

Strong science instruction requires that students:

- Apply content knowledge to explain real world phenomena and to design solutions,
- Investigate, evaluate, and reason scientifically, and
- Connect ideas across disciplines.

Title: **Elevate Science**

Grade/Course: **K, 3**

Publisher: **Pearson Education, Inc.**

Copyright: **2019**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
1. Three-dimensional Learning (Non-Negotiable)	2. Phenomenon-Based Instruction (Non-Negotiable)

Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings received a “Yes” for all Criteria 1-8.

Tier 2 ratings received a “Yes” for all non-negotiable criteria, but at least one “No” for the remaining criteria.

Tier 3 ratings received a “No” for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

[Grade K \(Tier 3\)](#)

[Grade 3 \(Tier 3\)](#)

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1. Three-dimensional Learning (Non-Negotiable)	2. Phenomenon-Based Instruction (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicator in Column 2, then the materials receive a “No” in Column 1. Submissions must meet Criteria 1 and 2 for the review to continue to Criteria 3 and 4. Submissions must meet all of the non-negotiable criteria in order for the review to continue to Section II.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 8.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria, but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet Criteria 1 and 2 for the review to continue to Criteria 3 and 4. Submissions must meet all of the non-negotiable criteria in order for the review to continue to Section II.			
<p>Non-Negotiable 1. THREE-DIMENSIONAL LEARNING: Students have multiple opportunities throughout each unit to develop an understanding and demonstrate application of the three dimensions.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials are designed so that students develop scientific content knowledge and scientific skills through interacting with the three dimensions of the science standards. The majority of the materials teach the science and engineering practices (SEP), crosscutting concepts (CCC) and disciplinary core ideas (DCI) separately when necessary but they are most often integrated to support deeper learning.</p>	<p>Yes</p>	<p>The materials are designed so that students develop scientific content knowledge and skills through interacting with the three dimensions of the science standards. The majority of the materials integrate the Science and Engineering Practices (SEP), Crosscutting Concepts (CCC), and Disciplinary Core Ideas (DCI) to support deeper thinking.</p> <p>For example, for Topic 1, “Pushes and Pulls,” in the “uConnect Lab” before Lesson 1, students carry out an investigation (SEP) and collect data to provide evidence for the effects (CCC) of pushes and pulls (DCI) (K-PS2-2). Students continue this work in Topic 1, Lesson 2, “Change in Movement” through the “uInvestigate Lab.” During the lab, students observe and explain how objects move at different speeds and in different directions (DCI) (LE.PS2A.b) by analyzing and interpreting the data collected (SEP) and explaining the effect (CCC) an action has on an object.</p> <p>In the “uInvestigate Lab” of Topic 3, “Sunlight,” Lesson 2, “Sunlight and Earth’s Surface,” students plan and carry out an investigation (SEP) to determine the effect (CCC) the sun has on different materials on earth’s surface (LE.PS3B.a). Students discover what happens when sunlight shines on an object. Students choose 3 objects to test and then develop plans to test them. Students are to collect and analyze the data.</p> <p>In Topic 4, “Earth’s Weather,” found in the “uDemonstrate Lab,” students use weather words or pictures to describe the weather each day and record the conditions on a chart. Students analyze the data (SEP) and determine weather patterns (CCC). Together the components of this activity support deeper learning of the DCI (LE.ESS2D.a).</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
<p>Non-Negotiable 2. PHENOMENON-BASED INSTRUCTION: Explaining phenomenon and designing solutions drive student learning.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 2a) Observing and explaining phenomena and designing solutions provide the purpose and opportunity for students to engage in learning a majority of the time.</p>	<p>No</p>	<p>Explaining phenomenon and designing solutions do not drive student learning or provide the purpose and opportunity for students to engage in learning a majority of the time. While students have some opportunity to design solutions through “Quests,” there are minimal opportunities to observe and explain phenomena. The quests are often loosely connected and do not provide adequate purpose to drive the instruction that follows.</p> <p>For example, in the preliminary section of the Teacher’s Edition entitled, “Elevate Learning!” the information is unclear about what is used as phenomena. However, the online Table of Contents explains that the “Quest” is the anchor phenomena (see “Getting Started with K-5 Elevate Science,” “Phenomena-Based Learning” tab under “Program Overview”).</p> <p>The “Quests” do not provide the purpose and opportunity for students to engage in learning a majority of the time. Often, the “Quests” are not aligned to the standards and associated performance expectations of the unit and do not adequately provide the purpose and opportunity to drive the progression of learning in the unit lessons that follow. For example, in Topic 1, “Pushes and Pulls,” beneath the heading “Wind Makes it Go,” the “Quest” challenges students to explain the phenomenon of how pushes and pulls move objects. However, in this activity, students are to find the best shape for a sail that would make a car go fast “in a big wind.” In this explanation, the focus is on the shape of the sail, not the strength or direction of the force applied to push it, as designated by the performance expectation for K- PS2-1.</p> <p>In Topic 6, “Environment,” beneath the heading “Quest Kickoff,” the materials state that students will investigate the phenomenon that plants and animals change their environment. The quest, “Trails for All,” challenges students to help a park</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			<p>ranger design signs that tell people how to use a nature trail wisely. In Lesson 1, “Where Plants and Animals Live,” prerequisite knowledge about where plants and animals live may be required, but the phenomenon does not serve to provide purpose and opportunity for building an understanding of the DCI of the unit standards in the lessons that follow. The scenario presented in the kickoff and the lessons that follow do not call for students to explain how plants and animals change the environment to meet their needs (K-ESS2-2). In Lessons 2, 3, and 4, students are immediately presented with a video to provide them information about how plants, animals and people change their environment, and how people can protect the environment. With this information, students have no need to engage in the SEP to build their own understanding to explain or ask questions about the phenomena.</p> <p>Similarly, in Topic 4, “Earth’s Weather,” beneath the heading “Chasing Storms,” students make a safety poster telling people how to stay safe in storms. In Lessons 1, 2, and 3, Standard K-ESS2-1 is covered. However, the phenomena “Quest” tied to Standard K-ESS3-2, is only addressed in “uEngineer It” and in Lesson 4 under the heading “Be Prepared.” The challenge to design a safety poster does not sufficiently drive the purpose for learning and is also not aligned with all performance expectations (PEs) of the unit. The quest does not serve to engage students in asking questions or in designing solutions to build understanding to support mastery of the performance expectations. In most lessons, students are immediately presented with a video to provide them information before other lesson activities; therefore, students have no need to engage in practices to explain or ask questions about phenomena.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
