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
*Investigate why there are no monarch caterpillars in an area that has been changed from a field to a vegetable garden (fictional community called Mariposa Grove)

Monarchs are the focus of many primary science curricula because they are familiar to children and very interesting- their life cycle and migration patterns are phenomena that people of all ages seek to observe and understand

Needs of Plants and Animals- declining Monarch butterflies- investigation on what to do to attract the Monarch butterflies in a fictional community
Where do monarchs live and why do they live there?, *What do milkweed plants need to live and grow?*, and *Why are there no milkweed plants in the neighborhood garden anymore?*. Focus on interdependent relationships. Real concern for a real problem to solve.

To what extent do the materials support Criterion 1A? Include your reasoning.
There is evidence that the phenomena is engaging and builds on everyday experiences. This is also connected to the essential questions that are used throughout the lessons.

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
3-D Statement Practices Disciplinary Core Ideas Crosscutting Concepts **Unit Level** Students carry out investigations to determine what plants and animals need to live and grow (systems and system models) in order to help a group of kids from the fictional town of Mariposa Grove solve the problem of why there are no longer monarch caterpillars living in a garden in their neighborhood (cause and effect). At the end of the unit, the class designs a solution to the problem by developing a model (scale, proportion, and quantity) for a garden that provides for both human and animal needs.

To what extent do the materials support Criterion 1B? Include your reasoning.
The Process Build makes sense and follows the Practices Disciplinary Core Ideas Crosscutting Concepts statement at the Unit level.

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
"Progress Build" organizes the sequence of lessons (see page 6) Coherence Flowchart **Process Build is easy to understand and numbered.** Progress Build Level 1: Growth is increasing in size or having new parts. When a plant grows, it gets bigger or develops new parts that were not there before, such as leaves.

Progress Build Level 2: Plants need to get water with their roots.

When a plant grows, it gets bigger or develops new parts that were not there before, such as leaves. Plants need water in order to live and grow. Plants use their roots to take in water from the soil around them.

Progress Build Level 3: Plants also need to get light with their leaves.

When a plant grows, it gets bigger or develops new parts that were not there before, such as leaves. Plants need water in order to live and grow. Plants use their roots to take in water from the soil around them. Plants also need light in order to live and grow. Plants get light when it hits their leaves.

Chapter 1 Lessons

Lesson 1.1: Pre-Unit Assessment

Lesson 1.2: Science Walk

Lesson 1.3: Observing a Place

Lesson 1.4: Exploring Animal Needs

Lesson 1.5: Investigating Animal Habitats

Lesson 1.6: Explaining Why There Are No Caterpillars

Lesson 1.7: Setting Up an Investigation

Chapter 2 Lessons

Lesson 2.1: Growing Seeds

Lesson 2.2: Comparing Plant Growth

Lesson 2.3: Investigating Plant Needs

Lesson 2.4: A Plant in the Desert

Lesson 2.5: Observing Garlic Roots

Lesson 2.6: Observing Radish Roots

Lesson 2.7: Water for Milkweed

Chapter 3 Lessons

Lesson 3.1: Planning a Light Investigation

Lesson 3.2: Observing Light Investigations

Lesson 3.3: Growing Toward the Light

Lesson 3.4: Above and Below

Chapter 4 Lessons

Lesson 4.1: Investigating Monarchs
Lesson 4.2: Investigating Human Needs
Lesson 4.3: Reflecting on Needs of Living Things
Lesson 4.4: End-of-Unit Assessment
Chapters at a Glance

Unit Question

What do living things need to live and grow?

Pushes and Pulls Unit 2: Class Pinball Machine, directional move, change in direction

Learn, Plan, Make, Test

Search for movement all around
Chapter 1 Lessons
Lesson 1.1: Pre-Unit Assessment
Lesson 1.2: Talking About Forces
Lesson 1.3: Forces Happen Between Two Objects
Lesson 1.4: We Are Engineers
Lesson 1.5: Writing About Forces
Chapter 2 Lessons
Lesson 2.1: Exploring Shorter and Longer Distances
Lesson 2.2: Strong and Gentle Forces
Lesson 2.3: Designing a New Launcher
Chapter 3 Lessons
Lesson 3.1: Movement in Different Directions
Lesson 3.2: Building with Forces
Lesson 3.3: Direction and Strength
Lesson 3.4: Targets in the Box Model
Lesson 3.5: Applying Strength and Direction
Chapter 4 Lessons
Lesson 4.1: Changing Direction
Lesson 4.2: Forces Change an Object's Direction
Lesson 4.3: Flippers and Bumpers
Chapter 5 Lessons
Lesson 5.1: Room 4 Solves a Problem
Lesson 5.2: Testing and Improving Our Box Models

Lesson 5.3: Showcasing Our Box Models
Chapter 6 Lessons
Lesson 6.1: Searching for Forces
Lesson 6.2: A Busy Day in Pushville
Lesson 6.3: End-of-Unit Assessment

Students plan and carry out investigations to determine how force affects the movement of an object, its direction, and its distance (cause and effect; scale, proportion, and quantity; structure and function). They assume the role of engineer as they engage in the design process to develop models that test ideas and construct solutions with the goal of designing a Class Pinball Machine. 5 books with this unit.

