

EQuIP Review Feedback



Lesson/Unit Name: Foundations of Multiplication and Division

Content Area: Mathematics

Grade Level: 2

Overall Rating:

E/I

Exemplar *if* Improved

Dimension I – Alignment to the Depth of the CCSS

<p><i>The lesson/unit aligns with the letter and spirit of the CCSS:</i></p> <ul style="list-style-type: none"> ✓ Targets a set of grade-level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning. ✓ Standards for Mathematical Practice that are central to the lesson are identified, handled in a grade-appropriate way, and well connected to the content being addressed. ✓ Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS. 	<p>The reviewed module (Module 2.6) does target a set of grade-level CCSS mathematics standards to the full depth of teaching and learning. Standards for Mathematical Practice are evident, and they are central to the lessons within the module. Some MPs (MP.3, MP.4, MP.7, and MP.8) were chosen to focus on, and these make sense and are appropriate given the conceptual context of the lessons. They also are explicitly connected to the content being taught through "notes" sections found in the individual lessons themselves. The SMPs are identified and used to enhance the mathematical content, but the materials often do not attend to the full meaning of each SMP. The materials are also coherent, following the progression of the standards. The materials include all three aspects of rigor and there is a balance between conceptual understanding, fluency and application, however the fluency aspect of the lessons feels too drill and kill in nature.</p>
<p>Rating: 3 – Meets most to all of the criteria in the dimension</p>	

Dimension II – Key Shifts the CCSS

<p><i>The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:</i></p> <ul style="list-style-type: none"> ❑ Focus: Lessons and units targeting the major work of the grade provide an especially in-depth treatment, with especially high expectations. Lessons and units targeting supporting work of the grade have visible connection to the major work of the grade and are sufficiently brief. Lessons and units do not hold students responsible for material from later grades. ✓ Coherence: The content develops through reasoning about the new concepts on the basis of previous understandings. Where appropriate, provides opportunities for students to connect knowledge and skills within or across clusters, domains and learning progressions. ✓ Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following: <ul style="list-style-type: none"> – Application: Provides opportunities for students to independently apply mathematical concepts in real-world situations and solve challenging problems with persistence, choosing and applying an 	<p>Module 2.6 deals with CCSS mathematical standards 2.OA.3, 2.OA.4, and 2.G.2, none of which are focus standards for second grade. Both 2.OA.3 and 2.OA.4 are supporting standards, and 2.G.2 is an additional standard. While it is entirely acceptable and appropriate to teach supporting and additional standards, especially to lay foundations for future work, these standards should be taught through brief units and lessons. The lessons do contain connections to 2.NBT.2 and 2.NBT.6, both of which are major work of second grade. However, the module is too extensive for supporting standards.</p> <p>The module does address coherence. In the overview, coherence is addressed by making connections to foundation standards 2.NBT.2 and 2.NBT.6 (place value, addition, and subtraction). Throughout the individual lessons, coherence is evident through the use of these foundation standards to introduce the concepts of making equal groups, making arrays, understanding properties of arrays and repeated addition, and identifying even/odd numbers. Coherence is also evident in the nature of the concept - it is being used to lay foundations for multiplication and division, third grade work.</p> <p>The balance of rigor that is found in Module 2.6 is appropriate for the work being done. The module is heavily focused on conceptual understanding, which is appropriate since it is introducing newer concepts as well as laying foundations for future work. There is a fluency practice at the beginning of each lesson, and some fluency activities throughout, as well as some application problems and activities within the lessons. The materials in this unit are consistent with the mathematical progression in the standards and</p>
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<p>appropriate model or strategy to new situations.</p> <ul style="list-style-type: none"> - Conceptual Understanding: Develops students' conceptual understanding through tasks, brief problems, questions, multiple representations and opportunities for students to write and speak about their understanding. - Procedural Skill and Fluency: Expects, supports and provides guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately. 	<p>students are offered extensive work with grade-level problems. Connections are made between clusters and domains where appropriate. Overall, the materials follow a coherent plan. The application problems could be improved by increasing the rigor and requiring students to choose and apply an appropriate model or strategy to new situations. The situations in the application problems will be familiar to most students.</p>
<p>Rating: 2 – Meets many of the criteria in the dimension</p>	

