

Mathematics High-Value Action Tool

Title of Resource: Pre-HSE MATH 2 Algebraic Thinking, Data Analysis, and Probability

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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. • 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: <p>• Additional notes on above actions:</p> <p style="margin-top: 20px;">There is some focus on the MWOTLs for levels C and D, but some MWOTLs are only partially addressed. There is some evidence of standards for mathematical practice, especially MP1, MP2, MP4, and MP7, but modifications would be necessary to fully implement/develop them in the lessons.</p>	

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 • Procedural and computational practice • Challenging application problems • 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: <p>• Additional notes on above actions:</p> <p>Supplemental resources would be needed for students to attain a solid conceptual understanding and the ability to apply the math they know to solve problems inside and outside the math classroom. More math drills would need to be added for fluency and students to gain a strong foundation. Some scaffolding will need to be built in. Supplemental problems would need to be added to bring in cross-content application and more real-world problems relevant to the lives of Adult Education students.</p>		

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 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 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: • Additional notes on above actions: <p>There is some coherence across the levels, but more review would be necessary to truly build coherence across the levels. The lessons do not indicate what prior knowledge is needed to complete each lesson, so teachers would need to review each lesson and review the vocabulary and skills needed to complete each lesson. The best example of coherence is found in the visual literacy lesson located near the end of the resource. The order of the lessons doesn’t always make the most sense. The lessons do not bridge from one to the other, so some may need to be rearranged or modifications would be required.</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 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. • 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:</p> <p>There is limited instruction provided, so additional instruction is needed. There is a Posttest and Posttest Diagnostic Chart at the end. Formative Assessment would need to be incorporated. An “exit slip” could be added at the end of each lesson to determine the students’ understanding or the teacher could do quick checks during the lesson such as “thumbs up/down” or “red/green (stop/go) cards</p> <p>The lessons don’t do a good job of accounting for varied student abilities/needs. Some supports would need to be built into the lessons for struggling students and more questions/tasks may need to be added for advanced students or students whom already have some experience with the content.</p> <p>The curriculum could include more real-world problems that bring in other content areas and are more relevant to the lives of Adult Education students.</p>	