

COMPUTER SCIENCE

High-Quality Instructional Materials Review Rubric

Grade Range: K-2

Evaluator		Rating Committee	
Publisher			
Title of Textbook Series/Instructional Program			
Grade Range of Textbook Series/Instructional Program	K-2	Specific Grade Evaluated	

Publisher indicated curriculum type: **Comprehensive Curriculum** **Complementary Curriculum**

This evaluation rubric is designed to offer an evaluation to determine how well instructional materials align to the Mississippi College- and Career- Readiness Standards (MCCRS) for Computer Science and other criteria for high-quality instructional materials for computer science. The evaluation rubric includes key considerations for high-quality instructional materials and outlines three **Gateways** for consideration when evaluating materials. Within each Gateway, **Criterion** and related **Indicators** are provided along with **Guiding/Key Questions**.



The evaluation rubric is designed to allow reviewers to determine a threshold for quality for each gateway. Remember to focus on what is present in the instructional materials and any supplemental resources rather than what might be inferred. All scores should be based on evidence observed from the instructional materials themselves.

Scoring Protocol and Criteria:

- **No evidence (0):** No correlation between the standards and lessons, a logical sequence of content cannot be identified and/or there appear to be significant content inaccuracies, essential understandings, knowledge, or skills are not addressed, and opportunities to practice essential skills are not included.
- **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 are aligned with the standards, content appears accurate clear, and in sequential order, most of the essential understandings, knowledge, and skills are supported, and many 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 has a score of at least 13 points.

Gateway 2: Instructional Support - **This is a requirement for submission.**

→ Advance to Gateway 3 only if Gateway 2 has a score of at least 14 points.

Gateway 3: Access and Technology

GATEWAY 1

Alignment to Standards - This is a requirement for submission.

High-quality computer science materials are coherent and aligned to the MCCRS for Computer Science to support student sensemaking of computer science concepts and practice through intentionally structured sequences of learning and leverage real-world phenomena and/or problems to engage students. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- Criterion 1.1 (1a – 1c): Alignment and Accuracy**
 Materials adequately address the MCCRS for Computer Science.
- Criterion 1.2 (1d – 1g): Coherence**
 Materials attend to the learning progressions emphasized in the standards, so that the curriculum is coherent both within grades and across grade bands and are coherent and consistent with the progressions in the MCCRS for Computer Science.
- Criterion 1.3 (1h – 1k): 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.

Criterion 1.1: ALIGNMENT AND ACCURACY			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
Materials are aligned closely to the MCCRS for Computer Science. 8 possible points	COMPREHENSIVE CURRICULUM ONLY: 1a. Instructional materials align with ALL 19 of the MCCRS for Computer Science at grade-level (4 points)	Are ALL 19 of the MCCRS for Computer Science covered in the curriculum for each grade-level? Does the curriculum support students in achieving proficiency for each standard?	0 2 4
	COMPLEMENTARY CURRICULUM ONLY: 1a. Instructional materials align with at least 9 of the 19 MCCRS for Computer Science at grade-level (4 points)	Are at least 9 of the 19 MCCRS for Computer Science covered in the curriculum for each grade-level? Does the curriculum support students in achieving proficiency for each standard?	0 2 4

	1b. The instructional materials provide opportunities to interact with real-world computer science tools and their purposes. (2 points)	Do instructional materials provide opportunities for students to interact with real-world computer science tools and their purposes?	0 1 2
	1c. The majority of time anticipated for the coverage of the instructional materials corresponds to standards for computer science. (2 points)	Does the majority of instructional time address the expected grade level learning outcomes? This includes: <input type="checkbox"/> assessment <input type="checkbox"/> supporting work connected to major work	0 1 2
TOTAL SCORE CRITERION 1.1 [8 possible points]			
Criterion 1.2: COHERENCE			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
Materials attend to the learning progressions emphasized in the standards, so that the curriculum is coherent both within grades and across grade bands and are coherent and consistent with the progressions in the MCCRS for Computer Science. 8 possible points	1d. The instructional materials are consistent with the progression of skills found in the MCCRS for Computer Science and provide a coherent sequence or collection of activities and texts that build content knowledge, vocabulary, and skills. (2 points)	Do the materials provide a coherent sequence of lessons that follow the progression of grade-level standards? Do the materials provide a coherent sequence of collection of activities and texts that build content knowledge, vocabulary, and skills?	0 1 2
	1e. Materials make connections to computer science topics covered in past lessons so students connect new learning with background knowledge. (2 points)	Are past topics and lessons referenced as new concepts are added?	0 1 2
	1f. Materials provide scaffolding or fading of support over time to promote student proficiency and independence with targeted computer science skills. (2 points)	Is scaffolding present to promote understanding and independence in learners?	0 1 2

