

# SCIENCE

## High-Quality Instructional Materials Review Rubric

### Advanced Placement

Evaluator		Rating Committee	
Publisher			
Title of Textbook Series/Instructional Program			
Grade Range of Textbook Series/Instructional Program		Specific Grade Evaluated	

This evaluation rubric is designed to evaluate how well instructional materials align with the [Advanced Placement Science Courses](#) and other criteria for high-quality instructional materials for the **science curriculum**. The evaluation rubric includes key considerations for high-quality instructional materials and outlines three **Gateways** for evaluating materials. Each **Gateway** provides a **Criterion**, related Indicators, and **Guiding/Key Questions** and **Evidence**.



The evaluation rubric is designed to help reviewers establish a quality threshold for each Gateway. Remember to concentrate on the content present in the instructional materials and any ancillary or complementary resources rather than what may be inferred. All scores should be based on evidence observed from the instructional materials themselves.

### Scoring Protocol and Criteria:

- **No evidence (0):** There is no correlation between the standards and lessons; a logical sequence of content cannot be identified. Additionally, there appear to be significant content inaccuracies; essential understandings, knowledge, or skills are not addressed, and opportunities to practice essential skills are omitted.
- **Limited (1 or 2):** Limited connections between the standards and the lessons are noted; content appears to contain some inaccuracies or is not always clear. Essential understandings, knowledge, or skills are not sufficiently addressed, and there is limited opportunity for students to practice essential skills.
- **Adequate (2 or 4):** Lessons align with the standards; the content is accurate, clear, and sequentially ordered; most essential understandings, knowledge, and skills are supported, and ample opportunities are provided for students to practice essential skills.

### The High-Quality Instructional Materials Review Rubric is comprised of three sections:

**Gateway 1:** Alignment to Standards - **This is a requirement for submission.**

→ Advance to Gateway 2 only if Gateway 1 scores at least **10 points**.

**Gateway 2:** Rigor and Instructional Practices - **This is a requirement for submission.**

→ Advance to Gateway 3 only if Gateway 2 scores at least **9 points**.

**Gateway 3:** Usability

# GATEWAY 1

**Alignment to Standards - This is a requirement for submission.**

High-quality science materials provide all students with extensive opportunities to engage with grade-level content, fulfilling the complete intent of the Advanced Placement for Science. Educators utilize evidence from the instructional materials to evaluate indicators relevant to each criterion to assess the Gateway rating.

- **Criterion 1.1 (1a – 1d): Alignment and Accuracy 10 possible points**  
Materials adequately address the **Advanced Placement for Science**.
- **Criterion 1.2 (1e – 1h): Learning Progressions and Coherence 8 possible points**  
Materials attend to the learning progressions emphasized in the standards so that the curriculum is coherent both within grades and across grade bands and is cohesive and consistent with the progressions in the **Advanced Placement for Science**.

Criterion 1.1: ALIGNMENT AND ACCURACY			
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
<b>1a.</b> Materials align with <b>all</b> course content within the Advanced Placement for Science, including the major work specific to each grade level and the supporting or additional content. (4 points)	<ul style="list-style-type: none"> <li>Does each lesson clearly indicate the specific standards addressed in the materials?</li> <li>Have all components of the standards been addressed?</li> <li>Does the lesson comprehensively address the content of the standards?</li> <li>Is complexity apparent in the materials?</li> </ul>	<ul style="list-style-type: none"> <li>Address grade-level or content-appropriate standards.</li> <li>Ensure that students attain grade-level proficiency while engaging in AP science.</li> </ul>	<b>0 2 4</b>
<b>1b.</b> Materials are aligned with research-based instructional practices related to <b>AP Science</b> . (2 points)	<ul style="list-style-type: none"> <li>Do the materials outline the program's teaching methodologies and research-based strategies that assist educators in understanding and implementing?</li> </ul>	<ul style="list-style-type: none"> <li>Explain the instructional approaches of the program.</li> <li>Identify and reference research-based and evidence-based strategies used in the design.</li> </ul>	<b>0 1 2</b>
<b>1c.</b> Materials present content, scientific and engineering practices, and the nature of science accurately and scientifically.	<ul style="list-style-type: none"> <li>Are the materials free from information that is inaccurate or misleading?</li> </ul>	<ul style="list-style-type: none"> <li>Present currently accepted scientific information in an unbiased manner.</li> </ul>	<b>0 1 2</b>

