

# EQuIP Review Feedback



**Lesson/Unit Name:** Composing and Decomposing Shares

**Content Area:** Mathematics

**Grade Level:** K

**Overall Rating:**

**E**

Exemplar

## Dimension I – Alignment to the Depth of the CCSS

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| <p><i>The lesson/unit aligns with the letter and spirit of the CCSS:</i></p> <ul style="list-style-type: none"><li>✓ Targets a set of grade-level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning.</li><li>✓ 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.</li><li>✓ Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS.</li></ul> | <p>The main standard for CCSSM in this lesson is K.G.6 (Compose simple shapes to form larger shapes). Also addressed are K.G.1 (Describe objects in the environment using names of shapes...), and K.G.4 (Analyze and compare two- and three-dimensional shapes, in different sizes and orientations...). Lessons 5-7 build on different shapes that make larger shapes as well as decompose a larger shape into smaller shapes. K.CC.4a and K.CC.4b are incorporated into the geometry to help students understand that geometry is not a stand alone domain.</p> <p>The SMP listed are SMP #1, #4, #6, and #7. SMP #6 and SMP #1 are explicitly stated in 2 of the lessons. It would be helpful to have SMP #4 and SMP #7 identified in a similar manner in the lessons. Models are being made using pattern blocks, cubes and paper models. Students are encouraged to find more than one way to compose a shape (Trace to show 2 ways to make each shape.). The teacher uses specific terminology throughout when teaching and debriefing (Trace your blocks to show your rectangle.; Use the small triangles to make the big shapes.) To compose and decompose shapes, students need to look for structure as well as make different use of structures.</p> <p>Because students are asked to create shapes from existing shapes as well as to fill in simple shapes, a balance between procedures and concepts is struck. The students are working on procedural skills, but the teacher gets to the conceptual development through the questions he/she asks ( Tell me about your work; Everyone drew two lines, but some people ended up with three pieces and some people had four pieces. Why?)</p> |
| <p>Rating: <b>3 – Meets most to all of the criteria in the dimension</b></p>   |  |

## Dimension II – Key Shifts the CCSS

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| <p><i>The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:</i></p> <ul style="list-style-type: none"><li>✓ <b>Focus:</b> 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.</li><li>✓ <b>Coherence:</b> The content develops through reasoning about the new concepts on the basis of previous understandings. Where appropriate, provides opportunities for students to connect</li></ul> | <p><b>Focus:</b> The focus of Topic B is K.G.6. This is developed through Lessons 5-7 where students are taking simple shapes (rectangles, triangles, pattern blocks) to create larger shapes. The process is also reversed in that students are given a large shape and asked what shapes may make up this larger shape. (India drew 2 lines on her rectangle. You can see her rectangle before she cut it. Circle the shapes India had after she cut.) K.G.1 and K.G.4 are listed as supporting standards addressed in the lessons. It would be helpful to have those standards written out.</p> <p><b>Coherence:</b> Listed up front of the document are the standards that could possibly have been addressed by those students who have attended Pre-Kindergarten [PK.G.4 Create and build shapes from components (e.g., sticks and clay balls)]. Because this is the last unit of Kindergarten, there is a culminating task that is built to look at what students have learned throughout the year as well as in this unit (The culminating task of this</p> |
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| <p>knowledge and skills within or across clusters, domains and learning progressions.</p> <p>✓ <b>Rigor:</b> Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:</p> <ul style="list-style-type: none"> <li>– <b>Application:</b> 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.</li> <li>– <b>Conceptual Understanding:</b> Develops students’ conceptual understanding through tasks, brief problems, questions, multiple representations and opportunities for students to write and speak about their understanding.</li> <li>– <b>Procedural Skill and Fluency:</b> 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.</li> </ul> | <p>module is set up as a Math Olympics, a celebration of student learning from the whole year.) A suggestion would be to tie this to what the progression is at grade 1.</p> <p>Rigor: Topic B is well done in having students develop the idea of how shapes are built and taken apart. Students are asked to show more than one way to decompose/compose. Students do an Olympics which have students create their own situations and combine other domains to check on the big ideas for kindergarten. Problem Sets are timed, (Students should do their personal best to complete the Problem Set within the allotted 10 minutes.) but if a student doesn't get finished, is it homework or just leave blank? That might cause the teacher to not know if a student does or does not have the understanding needed or the fluency to move quickly enough through the activities.</p> |
| <p>Rating: <b>3 – Meets most to all of the criteria in the dimension</b></p>  |  |