Unit 3: Sunlight and Weather

Relatable: What is the weather like on playgrounds? The build makes sense. Talk about extreme weather in the last chapter. Tornadoes
Chapter 1 Lessons
Lesson 1.1: What Is the Weather Like Today?
Lesson 1.2: Introducing Temperature
Lesson 1.3: Pre-Unit Assessment
Lesson 1.4: Weather and the Playgrounds
Chapter 2 Lessons
Lesson 2.1: Modeling the Sun Warming Earth's Surface
Lesson 2.2: Learning More About Models
Lesson 2.3: Investigating Sunlight on Earth's Surface
Lesson 2.4: Applying Sunlight Warming Earth's Surface
Chapter 3 Lessons
Lesson 3.1: Getting Warm in the Sunlight
Lesson 3.2: Discussing Warming Over Time
Lesson 3.3: Showing Ideas About Warming Over Time
Lesson 3.4: Reflecting on Warming Through Time
Chapter 4 Lessons
Lesson 4.1: Modeling Warming of Different Surfaces
Lesson 4.2: Reflecting on Warming of Different Surfaces
Lesson 4.3: Cool People in Hot Places
Lesson 4.4: Revisiting Sunlight Warming Earth's Surface
Chapter 5 Lessons

Lesson 5.1: Tornado! Predicting Severe Weather
Lesson 5.2: Investigating with the Flooding Model
Lesson 5.3: Discussing the Flooding Models
Lesson 5.4: Investigating Flooding Solutions
Lesson 5.5: Reflecting on Weather and Sunlight
Lesson 5.6: End-of-Unit Assessment

Students use models and collect and analyze data to determine the effect of sunlight on Earth's surfaces. They do this to explain what is causing two school playgrounds to be different temperatures (cause and effect, energy and matter). Students also obtain information and communicate ideas about severe weather and ways to prepare for it (patterns)

Time lapse videos
Learn what plants need and how humans can adapt
Redesign the community garden for humans and monarchs
"Science Walk"
Sorting cards
On the Fly Assessments
Explanation Language Frames
1.7 Do Plants Need Water Investigation
2.1 Growing Seeds
Vocabulary- stem, leaves
3.2 Light Investigation
End of Unit Assessment
5-10 minute 1:1 conversation
Trajectory of key ideas within and across grade levels

Observe and grown radishes and garlic. Record and note. Leads to decisions humans make. The sequence of this unit make sense. Every lesson appears connected to text at the center.

To what extent do the materials support Criterion 1C? Include your reasoning.
Each lesson builds on the other lessons and connects well together. The coherence can be seen within and across the units.

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
6 page rubric for end of unit assessment • Assessment guides/rubrics: Guidance is provided to gauge the level of student performance on the assessment task, with suggestions for student feedback and questioning strategies to advance learning, revise performance, or elicit and clarify student thinking. Rubrics are available in Digital Resources in the Lesson Brief for the lesson in which the task occurs. • Clipboard Assessment Tool: The Clipboard Assessment Tool offers support for conducting brief, talk-based checks that reveal students' thinking and correspond to the level of the Progress Build. The Clipboard Assessment Tool is provided at key points in the unit (in

Digital Resources) and includes tailored sets of questions and the specific activities that present an opportunity to ask those questions. Also included is space to write notes about students' ideas.

- Possible student responses: Possible student responses are provided to model how evidence of understanding, or partial understanding, may be demonstrated by the student for the specific task. Possible student responses are provided in the Possible Responses tab in the activity where there is an applicable notebook page. Possible student responses also appear in the Assessment Guide for the End-of-Unit Assessment (in Digital Resources).

- Look for/Now what? notes: Each On-the-Fly Assessment includes a two-part description of what evidence of understanding would look like for the task (Look for) and how instruction may be adjusted in response (Now what?). These are accessible by pressing the orange hummingbird icon in the activity in which they appear.

