

Mathematics High-Value Action Tool

Title of Resource: Number Power Fractions, Decimals, and Percents

Source/Publisher: Contemporary/McGraw Hill Date of Publication: 2011 Evaluation Date: 3/15/18

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. Utilize the “additional notes” section to provide information that would be useful for colleagues considering the resource, including suggestions for supplements to strengthen CCRS alignment.

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 Rating: Strong <input type="checkbox"/> Modifications Necessary <input checked="" type="checkbox"/> Weak <input type="checkbox"/></p>	
<p>High-value actions needed to fill the gaps:</p> <ul style="list-style-type: none"> • Identify supplemental resources to address MWOTLs not well represented by the evaluated resource. <i>I would add activities to the lesson that would focus on the math practices targeted.</i> • Supplement existing problems with additional on-level work tied to the MWOTL. <i>It is necessary to tie in prior learning and future learning to these lessons. This can be done with an added activity at the beginning and the end of each lesson.</i> • 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. <i>The book focuses somewhat on MP.1, MP.4 and MP.6.</i> • Modify or add student tasks or activities to help support the development of the Standards for Mathematical Practice. <i>The lessons would be stronger if students had activities that would allow them to reason abstractly and quantitatively or model a problem.</i> • Other: <i>This book is best used to supplement a lesson. You can use the lesson and add to it to make it more meaningful.</i> • Additional notes on above actions: <i>The lessons address MWOTLs, but often don't fully address the MWOTL.</i> 	

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 Rating: Strong <input type="checkbox"/> Modifications Necessary <input checked="" type="checkbox"/> Weak <input type="checkbox"/></p> <p>High-value actions needed to fill the gaps:</p> <ul style="list-style-type: none"> • 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"> • Conceptual understanding of the MWOTL <i>The lessons do not allow/demonstrate multiple ways to solving a problem</i> • Procedural and computational practice • Challenging application problems <i>Most application problems are not complex. They require one step to solve.</i> • Add high-level discussion questions and instructions targeted toward building conceptual understanding. • Add opportunities for students to build the capacity to complete mathematical procedures quickly and accurately. • Add authentic real-world application problems and tasks. • Other: <ul style="list-style-type: none"> • Additional notes on above actions: <i>I would include more activities with scaffolding and possibly, have them create their own real-world application problem.</i> • <i>The application problems include problems that cross content areas and careers, especially in the “Using Number Power” section in the back of the book.</i> 		

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 Rating: 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"> • Add to lesson(s) or units knowledge and skills from prior levels needed to understand content that students are currently learning. • Identify “as review” student tasks, activities, or assessment items included in units that reference learning at previous levels. • Identify opportunities where level-specific content supports future learning. • Exclude student activities or assessment items addressing learning at subsequent levels. • Identify student activities or assessment at subsequent levels as an extension of work at the current level. • Rearrange units so the sequence of knowledge and skills learned in the resource has a natural and logical flow to support student learning. • Other: <p>• Additional notes on above actions: <i>This book uses step by step skill building. There is no review or incorporation of prior knowledge built into the lessons and doesn't identify why the activities are important or how they support future learning. All of this would need to be added to make a lesson more meaningful to learners.</i></p>	

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 Rating: 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"> • Identify opportunities and resources for scaffolding, differentiation, intervention and support for students with learning challenges or are struggling to master content. • Identify opportunities and resources for extension and support for students who already know the content. • Identify content specific vocabulary and other language support needs and develop appropriate scaffolds. • Develop standards-aligned assessments and rubrics or assessment guidelines that unbiasedly measure a student’s ability to demonstrate targeted standards. • Incorporate varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures (for curricular units and published resources only). • Provide relevant contexts for learners such as career, community, or academic subjects for the purposes of building knowledge. • Other: <p>• Additional notes on above actions: <i>The lessons in the book need a large lesson up lift. Every lesson would need additions in all areas to better align them to the CCRS. I would provide vocabulary, more scaffolding activities: including video’s, guided activities, paired activities or online practice. There is a pre- and post- assessment included for each unit, but the lessons do not build in any other assessments for students/teachers to track progress. It is necessary to build in an assessment for each lesson to show evidence that the students understand the concept before moving on. There are application problems that are OK for “real world” application however, it may be beneficial to include more contexts as listed above to build knowledge. The lessons don’t include any accommodations for students with learning difficulties and there aren’t any challenge activities for students who already have a grasp of the content or are advanced.</i></p>	