<p>Non-Negotiable (only reviewed if criteria 1 and 2 are met)</p> <p>3. ALIGNMENT & ACCURACY: Materials adequately address the Louisiana Student Standards for Science.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 3a) The majority of the Louisiana Student Standards for Science are incorporated, to the full depth of the standards.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>REQUIRED 3b) Science content is accurate, reflecting the most current and widely accepted explanations.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>3c) In any one grade or course, instructional materials spend minimal time on content outside of the course, grade, or grade-band.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
<p>Non-Negotiable (only reviewed if criteria 1 and 2 are met)</p> <p>4. DISCIPLINARY LITERACY: Materials have students engage with authentic sources and incorporate speaking, reading, and writing to develop scientific literacy.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED *Indicator for grades 4-12 only 4a) Students regularly engage with authentic sources that represent the language and style that is used and produced by scientists; e.g., journal excerpts, authentic data, photographs, sections of lab reports, and media releases of current science research. Frequency of engagement with authentic sources should increase in higher grade levels and courses.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>REQUIRED 4b) Students regularly engage in speaking and writing about scientific phenomena and engineering solutions using authentic science sources; e.g., authentic data, models, lab investigations, or journal excerpts. Materials address the necessity of using scientific evidence to support scientific ideas.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	REQUIRED 4c) There is variability in the tasks that students are required to execute. For example, students are asked to produce solutions to problems, models of phenomena, explanations of theory development, and conclusions from investigations.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	4d) Materials provide a coherent sequence of authentic science sources that build scientific vocabulary and knowledge over the course of study. Vocabulary is addressed as needed in the materials but not taught in isolation of deeper scientific learning.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
SECTION II: ADDITIONAL INDICATORS OF QUALITY			
Additional Criterion 5. LEARNING PROGRESSIONS: The materials adequately address Appendix A: Learning Progressions . They are coherent and provide natural connections to other performance expectations including science and engineering practices, crosscutting concepts, and disciplinary core ideas; the content complements the the Louisiana Student Standards for Math . <input type="checkbox"/> Yes <input type="checkbox"/> No	REQUIRED 5a) The overall organization of the materials and the development of disciplinary core ideas, science and engineering practices, and crosscutting concepts are coherent within and across units. The progression of learning is coordinated over time, clear and organized to prevent student misunderstanding and supports student mastery of the performance expectations.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	5b) Students apply mathematical thinking when applicable. They are not introduced to math skills that are beyond the applicable grade’s expectations in the Louisiana Student Standards for Mathematics. Preferably, math connections are made explicit through clear references to the math standards, specifically in teacher materials.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
<p>Additional Criterion 6. SCAFFOLDING AND SUPPORT: Materials provide teachers with guidance to build their own knowledge and to give all students extensive opportunities and support to explore key concepts using multiple, varied experiences to build scientific thinking.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 6a) There are separate teacher support materials including: scientific background knowledge, support in three-dimensional learning, learning progressions, common student misconceptions and suggestions to address them, guidance targeting speaking and writing in the science classroom (i.e. conversation guides, sample scripts, rubrics, exemplar student responses).</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>6b) Appropriate suggestions and materials are provided for differentiated instruction supporting varying student needs at the unit and lesson level (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties to meet standards, etc.).</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
<p>Additional Criterion 7. USABILITY: Materials are easily accessible, promote safety in the science classroom, and are viable for implementation given the length of a school year.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 7a) Text sets (when applicable), laboratory, and other scientific materials are readily accessible through vendor packaging.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>7b) Materials help students build an understanding of standard operating procedures in a science laboratory and include safety guidelines, procedures, and equipment. Science classroom and laboratory safety guidelines are embedded in the curriculum.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>7c) The total amount of content is viable for a school year.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
<p>Additional Criterion 8. ASSESSMENT: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the</p>	<p>REQUIRED 8a) Multiple types of formative and summative assessments (performance-based tasks, questions, research, investigations, and projects) are embedded into content materials and assess the learning targets.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>REQUIRED 8b) Assessment items and tasks are structured on integration of the three-dimensions.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
assessed standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	8c) Scoring guidelines and rubrics align to performance expectations, and incorporate criteria that are specific, observable, and measurable.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 8. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria, but at least one “No” in Column 1 for the remaining criteria. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Three-dimensional Learning	Yes	Students have multiple opportunities throughout each unit to demonstrate the application of the three dimensions. The three dimensions are most often integrated with one another to support a deeper learning of the performance expectation.
	2. Phenomenon-Based Instruction	No	Problem-based “Quests” presented as phenomena in each topic do not provide the purpose and opportunity for students to engage in learning aligned to the standards a majority of the time.
	3. Alignment & Accuracy	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	4. Disciplinary Literacy	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
II: Additional Indicators of Quality	5. Learning Progressions	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6. Scaffolding and Support	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7. Usability	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	8. Assessment	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: <u>Tier III, Not representing quality</u>			

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- Connect ideas across disciplines.