- Assess understanding/Tailor instruction notes: Each Critical Juncture Assessment includes a two-part description of how the expected level of student understanding may be demonstrated in the task (Assess understanding) and how instruction may be adjusted in response (Tailor instruction) at the class, group, and student level. These are accessible by pressing the orange hummingbird icon for the activity in which they appear.

- On the fly assessment with "Look For" and "Now What"

Look for: Students' examination of different habitats is an initial opportunity to assess their understanding of how animals can only live in a place if the food they need to live is there. The Chapter 1: Clipboard Assessment Tool is available as a reference for key questions and a place to record notes on students' responses. In general, students should be deciding that their animal can live in a place once they identify that the food it eats is there, as well as deciding that their animal cannot live in a place when its food is not there. They may also have other reasons for why their animal cannot live in a place, such as the place being under water but their animal being pictured above water.

Now what? You may notice some students do not show evidence that they are thinking of animals as able to live only in places where they have the food they need. Be sure to note which students are still developing this understanding, as well as how many students. These observations will help you make a decision about whether to tailor instruction after the Critical Juncture in Lesson 1.7.

Detailed Unit Overview Explaining Why
Pre-Unit Assessment

To what extent do the materials support Criterion 2A? Include your reasoning.
Critical Assessment Juncture- to make decisions about instruction and possible feedback is helpful. The assessment system is comprehensive. Foundational Knowledge is listed for teachers.

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
First-hand experience investigations using garlic cloves and radish seeds Time Lapse Radish Seed Sunflower sequence charts

To what extent do the materials support Criterion 2B? Include your reasoning.
The experiences are engaging. I feel like there aren't as many experiences. Text is at the center of each lesson and sometimes feels like it is in place of a real experience. This felt like the weakness criteria. The flipper and bumper project does seem fun for young kids.

Both of these statements are concerning: However, if you have taught activity-based science before, you'll find managing this unit easier than units comprised of a higher percentage of firsthand activities. Lessons involving reading and writing take less preparation and management—and they are rarely messy!

Criterion 2C: Student Sense-making

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

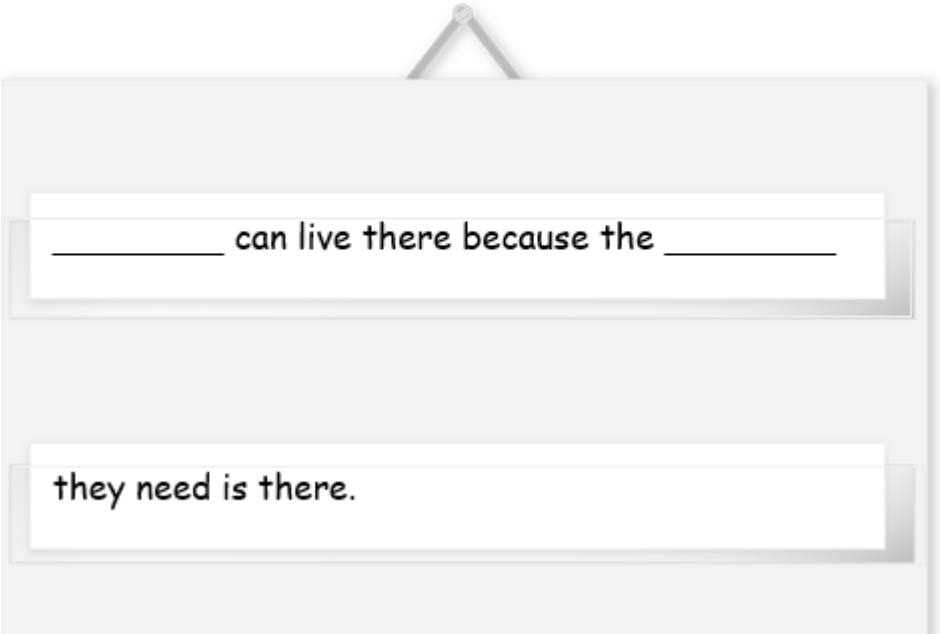
- Materials support student sense-making at both an individual and group level.
- Classroom discourse focuses on expressing and clarifying student reasoning with opportunities for students to share ideas and feedback with each other that supports the iterative and collaborative co-construction of explanations.
- 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



Talk like scientists

To what extent do the materials support Criterion 2C? Include your reasoning.
A lot of discussion centered around text.

