

Mathematics High-Value Action Tool

Title of Resource: Math Sense 2, Focus on Problem Solving

Source: New Readers Press

Publication Date: 2014

Evaluation Date: 2017

Determine the high-value actions needed to fill gaps for the dimensions that make up each criterion.

Identify the high-value action(s) related to each criterion that will strengthen the alignment of the resource to the CCRS.

Criterion #1—Focus: Does the resource focus strongly where the standards focus, including relevant Standards for Mathematical Practice?

<p>Dimension 1.1</p> <p>Major Work of the Level (MWOTL): <i>Most of the resource is focused on the most critical concepts for that level. (Support document: CCR Content Progressions or Major Works of the Level)</i></p>	<p>Dimension 1.2</p> <p>Standards for Mathematical Practice: <i>Each unit meaningfully connects mathematical content with the Standards for Mathematical Practice. (Support document: Standards for Mathematical Practice)</i></p>
<p>Resource Criterion Rating¹: Strong <input type="checkbox"/> Modifications Necessary x Weak <input type="checkbox"/></p>	
<p>High-value actions needed to fill the gaps:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify supplemental resources to address MWOTLs not well represented by the evaluated resource. <input type="checkbox"/> Supplement existing problems with additional on-level work tied to the MWOTL. <input type="checkbox"/> -X- Identify and add Standards for Mathematical Practice that are central to a unit (or reduce the number that are addressed) and include a description of how they are related. <input type="checkbox"/> -X- Modify or add student tasks or activities to help support the development of the Standards for Mathematical Practice. <input type="checkbox"/> Other: <input type="checkbox"/> Additional notes on above actions: Although it addresses the MWOTL and the supporting standards, it is lacking the inclusion or consideration for the Standards of Mathematical Practice. For Instance, little if any, consideration or opportunity is paid to both the need to reason abstractly or construct viable arguments and critique the reasoning of others. Questioning by an instructor, or additional material, could be included to provide the practice to concepts. For example, after studying or presenting concepts such as absolute value or signed numbers, students could be asked to come up with their own examples of said principles, and then discuss examples offered or ask the student offering an example to explain or defend why it is a real life application. 	

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Criterion #2—Rigor: Does the resource pursue conceptual understanding, procedural skill and fluency, and application with equal intensity?

<p>Dimension 2.1</p> <p>Conceptual Understanding: The resource <i>regularly</i> develops students’ conceptual understanding through tasks, problems, questions, multiple representations, and opportunities for students to <i>write</i> and <i>speak</i> about their understanding.</p>	<p>Dimension 2.2</p> <p>Procedural Skill and Fluency: The resource <i>regularly</i> asks students to perform calculations and use mathematical procedures quickly and accurately.</p>	<p>Dimension 2.3</p> <p>Application: The resource <i>regularly</i> provides opportunities for students to independently apply mathematical concepts in real-world situations and solve challenging problems with persistence, choosing and applying an appropriate model or strategy to new situations.</p>
<p>Resource Criterion Rating¹: Strong <input type="checkbox"/> Modifications Necessary <input type="checkbox"/> Weak x</p> <p>High-value actions needed to fill the gaps:</p> <ul style="list-style-type: none"> <input type="checkbox"/> -X- Add problems or tasks that are good matches to the standards targeted in lesson(s) or units and that focus on the following areas: <ul style="list-style-type: none"> <input type="checkbox"/> -X- Conceptual understanding of the MWOTL <input type="checkbox"/> Procedural and computational practice <input type="checkbox"/> -X- Challenging application problems <input type="checkbox"/> -X- Add high-level discussion questions and instructions targeted toward building conceptual understanding. <input type="checkbox"/> -X- Add opportunities for students to build the capacity to complete mathematical procedures quickly and accurately. <input type="checkbox"/> -X- Add authentic real-world application problems and tasks. <input type="checkbox"/> Other: <input type="checkbox"/> Additional notes on above actions: Ample opportunity to develop fluency or independently make connections to real life applications is lacking. Book seems to be heavily “rule” based, and is lacking an opportunity to develop conceptual understanding. 		

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Criterion #3—Coherence: Does the resource design learning around coherent progressions between levels and within the level?

<p>Dimension 3.1</p> <p>Coherence <u>Across</u> Levels: The resource <i>regularly</i> relates on-level concepts to knowledge from previous levels and to future learning. <i>(Support document: CCR Content Progressions)</i></p>	<p>Dimension 3.2</p> <p>Coherence <u>Within</u> a Level: Where appropriate, the resource connects two or more standards within a progression, or two or more progressions within a level. <i>(Support document: CCR Content Progressions)</i></p>
<p>Resource Criterion Rating¹: Strong <input type="checkbox"/> Modifications Necessary x Weak <input type="checkbox"/></p> <p>High-value actions needed to fill the gaps:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Add to lesson(s) or units knowledge and skills from prior levels needed to understand content that students are currently learning. <input checked="" type="checkbox"/> -X- Identify “as review” student tasks, activities, or assessment items included in units that reference learning at previous levels. <input checked="" type="checkbox"/> -X- Identify opportunities where level-specific content supports future learning. <input type="checkbox"/> Exclude student activities or assessment items addressing learning at subsequent levels. <input type="checkbox"/> Identify student activities or assessment at subsequent levels as an extension of work at the current level. <input type="checkbox"/> Rearrange units so the sequence of knowledge and skills learned in the resource has a natural and logical flow to support student learning. <input type="checkbox"/> Other: <input type="checkbox"/> Additional notes on above actions: Book does offer some review, and mention topics will be used throughout the book, but is lacking clear connections between topics through and across levels. Additional actions/resources would be needed to help students see and build these connections. 	

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Criterion #4—Structure, Support and Assessment: Does the resource provide structure and support for standards-aligned instruction and assessment?

<p>Dimension 4.1</p> <p>Instructional Support: The resource is responsive to varied student learning needs.</p>	<p>Dimension 4.2</p> <p>Assessment: The resource <i>regularly</i> provides opportunities to assess whether students are mastering standards-based content and skills.</p>
<p>Resource Criterion Rating¹: Strong <input type="checkbox"/> Modifications Necessary <input type="checkbox"/> Weak <input checked="" type="checkbox"/></p> <p>High-value actions needed to fill the gaps:</p> <ul style="list-style-type: none"> <input type="checkbox"/> -X- Identify opportunities and resources for scaffolding, differentiation, intervention and support for students with learning challenges or are struggling to master content. <input type="checkbox"/> -X- Identify opportunities and resources for extension and support for students who already know the content. <input type="checkbox"/> Identify content specific vocabulary and other language support needs and develop appropriate scaffolds. <input type="checkbox"/> Develop standards-aligned assessments and rubrics or assessment guidelines that unbiasedly measure a student’s ability to demonstrate targeted standards. <input type="checkbox"/> -X- Incorporate varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures (for curricular units and published resources only). <input type="checkbox"/> -X- Provide relevant contexts for learners such as career, community, or academic subjects for the purposes of building knowledge. <input type="checkbox"/> Other: <input type="checkbox"/> Additional notes on above actions: This resource does not identify ways to differentiate instruction for different learners. It also lacks an opportunity for assessments, with the exception of a short unit review. Additional resources (assessments, rubrics, etc) would be needed to better measure a student’s mastery of the standard. 	

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