Title: **Elevate Science**

Grade/Course: **3**

Publisher: **Pearson Education, Inc.**

Copyright: **2019**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
1. Three-dimensional Learning (Non-Negotiable)	2. Phenomenon-Based Instruction (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicator in Column 2, then the materials receive a “No” in Column 1. Submissions must meet Criteria 1 and 2 for the review to continue to Criteria 3 and 4. Submissions must meet all of the non-negotiable criteria in order for the review to continue to Section II.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 8.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria, but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet Criteria 1 and 2 for the review to continue to Criteria 3 and 4. Submissions must meet all of the non-negotiable criteria in order for the review to continue to Section II.			
<p>Non-Negotiable 1. THREE-DIMENSIONAL LEARNING: Students have multiple opportunities throughout each unit to develop an understanding and demonstrate application of the three dimensions.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials are designed so that students develop scientific content knowledge and scientific skills through interacting with the three dimensions of the science standards. The majority of the materials teach the science and engineering practices (SEP), crosscutting concepts (CCC) and disciplinary core ideas (DCI) separately when necessary but they are most often integrated to support deeper learning.</p>	<p>Yes</p>	<p>The materials are designed so that students develop scientific content knowledge and skills through interacting with the three dimensions of the science standards. The majority of the materials integrate the Science and Engineering Practices (SEP), Crosscutting Concepts (CCC), and Disciplinary Core Ideas (DCI) to support deeper thinking.</p> <p>For example, in Topic 3, Lesson 3, “Investigate Lab - How can you stop a flood?” students are asked to brainstorm and demonstrate three different ways to stop flood waters. Students work together to come up with a plan to test their ideas then carry out their plans. The lesson requires student engagement in discussions to determine the best method to prevent flooding. In this lab, students engage with the SEP (to develop and use models), the DCI (natural hazards), and the CCC (cause and effect) in an integrated manner to support deeper learning.</p> <p>In Topic 1, Lesson 2, students experiment with patterns in motion. Students observe a ball rolling in a bowl, then predict the motion of a different ball based on the pattern observed during the initial observation (CCC). Students then plan and carry out an investigation to answer their questions (SEP). Through the engagement in (SEP) as part of the “Investigate Lab” students are able to explore the idea that patterns (CCC) in an object’s motion can be observed and that past motion can predict future motion (DCI UE.PS2A.c).</p>

<p>Non-Negotiable 2. PHENOMENON-BASED INSTRUCTION: Explaining phenomenon and designing solutions drive student learning.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 2a) Observing and explaining phenomena and designing solutions provide the purpose and opportunity for students to engage in learning a majority of the time.</p>	<p>No</p>	<p>Explaining phenomenon and designing solutions do not drive student learning or provide the purpose and opportunity for students to engage in learning a majority of the time. While students have some opportunity to design solutions through “Quests,” there are minimal opportunities to observe and explain phenomena. The quests are often loosely connected and do not provide adequate purpose to drive the instruction that follows.</p> <p>For example, in Topic 2, “Electricity and Magnetism,” during the “Quest Kickoff” students are challenged to find a way to use magnets to figure out which boxes are heavy. While the “Quest Check-In” for this unit provides students with the opportunity to design solutions related to a problem-based learning scenario, such as when students are asked to show the forces acting on two objects, the interactions do not provide adequate purpose and opportunity for learning. Students do not need to use the sequence of lessons to fully understand and explain the phenomenon, and the information provided through the readings and activities within Lesson 2 enables students to use magnets to figure out which box is heavy. Additionally, the explanation students are required to provide in the “Quest Findings” on page 72 requires knowledge of “magnetic forces,” but not of “electrical forces.” The instruction from Lesson 1, “Electrical Forces” is not necessary to complete the “Quest Findings” at the end of Topic 2.</p> <p>In Topic 3, “Weather,” the Teacher Edition begins with a “Storyline” and caption, “Using Phenomena,” with an overview of what students will be doing within the topic. The overview includes the ideas that students should learn, key vocabulary, science and engineering practices, and math connections. An essential question, “What are ways to reduce the impacts of hazardous weather?” is presented along with a visual of a rainbow, and an additional question asked to engage and activate the students prior knowledge is, “How would you describe the weather that is happening in the picture?” The text indicates that students will be able to answer the essential question by the end of the topic. Although</p>
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			<p>the “Quest Kick Off: Hold on to your Roof” engages students and provides them with an opportunity to design solutions, there is no evidence that students are provided with an opportunity to explain phenomena at either the topic or lesson level. Within Lesson 1, “uEngineer it: Wild Weather,” the text again uses a caption, “Using Phenomena” in the Teacher Edition, but students are not presented with phenomena to explain. Instead, students gather information about how weather affects areas and hazards that may be present. In Lesson 2, the “Quest Check-in” relates to different types of roofs and how seasons affect them. In Lesson 3, the “Quest Check-in” asks students to look at improving roofs. While these activities are related to the quest challenge to design a roof, students are not presented with a phenomenon that adequately provides the purpose and opportunity for learning by requiring students to engage in the SEP to build explanations. Instead, the information is supplied; therefore, students have no need to engage in practices to explain or ask questions about phenomena.</p>
<p>Non-Negotiable (only reviewed if criteria 1 and 2 are met)</p> <p>3. ALIGNMENT & ACCURACY: Materials adequately address the Louisiana Student Standards for Science.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 3a) The majority of the Louisiana Student Standards for Science are incorporated, to the full depth of the standards.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>REQUIRED 3b) Science content is accurate, reflecting the most current and widely accepted explanations.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>3c) In any one grade or course, instructional materials spend minimal time on content outside of the course, grade, or grade-band.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>