Dimension III – Instructional Supports

<p><i>The lesson/unit is responsive to varied student learning needs:</i></p> <ul style="list-style-type: none"> ✓ Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media. ✓ Uses and encourages precise and accurate mathematics, academic language, terminology and concrete or abstract representations (e.g., pictures, symbols, expressions, equations, graphics, models) in the discipline. ✓ Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking. ✓ Addresses instructional expectations and is easy to understand and use. ✓ Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners. <ul style="list-style-type: none"> - Supports diverse cultural and linguistic backgrounds, interests and styles. - Provides extra supports for students working below grade level. - Provides extensions for students with high interest or working above grade level. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ✓ Recommend and facilitate a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, pair-share). ✓ Gradually remove supports, requiring students to demonstrate their mathematical understanding independently. 	<p>The module has clear and sufficient guidance and is easy to use. The format of the lessons and activities allow it to be utilized by teachers of any experience level. There are guidelines for asking students questions, as well as possible student answers. There are also notes about possible misconceptions of students and how these can be addressed.</p> <p>Throughout each lesson, students are engaged in learning through thought-provoking relevant questions. These questions and the activities provide lead to a natural progression of learning the work. Support also includes differentiation of lessons for both struggling learners, as well as advanced learners.</p> <p>The UDL design of the lessons provides multiple opportunities for differentiation with the multiple means of expression, representation, action, etc. Within the differentiation suggestions teachers see opportunities to support struggling students while continuing to expect that students work on grade-level problems. Supporting for English language learners (ELLs) reflected high expectations for these students. Teacher notes include suggestions for enrichments for students to continue working within their grade level while deepening their understanding of the content.</p>
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<ul style="list-style-type: none"> ✓ Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time. ✓ Expect, support and provide guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately. 	
Rating: 3 – Meets most to all of the criteria in the dimension	

Dimension IV – Assessment

<p><i>The lesson/unit regularly assesses whether students are mastering standards-based content and skills:</i></p> <ul style="list-style-type: none"> ✓ Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS. ✓ Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts. ✓ Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance. <p><u><i>A unit or longer lesson should:</i></u></p> <ul style="list-style-type: none"> ✓ Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures. 	<p>Foundational standards are listed for the unit but there are no directions for using these standards to assess prior knowledge. Systematic ways to gather information about prior knowledge are lacking for this unit. Support for identifying and addressing common student errors and misconceptions are there but could be more specific. The materials do include opportunities for ongoing review and practice. Assessments are found throughout the module, and varied modes of assessment are utilized. There are ways in which teachers can observe for conceptual understanding and opportunities for students to independently demonstrate the targeted standards. Assessments are unbiased and grade-level appropriate. Rubrics and answer keys are found through the lessons and the module as a whole, thereby allowing teachers real-time ways of interpreting student performance. While it is noted that rubrics and answer keys are provided, they are not entirely provided for the formative assessments. This should be addressed in order to increase the rating in this domain. While the summative assessments include information on standards alignment and scoring rubrics, the formative assessments do not include this same information.</p>
Rating: 2 – Meets many of the criteria in the dimension	

Summary Comments

<p>Overall, the reviewed module has the ability to be an Exemplar. It contains many of the criteria in all four domains. The criteria of focus, and adding to the formative assessment piece are two ways in which the module's rating could become Exemplar, particularly with attention to the major work of second grade and attending to extensive teaching of supporting standards. A particular strength of the unit is the UDL text feature within the lessons that bring the attention to the teacher to think about differentiating the lesson. The unit is thorough in addressing the foundation of multiplication and does not only attend to the idea of repeated addition, but also addresses unitizing. One aspect that could be improved is the drill for fluency practice. It would be much more engaging for students to practice for fluency using games or similar activities.</p>

Rating Scales

Rating Scale for Dimensions I, II, III, IV:

3: Meets most to all of the criteria in the dimension

2: Meets many of the criteria in the dimension

1: Meets some of the criteria in the dimension

0: Does not meet the criteria in the dimension

Overall Rating for the Lesson/Unit:

E: Exemplar – Aligned and meets most to all of the criteria in dimensions II, III, IV **(total 11 – 12)**

E/I: Exemplar if Improved – Aligned and needs some improvement in one or more dimensions **(total 8 – 10)**

R: Revision Needed – Aligned partially and needs significant revision in one or more dimensions **(total 3 – 7)**

N: Not Ready to Review – Not aligned and does not meet criteria **(total 0 – 2)**

Rating Descriptors

Descriptors for Dimensions I, II, III, IV:

- 3: Exemplifies CCSS Quality** - meets the standard described by criteria in the dimension, as explained in criterion-based observations.
- 2: Approaching CCSS Quality** - meets many criteria but will benefit from revision in others, as suggested in criterion-based observations.
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- 1: Developing toward CCSS Quality** - needs significant revision, as suggested in criterion-based observations.
- 0: Not representing CCSS Quality** - does not address the criteria in the dimension.

Descriptor for Overall Ratings:

- E: Exemplifies CCSS Quality** – Aligned and exemplifies the quality standard and exemplifies most of the criteria across Dimensions II, III, IV of the rubric.
- E/I: Approaching CCSS Quality** – Aligned and exemplifies the quality standard in some dimensions but will benefit from some revision in others.
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- R: Developing toward CCSS Quality** – Aligned partially and approaches the quality standard in some dimensions and needs significant revision in others.
- N: Not representing CCSS Quality** – Not aligned and does not address criteria.