(2 points)		<ul style="list-style-type: none"> <li>Clearly describe scientists' methods to obtain, evaluate, and communicate information.</li> <li>Avoid information or activities that may lead to common misconceptions.</li> </ul>	
<b>1d.</b> Materials offer students opportunities to develop and use models. (2 points)	<ul style="list-style-type: none"> <li>Do students develop and use models for sense-making and explanations of scientific phenomena?</li> <li>Are there opportunities to revise and improve models both individually and collaboratively?</li> </ul>	<ul style="list-style-type: none"> <li>Engage students in developing and utilizing representative and systems models.</li> <li>Engage students in creating and employing various forms of modeling (e.g., drawings, mathematical models, simulations).</li> </ul>	<b>0 1 2</b>
<p style="text-align: right;"><b>TOTAL SCORE CRITERION 1.1</b></p> <p><b>Meets:</b> 8-10 points   <b>Partially Meets:</b> 6-7 points   <b>Does Not Meet:</b> 0-5 points</p>			
<b>Criterion 1.2: LEARNING PROGRESSIONS and COHERENCE</b>			
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
<b>1e.</b> Materials follow a sequence that enhances student engagement in practices, increasing both complexity and depth across grade levels. (2 points)	<ul style="list-style-type: none"> <li>Is the time for content and skills explicitly identified and coherent?</li> <li>Do students engage more independently in science and engineering practices and the nature of science over time?</li> </ul>	<ul style="list-style-type: none"> <li>Establish a deliberate sequence.</li> <li>Assist teachers in shifting from teacher-led investigations and activities to student-driven ones.</li> </ul>	<b>0 1 2</b>
<b>1f.</b> Materials link to skills covered in earlier lessons, enabling students to relate new learning to previous knowledge. (2 points)	<ul style="list-style-type: none"> <li>Are past topics and lessons referenced as new concepts are introduced?</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate prior knowledge.</li> </ul>	<b>0 1 2</b>
<b>1g.</b> Materials offer scaffolding or opportunities for reduced educator support over time to encourage student proficiency and independence. (2 points)	<ul style="list-style-type: none"> <li>Is scaffolding in place to promote understanding and independence among learners?</li> </ul>		<b>0 1 2</b>
<b>1h.</b> Content is appropriate for the grade level and considers students' prior knowledge,	<ul style="list-style-type: none"> <li>Is the content appropriate for the grade level?</li> </ul>	<ul style="list-style-type: none"> <li>Create opportunities for students to develop vertical content knowledge by</li> </ul>	<b>0 1 2</b>

incorporating it into the lesson and covering material not previously addressed. (2 points)	<ul style="list-style-type: none"> <li>Does the content build on the skills students should have acquired from previous lessons?</li> </ul>	utilizing their prior knowledge and understanding of the concept.	
<b>TOTAL SCORE CRITERION 1.2</b> <b>Meets: 7-8 points   Partially Meets: 5-6 points   Does Not Meet: 0-4 points</b>			

Gateway 1 Points AVAILABLE	Gateway 1 Points ACHIEVED	GATEWAY 1 RATING
18	Sum of points from Criterion 1.1 and 1.2	<input type="checkbox"/> <b>Meets</b> (score of 15-18 points) <b>PROCEED TO GATEWAY 2</b> <input type="checkbox"/> <b>Partially Meets</b> (score of 10-14 points) <b>PROCEED TO GATEWAY 2</b> <input type="checkbox"/> <b>Does Not Meet</b> (score of 0-9 points) <b>STOP REVIEW</b>

# GATEWAY 2

Rigor and Instructional Practices - **This is a requirement for submission.**

Gateway 2 explores how materials assist students in achieving the standards and challenging expectations in the **Advanced Placement for Science**.

- **Criterion 2.1 (2a – 2o): Student Learning 32 possible points**  
Materials identify methods for designing materials that support each student's regular and active participation in grade-level or grade band content.
- **Criterion 2.2 (2p – 2r): Instructional Design 6 possible points**  
Materials align with student-centered practices and provide opportunities for students to explore content.

Criterion 2.1: STUDENT LEARNING			
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
<b>2a.</b> Materials offer suitable levels and types of scaffolding, differentiation, intervention, and support for diverse learners. <b>(4 points)</b>	<ul style="list-style-type: none"> <li>Do materials offer teachers strategies to meet a range of learner needs?</li> <li>Offer additional support for students working below grade level.</li> <li>Provide extensions for high-interest students or those working above grade level.</li> </ul>	<ul style="list-style-type: none"> <li>Provides extensions for high-interest students or those working above grade level.</li> <li>Offer specific strategies and support for differentiating instruction.</li> <li>Establish a comprehensive strategic support system to help students maintain consistent and active involvement in their learning.</li> </ul>	<b>0 2 4</b>
<b>2b.</b> Materials within each lesson offer various representations tailored for different types of learners, incorporating alternatives to reading, writing, listening, and speaking, such as translations, pictures, or graphic organizers. <b>(2 points)</b>	<ul style="list-style-type: none"> <li>Do materials offer various representations for diverse types of learners?</li> </ul>	<ul style="list-style-type: none"> <li>Provide tasks with multiple entry points.</li> <li>Use various representations to engage students with grade-level or course-level content.</li> <li>Include activities incorporating visuals to build necessary background knowledge on new or unfamiliar themes or topics.</li> </ul>	<b>0 1 2</b>
<b>2c.</b> Assessment methods are diverse, ensuring accessibility for all students and avoiding	<ul style="list-style-type: none"> <li>Are the assessment methods varied to ensure accessibility for all types of students?</li> </ul>	<ul style="list-style-type: none"> <li>Provide resources (e.g., sample student responses, rubrics, scoring guidelines,</li> </ul>	<b>0 1 2</b>

