

Mathematics High-Value Action Tool

Title of Resource: Introductory Algebra an Applied Approach, 7th Edition Source/Publisher: Houghton Mifflin
 ISBN: 978-0-547-06117-7 Date of Publication: 2009 Evaluation Date: March 12, 2018

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?

Dimension 1.1 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>	Dimension 1.2 Standards for Mathematical Practice: <i>Each unit meaningfully connects mathematical content with the Standards for Mathematical Practice. (Support document: Standards for Mathematical Practice)</i>
Resource Criterion Rating: Strong <input checked="" type="checkbox"/> Modifications Necessary <input type="checkbox"/> Weak <input type="checkbox"/>	
High-value actions needed to fill the gaps: <ul style="list-style-type: none"> • Identify supplemental resources to address MWOTLs not well represented by the evaluated resource. • Supplement existing problems with additional on-level work tied to the MWOTL. • 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. • Modify or add student tasks or activities to help support the development of the Standards for Mathematical Practice. • Other: 	
• Additional notes on above actions: This book covers most of the MWOTLs and supporting standards for Mathematics Levels C and D. It also covers a good number, not all, of the MWOTLs for Level E. The book does not claim to be CCRS aligned, so the specific CCRS standards are not spelled out for each chapter. It is easy to assign a standard(s) to each chapter using the CCRS Content Progression for Mathematics. The book doesn't specifically state Standards for Mathematical Practice that are being worked on, however, each chapter contains a “You Try It” (section where students need to write a strategy for solving problems), “Applying the Concept”, “Focus on Problem Solving”, and “Projects and Group Activities” section that engage students in them.	

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>
---	--	--

Resource Criterion Rating: Strong **X** Modifications Necessary Weak

High-value actions needed to fill the gaps:

- Add problems or tasks that are good matches to the standards targeted in lesson(s) or units and that focus on the following areas:
 - Conceptual understanding of the MWOTL **Each chapter begins with an explanation of the concept and has good explanations and examples in the margins like the “Take Note” comments**
 - Procedural and computational practice **“How To” sections in each chapter with side notes about procedures**
 - Challenging application problems **good real-world application problems (both occupational and from other content areas)**
- **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. **“Objective A” in most sections provides drill.**
- Add authentic real-world application problems and tasks. **Each section has a good number of application problems that cross content areas and are relatable to Adult Education students.**
- Other:
- Additional notes on above actions:

Most chapters provide a large section of drill followed by application and more challenging application/thought problems.

The lesson plan for the day would need to add an introduction and add some discussion questions into the lesson.

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 X Weak <input 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. The side comments address previous learning that is needed to solve current problems. • Identify “as review” student tasks, activities, or assessment items included in units that reference learning at previous levels. Chapter summaries with “Key Words”, “Essential Rules and Procedures” and “Review Exercises” and “Chapter Tests”. • 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. The progression of the chapters makes sense. • Other: • Additional notes on above actions: The book does a good job reinforcing previous learning but could do better at bridging activities to future learning. Some discussion and/or activities need to be added to the lesson plan to show why the skill is important and/or how it relates to future learning. 	

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 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 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. <i>The book does a good job introducing vocabulary and does allow for different ways of solving a problem.</i> • 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). <i>Each chapter has a “Prep Test”, “Review Exercises” and a “Chapter Test”. Each section includes “You Try It” sections where students can practice a skill and teachers can check student understanding.</i> • Provide relevant contexts for learners such as career, community, or academic subjects for the purposes of building knowledge. <i>The book provides problems that span many content areas and careers.</i> • Other: • Additional notes on above actions: <i>Teachers will need to add supports for students with special needs and may need to add content/activities for advanced students.</i> <p><i>Assessments do not specifically show mastery of a CCRS standard since the book does not claim to be aligned.</i></p>	