

Math Textbook Reviews:

Section 1, June 2014

Publisher: The Math Learning Center

Textbook Title: Bridges in Mathematics

Grade band: 3-5

| Focus Metrics | |
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| A. In any grade, materials are designed so teachers and students spend the large majority of their time on the major work of the grade, with the majority of major work introduced early in the year. | Yes |
| B. Topics from future grades are clearly identified as such in the materials and do not detract from focus | Yes |
| C. Topics from earlier grades are used to support grade-level work. Content from prior grades is clearly indicated as such. | Yes |
| D. The following topics are not introduced before the appropriate grade level: Gr. 8 - similarity, congruence, or geometric transformations; Gr. 7 - probability; Gr. 6 - statistical distributions and statistical association or trends; Gr. 4 - symmetry of shapes | Yes |
| Does this textbook meet the requirements for focus? | Yes |
| Justification/Notes: Grade 3- Major work involving multiplication/division is explicitly covered in 3 out of 8 units. Scope and sequence identifies standards from previous grade level. Grade 4- Major work involving fractions, place value, and multiplication are explicitly covered in 5 out of 8 units. Scope and sequence identifies standards from previous grade level. Grade 5- Major work involving fractions, place value, and multiplication/division are explicitly covered in 5 out of 8 units. Scope and sequence identifies standards from previous grade level. | |

Rigor Metrics

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| A. In the major work of the grade, the three aspects of rigor are given full attention: conceptual understanding, procedural fluency, and application. | Yes |
| B. High quality problems and questions designed to invite exploration and support conceptual understanding are included for content standards and clusters that explicitly call for it. A variety of conceptual problems enable students to connect mathematical ideas and representations, and transfer understandings to new situations. | Yes |
| C. The development of procedural fluency is robust for those standards that set explicit expectations for fluency. Sometimes problems are purely procedural, and none are based on non-mathematical tricks or mnemonics. | Yes |
| D. Students are given opportunity to apply mathematical knowledge and skills for standards that set a clear expectation for solving real-world problems. A variety of grade-level appropriate problems provide students the opportunity to apply mathematical models in a variety of contextual situations. | Yes |
| Does this textbook meet the requirements for rigor? | Yes |
| Justification/Notes: The program available to students does well with developing from introduction of concept, to procedural fluency and uses applications throughout. The amount of procedural fluency problems meets expectations. The organization of units into modules allows for targeted planning by the teacher. Rigor is embedded with integration of science within the mathematics. | |

Were both non-negotiables in Section I met? Yes

Optional Additional Comments from Reviewers: n/a

Math Textbook Reviews: Section 2

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| Alignment Metrics | |
|---|---|
| A. Materials connect the math practices to the content standards in meaningful and intentional ways, preferentially for the major work of the grade. The development of the practices is well-grounded in content and | 2 |

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| not in isolation. | |
| B. Material include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Problems and activities present opportunities for students to make use of and exhibit the practices as they work on content | 2 |
| C. Particular attention is given to MP3 - Construct viable arguments and critique the reasoning of others: Students are encourages to create and test mathematical arguments, make generalizations and provide justifications, particularly in standards that explicitly call for it, in a manner of reasoning appropriate to the grade level. | 2 |
| D. Particular attention is given to MP4 - Model with mathematics: Students should be given opportunities to apply mathematics learned in novel situations, with an appropriate tradeoff between the complexity and novelty of the problem and the newness of the content they are asked to use. Modeling problems should draw heavily from major work of the grade level or securely-held content, integrated across multiple domains/clusters where appropriate. | 2 |

| Coherence Metrics | |
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| A. Connections are made within a grade between clusters and domains, where these connections are appropriate and natural, as set forth by the Standards (e.g., area models to multiplication in grade 3). | 2 |
| B. For materials in a series, grade level progressions reflect the progressions as seen in the Standards, including the development of the practices. These progression connections are clearly indicated in the materials. Any discrepancies in content progressions enhance the required learning in each grade and are clearly aimed at helping students meet the Standards as written. | 2 |

| Usability Metrics | |
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| A. Materials support teachers in ways such as the following: planning (including ideas for pacing), introducing lessons, assessment types, vocabulary. | 2 |
| B. Materials are clear and easy to read for students, teachers, parents. The | 1 |

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| design and graphics do not distract from the mathematics. | |
| C. Materials include supports for all learners, e.g., EL, students who are below grade level, advanced students. | 2 |

| Sensitivity | |
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| Please use the space below to note any concerns about sensitivity with this material. | n/a |

Other Comments:

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| Alignment |
| The materials connect to math practices by aligning content to Common Core State Standards for support of student learning as evidenced in text. (A) |
| The lessons, modules, and materials regularly provide visual models and encourage the use of manipulatives. The models promote conceptual understanding and student engagement. (B) |
| |
| Mathematical practice 3, constructing viable arguments, is included in the Math Forums portion of the text. Students are given opportunities to discuss solution paths and critique others' reasoning. Additionally, question formats are open ended requiring an explanation. (C.i.) |
| Mathematical practice 4, modeling with mathematics, is evidenced by the use of visual models; including area models, linear representations, vocabulary cards, etc. Opportunities for students to model are abundant in the fraction modules, which are part of the major work of the grade. (C.ii) |
| Coherence |
| Unit modules include lessons with connections to other standards and previous learning. The concepts within the unit move from basic to complex. (A) |
| The scope and sequence provided identifies progressions from previous grade levels. (B) |
| Usability |
| A scope and sequence is provided for ease with planning. Modules include suggested pacing for lessons. (A) |

Although this text has an abundance of materials and resources, the large number of binders for each grade level may deter users due to usability issues. (B)

The text includes free online materials for Spanish learners. In addition, home connections are provided for teachers to share with parents. (C)