	1g. Content is appropriate to the grade-level and considers students' prior knowledge to incorporate this knowledge into the lesson and/or cover material not previously covered. (2 points)	Is content grade-level appropriate? Does content incorporate student prior knowledge?	0 1 2
TOTAL SCORE CRITERION 1.2 [8 possible points]			
Criterion 1.3: ASSESSMENT			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
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. 8 possible points	1h. Materials provide strategies for gathering information on students' prior knowledge and across grade levels. (2 points)	Do materials provide strategies to gather information on students' prior knowledge?	0 1 2
	1i. Assessments clearly denote which standards are targeted. (2 points)	Do materials denote what standard is being assessed by each item?	0 1 2
	1j. Assessments include aligned rubrics that provide sufficient guidance to teachers for interpreting student performance and suggestions for follow-up. (2 points)	Do materials include scoring guidance (rubrics, anchors, etc.)? Does the guidance include support for teachers to interpret student performance and suggestions for follow-up?	0 1 2
	1k. Assessment methods are varied, making them accessible to all students and do not penalize or reward students due to exceptionalities. (2 points)	Are assessment methods varied to all accessibility for all types of students?	0 1 2
TOTAL SCORE CRITERION 1.3 [8 possible points]			

Gateway 1 Points AVAILABLE	Gateway 1 Points ACHIEVED	GATEWAY 1 RATING
24	Sum of points from Criterion 1.1, 1.2, and 1.3	<input type="checkbox"/> Meets (score of 20-24 points) PROCEED TO GATEWAY 2 <input type="checkbox"/> Partially Meets (score of 13-19 points) PROCEED TO GATEWAY 2 <input type="checkbox"/> Does Not Meet (score of 0-12 points) STOP REVIEW
GATEWAY COMMENTS		

GATEWAY 2

Instructional Support - This is a requirement for submission.

Gateway 2 examines the way materials support teachers to fully utilize the curriculum and understand the skills and learning of their students. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- Criterion 2.1 (2a – 2d): Student Learning**
 Materials identify ways in which materials are designed for each student’s regular and active participation in grade-level/grade band/series content.
- Criterion 2.2 (2e – 2h): Teacher Supports and Supplemental Materials**
 Materials include resources for teachers to effectively plan and implement materials with integrity and to further develop their professional learning.
- Criterion 2.3 (2i – 2l): Instructional Design**
 Materials align with student-centered practices and allow opportunities for students to explore content.

Criterion 2.1: STUDENT LEARNING			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
Materials identify ways in which materials are designed for each student’s regular and active participation in grade-level/grade band/series content. 10 possible points	2a. Materials provide appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners. <ul style="list-style-type: none"> <input type="checkbox"/> Supports diverse cultural and linguistic backgrounds, interests and styles. <input type="checkbox"/> Provides extra support for students working below grade level. <input type="checkbox"/> Provides extensions for students with high interest or working above grade level. (4 points)	Do materials provide teachers with strategies for meeting a range of learner needs?	0 2 4

	2b. Materials within each lesson provide multiple representations by adapting for a variety of different types of learners using alternatives to reading, writing, listening, and speaking such as translations, pictures, or graphic organizers. (2 points)	Do materials provide multiple representations for different types of learners?	0 1 2
	2c. Connects learning to students' homes, neighborhoods, and communities. (2 points)	Do materials provide or allow for possible connections from content to student homes, neighborhoods, and communities?	0 1 2
	2d. Materials provide guidance and strategies that encourage and support students to draw upon their own diverse cultural, linguistic, and social backgrounds to facilitate learning. (2 points)	Do the materials include content and questions that encourage students to draw upon their own diverse backgrounds?	0 1 2
TOTAL SCORE CRITERION 2.1 [10 possible points]			
Criterion 2.2: TEACHER SUPPORTS AND SUPPLEMENTAL MATERIALS			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
Materials include resources for teachers to effectively plan and implement materials with integrity and to further develop their professional learning. 8 possible points	2e. Materials are educative and accessible for teachers with differing computer science content knowledge (i.e. computer science definitions and examples of computer science concepts are offered to support teacher learning). (2 points)	Do the materials include features (glossaries, footnotes, recordings, pictures, etc.) that aid teachers (and students) in using them effectively?	0 1 2
	2f. Materials provide teachers with common misconceptions and challenges that students have regarding computer science concepts and potential explanations or solutions associated with computer science. (2 points)	Are common misconceptions and challenges provided? Are possible explanations or solutions shared to help students overcome these?	0 1 2