<p>Non-Negotiable (only reviewed if criteria 1 and 2 are met)</p> <p>4. DISCIPLINARY LITERACY: Materials have students engage with authentic sources and incorporate speaking, reading, and writing to develop scientific literacy.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED *Indicator for grades 4-12 only</p> <p>4a) Students regularly engage with authentic sources that represent the language and style that is used and produced by scientists; e.g., journal excerpts, authentic data, photographs, sections of lab reports, and media releases of current science research. Frequency of engagement with authentic sources should increase in higher grade levels and courses.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>REQUIRED</p> <p>4b) Students regularly engage in speaking and writing about scientific phenomena and engineering solutions using authentic science sources; e.g., authentic data, models, lab investigations, or journal excerpts. Materials address the necessity of using scientific evidence to support scientific ideas.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>REQUIRED</p> <p>4c) There is variability in the tasks that students are required to execute. For example, students are asked to produce solutions to problems, models of phenomena, explanations of theory development, and conclusions from investigations.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>4d) Materials provide a coherent sequence of authentic science sources that build scientific vocabulary and knowledge over the course of study. Vocabulary is addressed as needed in the materials but not taught in isolation of deeper scientific learning.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
SECTION II: ADDITIONAL INDICATORS OF QUALITY			
<p>Additional Criterion</p> <p>5. LEARNING PROGRESSIONS: The materials adequately address Appendix A: Learning Progressions. They are coherent and provide natural connections to other performance expectations</p>	<p>REQUIRED</p> <p>5a) The overall organization of the materials and the development of disciplinary core ideas, science and engineering practices, and crosscutting concepts are coherent within and across units. The progression of learning is coordinated over time, clear and organized to prevent student misunderstanding and supports student</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

<p>including science and engineering practices, crosscutting concepts, and disciplinary core ideas; the content complements the the Louisiana Student Standards for Math.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>mastery of the performance expectations.</p>		
<p>Additional Criterion 6. SCAFFOLDING AND SUPPORT: Materials provide teachers with guidance to build their own knowledge and to give all students extensive opportunities and support to explore key concepts using multiple, varied experiences to build scientific thinking.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 5b) Students apply mathematical thinking when applicable. They are not introduced to math skills that are beyond the applicable grade’s expectations in the Louisiana Student Standards for Mathematics. Preferably, math connections are made explicit through clear references to the math standards, specifically in teacher materials.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
<p>Additional Criterion 7. USABILITY: Materials are easily accessible, promote safety in the science classroom, and are viable for implementation given the length of a school year.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 6a) There are separate teacher support materials including: scientific background knowledge, support in three-dimensional learning, learning progressions, common student misconceptions and suggestions to address them, guidance targeting speaking and writing in the science classroom (i.e. conversation guides, sample scripts, rubrics, exemplar student responses).</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>6b) Appropriate suggestions and materials are provided for differentiated instruction supporting varying student needs at the unit and lesson level (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties to meet standards, etc.).</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>REQUIRED 7a) Text sets (when applicable), laboratory, and other scientific materials are readily accessible through vendor packaging.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7b) Materials help students build an understanding of standard operating procedures in a science laboratory and include safety guidelines, procedures, and equipment. Science classroom and laboratory safety guidelines are embedded in the curriculum.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7c) The total amount of content is viable for a school year.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

Additional Criterion 8. ASSESSMENT: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	REQUIRED 8a) Multiple types of formative and summative assessments (performance-based tasks, questions, research, investigations, and projects) are embedded into content materials and assess the learning targets.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED 8b) Assessment items and tasks are structured on integration of the three-dimensions.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	8c) Scoring guidelines and rubrics align to performance expectations, and incorporate criteria that are specific, observable, and measurable.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

FINAL EVALUATION

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 8.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria, but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

Compile the results for Sections I and II to make a final decision for the material under review.

Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Three-dimensional Learning	Yes	Students have multiple opportunities throughout each unit to demonstrate the application of the three dimensions. The three dimensions are most often integrated with one another to support a deeper learning of the performance expectation.
	2. Phenomenon-Based Instruction	No	Problem-based “Quests” presented as phenomena in each topic do not provide the purpose and opportunity for students to engage in learning aligned to the standards a majority of the time.
	3. Alignment & Accuracy	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	4. Disciplinary Literacy	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
II: Additional Indicators of Quality	5. Learning Progressions	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6. Scaffolding and Support	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7. Usability	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

	8. Assessment	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: <u>Tier III, Not representing quality</u>			

Instructional materials are one of the most important tools educators use in the classroom to enhance student learning. It is critical that they fully align to state standards—what students are expected to learn and be able to do at the end of each grade level or course—and are high quality if they are to provide meaningful instructional support.

The Louisiana Department of Education is committed to ensuring that every student has access to high-quality instructional materials. In Louisiana all districts are able to purchase instructional materials that are best for their local communities since those closest to students are best positioned to decide which instructional materials are appropriate for their district and classrooms. To support local school districts in making their own local, high-quality decisions, the Louisiana Department of Education leads online reviews of instructional materials.

Instructional materials are reviewed by a committee of Louisiana educators. Teacher Leader Advisors (TLAs) are a group of exceptional educators from across Louisiana who play an influential role in raising expectations for students and supporting the success of teachers. Teacher Leader Advisors use their robust knowledge of teaching and learning to review instructional materials.

The [2018-2019 Teacher Leader Advisors](#) are selected from across the state and represent the following parishes and school systems: Ascension, Bossier, Caddo, Central, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, InspireNOLA, Jefferson, KDHSA (Jefferson Parish Charter), Lafayette, Lincoln, Livingston, Orleans, Ouachita, Pointe Coupee, Rapides, Recovery School District, RSD - Choice Foundation, RSD – FirstLine, RSD – NOCP, St. Charles, St. Mary, St. Tammany, Tangipahoa, Vermilion, West Baton Rouge, West Feliciana, Zachary. This review represents the work of current classroom teachers with experience in grades K-8.

