells students what they need to know.	Students figure out explanations through classroom discourse with each other.
The teacher calls on a few students to share reasoning.	All students have the opportunity to share their thinking orally or in writing.
The focus is only on getting the "right" answer.	Sense-making begins with initial student ideas that progress in sophistication.
Vocabulary is front-loaded. All students are provided with sentence frames.	Specialized vocabulary is embedded in the instructional sequence with multiple opportunities to use and development over time. Writing supports are differentiated.

Examples of Evidence:

- ◊ 5th grade students develop models of how scents travel that are refined over the course of a three weeks using a combination of visual and written language providing multiple opportunities to develop precise vocabulary in the physical science unit.
- ◊ 3rd grade students answer questions in their notebook individually using pictures and words to explain their initial ideas about how static electricity works and have the opportunity to revise this after discussing with a peer and the whole class in the physical science unit.
- ◊ The teacher facilitates a class discussion using a word wall where kindergarten students share observations with a shoulder partner and the whole group about the kinds of things in their homes to figure out that the things we need come from nature.
- ◊ Suggested sentence frames are included to support oral and written responses when needed with the goal of independence.

Specific Evidence from Materials
Each lesson of Unit 1, contains a section titled, "Sense Making of the Phenomenon." This comes at the end of each lesson and asks students to again review the phenomenon attended to in the lesson with a quick video, and asks students two questions to guide their thinking. Students are then asked to answer a final question and put their ideas into a three part graphic organizer with their claim, evidence, and reasoning. Example: In lesson 2, students are shown the video of cats eating and drinking water like humans and asked, "What is the cat of the left doing? What is the cat on the right doing?" Then they are asked to use their findings from the investigation to answer: What do animals need in order to stay alive?

There is a "Vocabulary" section to each lesson of Unit 1, and it asks the student to match words from a bank to a picture, students can then check their answer or reset the words. Example: In lesson 2 the words are "plant" and "animal" and there is a picture of a dandelion and mouse. This will give the student a check mark if it is correct and an x if it is not but does not define the word.
For the Unit, there is a section called "Vocabulary Cards." This is a digital note card with a vocabulary word on the front and can be "flipped" to show a photo on the back, however there is not a definition presented.
The "Show What You Know" section of the lessons contains a sentence with two fillable spaces and a picture supported word bank. Ex: Lesson 1, "All plants need _____ and _____." Students can choose from the following list: flowers, people, pots, sunlight, water, windows.
The reference sections of the digital materials contains a glossary of all the words found in the Unit, again each word is accompanied with a picture but lack explicit definitions.

To what extent do the materials support Criterion 2C? Include your reasoning.
The materials somewhat support Criterion 2C: Student Sense-making. The materials support student sense-making at both an individual and group level. Classroom discourse mostly focuses on expressing and clarifying student reasoning with some opportunities for students to share ideas and feedback with eachother. The materials include picture supports for oral and written language processing but do not include a word wall component or even provide the teacher or students with a clear definition of words. There is not strong evidence of a language-in-use approach.

Criterion 2D: Teacher Supports

Instructional materials support teacher planning and instruction.

- Materials include background knowledge in both science content and pedagogy and student preconceptions.
- Materials have clear and concise instructional directions and connections to the standards.
- Materials provide guidance to support differentiated instruction, extra support and extensions at the appropriate level for a broad range of learners.
- Materials include professional learning and additional instructional planning resources.
- Materials have supports for families to extend learning and offers suggestions for how to help their student(s) at home.

Examples of Evidence:

- ◊ Information prior to lessons gives teachers things to except that students may already know in unit 1 p.12 in addition to how their understandings will build.
- ◊ 1st grade students have a choice to investigate different variables related to shadows, and suggestions are included as well as extensions to do at home. (Light unit, p. 40)
- ◊ The assessments include recommendations for additional supports when students don't meet expectations. "Students may struggle to articulate that scientists look back at the data they collect to look for patterns and to draw conclusions about phenomena. One way to support them in this thinking might be to share an anecdote such as, "When I was growing up, my mom used to measure my height by marking it on the wall in the pantry. When I look back at those marks, I notice patterns, like that I grew faster between the ages of 5 and 8 than I did when I was older."" (p.14)
- ◊ Students make observations of the sky with their families, looking for patterns over time. Families are provided with background information on how to record observations and what patterns to expect.

