

Instructional Materials Evaluation for Alignment: Guidelines for Textbook
 Subject: Science K-12

Section 1: Alignment to Standards – This is a requirement for submission.

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | COMMENTS WITH EXAMPLES |
|---|---|------------------------|------------------------|
| <p>(1) ALIGNMENT AND ACCURACY Materials adequately address the <i>Mississippi College- and Career-Readiness Standards (MS CCRS) for Science</i>. Explaining phenomenon and designing solutions drive student learning.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | 1a) The majority of the <i>MS CCRS for Science</i> performance objectives are incorporated, to the full depth of the standards. | | |
| | 1b) Observing and explaining phenomenon and designing solutions provide the purpose and opportunity for students to engage in learning. | | |
| | 1c) Science content is accurate , reflecting the most current and widely accepted explanations and research. | | |
| | 1d) Engineering Design Processes are addressed especially in grades K-8. | | |
| <p>(2) THREE-DIMENSIONAL LEARNING Students have multiple opportunities throughout each unit to develop an understanding and demonstrate application of the three dimensions.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | 2a) Materials include and emphasize the science and engineering practices and crosscutting concepts that integrate into the disciplinary core ideas for the <i>MS CCRS for Science</i> . | | |
| | 2b) There is variability in the tasks that students are asked to accomplish. The material requires students to apply and demonstrate their understanding in multiple ways. | | |
| <p>(3) DISCIPLINARY LITERACY Materials have students engage with authentic Sources and incorporate reading, writing, and communication skills to develop scientific literacy.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | 3a) 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. | | |
| | 3b) Materials address the necessity of using scientific evidence to support scientific ideas. | | |

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| | 3c) Students are offered connections with authentic sources that represent the language and style that is used and produced by scientists. Examples could include 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. | | |
| | 3d) Students have the opportunity to regularly engage in speaking and writing about scientific phenomena and engineering solutions. | | |
| <p>(4) LEARNING PROGRESSIONS Materials are coherent and provide natural connections from the disciplinary core ideas to other performance expectations including science and engineering practices, crosscutting concepts, engineering design processes, and compliments the major mathematics concepts from the <i>MS CCRS for Math</i>.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | 4a) The overall organization of the materials and the development of content skills and practices are coherent and support student mastery of the standards. The progression of learning is organized in a deliberate fashion to promote student understanding. | | |
| | 4b) Materials are presented in an engaging context that are related to real world experiences and situations. | | |
| | 4c) Students apply mathematical thinking when applicable. The math skills are appropriate for the grade level of the students. | | |

Section 2: Instructional Support, Usability, and Assessment

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| <p>(5) 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 experience to build scientific thinking.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>5a) There are separate teacher support materials to assist teachers:</p> <ul style="list-style-type: none"> • Organize and sequence effective learning experiences for students; • Utilize instructional materials to develop a variety of effective teaching strategies for student learning; • Utilize teacher’s use of science and engineering practices, inquiry, and cross-cutting concepts within the disciplinary core ideas; and • Incorporate reading, writing, and mathematical practices into lessons where appropriate. <p>These instructional support documents support the work teachers do by providing:</p> <ul style="list-style-type: none"> • Pertinent content background information; • Examples of student misconceptions; • Resources to assist and enhance instruction (electronic, web-based, software, etc.) • Materials and equipment needed along with maintenance and safe use’ • Technical support for the use of multi-media, equipment and technology resources. | | |
| | <p>5b) 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 comment student difficulties to meet standards, etc.).</p> | | |
| | <p>5c) Instructional materials are accessible to students including</p> <ul style="list-style-type: none"> • Varied learning ability/disabilities; | | |

| | <ul style="list-style-type: none"> • Special needs (e.g., auditory, visual, physical, speech, emotional); • English language proficiency; • Cultural differences; • Different learning styles; and • Gender. | | |
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| <p>(6) USABILITY Materials are easy to use, promote safety in the science classroom, and are viable for implementation given the length of a school year. The information is organized logically and presented clearly using multiple methods</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | 6a) The text provides clearly stated objectives for each lesson. It uses text features (e.g., titles, headings, subheadings, review questions, goals, objectives, space, print, grade appropriate type size, color) to enhance readability. | | |
| | 6b) 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 materials. | | |
| | 6c) The total amount of content is viable for a school year. | | |
| | 6d) The text incorporates a glossary, footnotes, recordings, pictures, and/or other features that aid students and teachers in using the book effectively. | | |
| | 6e) The text and supplemental materials employs a variety of reading levels and is grade/level appropriate . | | |
| | 6f) The text and supplemental materials provides ample materials that reinforce student learning through practice. | | |
| | 6g) All supplemental materials are aligned to the text content with a clear match to content. | | |
| | 6h) Supplemental materials provide a variety of resources for student learning activities (e.g., incorporating science journals/writing, cooperative group work, graphic organizers, etc.). | | |

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| <p>(7) 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.</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> | 7a) Multiple types of formative and summative assessments (performance-based tasks, questions, research, investigations, and projects) are embedded into the content materials and assess the learning targets. | | |
| | 7b) The assessment materials include embedded assessments that reflect a variety of knowledge levels. | | |
| | 7c) The assessment materials provide evaluation measures that supports differentiated learning activities. | | |
| | 7d) Scoring guidelines and rubrics align to performance expectations, and incorporate criteria that are specific, observable, and measurable. | | |