Appendix I.

Publisher Response



Strong science instruction requires that students:

- Apply content knowledge to explain real world phenomena and to design solutions,
- Investigate, evaluate, and reason scientifically, and
- Connect ideas across disciplines.

Title: **Elevate Science**

Grade/Course: **K, 3**

Publisher: **Pearson Education, Inc.**

Copyright: **2019**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
1. Three-dimensional Learning (Non-Negotiable)	2. Phenomenon-Based Instruction (Non-Negotiable)

Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings received a “Yes” for all Criteria 1-8.

Tier 2 ratings received a “Yes” for all non-negotiable criteria, but at least one “No” for the remaining criteria.

Tier 3 ratings received a “No” for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

[Grade K \(Tier 3\)](#)

[Grade 3 \(Tier 3\)](#)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet Criteria 1 and 2 for the review to continue to Criteria 3 and 4. Submissions must meet all of the non-negotiable criteria in order for the review to continue to Section II.				
<p>Non-Negotiable 1. THREE-DIMENSIONAL LEARNING: Students have multiple opportunities throughout each unit to develop an understanding and demonstrate application of the three dimensions.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials are designed so that students develop scientific content knowledge and scientific skills through interacting with the three dimensions of the science standards. The majority of the materials teach the science and engineering practices (SEP), crosscutting concepts (CCC) and disciplinary core ideas (DCI) separately when necessary but they are most often integrated to support deeper learning.</p>	<p>Yes</p>	<p>The materials are designed so that students develop scientific content knowledge and skills through interacting with the three dimensions of the science standards. The majority of the materials integrate the Science and Engineering Practices (SEP), Crosscutting Concepts (CCC), and Disciplinary Core Ideas (DCI) to support deeper thinking.</p> <p>For example, for Topic 1, “Pushes and Pulls,” in the “uConnect Lab” before Lesson 1, students carry out an investigation (SEP) and collect data to provide evidence for the effects (CCC) of pushes and pulls (DCI) (K-PS2-2). Students continue this work in Topic 1, Lesson 2, “Change in Movement” through the “uInvestigate Lab.” During the lab, students observe and explain how objects move at different speeds and in different directions (DCI) (LE.PS2A.b) by analyzing and interpreting the data collected (SEP) and explaining the effect (CCC) an action has on an object.</p> <p>In the “uInvestigate Lab” of Topic 3, “Sunlight,” Lesson 2, “Sunlight and Earth’s Surface,” students plan and carry out an investigation (SEP) to determine the effect (CCC) the sun has on different materials on earth’s surface (LE.PS3B.a). Students discover what happens when sunlight shines on an object. Students choose 3 objects to test and then develop plans to test them. Students are to collect and analyze the data.</p> <p>In Topic 4, “Earth’s Weather,” found in the “uDemonstrate Lab,” students use weather words or pictures to describe the weather each day and record the conditions on a chart. Students analyze the data (SEP) and determine weather patterns (CCC). Together the components of this activity support deeper learning of the DCI (LE.ESS2D.a).</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>Non-Negotiable 2. PHENOMENON-BASED INSTRUCTION: Explaining phenomenon and designing solutions drive student learning.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 2a) Observing and explaining phenomena and designing solutions provide the purpose and opportunity for students to engage in learning a majority of the time.</p>	<p>No</p>	<p>Explaining phenomenon and designing solutions do not drive student learning or provide the purpose and opportunity for students to engage in learning a majority of the time. While students have some opportunity to design solutions through “Quests,” there are minimal opportunities to observe and explain phenomena. The quests are often loosely connected and do not provide adequate purpose to drive the instruction that follows.</p> <p>For example, in the preliminary section of the Teacher’s Edition entitled, “Elevate Learning!” the information is unclear about what is used as phenomena. However, the online Table of Contents explains that the “Quest” is the anchor phenomena (see “Getting Started with K-5 Elevate Science,” “Phenomena-Based Learning” tab under “Program Overview”).</p> <p>The “Quests” do not provide the purpose and opportunity for students to engage in learning a majority of the time. Often, the “Quests” are not aligned to the standards and associated performance expectations of the unit and do not adequately provide the purpose and opportunity to drive the progression of learning in the unit lessons that follow. For example, in Topic 1, “Pushes and Pulls,” beneath the heading “Wind Makes it Go,” the “Quest” challenges students to explain the phenomenon of how pushes and pulls move objects. However, in this activity, students are to find the best shape for a sail that would make a car go fast “in a big wind.” In this explanation, the focus is on the shape of the sail, not the strength or direction of the force applied to push it, as designated by the performance expectation for K- PS2-1.</p> <p>In Topic 6, “Environment,” beneath the heading “Quest Kickoff,” the materials state that students will investigate the phenomenon that plants and animals change their environment. The quest, “Trails for All,” challenges students to help a park</p>	<p>Elevate Science is based on the research foundations found in the A Framework for K-12 Science Education (NRC 2012) and supported by the findings and summaries in How Students Learn – Science in the Classroom (NRC 2005) and Taking Science to School (NRC 2007). The instructional design incorporates that research and acknowledges the importance of addressing the four different perspectives of the learning environment: learner-centered lens, knowledge-centered lens, assessment-centered lens, and the community-centered lens (How Students Learn, p13). The result is a problem-based learning model that uses a driving question and topic scenario as the vehicle for developing student understanding.</p> <p>Quest Topic Challenge: The Quest challenge in each topic is used to organize the Performance Expectations into a student friendly, problem-based scenario that provides the context to make the learning real, age-appropriate, accessible, and engaging to the student. The Quest provides the framework for the progression of student experiences designed to address the goals of the instruction while maintaining student curiosity and inquiry. The Quest were not designed to be repetitive scenarios but were intentionally varied to maintain student interest throughout the academic year and appeal to a diverse set of learners.</p> <p>Kindergarten Response: Addresses paragraphs #1-3 Grade 3 Response: Addresses paragraph #1 The role of the Quest was designed to provide a variety of engagement opportunities to address diverse student populations and assist in meeting the needs of different classroom learners)</p> <p>Our goal in Elevate Science is that each topic focus on the development of at least one disciplinary idea, include repeated opportunities to engage in the Science and Engineering practices, and have a connection to a crosscutting concept. Given that the</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			<p>ranger design signs that tell people how to use a nature trail wisely. In Lesson 1, “Where Plants and Animals Live,” prerequisite knowledge about where plants and animals live may be required, but the phenomenon does not serve to provide purpose and opportunity for building an understanding of the DCI of the unit standards in the lessons that follow. The scenario presented in the kickoff and the lessons that follow do not call for students to explain how plants and animals change the environment to meet their needs (K-ESS2-2). In Lessons 2, 3, and 4, students are immediately presented with a video to provide them information about how plants, animals and people change their environment, and how people can protect the environment. With this information, students have no need to engage in the SEP to build their own understanding to explain or ask questions about the phenomena.</p> <p>Similarly, in Topic 4, “Earth’s Weather,” beneath the heading “Chasing Storms,” students make a safety poster telling people how to stay safe in storms. In Lessons 1, 2, and 3, Standard K-ESS2-1 is covered. However, the phenomena “Quest” tied to Standard K-ESS3-2, is only addressed in “uEngineer It” and in Lesson 4 under the heading “Be Prepared.” The challenge to design a safety poster does not sufficiently drive the purpose for learning and is also not aligned with all performance expectations (PEs) of the unit. The quest does not serve to engage students in asking questions or in designing solutions to build understanding to support mastery of the performance expectations. In most lessons, students are immediately presented with a video to provide them information before other lesson activities; therefore, students have no need to engage in practices to explain or ask questions about phenomena.</p>	<p>instruction is designed to support a variety of learners and diverse classroom needs, we believe that there are multiple approaches to implementing these three dimensions as was described in the A Framework for K-12 Science Education “We [the committee] acknowledge that there is no single approach that defines how to integrate the three dimensions into standards, curriculum, instruction and assessment. One can in fact envision many different ways to achieve such integration, with the main components of the framework conveyed with a high degree of fidelity, but with different choices as to when to stress a particular practice or crosscutting idea.” (p217). The topic with all of its student experiences (activities, readings, digital interactions) needs to be considered when evaluating its ability to address the identified performance expectations.</p> <p>Addressing the Performance Expectations in the topic: The individual activities, readings, and digital learning experiences within a topic were designed with the intent of a ‘holistic approach’ that focuses on helping students build their understandings of the core idea while developing their skills (practices) associated with each PE. In some cases, however, when the PE is tied to an engineering task, the uEngineer It! Investigation may be sufficient to cover it. Isolating and assessing an individual activity or digital resource within the topic is counter to the instructional pedagogy of the program.</p> <p>Kindergarten Response: Addresses paragraphs #3 – K-PS2-2 involves the engineering standard [K-PS2-2: Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.*] and as such, students need to connect the shape and size of their sail to the ability of the wind to move the car. The intent of the lesson is to apply the concept of push to their design solution, not define strength or direction of a push or pull as described in K-PS2-1.</p>