Specific Evidence from Materials
Each lesson contains a section from differentiating instruction for students who are English Learners, Students with Special Needs, and Advanced Learners. P15 for unit 1, lesson 1. EL supports include using mixed ability grouping and sentence starters. Special needs suggestions are going through the data twice and focusing on a single requirement of a plant at at a time. Advanced learner suggestions are acquiring one or more plants chosen by the students in the investigation and assigning the advanced learner the task of taking care of the plant for the rest of the year. The digital resources often include a link named, "Universal Access." In lesson 1, this refers to how the teacher can support students with special needs by collecting data for sunlight and water separately. In lesson 3, this attends to the supports for advanced learners and how they can further investigate sources of water for humans. There is also an a Skills and Toolkits subsection of Support that contains ELA/ELD connections, differentiating instruction, and reading support. The Collecting Data section of lesson 1, Unit 1, has a place dedicated to "misconceptions" and describes a common misunderstanding that students might have and specific recommendations on what to clarify for student understanding.

The "Planning" section of the Unit contains a tab about the "Science Background" and covers science concepts, vocabulary, investigation, and student text."
The planning section of the unit, contains the link "Enhancing Learning" which provides the teacher with additional supports such as videos, websites, and readings. Ex: Lesson 3, there is a video on what humans need to stay healthy, a website link about how humans get nutrients from food, and two books on how peanut butter is made and where food in a lunchbox comes from.
The Support section of the digital materials notes that they provide teachers training resources such as self-paced tutorials and Professional Development in the forms of a searchable knowledge-base, live webinars and an on-demand webinar library, and a downloadable PDF of the Methods Book.

To what extent do the materials support Criterion 2D? Include your reasoning.
The materials somewhat supports Criterion 2D: Teacher Supports. The materials include minimal background knowledge in science content and student misconceptions but does not attend to pedagogy. The materials have clear and concise instructional directions and connections to the standards. The materials do provide guidance to support differentiated instruction, extra support, and extensions but they are lacking in depth for advanced learners. The EL and Special needs suggestions are adequate, however the Advanced learner suggestions are acquiring one or more plants chosen by the students in the investigation and assigning the advanced learner the task of taking care of the plant for the rest of the year. This suggestion is inadequate as it only provides them with an enrichment task and does not further progress their learning or provide them a deeper understanding of content or with new insights. The materials include professional learning and additional instructional planning resources. The materials do not have supports for families to extend learning and offer suggestions for how to help their student(s) at home.

Category 3: Student Materials

Criterion 3A: Program Design

Instructional materials represent a comprehensive K-5 core program.

- Materials provide instruction that correlates to our recommended instructional minutes for science.
- Materials are available in both English and Spanish.
- Graphic organizers and templates for science notebooks are included.
- Teacher and student materials have resources both in print and online.
- Multimedia supports are included such as videos, tutorials and simulations and when appropriate reflect the diversity of our students and society in a culturally responsive manner including different genders and sexual orientations, from many cultures and nations, both contemporary and historical.
- Technology options are appropriate for both classroom and home use possibly including translation capabilities.

Examples of Evidence:

- ◊ There are four units, each representing nine weeks of instruction at 180 minutes a week. This is short of our recommended minutes of 240 minutes a week for 5th grade.
- ◊ There are 132 60-min lessons for the whole year. This correlates to our recommended instructional minutes of 220 minutes per week for grades K-2. (3-4 60-min lessons per week)

Specific Evidence from Materials
There are three units, with 5- 7 lessons and 1-2 performance assessments. Each lesson has the option of being "fast tracked" usually 39-53 mintues or "fast track plus extension" usually 71-92 minutes. The lessons with extensions go over our recommended instructional minutes for science. However since there are only 3 units over 4 quarters some lesson could be taught over 1-2 days. The Science Journals and Interactive Students Notebooks can be provide in both English and Spanish. The digital platform allows the user to toggle between English and Spanish for viewing Master and Fast Track lesson guides. Vocabulary cards can be viewed in English and Spanish. The Unit Checkpoints can be viewed in English and Spanish. The section, Text with Notes, can be used in either English or Spanish.

