

EQuIP Review Feedback



Lesson/Unit Name: Addition, Subtraction and the Number Line

Content Area: Mathematics

Grade Level: 1

Overall Rating:

E

Exemplar

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>This unit targets: 1MD.2-Express the length of an object as a whole number of length units by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same size length units that span it with no gaps or overlaps. 1.OA.1-Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions e.g. by using objects, drawings and equations with a symbol for the unknown number to represent the problem. 1.OA.5- Relate counting to addition and subtraction. The unit is reaching the full depth of the standards by having students iterating units to measure and then adding and subtracting using the number line.</p> <p>The introduction to the unit explains that the students have been exposed to these standards in previous units and will be connecting their learning in this unit by putting the two standards together.</p> <p>The Standards for Mathematical Practices (SMPs) are central to the lessons. The SMPs are identified in each lesson and explained how the students will be engaging in the practice. The one SMP that is misaligned is #5. When engaging students in SMP 5, students need to be selecting the appropriate tool to meet this standard.</p> <p>This unit presents a balance of procedures and conceptual understanding. Procedurally, students are given time to practice using the number line so they are using it correctly. Conceptually, students are diving deep into understanding the meaning of the number line and how it allows students to solve problems.</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.	<p>The unit has great focus surrounding the major learning in first grade mathematics. Addition and Subtraction is essential learning in both the first grade curriculum and beyond. Measurement is also a major expectation throughout mathematics and this unit gives the students the support they need to be successful in future lessons. The lessons have an outstanding connection to the previous learned standards and they are clearly identified in the unit overview. The unit also makes note of how these standards connect to learning at the second grade level.</p> <p>The material presented allows students to think about ways to solve the problems and choose ways that make sense to them. It gives them the opportunities to transfer their knowledge between visual representations and operations. The students are not asked to write about their learning</p>
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<ul style="list-style-type: none"> ✓ 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 appropriate model or strategy to new situations. – 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>but are given multiple opportunities to discuss their thoughts with their peers and the teacher. A suggestion would be to provide opportunities for the students to write about their learning as both a way to process their understanding and for the teacher to determine understanding.</p>
<p>Rating: 3 – Meets most to all 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. 	<p>The unit is clear and easy to understand with sufficient support for teaching and learning. Students are expected to use correct academic vocabulary and precise mathematics throughout the unit. The problems are thought-provoking and will engage students’ productive struggle of mathematics.</p> <p>Each lesson provides instructional supports for students working below and above grade level. A suggestion for improvement would be to include differentiation for students from other linguistic backgrounds. A strength of the unit is each lesson has a space for possible student misconceptions. The whole group to partnering activities allow the students to learn through different means. The students are using models and answering questions about their learning.</p> <p>The unit contains a mix of instructional approaches including modeling, pairs, small group, whole group, and checks for understanding. The assessment on each lesson includes look-fors for the teacher. During the lesson, there are questions for the teacher to use.</p> <p>Students are allowed to gradually remove supports for themselves. In each lesson students are given the opportunity to self-assess if they need more help and stay on the carpet or go begin the task. Additionally, the lessons are built so the sequence of lessons gradually advances and deepens over</p>
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<ul style="list-style-type: none"> - Provides extra supports for students working below grade level. - Provides extensions for students with high interest or working above grade level. <p><u>A unit or longer lesson should:</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. ✓ 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. 	<p>the unit. Students are given support and expected to procedurally use number lines to solve problems by the end of the unit.</p>
<p>Rating: 3 – Meets most to all of the criteria in the dimension</p>	

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. <input type="checkbox"/> Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance. <p><u>A unit or longer lesson should:</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>The lessons plans are designed to elicit direct, observable evidence. The lessons provide support for teachers to identify student understanding and suggestions for how to support struggling learners. Each lesson has an exit ticket or teacher observation. The tasks are appropriate for the grade level and accessible to all students. A suggestion would be to provide small illustrations on the worksheet with the problems to represent what the students are measuring for struggling readers. For example, use a picture of a pencil, snake, rope, etc. to allow non fluent readers to access the same information as their peers.</p> <p>The exit tickets and final assessment do not have answer keys or scoring guidelines that provide sufficient guidance for interpreting student performance. It is suggested you include this piece to strengthen the unit.</p> <p>The unit uses formative, summative, and self-assessment measures. A strength of this unit is the use of self-assessment. Students are directed to decide if they need more help and stay on the carpet or if they are ready to begin doing the work for the day.</p>
<p>Rating: 2 – Meets many of the criteria in the dimension</p>	

Summary Comments

<p>The unit is very well designed for a first grade classroom. The lessons could be easily taught in the format they are in and students could easily have success demonstrating master of the standards.</p> <p>The overview of the unit sets the teacher up for a clear understanding of the standards that are being addressed and how they connect to previous and future learning. The overview also gives an outstanding explanation for how the unit is developing the students’ conceptual understanding of numbers as iterating units and moving from manipulating objects to showing these lengths on the number line.</p>
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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
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- 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**)
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- 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.