penalization or rewards based on exceptionalities. (2 points)	<ul style="list-style-type: none"> <li>Is guidance consistently provided to teachers on how to interpret student understanding?</li> </ul>	<p>and open-ended feedback) for scoring purposes.</p> <ul style="list-style-type: none"> <li>Guide teachers in interpreting student understanding.</li> <li>Provide opportunities for students to demonstrate learning through annotated drawings, classroom observations, oral responses, presentations, glossaries, home language, performance assessments, and portfolios.</li> </ul>	
<b>2d.</b> Materials create opportunities for students to ask questions and define problems. (2 points)	<ul style="list-style-type: none"> <li>Are students generating questions that investigations can answer?</li> <li>Are students asking questions about complex situations that do not have simple right or wrong answers?</li> <li>Are students presented with open-ended problems?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to notice and wonder before any information is given.</li> <li>Support students in asking questions that can lead to the explanation of phenomena or sensemaking.</li> <li>Utilize situations where students identify and define authentic problems rather than simply completing predefined projects.</li> </ul>	<b>0 1 2</b>
<b>2e.</b> Materials offer students opportunities to design and conduct investigations. (2 points)	<ul style="list-style-type: none"> <li>Do students plan and conduct investigations to gather data supporting explanations of phenomena?</li> </ul>	<ul style="list-style-type: none"> <li>Offer opportunities for students to plan and design their investigations.</li> <li>Offer opportunities for students to evaluate and revise experimental designs.</li> </ul>	<b>0 1 2</b>
<b>2f.</b> Materials offer students chances to analyze and interpret data. (2 points)	<ul style="list-style-type: none"> <li>Do students use data collected through scientific investigations to derive meaning?</li> <li>Do students use observations (first- or secondhand) to describe patterns and relationships in the natural and designed worlds to answer scientific questions and solve problems?</li> <li>Do students compare data sets, including their own, to discuss similarities and differences in their findings?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to present their data in various formats (e.g., drawings, graphs, maps, tables, charts).</li> <li>Provide opportunities for students to use and interpret different data types (e.g., drawings, graphs, maps, tables, charts).</li> <li>Provide opportunities for students to analyze data sets generated by researchers.</li> </ul>	<b>0 1 2</b>

		<ul style="list-style-type: none"> <li>Provide opportunities for students to use digital tools to organize and analyze data.</li> </ul>	
<b>2g.</b> Materials enable students to utilize mathematics and computational thinking. (2 points)	<ul style="list-style-type: none"> <li>Do students apply mathematical concepts and processes to scientific and engineering questions and problems to support scientific conclusions and design solutions?</li> <li>Do the materials guide students in breaking down complex tasks into sequential steps to solve problems or understand phenomena?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to apply mathematical concepts and processes to analyze first- or secondhand data.</li> <li>Incorporate mathematics and computational thinking into students' sensemaking, investigation, and explanation of phenomena or problems.</li> </ul>	<b>0 1 2</b>
<b>2h.</b> Materials offer opportunities for students to engage in evidence-based arguments. (2 points)	<ul style="list-style-type: none"> <li>Do students share, respond to, and critique ideas to build consensus and develop explanations?</li> <li>Do students use evidence to determine what is relevant, irrelevant, fact, or opinion?</li> <li>Do students explain their reasoning when constructing or supporting an argument with evidence, data, or a model?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to apply reasoning to demonstrate how the evidence supports their claims.</li> <li>Provide opportunities for students to make and defend claims based on evidence regarding the natural world or the effectiveness of a design solution.</li> <li>Include opportunities for students to utilize student-generated data and data sets from outside researchers to support their claims.</li> <li>Offer support that assists teachers in scaffolding experiences for students to enhance proficiency in reasoning and developing arguments from evidence.</li> </ul>	<b>0 1 2</b>
<b>2i.</b> Materials assist students in grasping how scientific knowledge evolves with new evidence. (2 points)	<ul style="list-style-type: none"> <li>Do the materials contain examples that show how scientific ideas have changed over the years as technology improves or new evidence emerges?</li> <li>Do the materials include recent scientific research?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to refine models following further investigation.</li> <li>Showcase examples of historical models and their evolution over time.</li> <li>Utilize research studies from the past decade.</li> </ul>	<b>0 1 2</b>