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				<p>Grade 3 Response: Addresses paragraphs #3 – WEATHER TOPIC The phenomena in the picture is not about how the rainbow forms but is on the storm clouds that can generate hazardous weather events. This sets the stage for introducing the Quest challenge to design a wind-resistant roof which focuses on the three Engineering Design PEs.</p> <p>Also, the comment about not addressing the SEP of building explanations in the last sentence of Grade 3 review is inaccurate. Neither of the core PEs for this topic focus on constructing explanations or asking questions. The SEPs for this topic are #4 and #7 (Analyzing and Interpreting Data and Engaging in Argument from Evidence).</p> <p>Quest Findings: In each topic Quest, the scope of the challenge does not require that all PE criteria need to be addressed. Students will use and apply certain scientific principles in some manner within the topic in order to demonstrate their overall understanding of the core idea and exhibit fluency with the practices. However, within a given topic, there are some cases where an individual PE is so narrow in definition that it can be sufficiently addressed within a single investigation or activity. When that occurs, the PE is not necessarily included in the culminating Quest Finding.</p> <p>Grade 3 Response: Addresses paragraphs #2 – The Quest challenge focuses on 3-PS2-3 and 3-PS2-4 where the focus is on magnetic interactions. Since the PE does not call for the application of both electric AND magnetic interactions, but rather states electric OR magnetic, the Quest challenge focuses on the magnetic understanding. The intent of the challenge is to have students develop an understanding of the engineering design process Also, in order to address 3-PS2-3 on the cause and effect relationships of electric interactions, Lesson 1</p>

