Lesson/Unit Name: Area Architects  
Content Area: Mathematics  
Grade Level: 3

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>The standards addressed in the lesson (MAFS.3.MD.3.5; MAFS.3.MD.3.5a; MAFS.3.MD.3.5b; and MAFS.3.MD.3.6) were listed, but were a little hard to find. This is likely a CPALMS formatting issue.</th>
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<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>Having the practice standards embedded throughout the lesson is extremely helpful because teachers will know what to focus on and formatively assess (argument, representations, precise vocabulary) during each part of the lesson. Constructing viable arguments (MP.3) isn’t addressed as rigorously in this lesson as modeling with mathematics (MP4) and precision (MP6). Likely it will be addressed in greater depth later in the unit when students have opportunities to critique at a deeper level.</td>
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<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>Students have many opportunities to build understanding of the concept of area as well as procedural skills such as how to physically measure area. The concept of scale is built well here, although it is not included as an objective. It is certainly apt for the real-world context of the problem and lays the foundation for future work.</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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Rating: 3 – Meets most to all of the criteria in the dimension

Dimension II – Key Shifts the CCSS

<table>
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<tr>
<th>The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:</th>
<th>The lesson is focused on building the concept of area and how it is measured, which is a newly introduced concept in third grade. The focus is appropriate for an introductory lesson.</th>
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<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>A pre-assessment is used to determine what students already know and it ties the lesson to previous learning (basic plane figures, counting squares in arrays, ordering numbers, basic measurement units). The lesson works from simpler to more difficult tasks and toward less and less support. The lesson is first in a series of lessons about area.</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>In this lesson, students are challenged to apply mathematics in a real world context throughout the lesson in a way that could apply to students’ lives. Students have opportunities within the lesson to complete tasks with partners. There are expectations that students share thinking with a partner and with other groups. They must also write briefly about their understanding on the summative assessment. The lesson begins with a rather closed task of determining the area of a given room or rooms printed on a grid. The main goal being to establish a definition of area and a procedure for finding it. The next activity also begins with a closed task of choosing a single room to model, but then allows students to move to a more open task of making other rooms with the same area but different shapes. While many of the activities throughout the lesson appear somewhat closed, the fact that it is an introductory lesson must be taken into account. The lesson does a good job of introducing the concepts of</td>
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<tr>
<td>✓ Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:</td>
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<tr>
<td>Application: Provides opportunities for students to independently apply</td>
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</table>
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:** 3 – Meets most to all of the criteria in the dimension

### Dimension III – Instructional Supports

<table>
<thead>
<tr>
<th>The lesson/unit is responsive to varied student learning needs:</th>
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<tbody>
<tr>
<td>✓ Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media.</td>
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</tr>
<tr>
<td>✓ 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.</td>
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<tr>
<td>✓ Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking.</td>
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<tr>
<td>✓ Addresses instructional expectations and is easy to understand and use.</td>
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<tr>
<td>✓ Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners.</td>
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<tr>
<td>✓ Supports diverse cultural and linguistic backgrounds, interests and styles.</td>
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<tr>
<td>✓ Provides extra supports for students working below grade level.</td>
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</tr>
<tr>
<td>✓ Provides extensions for students with high interest or working above grade level.</td>
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</tbody>
</table>

**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 models, using a range of questions, checking for understanding, flexible grouping, pair-share).

Clear guidance is given throughout the lesson. The links for all documents work. Time frames help teachers determine which parts they will spend more time on and can also help teachers determine how to split the lesson up if they are doing it over two days.

Vocabulary is listed at the beginning of the lesson and interspersed within the lesson. Students are given picture models to use to assist their thinking and reasoning. Manipulatives are encouraged to build the models to different scales.

The task is relevant to students and allows them to work independently and in small groups to complete. The directions help guide teachers to allow students to do the thinking and allow them to engage in productive struggle. The language of the lessons guide the teacher to “ask students, "challenge students," and "have students..." rather than "tell students." This is a welcome change. The guiding questions are an excellent resource for the teacher. They might even be used as math journal prompts or exit slip questions for a formative assessment.

There are specific interventions listed for various groups.
- 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.

The pre-assessment (What I Know) allows the teacher to learn and respond to students’ prior knowledge. The section that begins "If the students are unable then...." is incredibly helpful and will provide a means for teachers to remediate issues if it is necessary before teaching new material. Formative assessment points are indicated throughout the lesson, sometimes in conjunction with a list of what to look/listen for.

There is a rubric for the summative assessment and the worksheets have answer sheets. The rubric isn’t as clear as it might be and some student work examples of the different levels might be helpful. There are no opportunities for self-assessment provided in the lesson.

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

**Summary Comments**

1. This lesson addressed a major cluster of grade three standards for Measurement and Data and Mathematical Practice Standards 3, 4, and 6. These standards were developed conceptually and procedures were developed in tandem. Student engagement in MP3 (constructing viable arguments and critiquing the reasoning of others) could have been more rigorous, but is likely developed in future lessons within the unit.

2. Coherence of the lesson is developed through assessing prior knowledge and building the concept of area throughout the lesson to arrive at a definition of and ability to scale area. Rigor is present, though it is understood that this is an introductory lesson and students should have more opportunity for more open-ended questions throughout the unit.

3. Instructional supports for the lesson are strong. There are many directions for teachers that instruct them to let the students investigate and discuss. Guiding questions are provided that help teachers more deeply engage student thinking about the tasks they are completing. Ideas for interventions and modifications are present to assist different learners.

4. Opportunities for formative assessment are pointed out and supported with questions throughout the lesson. A summative assessment is provided with an answer key and a rubric (though the rubric could use more specific information and perhaps student work samples of each level).
**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.