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
Offline Guide if no internet Easy to follow lesson guide Printable vocab cards and picture cards PowerPoint class slides Nothing on student version of login. Wall Charts Specific Differentiation Strategies- academic language, vocab, inclusion Turn and Talk- diverse partners; good picture support Home Investigations

Simple directions and guidance on the investigations notebook

Purpose for reading

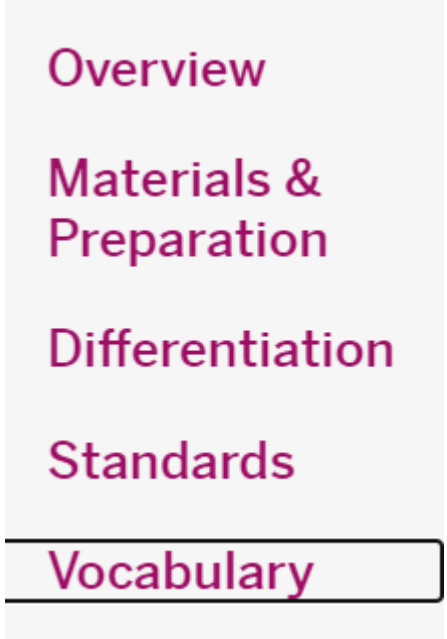
Partner share

This feels a little like an ELA curriculum teaching science

Potential Challenges in the lesson

Language Frame

Gestures multimodal



Informational letter for families
Science Background (pages 16-24)
"Potential Challenges for This Lesson_
Academic language support
Vocab support
Promoting inclusion in discussions
Specific strategies to support students with disabilities
Refer to specific strategies for EL
Build prior knowledge

More challenge
Time frame for each lesson
Images
Direct instruction- “scripted”

Both of these statements are concerning: However, if you have taught activity-based science before, you’ll find managing this unit easier than units comprised of a higher percentage of firsthand activities. Lessons involving reading and writing take less preparation and management—and they are rarely messy!

In addition, the sections under Teacher References offer useful information; these do not need to be read in advance, but you may wish to refer to them over the course of the unit.

Science background- pedagogical considerations
Standards at a glance

To what extent do the materials support Criterion 2D? Include your reasoning.
A lot of teacher supports. The program is well organized and has many features for teachers.

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
English and Spanish available. There are multimedia supports and technology included.

To what extent do the materials support Criterion 3A? Include your reasoning.
I saw evidence of this but it didn't stand out as the most important criteria in this program.

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
Kit doesn't include general materials (trays, dish tubs), typical school supplies, and food items. Investigations notebook may be printed or purchased. "Distribution Station"- Cafeteria style trays (4 per class) Materials at a glance Plastic cups, clamp light, grow light bulb, timer, soil, seeds Printed materials: Notebook, Food cards, Station Cards, Language Frame Cards, Sorting Cards Wall: unit question, chapter questions, section headers, vocab Student books 18 + big book (Book is way above the Lexile level of kindergarten; not enough for a typical number of kids in a class). These books would be best utilized as a read aloud, not as a class shared reading. Books are engaging, colorful, labeled pictures, fiction and nonfiction Materials to be provided by the teacher: bowl, clipboards, garlic bulbs, garlic cloves, pitcher, pocket chart, sentence strips) Student to student discussions- easy to see components of lesson in the chapter activities (pg. 31) Vocabulary Classroom Wall Mariposa Grove Slideshow Embedded supports for Diverse Learners-visuals Shared Listening Books are flimsy Cards will not last long- paper is thin, cards are small Notebook has graphics and is thin Investigation Notebook – can copy or purchase Informative letter for parents Many of the materials can be projected.

Trays for organization

To what extent do the materials support Criterion 3B? Include your reasoning.
Concerned about the student books provided. They would be best used as a read aloud and not for individual student distribution. The other materials seem adequate, but may not withstand multiple year use.

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
Reading: Science Walk- setting a purpose for reading. Read aloud Science Walk Book "First hand experience and observation" Handbook of plants 5 book titles used in this unit

To what extent do the materials support Criterion 1A? Include your reasoning.
This is the strength of this program. The text is of high-quality and uses familiar and highly regarded published trade books.

Referenced, adapted and formatted from the following documents:

Achieve, Inc. (2016). EQuIP Rubric, Version 3.0.

Achieve, Inc. (2018). Science Task Prescreen.

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Achieve, Inc. (2017). Primary Evaluation of Essential Criteria (PEEC) for Next Generation Science Standards Instructional Materials Design.

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

BSCS (2017). Guidelines for the Evaluation of Instructional Materials in Science.

BSCS Science Learning (2018). NextGen TIME

MacDonald et al. (2020). *Design Principles for Engaging Multilingual Learners in Three-Dimensional Science* Wisconsin Center for Education Research (WCER) Working Paper No. 2020-1. https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2020_1.pdf

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