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				<p>Electric Forces builds student understanding that certain forces can interact between two objects not in contact with each other.</p> <p>Instructional Lesson Videos: The videos provide an optional instructional path for instruction when time is short. Based on our elementary classroom research, educators expressed their concern on the time they had available in order to teach science. They expressed a desire to have options that could help them introduce and address parts of topics that they could not cover with the time they had in class. The videos provide the classroom educator with options to streamline the learning experience and facilitate instruction. These options provide a valuable resource for the busy K-5 classroom.</p> <p>(Kindergarten Response: Addresses paragraphs #4 and 5 – The videos provide an alternative to the classroom instruction in order to assist educators in meeting time and resource constraints in their classrooms. Our research with elementary educators, especially in K-3 indicated a high degree of need in adjusting the program’s instructional delivery in order to meet their allotted time for science instruction. These are options for use, not required, and as such should not be viewed as the intended instructional approach.</p> <p>Other Points About Elevate Science</p> <p>Extraneous information: We view the Performance Expectations as the minimum for student learning and not the ultimate outcome of their science understanding. For this reason, the different topics do contain additional avenues of student inquiry that would naturally arise from their organic curiosity of the topic phenomenon or Quest journey. We do not view these as extraneous, but as the normal extension of student behaviors and inquisitiveness that arise from their participation in the topic experiences.</p>

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				<p>Progression Across the Grade: Our program is organized around a series of topics where each topic is designed to stand as an independent learning experience. This decision was based upon our national research in which the majority of elementary classroom educators preferred to have topics that could be shuffled around to meet their varying state, district or local needs; be more responsive to local current events; and address the varying interests of students.</p> <p>REFERENCE – STANDARDS AND LESSON DESCRIPTIONS</p> <p>Kindergarten: Topic 1 Pushes and Pulls – The topic addresses: DCI: PS2.A; PS2.B; PS3.C; ETS1.A SEP3: Plan and Conduct an investigation CCC2: Cause and Effect K-PS2-1: Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. K-PS2-2: Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.* K-2 ETS 1-3: analyze data form tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <p>QUEST: Students plan a design (SEP3) for the best sail (CCC2) for a wind car that will help the car move (PS2.A) in a wind. [Applying concept of push (wind pushing the sail) on the motion of an object (the car)] Lesson 1: Observe how things move (explore pushes and pulls). Connection: Plan how their sail design will capture the most wind Lesson 2: Observe ways objects can move and understand why they move (changes in movement).</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				<p>Connection: Students describe how the sail works with wind blowing on it Lesson 3: Investigate how objects move (change in movement with different pushes and pulls). Connection: How the design of their sail makes the car go (apply the design solution)</p> <p>Topic 4 Earth’s Weather – The topic addresses: DCI: ESS2.D; ESS3.B; ETS1.A SEP1: Asking Questions and Defining Problems; SEP4: Analyze and Interpret Data CCC1: Patterns; CCC2 Cause and Effect K-ESS2-1: Use and share observations of local weather conditions to describe patterns over time. K-ESS3-2: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.* K-2 ETS 1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object.</p> <p>QUEST: Students will design an informational poster to alert festival attendees in anticipation of severe weather. Lesson 1: Describe different types of weather (Use, collect and share observations). Connection: Introducing weather concepts prior to making observations Lesson 2: Observing the weather changes day to day and looking for patterns over time. Connection: Understanding weather patterns for predictability Lesson 3: Recognize seasons (long term patterns) Connection: Recognize yearly patterns to weather and how it can be used to predict severe weather. Lesson 4: Identifying severe storms and ways to protect yourself. Connection: How warnings can be used to communicate prediction about severe weather</p> <p>Topic 6 Environment – The topic addresses:</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				<p>DCI: ESS2.E; ESS3.A; ESS3.C; ETS1.B SEP7: Engage in Argument from Evidence; SEP2 Develop and Use Models CCC4: System and System Models; CCC2: Cause and Effect K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs K-ESS3-1: Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live. K-ESS3-3: Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.*</p> <p>QUEST: Students apply what they learn about how plants, animals and people change the environment and design signs to protect nature trails (focus on sharing and evaluating different solutions) Lesson 1: Observations on where plants and animals live (make models and articulate why their model is good example of where a plant or animal lives - highlight the needs fulfilled) Connection: Understanding that plants/animals live where their needs are met Lesson 2: Observe ways in which plants and animals change their environment (create model of animal changing environment and defend why model is correct). Connection: make drawings to show changes plants/animals make to their environment along a trail Lesson 3: Observe ways in which people change their environment (use models and describe human changes to the environment) Connection: how can humans impact a nature trail. Lesson 4: Describe ways in which people can protect the environment (expand into recycling/ reuse as solution to reducing humans impact on environment). Connection: Use models as evidence of human impact on trails.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				<p>Grade 3 Topic 2 Electricity and Magnetism– The topic addresses: DCI: PS2.B; SEP1: Ask questions and Define Solutions CCC2: Cause and Effect 3-PS2-3: Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. 3-PS2-4: Define a simple design problem that can be solved by applying scientific ideas about magnets.* 3-5 ETS1-1: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p>Topic 3 Weather– The topic addresses: DCI: ESS2.D; ESS3.B SEP4: Analyzing and Interpreting Data; SEP7 Engaging in Argument from Evidence CCC1: Patterns; CCC2: Cause and Effect</p> <p>3-ESS2-1: Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. 3-ESS3-1: Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.* 3-5-ETS1-1: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 3-5-ETS1-3: Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>Non-Negotiable (only reviewed if criteria 1 and 2 are met)</p> <p>3. ALIGNMENT & ACCURACY: Materials adequately address the Louisiana Student Standards for Science.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 3a) The majority of the Louisiana Student Standards for Science are incorporated, to the full depth of the standards.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>REQUIRED 3b) Science content is accurate, reflecting the most current and widely accepted explanations.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>3c) In any one grade or course, instructional materials spend minimal time on content outside of the course, grade, or grade-band.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
<p>Non-Negotiable (only reviewed if criteria 1 and 2 are met)</p> <p>4. DISCIPLINARY LITERACY: Materials have students engage with authentic sources and incorporate speaking, reading, and</p>	<p>REQUIRED *Indicator for grades 4-12 only 4a) Students regularly engage with authentic sources that represent the language and style that is used and produced by scientists; e.g., journal excerpts, authentic data, photographs, sections of lab reports, and media releases of current science research. Frequency of engagement with authentic sources should increase in higher grade levels and courses.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>writing to develop scientific literacy.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 4b) Students regularly engage in speaking and writing about scientific phenomena and engineering solutions using authentic science sources; e.g., authentic data, models, lab investigations, or journal excerpts. Materials address the necessity of using scientific evidence to support scientific ideas.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>REQUIRED 4c) There is variability in the tasks that students are required to execute. For example, students are asked to produce solutions to problems, models of phenomena, explanations of theory development, and conclusions from investigations.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>4d) Materials provide a coherent sequence of authentic science sources that build scientific vocabulary and knowledge over the course of study. Vocabulary is addressed as needed in the materials but not taught in isolation of deeper scientific learning.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
SECTION II: ADDITIONAL INDICATORS OF QUALITY				
<p>Additional Criterion 5. LEARNING PROGRESSIONS: The materials adequately address Appendix A: Learning Progressions. They are coherent and provide natural connections to other performance expectations including science and engineering</p>	<p>REQUIRED 5a) The overall organization of the materials and the development of disciplinary core ideas, science and engineering practices, and crosscutting concepts are coherent within and across units. The progression of learning is coordinated over time, clear and organized to prevent student misunderstanding and supports student mastery of the performance expectations.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>practices, crosscutting concepts, and disciplinary core ideas; the content complements the the Louisiana Student Standards for Math.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>5b) Students apply mathematical thinking when applicable. They are not introduced to math skills that are beyond the applicable grade’s expectations in the Louisiana Student Standards for Mathematics. Preferably, math connections are made explicit through clear references to the math standards, specifically in teacher materials.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
<p>Additional Criterion 6. SCAFFOLDING AND SUPPORT: Materials provide teachers with guidance to build their own knowledge and to give all students extensive opportunities and support to explore key concepts using multiple, varied experiences to build scientific thinking.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 6a) There are separate teacher support materials including: scientific background knowledge, support in three-dimensional learning, learning progressions, common student misconceptions and suggestions to address them, guidance targeting speaking and writing in the science classroom (i.e. conversation guides, sample scripts, rubrics, exemplar student responses).</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>6b) Appropriate suggestions and materials are provided for differentiated instruction supporting varying student needs at the unit and lesson level (e.g., alternative teaching approaches, pacing, instructional delivery options, suggestions for addressing common student difficulties to meet standards, etc.).</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
<p>Additional Criterion 7. USABILITY: Materials are easily accessible, promote safety in the science classroom, and are viable for implementation given the length of a school year.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 7a) Text sets (when applicable), laboratory, and other scientific materials are readily accessible through vendor packaging.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>7b) Materials help students build an understanding of standard operating procedures in a science laboratory and include safety guidelines, procedures, and equipment. Science classroom and laboratory safety guidelines are embedded in the curriculum.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>7c) The total amount of content is viable for a school year.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Additional Criterion 8. ASSESSMENT: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	REQUIRED 8a) Multiple types of formative and summative assessments (performance-based tasks, questions, research, investigations, and projects) are embedded into content materials and assess the learning targets.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED 8b) Assessment items and tasks are structured on integration of the three-dimensions .	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	8c) Scoring guidelines and rubrics align to performance expectations, and incorporate criteria that are specific, observable, and measurable.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 8. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria, but at least one “No” in Column 1 for the remaining criteria. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	Criteria	Yes/No	Final Justification/Comments	
I: Non-Negotiables	1. Three-dimensional Learning	Yes	Students have multiple opportunities throughout each unit to demonstrate the application of the three dimensions. The three dimensions are most often integrated with one another to support a deeper learning of the performance expectation.	
	2. Phenomenon-Based Instruction	No	Problem-based “Quests” presented as phenomena in each topic do not provide the purpose and opportunity for students to engage in learning aligned to the standards a majority of the time.	
	3. Alignment & Accuracy	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	4. Disciplinary Literacy	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
II: Additional Indicators of Quality	5. Learning Progressions	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	6. Scaffolding and Support	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	7. Usability	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	8. Assessment	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: <u>Tier III, Not representing quality</u>				