<p><b>2j.</b> Materials offer opportunities for evidence-based and data-driven student discourse. (2 points)</p>	<ul style="list-style-type: none"> <li>How often do students have the opportunity to compare ideas, critique arguments, and pose evidence-based questions?</li> <li>Are there multiple chances in instructional sequences for students to participate in scientific discourse?</li> </ul>	<ul style="list-style-type: none"> <li>Guide teachers in structuring and facilitating evidence-based, data-driven student discourse.</li> <li>Support students in using evidence and data for discourse, critiquing arguments, and building consensus.</li> </ul>	<p><b>0 1 2</b></p>
<p><b>2k.</b> Materials create opportunities for scientific discourse in diverse settings and for various purposes. (2 points)</p>	<ul style="list-style-type: none"> <li>What types of opportunities are available for students to engage in scientific discourse?</li> </ul>	<ul style="list-style-type: none"> <li>Provide students with opportunities to communicate with authentic audiences (e.g., researchers, community stakeholders, legislators, businesses).</li> <li>Encourage students to communicate using various modalities (e.g., letters, presentations, podcasts, discussions, debates).</li> <li>Allow students to reflect on and provide feedback for their peers' work and authentic research studies.</li> </ul>	<p><b>0 1 2</b></p>
<p><b>2l.</b> Materials promote student discourse, enhancing the sophistication of both vocabulary and structure as understanding of each concept develops. (2 points)</p>	<ul style="list-style-type: none"> <li>Do the materials provide scaffolds to support student engagement in scientific discourse?</li> <li>Does student discourse increase complexity and depth within and across grade levels?</li> </ul>	<ul style="list-style-type: none"> <li>Support teachers in facilitating student discussions with prompts, activities, and strategies.</li> <li>Assist teachers in helping students transition from discussing concepts in everyday language to using scientific vocabulary.</li> </ul>	<p><b>0 1 2</b></p>
<p><b>2m.</b> Materials leverage phenomena and problems to drive instruction, engaging students in sensemaking and problem-solving. (2 points)</p>	<ul style="list-style-type: none"> <li>Is instruction structured around observable events in the natural or designed worlds that scientific knowledge can explain or predict?</li> <li>How do the materials assist students in refining their understanding of the events or problems they are investigating?</li> <li>Is instruction driven by the exploration and explanation of phenomena or the solving of problems?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to create and refine models and explanations of phenomena, or to iterate on solutions to problems.</li> <li>Align instructional content with the anchoring phenomenon or initial problem.</li> </ul>	<p><b>0 1 2</b></p>

<b>2n.</b> Materials structure lessons that introduce phenomena at the beginning of instruction before explaining concepts or defining vocabulary. (2 points)	<ul style="list-style-type: none"> <li>Where in the instructional sequence are phenomena or problems used?</li> <li>Are phenomena presented without an accompanying explanation?</li> <li>Do students revisit the phenomenon throughout the instructional sequence?</li> <li>Is scientific vocabulary introduced as students need it to understand the phenomena?</li> </ul>	<ul style="list-style-type: none"> <li>Begin lessons with phenomena or problems.</li> <li>Employ everyday language when presenting phenomena or problems.</li> <li>Build students' conceptual understanding before introducing scientific vocabulary.</li> </ul>	<b>0 1 2</b>
<b>2o.</b> Materials utilize phenomena and problems that are significant to students, aiming to illuminate and connect with their prior knowledge and experiences. (2 points)	<ul style="list-style-type: none"> <li>How do the materials support students in connecting their personal experiences and prior knowledge with phenomena and problems?</li> <li>Is there guidance to help teachers leverage the diverse experiences students bring to the classroom?</li> <li>Can the phenomena and problems be linked to content from other contexts?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for students to make local, regional, and global connections.</li> <li>Connect students' personal experiences and prior knowledge frequently with the phenomena or problems presented.</li> <li>Suggest ways for teachers to elicit students' prior knowledge and interests.</li> <li>Offer opportunities for students to apply their experiences and prior knowledge to phenomena and problems.</li> </ul>	<b>0 1 2</b>
<p style="text-align: right;"><b>TOTAL SCORE CRITERION 2.1</b></p> <p style="text-align: center;"><b>Meets:</b> 26-32 points   <b>Partially Meets:</b> 17-25 points   <b>Does Not Meet:</b> 0-16 points</p>			
<b>Criterion 2.2 INSTRUCTIONAL DESIGN</b>			
<b>INDICATORS OF SUPERIOR QUALITY</b>	<b>GUIDING QUESTIONS</b>	<b>EVIDENCE OF HOW THE MATERIALS</b>	<b>SCORE</b>
<b>2p.</b> Materials encompass a variety of instructional strategies (i.e., discussions, modeling, student activities, and projects). (2 points)	<ul style="list-style-type: none"> <li>Do materials facilitate various instructional strategies within lessons and across the curriculum?</li> </ul>	<ul style="list-style-type: none"> <li>Utilize various formats and methods over time to enhance students' understanding and their ability to explain and apply content concepts.</li> </ul>	<b>0 1 2</b>
<b>2q.</b> Materials offer opportunities for students to obtain, evaluate, and communicate information. (2 points)	<ul style="list-style-type: none"> <li>Do students communicate with different audiences?</li> <li>Do students engage with, assess, and select information from various sources?</li> </ul>	<ul style="list-style-type: none"> <li>Provide students with opportunities to share scientific and technical information orally and in writing,</li> </ul>	<b>0 1 2</b>

		utilizing tables, diagrams, charts, and/or mathematical representations. <ul style="list-style-type: none"> <li>Create chances for students to gather, read, and synthesize information from multiple sources, evaluate its credibility and accuracy, and describe whether the information is supported by evidence.</li> </ul>	
2r. Materials offer opportunities for students to formulate explanations and devise solutions. (2 points)	<ul style="list-style-type: none"> <li>Do students construct scientific explanations based on valid and reliable evidence from various sources, including their experiments?</li> <li>Do students devise solutions for problems they have identified, including those of local relevance?</li> </ul>	<ul style="list-style-type: none"> <li>Expect students to develop their explanations instead of repeating provided descriptions.</li> <li>Provide opportunities for students to solve real-world problems instead of completing design challenges.</li> </ul>	0 1 2
<b>TOTAL SCORE CRITERION 2.2</b> <b>Meets: 5-6 points   Partially Meets: 3-4 points   Does Not Meet: 0-2 points</b>			

