

# High-Quality Assignments for English Learners Rubric: Mathematics



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For all strands, “**Strong**” means the evidence is present most or all of the time, or that the evidence is strong; “**Moderate**” means the evidence is present at least half of the time, or that the evidence is moderately strong; “**Weak**” means the evidence is at least minimally present but is of poor quality; and “**None**” means that the evidence is absent.

## 1. Alignment with the grade-level content and practice standards

Evidence	3	2	1	0
<p><b>1a.</b> Tasks focus on <b>grade-level work</b> as specified in math content and practice standards.</p> <p><i>Guidance: See <a href="#">CCSS</a> for mathematics expectations for each grade.</i></p>	_Strong	_Moderate	_Weak	_None
<p><b>1b.</b> <b>Assessments</b> are presented in ways that are accessible to learners.</p> <p><i>Guidance: “Accessible” means assessment directions and grading criteria are presented clearly and explicitly. It is clear what students are being asked to do.</i></p>	_Strong	_Moderate	_Weak	_None
<p><b>1c.</b> Tasks connect math <b>practices</b> with math <b>content</b>.</p>	_Strong	_Moderate	_Weak	_None

## 2. Rigor

Evidence	3	2	1	0
<p><b>2a.</b> Tasks focus on the <b>development</b> of <b>conceptual mathematical understanding</b>.</p>	_Strong	_Moderate	_Weak	_None
<p><b>2b.</b> Tasks focus on the <b>building</b> of <b>procedural fluency</b>.</p>	_Strong	_Moderate	_Weak	_None

2c. Tasks focus on the <b>application</b> of math concepts OR skills to <b>real-world situations</b> .	_Strong	_Moderate	_Weak	_None
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### 3. Cognitive Demand

Evidence	3	2	1	0
<p>3a. The assignment requires high levels of cognitive demand, aligning with <b>Strategic Thinking (DOK 3)</b> or <b>Research and Extended Thinking (DOK 4)</b> in Norman L. Webb's Depth of Knowledge Levels.</p> <p><i>More details are in the <a href="#">Further Guidance</a> section.</i></p>	_Strong	_Moderate	_Weak	_None

### 4. Intentional Scaffolds and Opportunities for ELD

Evidence	3	2	1	0
<p>4a. Scaffolds support learners to access grade level content <b>independently</b>.</p> <p><i>Guidance: Scaffolds may be provided in English or the home language. Pay close attention to the language of the scaffolds and its appropriateness for the intended students. Example scaffolds are in the <a href="#">Further Guidance</a> section.</i></p>	_Strong	_Moderate	_Weak	_None
<p>4b. Assignment helps learners to <b>connect prior knowledge or home language skills</b> to build understanding of new concepts.</p>	_Strong	_Moderate	_Weak	_None
<p>4c. Scaffolds support learners to <b>pay close attention to target language</b> during planned opportunities for <b>discussing, reasoning, problem solving, justifying, OR explaining</b>.</p>	_Strong	_Moderate	_Weak	_None

<p><b>4d.</b> Scaffolds include structures or procedures that engage learners in <b>metacognitive thinking, negotiating,</b> or <b>analyzing</b> in collaboration with peers.</p>	_Strong	_Moderate	_Weak	_None
<p><b>4e.</b> Assignment contains <b>clear expectations</b> for mathematical reasoning through <b>written language use</b>.</p> <p><i><b>Guidance:</b> Students are guided to be strategic and purposeful in their choice of words and use of written language in order to form and demonstrate meaning. Task or question prompts may suggest functional uses of language (e.g., Describe, List, Tabulate, Generate questions, Respond with complete sentences, Show your graph, Write a formula, Diagram, etc.).</i></p>	_Strong	_Moderate	_Weak	_None
<p><b>4f.</b> Assignment contains <b>clear expectations</b> for mathematical reasoning through <b>speaking</b>.</p>	_Strong	_Moderate	_Weak	_None
<p><b>4g.</b> Assignment contains <b>clear expectations</b> for mathematical reasoning through <b>listening</b>.</p>	_Strong	_Moderate	_Weak	_None
<p><b>4h.</b> Assignment <b>specifies the language</b> students should use for communication (English, home language, or student’s choice).</p>				