Instructional materials are one of the most important tools educators use in the classroom to enhance student learning. It is critical that they fully align to state standards—what students are expected to learn and be able to do at the end of each grade level or course—and are high quality if they are to provide meaningful instructional support.

The Louisiana Department of Education is committed to ensuring that every student has access to high-quality instructional materials. In Louisiana all districts are able to purchase instructional materials that are best for their local communities since those closest to students are best positioned to decide which instructional materials are appropriate for their district and classrooms. To support local school districts in making their own local, high-quality decisions, the Louisiana Department of Education leads online reviews of instructional materials.

Instructional materials are reviewed by a committee of Louisiana educators. Teacher Leader Advisors (TLAs) are a group of exceptional educators from across Louisiana who play an influential role in raising expectations for students and supporting the success of teachers. Teacher Leader Advisors use their robust knowledge of teaching and learning to review instructional materials.

The [2018-2019 Teacher Leader Advisors](#) are selected from across the state and represent the following parishes and school systems: Ascension, Bossier, Caddo, Central, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, InspireNOLA, Jefferson, KDHSA (Jefferson Parish Charter), Lafayette, Lincoln, Livingston, Orleans, Ouachita, Pointe Coupee, Rapides, Recovery School District, RSD - Choice Foundation, RSD – FirstLine, RSD – NOCP, St. Charles, St. Mary, St. Tammany, Tangipahoa, Vermilion, West Baton Rouge, West Feliciana, Zachary. This review represents the work of current classroom teachers with experience in grades K-8.

Appendix II.

Public Comments

There were no public comments submitted.