Gateway 2 Points AVAILABLE	Gateway 2 Points ACHIEVED	GATEWAY 2 RATING
38	Sum of points from Criterion 2.1 and 2.2	<input type="checkbox"/> <b>Meets</b> (score of 30-38 points) <b>PROCEED TO GATEWAY 2</b> <input type="checkbox"/> <b>Partially Meets</b> (score of 20-29 points) <b>PROCEED TO GATEWAY 2</b> <input type="checkbox"/> <b>Does Not Meet</b> (score of 0-19 points) <b>STOP REVIEW</b>

# GATEWAY 3

## Usability

Materials help teachers effectively apply the curriculum to understand their students' skills and learning while accommodating diverse learners. To determine the Gateway rating, educators assess evidence from the instructional materials to score indicators related to each criterion.

- **Criterion 3.1 (3a – 3h): Teacher Supports 16 possible points**  
Materials include resources for teachers to effectively plan and implement materials with integrity and to develop their professional learning further.
- **Criterion 3.2 (3i – 3l): Assessment 12 possible points**  
Materials include a system of assessments identifying how materials provide tools, guidance, and support for teachers to collect, interpret, and act on data about student progress toward the standards.
- **Criterion 3.3 (3m – 3u): Student Supports 18 possible points**  
Materials are designed for students' regular and active participation in grade-level/grade-band/series content.
- **Criterion 3.4 (3v – 3y): Intentional Design 8 possible points**  
Materials are visually engaging and reference or integrate digital technology (when applicable) with teacher guidance.

Criterion 3.1: TEACHER SUPPORTS			
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
<b>3a.</b> Materials provide teacher guidance with functional annotations and suggestions for enacting the student and ancillary materials, with specific attention to engaging students to guide their development. (2 points)	<ul style="list-style-type: none"> <li>Do the materials offer comprehensive guidance, including detailed annotations and actionable suggestions, to assist teachers in implementing both student and ancillary materials, specifically focusing on engaging students to facilitate their developmental progress?</li> </ul>	<ul style="list-style-type: none"> <li>Provide overview sections, annotations, narrative information, or other documents that will assist the teacher in planning instruction, including strategies and guidance for presenting the content.</li> <li>Guide students in implementing scientific and engineering practices.</li> <li>Include guidance on identifying and addressing student errors and misconceptions in the planning phase.</li> </ul>	<b>0 1 2</b>

<p><b>3b.</b> Materials contain adult-level explanations and examples of the more complex grade-level or course-level concepts and concepts beyond the current course so that teachers can improve their knowledge of the subject. (2 points)</p>	<ul style="list-style-type: none"> <li>Do the materials provide comprehensive resources that support teachers in deepening their understanding of complex grade-level or course-level concepts, extending beyond the current curriculum through adult-level explanations and examples?</li> </ul>	<ul style="list-style-type: none"> <li>Provide complete adult-level explanations and examples that support the teacher in developing their understanding of the content and expected student practices.</li> <li>Support teachers to develop their understanding of more advanced applications of grade-level or course-level concepts.</li> <li>Support teachers to develop their understanding of concepts beyond the current course.</li> </ul>	<p><b>0 1 2</b></p>
<p><b>3c.</b> Materials provide recommendations for immersive curriculum-based professional learning that allows teachers to experience the materials as students. (2 points)</p>	<ul style="list-style-type: none"> <li>Do the materials recommend curriculum-based professional learning to enhance teacher content knowledge and pedagogy?</li> <li>Do the materials provide best practices to support teachers' planning for instruction?</li> <li>Do the materials recommend professional learning strategies that encourage teachers to reflect on and consider the student experience with the instructional materials?</li> <li>Do the materials provide recommendations for initial professional learning and sustained teacher support for student success with the program?</li> </ul>	<ul style="list-style-type: none"> <li>Guide curriculum-based professional learning to support classroom facilitation, including understanding the program's instructional design, philosophy, and approaches in units and lessons.</li> <li>Provide guidance and strategies for professional learning that provide teachers with opportunities and time to plan instruction and collaborate with colleagues (i.e., professional learning communities, study groups, coaching, feedback, and reflective practices).</li> <li>Includes initial and ongoing curriculum-based professional learning to support the program's sustainability.</li> </ul>	<p><b>0 1 2</b></p>
<p><b>3d.</b> Materials include standards correlation information that explains the role of the standards in the context of the overall series. (2 points)</p>	<ul style="list-style-type: none"> <li>Do the materials include standards correlation information, including college- and career-ready, that explains the role of the standards in the context of the overall series?</li> </ul>		<p><b>0 1 2</b></p>
<p><b>3e.</b> Materials provide strategies for informing all stakeholders, including students, parents, or caregivers, about the program and suggestions</p>	<ul style="list-style-type: none"> <li>Do the materials provide strategies for informing all stakeholders, including students, parents, or caregivers, about the program and suggestions for how</li> </ul>	<ul style="list-style-type: none"> <li>Contain strategies for informing students, parents, and/or caregivers about the technology and computer science their student is learning.</li> </ul>	<p><b>0 1 2</b></p>