	<p>2g. Materials contain teacher' support materials with:</p> <ul style="list-style-type: none"> <input type="checkbox"/> ample and useful annotations, and <input type="checkbox"/> suggestions on how to present the content in the student edition and in the ancillary materials. <p>(2 points)</p>	Are there overview sections and/or annotations that contain narrative information about the computer application content and/or ancillary documents that will assist the teacher in presenting the student material?	0 1 2
	<p>2h. Materials provide a list of lessons in the teacher's edition (in print or clearly distinguished/accessibile as a teacher's edition in digital materials), cross-referencing the standards addressed and providing an estimated instructional time for each lesson, chapter and unit (i.e., pacing guide). (2 points)</p>	Is there clear documentation that aligns standards to lessons/chapters/units/topics? Is there clear documentation that provides estimated instructional time for lessons/chapters/units/topics?	0 1 2
TOTAL SCORE CRITERION 2.2			
[8 possible points]			
Criterion 2.3: INSTRUCTIONAL DESIGN			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<p>Materials align with student-centered practices and allow opportunities for students to explore content.</p> <p>8 possible points</p>	<p>2i. Materials include a mixture of instructional strategies (e.g. discussions, modeling, student activities, projects, etc.). (2 points)</p>	Do materials allow for a variety of instructional strategies within the lessons and across the curriculum?	0 1 2
	<p>2j. Students are provided with opportunities to collaborate. (2 points)</p>	Do the materials include activities that allow students to work collaboratively?	0 1 2
	<p>2k. Students are provided with opportunities to explore, provide solutions to open-ended prompts, connect content with real-world applications, and reflect on their learning. (2 points)</p>	Are students provided with opportunities to explore open-ended prompts and reflect on their own learning?	0 1 2

	21. Students are provided with opportunities to see career opportunities and pathways related to the content. (2 points)	Are students provided with opportunities to see career opportunities related to the content?	0 1 2
TOTAL SCORE CRITERION 2.3 [8 possible points]			

Gateway 2 Points AVAILABLE	Gateway 2 Points ACHIEVED	GATEWAY 2 RATING
26	Sum of points from Criterion 2.1, 2.2, 2.3	<input type="checkbox"/> Meets (score of 21-26 points) PROCEED TO GATEWAY 3 <input type="checkbox"/> Partially Meets (score of 14-20 points) PROCEED TO GATEWAY 3 <input type="checkbox"/> Does Not Meet (score of 0-13 points) STOP REVIEW
GATEWAY COMMENTS		

TOTAL SCORE (Gateway 1 and 2)		
GATEWAY 1	GATEWAY 2	GRAND TOTAL
of 24 points	of 26 points	of 50 points
RATING	RATING	

GATEWAY 3

Access and Technology

Schools can use digital resources in a variety of ways to support teaching and learning. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- **Criterion 3.1 (3a – 3i): Access and Technology**

Materials integrate digital technology and interactive tools, when appropriate, in ways that support student engagement.

Criterion 3.1: ACCESS AND TECHNOLOGY			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
Materials integrate digital technology and interactive tools, when appropriate, in ways that support student engagement. 18 possible points	3a. Digital materials (either included as part of the core materials or as part of a digital curriculum) are web-based and compatible with multiple internet browsers (e.g., Internet Explorer, Firefox, Google Chrome, etc.). <i>(2 points)</i>	Are materials accessible on a variety of web browsers?	0 1 2
	3b. Digital materials are “platform neutral” (i.e., are compatible with multiple operating systems such as Windows and Apple and are not proprietary to any single platform) and allow the use of tablets and mobile devices. <i>(2 points)</i>	Are materials accessible on a variety of devices? Do materials require specific device requirements that may not be accessible on all device types?	0 1 2
	3c. Materials include opportunities to assess student computer application understandings and knowledge of procedural skills using technology. <i>(2 points)</i>	Do materials enhance and expand student understanding and knowledge of skills?	0 1 2
	3d. Materials are responsive to student input in a way that creates an individualized learning experience (i.e., the material adapts to the user based on what they do, or the material allows the user some flexibility or individual control during the learning	Do materials promote individualized learning experiences?	0 1 2

	experience). (2 points)		
	3e. Interactive material is purposeful and directly related to learning. (2 points)	Is the material directly related to learning?	0 1 2
	3f. Materials are well-designed, easy to use, and encourage learner use. (2 points)	Are the materials well-designed and easy to use? Do the materials encourage learner use?	0 1 2
	3g. Materials are accessible from within a Learning Management System (LMS). (2 points)	Can materials be easily shared within a Learning Management System?	0 1 2
	3h. Materials meet all district privacy-data security requirements. (2 points)	Do materials meet privacy-data security requirements for schools?	0 1 2
	3i. Non-digital versions of materials are available for students who do not have off-campus access to digital materials. (2 points)	Are there non-digital versions of all materials that students can use when off-campus and away from internet access?	0 1 2

Gateway 3 Points AVAILABLE	Gateway 3 Points ACHIEVED	GATEWAY 3 RATING
18	Sum of Criterion 3.1 points	<input type="checkbox"/> Meets (score of 14-18 points) <input type="checkbox"/> Partially Meets (score of 10-13 points) <input type="checkbox"/> Does Not Meet (score of 0-9 points)
GATEWAY COMMENTS		

TOTAL SCORE (Gateway 1, 2, and 3)			
GATEWAY 1	GATEWAY 2	GATEWAY 3	GRAND TOTAL
of 24 points	of 26 points	of 18 points	of 68 points
RATING	RATING	RATING	

ADDITIONAL NOTES