Lesson/Unit Name: The similarities between tens frames and tens/ones blocks when used to add a two-digit number and a one-digit number
Content Area: Mathematics
Grade Level: 1

Dimension I – Alignment to the Depth of the CCSS

<table>
<thead>
<tr>
<th>The lesson/unit aligns with the letter and spirit of the CCSS:</th>
<th>This lesson targets one part of 1st grade standard 1.NBT.C.4 and focuses on having students make connections between two different concrete, place-value based tools: tens frames and tens and ones blocks. This is the second lesson within a larger unit on place value and the depth is appropriate.</th>
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</thead>
<tbody>
<tr>
<td>✓ Targets a set of grade-level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning.</td>
<td>Six of the eight mathematical practices are listed at the beginning of the lesson but no description of how they are addressed or indication within the lesson of when they are addressed is given. Consider limiting the number of mathematical practice standards that are addressed and providing a clear indication of how they connect to the content. For example, you might indicate that Using Appropriate Tools Strategically and Attending to Precision are most relevant for this lesson, given the focus on describing the differences between the two strategies. You can then include for teachers how and why to incorporate those standards into their approach to this lesson.</td>
</tr>
<tr>
<td>☐ 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.</td>
<td>The conceptual understanding was appropriately addressed given the comparisons between the two tools.</td>
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<tr>
<td>✓ Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS.</td>
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</table>

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

Dimension II – Key Shifts the CCSS

<table>
<thead>
<tr>
<th>The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:</th>
<th>Focus: This lesson stayed completely focused on the standards-aligned objective for the lesson. The lesson built towards the objective clearly and directly.</th>
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</thead>
<tbody>
<tr>
<td>✓ 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.</td>
<td>Coherence: This lesson comes at the beginning of a unit. It should be noted that students are expected to be able to fluently compose tens with tens frames because the problems given in this lesson expect that from students right away. In addition, an explanation of why students are transitioning from tens frames to tens and ones blocks (to prepare to use hundreds blocks in the future) would be helpful to provide for teachers.</td>
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<tr>
<td>☐ 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.</td>
<td>Rigor: The purpose of this lesson is to transfer the conceptual understanding around place value from tens frames to tens and ones blocks. Students are required to speak about their understanding, but not to write about it (even though that is indicated as an objective). Students also have to use both tools to solve several different story problems, which focuses on the procedure.</td>
</tr>
<tr>
<td>✓ Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:</td>
<td></td>
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Overall Rating: E/I
Exemplar if Improved
- **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.

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

### Dimension III – Instructional Supports

**The lesson/unit is responsive to varied student learning needs:**

- 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.
  - 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.

**A unit or longer lesson should:**

- Recommend and facilitate a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including

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<th>Clear and sufficient guidance:</th>
<th>There is enough guidance to support student achievement of the lesson objectives (except for the writing objective, which was not addressed).</th>
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<tr>
<td>Precise and accurate mathematics:</td>
<td>A vocabulary list was provided. Appendix D, while not used in lesson 2, also indicates a clear focus on precise and accurate vocabulary which students would be expected to use during discussion. In addition, the sample language given is precise and accurate. Concrete representations are also used.</td>
</tr>
<tr>
<td>Productive struggle:</td>
<td>There is productive struggle directly related to the objective. For example, students are asked to &quot;prove&quot; that they have the same amount in both tools. They also need to describe the similarities and differences between the two tools. Consider adding in a time for students to write about these ideas.</td>
</tr>
<tr>
<td>Instructional expectations:</td>
<td>This lesson is easy to understand and use. It is clear what is expected of students and the teacher.</td>
</tr>
<tr>
<td>Scaffolding and differentiation:</td>
<td>Besides assigning students who finish early an extension problem or considering groupings, no other accommodations or differentiation was provided. Consider other ways to meet all students' needs, particularly to support students during the discussion.</td>
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</tbody>
</table>
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.

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

**Dimension IV – Assessment**

**The lesson/unit regularly assesses whether students are mastering standards-based content and skills:**

- 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.

**A unit or longer lesson should:**

- Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures.

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

**Summary Comments**

Dimension III was the strongest component of this lesson. It is very easy to understand, and what is expected of students and the teacher is clear.

Two recommendations for taking this lesson to the next level are:

1. Clarify 1-2 Standards of Mathematical Practice that are most integral to the lesson content and describe how they connect to and support the lesson content.

2. Clarify where this lesson fits into the unit and the year, including why students need to transition from tens frames to tens and ones blocks and the prerequisite knowledge students needed, both mathematical knowledge and skill in using the tools.
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.