

EQulP Review Feedback



Lesson/Unit Name: Adding a Two-Digit Number and a One-Digit Number Using Ten Frames

Content Area: Mathematics

Grade Level: 1

Overall Rating:

E/I

Exemplar if Improved

Dimension I – Alignment to the Depth of the CCSS

The lesson/unit aligns with the letter and spirit of the CCSS:

- ✓ 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.

The standard identified as the focus of the lesson is 1.NBT.4. This lesson addresses only a portion of the standard and only has students use one strategy to address the concept. This is fine, however, it should be noted in some way that this lesson only partially addresses the standard. Connections are made to previous learning of the concept (single digit addition) and to the strategy (ten frames). Because this is a large standard and it will take several lessons to develop the skills and concepts, it would be helpful to make connections to what will come next (e.g., other strategies to explore the concept).

Several standards for mathematical practice are identified at the beginning of the lesson. Some of these may occur throughout the lesson. For example, students have the opportunity to construct viable arguments and critique the reasoning of others as they construct and share their own word problems. Students also model with mathematics and use tools strategically as they use the ten frames. It would be helpful to identify for the reader where these practices are being used within the lesson itself and to give students a chance to identify and reflect on them. The lesson states that children read these practices at the beginning of the lesson and implies that they have an understanding of what they look like in action. However, there is nothing in the lesson that shows where they are occurring and when students identify them.

The balance of conceptual understanding through the use of a real-world problem and discussion to building a procedure for solving the problem is done well.

Rating: 2 – Meets many of the criteria in the dimension

Dimension II – Key Shifts the CCSS

The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:

- ✓ **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

This lesson is part of the major work of the grade (adding within 100) and merits more than one lesson. While it obviously builds upon concepts and procedures students have already learned, it would be helpful to know what students will do with the ideas next--what are they building toward or how else will they be using what they are learning? The lesson briefly discusses how it could be adapted for lower and higher grades, but it would be more helpful to include the specific standard at those grades (K.NBT.1 and 2.NBT.7) from which this understanding builds and to which it will be applied in the future.

The lesson develops well from concrete to more abstract. There are no connections of knowledge and skills across clusters, domains, or learning progressions. Connections to adding and subtracting one digit numbers, counting, or other curriculum would strengthen the lesson.

<p>students to connect knowledge and skills within or across clusters, domains and learning progressions.</p> <p>✓ Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:</p> <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>Students get the opportunity to apply their understanding to developing problems of their own using the given tools and models. This exercise is open in that they get to choose numbers in which they feel comfortable working. They also get to explain their strategies with the class and with one another. The teacher calls on partners to explain their strategies for solving the duck problem using the ten frames (p. 3, #5). It might be made clearer that the step-by-step guidance from the teacher listed in the plan (p. 3, #6-#11) is to be given only if students are not able to do this through their own explanations.</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. 	<p>The directions for the lesson are clearly written. Because the time frame for the lesson is given as 50 minutes, it would be helpful to have some times for each section of the lesson. Also, it is unclear how the additional resources are to be used--during the lesson, after, at another time. Many websites are listed, but there is no guidance on how a teacher might use them.</p> <p>Though there is a long list of vocabulary at the beginning of the lesson, there is no guidance on how the words are used, addressed, or incorporated into the learning. There is a vocabulary checklist included, but again no direction or reference to it in the lesson plan. Students do have the opportunity within the lesson to give pictorial representations, equations, and sentences to describe their reasoning.</p> <p>This lesson offers opportunity for productive struggle as students are encouraged to explain their strategies and to create their own problems to solve. They also have to express their understanding in a variety of ways.</p> <p>There is little provision for differentiation, intervention, or support for a broad range of learners. While there is a section of differentiated learning cards listed, there is no direction given for their use and no connection to a diagnosis of which students need them. The lesson includes suggestions for modifying up or down for other grade levels, but this simply talks about how the ten frames might be used to teach concepts in kindergarten or second grade, not how to use them for students at varying levels in first grade. Instead of adapting up or down, how this could be scaled for below level learners and exceptional learners would be more helpful here.</p>
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<p>– Provides extensions for students with high interest or working above grade level.</p> <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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). <input type="checkbox"/> Gradually remove supports, requiring students to demonstrate their mathematical understanding independently. <input type="checkbox"/> Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time. <input type="checkbox"/> 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>Rating: 2 – Meets many 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"> <input type="checkbox"/> Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures. 	<p>Assessments are provided by way of exit slips, observations, and conversations. There is an answer key for the exit slips along with a "rubric.". The observations and conversations assessments consist of a list of look and listen fors. While these provide some guidance for assessment, some additional clarification is needed. The exit slip includes two problems. It is stated that the students must complete the first and may do the second if time allows. The second consists of a missing addend problem, which has not been addressed in this lesson. It is stated that the challenge question is used to inform future instruction, but it is not clear how this will occur if not all students have time to attempt or complete it. In other assessments, it might be helpful to explain more precisely what different levels of performance would look like. For example, what does it look like when a "sentence reasonably explains math reasoning". This would make it easier to connect the assessments to differentiation strategies such as the cards mentioned in the additional resources.</p>
<p>Rating: 2 – Meets many of the criteria in the dimension</p>	

Summary Comments

<p>This lesson does a good job of addressing one part of the standard for which it is intended. Clarifying that it is only intended to teach this part will help to narrow that focus. The lesson is well put together and easy to follow and understand. The core of the lesson is solid and offers opportunities for students to do the thinking, to share their strategies, and to build on prior understandings and procedures.</p> <p>This lesson could be improved by providing options for struggling or advanced students that are tightly connected to the lesson and to the students' performance on the assessments. To this end, the rubrics for the assessments could provide more guidance for what each level might look like and recommendations for students who are at each level.</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

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.

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.

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.