### Dimension III – Instructional Supports

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| <p><i>The lesson/unit is responsive to varied student learning needs:</i></p> <ul style="list-style-type: none"> <li>✓ Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media.</li> <li>✓ 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.</li> <li>✓ Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking.</li> <li>✓ Addresses instructional expectations and is easy to understand and use.</li> <li>✓ Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners. <ul style="list-style-type: none"> <li>– Supports diverse cultural and linguistic backgrounds, interests and styles.</li> <li>– Provides extra supports for students working below grade level.</li> <li>– Provides extensions for students with high interest or working above grade level.</li> </ul> </li> </ul> | <p>Clear and sufficient guidance: Many examples of what students might say (T: Would anyone like to hold up their recording sheet and share one of their new shapes? S: Mine looks like a bird!; I made a snowman shape.; I made a person!) are given. Student work samples are also included (pg. 6.B.8; 6.B.17; 6.B.26) The one link that was included no longer works(museum of play).</p> <p>Precise and accurate mathematics: The Problem Sets use correct vocabulary when naming shapes (rectangles, triangles, etc.). Because students do not need to be specific with the geometric terminology of the object they are using, the teacher will encourage precise language as it comes up. (Many students will name shapes after a real world object they resemble, but look for some students to start naming based on attributes.)</p> <p>Productive struggle: There are many entrances into a problem with a variety of answers throughout Topic B. [(T: Let’s try another one. Take a square and a triangle out of your pattern block box. On your board, find a way to put their sides together to make a new shape. Tell me about your work.)(T: Is there another way you could fold it? S: Yes! When I fold it the other way and then unfold it again, I have four rectangles in all!; I left mine folded and folded again. Now I have a square.))] Students are asked to describe their thinking when doing a debrief of an activity. (We all started with the same square, but all of your puzzles were different. Why is that?; How does our work with the pattern blocks remind you of when you drew your house at the beginning of the lesson?)</p> <p>Scaffolding and differentiation: There is much help for English language learners (Help English language learners discuss their work with a partner by</p> |
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| <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> <li>✓ 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).</li> <li>✓ Gradually remove supports, requiring students to demonstrate their mathematical understanding independently.</li> <li>✓ Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time.</li> <li>✓ 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.</li> </ul> | <p>providing them with sentence starters such as, “I have more pieces because....”; give English language learners a review of key vocabulary needed to tell about their new shapes: sides, corners, and straight lines, etc.) There is some help for students above grade level [Give above grade level students pattern blocks to use in creating different shapes. Challenge them by asking them to be sure to use at least one of the each of the pattern blocks (including the orange square and the light rhombus) and to make sure not to leave any gaps in their design.] In the Scaffolds section, there is a link to a website for further strategies for students with disabilities (<a href="http://www.p12.nysed.gov/specialed/aim">www.p12.nysed.gov/specialed/aim</a>). Rather than being a footnote, it would be helpful to include directly into the Scaffolds section.</p> <p>Instructional approaches: Pair-share is used throughout, whole class debrief to share thinking is done in each lesson and an exit ticket is done for Lesson 6. Homework is given in Lesson 7 but not mentioned in the lesson plan itself. Is this optional?</p> <p>Gradual release: The exit ticket and making and sharing their individual compositions are done throughout.</p> <p>Sequence: The Topic starts with a simple shape (square) and moves to more complex shapes (rhombus) and combination of shapes (I used ____ shapes.). Topic B also builds on previous learning through fluency practices and the culminating task.</p> |
| <p><b>Rating: 3 – Meets most to all of the criteria in the dimension</b></p>  |   |

#### Dimension IV – Assessment

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| <p><i>The lesson/unit regularly assesses whether students are mastering standards-based content and skills:</i></p> <ul style="list-style-type: none"> <li>✓ Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS.</li> <li>✓ Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.</li> <li><input type="checkbox"/> Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance.</li> </ul> <p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> <li>✓ Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures.</li> </ul> | <p>Observable evidence: The teacher is to constantly move about the room to monitor understanding (Listen to the conversations to observe precision in the descriptive language such as sides, corners, straight lines, and so on. Look for misconceptions or misunderstandings that can be addressed in the Debrief.)</p> <p>Student proficiency: Each lesson has a targeted fluency which has been addressed in previous lessons throughout the year. They are short (less than 14 minutes) in duration. The assessment of conceptual understanding is done through teacher observation, exit ticket, questioning and End-of-Module Assessment task.</p> <p>Rubrics and answer keys: A rubric is provided for the End-of-Module Assessment task. Student examples are sometimes given. No answer keys are provided. It would be helpful in Lesson 8 to know if the End-of-Module is individual or whole class in its delivery. The Exit Ticket for Lesson 5 is labeled as lesson 6. No answer keys to exit tickets are provided nor direction on how to use the student responses to inform instruction.</p> <p>Varied modes: The pre-assessment is not given for this topic. Formative assessments seem to be exit tickets, teacher observation, and debriefs that will inform instruction. The Sprint Progress Log and Plan to Get Ready for First Grade are good examples of self-assessment measures for Kindergarten.</p> |
| <p><b>Rating: 3 – Meets most to all of the criteria in the dimension</b></p>  |  |

## Summary Comments

Domain 1 is strong on targeting K.G.6 with the support from K.G.1 and K.G.4. Making sure that teachers know when SMP #7 and SMP #4 are being used within a given lesson would enhance this domain.

Domain 2's strength is the scaffolding of the lessons to build the rigor needed to be successful. There is a blend within each lesson to build procedural skills through the activity with the teacher helping build conceptual understanding through targeted questioning. A suggestion to connect the geometry in Kindergarten to that in grade 1 would help students be prepared to take their current understanding and build on that relationship.

Domain 3 is the strongest of the domains. The teacher has varied instructional strategies; varied tasks and manipulatives are given; gradual release of supports is smoothly done between lessons 5-7. Moving the footnote for students with disabilities into the Scaffold section would help teachers know that there is help available. The link to the problem museum is not available.

Domain 4 has a good End-of-Module Assessment but needs some directions for teachers. Answer keys and how to respond to the data collected are needed for the exit tickets.

### **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.