## 5. Learner Autonomy and Choice

Evidence	3	2	1	0
<p><b>5a.</b> Assignment provides learners with <b>ample choice in content</b>. Content can include text, optional mini-lessons, home language, and more.</p>	_Strong	_Moderate	_Weak	_None
<p><b>5b.</b> Assignment provides learners with <b>ample choice in product</b>.</p> <p><i>Product refers to how students present their final thinking.</i></p>	_Strong	_Moderate	_Weak	_None
<p><b>5c.</b> Assignment provides learners with <b>ample choice in process</b>.</p> <p><i>Processes can include format of engagement or expression, medium (e.g., audio vs. written text), and working with peers or alone.</i></p>	_Strong	_Moderate	_Weak	_None
<p><b>5d.</b> Assignment prompts learners' <b>metacognitive thinking</b> about any of the following: 1) their engagement in the task, 2) what they learned, and/or 3) where they experienced difficulties.</p>	_Strong	_Moderate	_Weak	_None
<p><b>5e.</b> Assignment prompts learners' <b>metalinguistic thinking</b> about how English language structures relate to their home language.</p>	_Strong	_Moderate	_Weak	_None

# Mathematics Rubric Guidance

## Scoring guidelines

For all items, raters should score the assignment holistically. In other words, we are looking for a rating of quality rather than quantity. Whether the assignment has multiple tasks or one main task, raters should evaluate the quality of the assignment as a whole

## Cognitive Demand

This row is based on Norman A. Webb's Degrees of Knowledge.<sup>1</sup> The examples below are from Education Trust's Math Assignment Analysis Guide.<sup>2</sup> Keep in mind that multiple choice is not always low in cognitive demand; be sure to look at what kind of thinking is being demanded of the student.

1. Recall/reproduction
  - a. Recall a fact, term, principle, concept
  - b. Perform a routine procedure or a simple algorithm; or apply a formula
2. Basic application of skills
  - a. Use information
  - b. Apply conceptual knowledge
  - c. Select appropriate procedures for a task
  - d. Complete two or more steps with decision points along the way
  - e. Complete routine problems
  - f. Organize/display data
  - g. Interpret/use sample data
3. Strategic thinking
  - a. Requires reasoning or developing a plan or sequence of steps to approach the problem; requires some decision-making and justification
  - b. Abstract, complex, or nonroutine
  - c. There is often more than one possible answer
4. Research and extended thinking

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<sup>1</sup> Webb, Norman L., and others. "Web Alignment Tool." July 24, 2005. Wisconsin Center of Educational Research. University of Wisconsin-Madison. [https://www.stancoe.org/sites/default/files/instructional-support-services/resources/california-state-standards/CSS\\_dok\\_chart.pdf](https://www.stancoe.org/sites/default/files/instructional-support-services/resources/california-state-standards/CSS_dok_chart.pdf)

<sup>2</sup> "Math Assignment Analysis Guide." April 2018. The Education Trust. <https://edtrust.org/wp-content/uploads/2014/09/Math-Assignment-Analysis-Guide.FINAL-4-18.pdf>

- a. An investigation or application to the real world; requires time to research, problem solve, and process multiple conditions of the problem or task
- b. Requires nonroutine manipulations across disciplines/content areas/multiple sources

## Intentional Scaffolds and Opportunities for ELD

Scaffolds may be provided in the text of the task and/or may be provided alongside the task. Examples of scaffolds to look for:

1. Translation and translanguaging<sup>3</sup> opportunities
2. Modeling
3. Pre-teaching vocabulary (Note: This in isolation is not considered a Common Core–aligned strategy. Pre-teaching should only occur for words that cannot be defined through context clues.)
4. Directions to interact with peers and teacher
5. Developing metacognition: look for questions that guide learners to self-assess performance, develop personal learning strategies, etc.
6. Graphic organizers

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<sup>3</sup> “Translanguaging Resources.” CUNY-NYS Initiative on Emergent Bilinguals. <https://www.cuny-nysieb.org/>