To what extent do the materials support Criterion 3A? Include your reasoning.
The materials mostly support Criterion 3A: Program Design. The materials provide instruction that can correlate to our recommended instructional minutes for science. The lessons with extensions go over our recommended instructional minutes per day however, since there are only 3 units to cover in 4 quarters, some lesson can be taught over multiple days. The materials are available in both English and Spanish. Graphic organizers and templates for science notebooks are include and the notebook contains quality pictures and ideas. The teacher and student materials have resources both in print and online. Multimedia supports are included such as videos and simluations and when appropriate reflect the diversity of our students and society in a

culturally responsive manner including different genders from many cultures and nations. The multimedia does not reflect historical examples of the phenomenon as they are all contemporary. The technology options are appropriate for the classroom but the reviewer is unaware of how platform works for home use.

Criterion 3B: Science Equipment

Instructional materials include hands-on materials and equipment that support three-dimensional learning.

- Enough materials are included to allow students to do the investigations themselves.
- Materials are of a quality that will last through many uses.
- Materials include the tools necessary to make observations and measurements and conduct investigations.

Examples of Evidence:

- ◊ There are enough thermometers, graduated cylinders, balances, magnifying glasses and measuring tapes for a whole class to use in small groups.
- ◊ Everything is included to engage in the lessons except for things that would already be found in the classroom like tape and colored pencils.

Specific Evidence from Materials
2 boxes, one of "common materials" that include unit posters with "I wonder…?", science safety poster, various consumable materials. The second which has hands on materials for one lesson in each unit. Example, Unit 1, Lesson 7 contains enough balloons, cornstarch, strainer for teacher to do a demonstration or whole group investigation.

To what extent do the materials support Criterion 3B? Include your reasoning.
The materials somewhat support Criterion 3B: Science Equipment. There are enough materials for the teacher to do a demonstration but do not allow the students to do the investigation themselves. The materials are of a quality that will last through many uses. The materials include the tools necessary to make observations and measurements but do not require students to conduct first hand investigations as much learning is done through slides and videos.

Criterion 3C: Reading Materials

Instructional materials include grade-appropriate texts that support three-dimensional learning.

- A range of text types and genres, both print and online, are embedded in learning experiences.
- Texts support context-specific academic vocabulary.
- Materials reflect the diversity of our students and society in a culturally responsive manner including different genders and sexual orientations, from many cultures and nations, both contemporary and historical.
- Materials include supports for reading comprehension for a variety of student needs including high-quality questions.

Examples of Evidence:

- ◊ Texts include an interview of Sylvia Earle and profiles of Chien Shiung Wu and Benjamin Banneker. These highlight the connections to the science students are learning. Pictures of scientists working in the field represent the diversity of our students.
- ◊ Cultural myths about the sun and stars are included in the earth/space science unit.
- ◊ Vocabulary is highlighted in the reading that follows a concrete experience where the vocabulary is first introduced.

Specific Evidence from Materials
The Science Journals for all 3 units include an investigation (p6-12), text with notes (p13-17), and a check for understanding (p18-19) for each lesson of a unit – seen in Unit 1, lesson 1. The Science Jounrals also include support context-specific vocabulary which is bolded and colored, example plants on p6. These words are again shown with colored picture support in the glossary on pages 136-138, however a text definition is not provided. In the check for understanding, students can show what the students can choose from a word bank with picture support to fill in a sentence p18. The physical materials do not include print books for students or teacher. There are no big books or student read alouds.

To what extent do the materials support Criterion 1A? Include your reasoning.
The materials somewhat support Criterion 3C: Reading Materials. There are not a range of text types and genres for students. Instead, the texts are encompassed within the Science Jounals. The text included in the Science Journals does support context-specific academic vocabulary. There are not other standalone texts in print or online. The text from the Sciene Journals do support reading comprehension but are not indepth and do not include high-quality questions, instead being mostly picture support.

Referenced, adapted and formatted from the following documents:

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Brennan et al. (2017) *Priority Features of NGSS-Aligned Instructional Materials: Recommendations for Publishers, Reviewers and Educators* [White paper].

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