for how they can help support student progress and achievement. (2 points)	they can help support student progress and achievement?	<ul style="list-style-type: none"> <li>Provide forms of communication with parents and caregivers, including for families that may speak and read in a language other than English.</li> <li>Contain suggestions for how parents or caregivers can support student progress and achievement.</li> </ul>	
<b>3f.</b> Materials provide a comprehensive list of supplies needed to support instructional activities. (2 points)	<ul style="list-style-type: none"> <li>Does the curriculum provide a comprehensive list of materials/supplies needed to support instructional materials?</li> </ul>	<ul style="list-style-type: none"> <li>Provide a comprehensive list of all digital and print materials needed to complete the instructional activities.</li> </ul>	<b>0 1 2</b>
<b>3g.</b> Materials regularly and systematically balance time and resources required for following the suggested implementation and information for alternative implementations. (2 points)	<ul style="list-style-type: none"> <li>Do the materials explore multiple implementation pathways and their resource implications?</li> <li>Do materials address trade-offs between implementations, incorporating considerations of time and effectiveness?</li> <li>Do materials prioritize adaptability, promoting flexibility in response to available resources or evolving circumstances?</li> </ul>	<ul style="list-style-type: none"> <li>Provide a detailed breakdown of the resources needed for each implementation pathway, including time, personnel, materials, and any other required resources.</li> <li>Provide a clear and structured comparison highlighting the trade-offs with different implementation methods and discussing how each option affects time and effectiveness.</li> <li>Provide guidance or suggestions on how to adapt or modify the implementation strategy based on the availability of resources or changing circumstances, demonstrating a practice approach to flexibility.</li> </ul>	<b>0 1 2</b>
<b>3h.</b> Materials provide clear science safety guidelines for teachers and students across the materials. (2 points)	<ul style="list-style-type: none"> <li>Are there sufficient safety instructions in both student and teacher materials to ensure that activities will be conducted safely?</li> </ul>	<ul style="list-style-type: none"> <li>Embed clear science safety guidelines for teachers and students aligned to OSHA, local, state, and national guidelines.</li> </ul>	<b>0 1 2</b>
<p style="text-align: right;"><b>TOTAL SCORE CRITERION 3.1</b></p> <p><b>Meets: 12-16 points   Partially Meets: 9-11 points   Does Not Meet: 0-8 points</b></p>			

## Criterion 3.2: ASSESSMENTS

INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
<b>3i.</b> Assessment information is included in the materials to indicate which standards are assessed. (2 points)	<ul style="list-style-type: none"> <li>Do the standards correlations or assessment guidance documents indicate if all standards for the content area are evaluated by the end of the year?</li> </ul>		<b>0 1 2</b>
<b>3j.</b> Assessment system provides multiple opportunities throughout the grade, course, and/or series to determine students' learning. It offers sufficient guidance to teachers for interpreting student performance and suggestions for follow-up. (4 points)	<ul style="list-style-type: none"> <li>Do the materials include multiple types of formative and summative assessments?</li> <li>Does the assessment system provide sufficient guidance to teachers for interpreting student performance and suggestions for follow-up?</li> <li>Is guidance consistently provided to teachers on how to interpret student understandings?</li> </ul>	<ul style="list-style-type: none"> <li>Provide resources (e.g., sample student responses, rubrics, scoring guidelines, and open-ended feedback) for scoring purposes.</li> <li>Guide teachers to interpret student understanding.</li> <li>Provide teachers guidance to respond to student needs elicited by the assessment.</li> <li>Provide opportunities for students to show learning through annotated drawings, classroom observations, oral responses, presentations, use of glossaries and home language, performance assessments, and portfolios.</li> </ul>	<b>0 2 4</b>
<b>3k.</b> Assessments include opportunities for students to demonstrate the full intent of grade-level/course-level standards and practices across the series. (4 points)	<ul style="list-style-type: none"> <li>Do the assessments include a variety of modalities (e.g., writing, illustrating, demonstrating, modeling, oral presentations, and performance tasks), and how are they used across different assessments?</li> <li>Do the assessment tasks incorporate sufficient complexity to assess the depth of the performance expectations?</li> </ul>	<ul style="list-style-type: none"> <li>Provide opportunities for different modalities (e.g., writing, illustrating, demonstrating, modeling, oral presentations, and performance tasks).</li> <li>Provide opportunities for different items used for student assessments and how they measure student performance (e.g., performance tasks, discussion questions, constructed response questions, project- or problem-based tasks, portfolios, justified multiple-choice).</li> </ul>	<b>0 2 4</b>

<b>3l.</b> Assessments offer accommodations that allow students to demonstrate their knowledge and skills without changing the content of the assessment. (2 points)	<ul style="list-style-type: none"> <li>Do materials incorporate accommodations in assessments that maintain the assessment's content while enabling students to demonstrate their knowledge and skills effectively?</li> <li>Is guidance provided for teachers to use the accommodations?</li> </ul>	<ul style="list-style-type: none"> <li>Describe where and how accommodations are offered that ensure all students can access the assessment (e.g., text-to-speech, increased font size, etc.) without changing the content of the evaluation.</li> <li>Guide for teachers to accommodate students, including those in special populations, without altering grade level or course expectations or the assessment content.</li> </ul>	<b>0 1 2</b>
<p style="text-align: right;"><b>TOTAL SCORE CRITERION 3.2</b></p> <p style="text-align: center;"><b>Meets:</b> 10-12 points   <b>Partially Meets:</b> 7-9 points   <b>Does Not Meet:</b> 0-6 points</p>			
<b>Criterion 3.3: STUDENT SUPPORTS</b>			
<b>INDICATORS OF SUPERIOR QUALITY</b>	<b>GUIDING QUESTIONS</b>	<b>EVIDENCE OF HOW THE MATERIALS</b>	<b>SCORE</b>
<b>3m.</b> Materials provide strategies and support to help students consistently and actively engage in learning at course level or grade level. (2 points)	<ul style="list-style-type: none"> <li>Do materials provide differentiation supports to engage students sufficiently in grade-level/course-level science?</li> <li>Do the materials provide comprehensive guidance on strategies and accommodations for diverse student needs?</li> </ul>	<ul style="list-style-type: none"> <li>Provide specific strategies and supports for differentiating instruction.</li> <li>Provide a comprehensive strategic support system for students to maintain consistent and active involvement in their learning.</li> </ul>	<b>0 1 2</b>
<b>3n.</b> Materials provide extensions and opportunities for students to engage with grade-level or course-level content at higher levels of complexity. (2 points)	<ul style="list-style-type: none"> <li>Do materials provide intentional extensions and structured opportunities enabling students to interact with course or grade-level content at higher levels of complexity?</li> </ul>	<ul style="list-style-type: none"> <li>Suggest strategies and supports for student's exploration of grade-level or course-level content at a higher level of complexity, not students completing additional tasks, but as extensions of their learning.</li> <li>Provide opportunities for students to develop and apply higher-level thinking.</li> <li>Suggest extensions that provide a deeper understanding of grade-level or course-</li> </ul>	<b>0 1 2</b>

		level concepts rather than advancing to later-grade concepts.	
<b>3o.</b> Materials provide varied approaches to learning tasks over time and variety in how students are expected to demonstrate their learning, with opportunities for students to monitor their learning. (2 points)	<ul style="list-style-type: none"> <li>• What approaches to the presentation of material are provided?</li> <li>• What approaches are provided for students to demonstrate and monitor their learning?</li> <li>• Do the approaches to presentation and demonstration of learning vary over the year?</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Provide opportunities for students to share their thinking, demonstrate changes over time, and apply their understanding in new contexts.</li> <li>• Leverage various formats and methods over time to deepen student understanding and ability to explain and apply content concepts.</li> <li>• Provide opportunities for students to monitor and deepen their learning using ongoing review, either oral or written feedback, practice, and self-reflection.</li> </ul>	<b>0 1 2</b>
<b>3p.</b> Materials provide opportunities for teachers to use various grouping strategies. (2 points)	<ul style="list-style-type: none"> <li>• How and where do the materials guide the teacher on how and when to use specific grouping strategies?</li> </ul>	<ul style="list-style-type: none"> <li>• Describe how and where to group students in various grouping formats for the teacher.</li> <li>• Provide meaningful interaction among students, such as in large or small groups, pairs, etc.</li> </ul>	<b>0 1 2</b>
<b>3q.</b> Materials provide strategies and support for students who read, write, and/or speak in a language other than English to participate in learning regularly. (2 points)	<ul style="list-style-type: none"> <li>• Where do materials provide appropriate support and accommodations for EL students that will support their regular and active participation in learning?</li> </ul>	<ul style="list-style-type: none"> <li>• Provide strategies and opportunities for speaking, listening, reading, and writing to develop practices and knowledge of the subject matter, including scaffolding up to and within grade-level or course-level work.</li> <li>• Provide teacher guidance to support EL students.</li> <li>• Provide guidance that helps teachers identify and follow up on whether the student has challenges in content vs. language acquisition, as well as identify when students may have misconceptions about content vs. language demand, to ensure the two are not conflated.</li> </ul>	<b>0 1 2</b>

<b>3r.</b> Materials provide a balance of images or information about people, representing various demographic and physical characteristics. (2 points)	<ul style="list-style-type: none"> <li>Are depictions of demographics or physical characteristics portrayed positively across the curriculum?</li> </ul>	<ul style="list-style-type: none"> <li>Provide positive, diverse, and balanced depictions of individuals of different genders, races, ethnicities, and other physical characteristics engaging in and able to do the work.</li> </ul>	<b>0 1 2</b>
<b>3s.</b> Materials guide encourages teachers to draw upon student home language to facilitate learning. (2 points)	<ul style="list-style-type: none"> <li>Do the materials include instructions on garnering information about a student's home language to aid learning?</li> </ul>	<ul style="list-style-type: none"> <li>Provide suggestions and strategies for how to allow the use of the home language to support students in learning technology and computer science.</li> <li>Present multilingualism as an asset in reading and learning.</li> </ul>	<b>0 1 2</b>
<b>3t.</b> Materials guide encourages teachers to draw upon students' cultural and social backgrounds to facilitate learning. (2 points)	<ul style="list-style-type: none"> <li>How well do the materials connect to the students' funds of knowledge, culture, or community?</li> </ul>	<ul style="list-style-type: none"> <li>Make connections to students' linguistic and cultural backgrounds to facilitate learning.</li> <li>Provide opportunities for students to feel acknowledged, e.g., asked to create personal problems based on customs of their own home culture.</li> </ul>	<b>0 1 2</b>
<b>3u.</b> Materials provide support for different reading levels to ensure accessibility for students. (2 points)	<ul style="list-style-type: none"> <li>How and where do the materials include specific supports or strategies to modify lessons or activities for students who read, write, speak, or listen below grade level?</li> </ul>	<ul style="list-style-type: none"> <li>Provide tasks with multiple entry points.</li> <li>Use a variety of representations to engage students with grade-level or course-level content.</li> <li>Include pre-reading activities that utilize visuals to appropriately establish necessary background knowledge on new or unfamiliar themes or topics.</li> </ul>	<b>0 1 2</b>
<b>TOTAL SCORE CRITERION 3.3</b> <b>Meets: 15-18 points   Partially Meets: 10-14 points   Does Not Meet: 0-9 points</b>			

Criterion 3.4: INTENTIONAL DESIGN			
INDICATORS OF SUPERIOR QUALITY	GUIDING QUESTIONS	EVIDENCE OF HOW THE MATERIALS	SCORE
<b>3v.</b> Materials integrate technology such as interactive tools, virtual manipulatives/objects, and/ or dynamic software in ways that engage students in the grade-level/series standards, when applicable. (2 points)	<ul style="list-style-type: none"> <li>Do the materials integrate digital technology and interactive tools in ways that support student engagement in content?</li> </ul>	<ul style="list-style-type: none"> <li>Connect and support the learning objectives.</li> </ul>	<b>0 1 2</b>
<b>3w.</b> Materials include or reference digital technology that allows teachers and/or students to collaborate. (2 points)	<ul style="list-style-type: none"> <li>Do the digital materials allow teachers and/or students to collaborate?</li> </ul>	<ul style="list-style-type: none"> <li>Support collaboration between teacher to teacher, teacher to student, or student to student.</li> </ul>	<b>0 1 2</b>
<b>3x.</b> The visual design (whether in print or digital) supports students in engaging thoughtfully with the subject and is neither distracting nor chaotic. (2 points)	<ul style="list-style-type: none"> <li>Does the visual design support student learning and engagement without being visually distracting?</li> </ul>	<ul style="list-style-type: none"> <li>Provide images, graphics, and models that support student learning and engagement.</li> <li>Provide images, graphics, and models that communicate information or support student understanding of topics, text, or concepts.</li> <li>Provide organizational features (e.g., Table of Contents, glossary, index, internal references, table headers, captions, etc.) clearly and accurately.</li> </ul>	<b>0 1 2</b>
<b>3y.</b> Materials provide teacher guidance for using embedded technology to support and enhance student learning, when applicable. (2 points)	<ul style="list-style-type: none"> <li>Do the materials guide teachers in using embedded technology to support and enhance student learning?</li> <li>Are the materials compatible with different learning management systems and easily integrated?</li> <li>Is the digital material compatible with applicable browsers?</li> <li>Are materials compatible with the hardware used in the school or district, like computers, tablets, or other devices?</li> </ul>	<ul style="list-style-type: none"> <li>Include guidance on use with an LMS.</li> <li>Work with the applicable browser if it is web-based.</li> <li>They are designed to work seamlessly with computers, tablets, etc., in the school or district.</li> </ul>	<b>0 1 2</b>
<b>TOTAL SCORE CRITERION 3.4</b> <b>Meets:</b> 7-8 points   <b>Partially Meets:</b> 5-6 points   <b>Does Not Meet:</b> 0-4 points			

Gateway 3 Points AVAILABLE	Gateway 3 Points ACHIEVED	GATEWAY 3 RATING
<b>54</b>	Sum of Criterion 3.1, 3.2, 3.3, and 3.4 points	<input type="checkbox"/> <b>Meets</b> (score of 36-54 points) <input type="checkbox"/> <b>Partially Meets</b> (score of 28-35 points) <input type="checkbox"/> <b>Does Not Meet</b> (score of 0-27 points)

TOTAL SCORE (Gateway 1, 2, and 3)			
GATEWAY 1	GATEWAY 2	GATEWAY 3	GRAND TOTAL
of 18 points	of 38 points	of 54 points	of 110 points