

# EQuIP Review Feedback



**Lesson/Unit Name:** Champion Volleyball Team

**Content Area:** Mathematics

**Grade Level:** 6

<p><b>Overall Rating:</b></p> <p style="font-size: 2em; font-weight: bold;">E</p> <p>Exemplar</p>
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## 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"> <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>This lesson aligns to two Common Core Ratio and Proportions standards, requiring students to identify ratios and use these ratios to solve a real - world problem.</p> <p>The Standards for Mathematical Practice are referenced under "Additional Information/Instructions" but not referred within the lesson. Five of the Standards for Mathematical Practice are listed at the end of the lesson:</p> <ul style="list-style-type: none"> <li>- Make sense of problems and persevere in solving them.</li> <li>- Reason abstractly and quantitatively.</li> <li>- Model with mathematics.</li> <li>- Construct viable arguments and critique the reasoning of others.</li> <li>- Look for and make use of structure.</li> </ul> <p>Listing the Standards for Mathematical Practice earlier in the lesson plan would draw more attention to them. While they are implicit within this lesson, it would be helpful to provide more detail about where and how you envision students engaging in these practices throughout the lesson.</p> <p>The use of given data for the volleyball players provides a concrete example of where ratios and rates can be used in the real world. Students work on the problem and must justify/explain their recommendations. They are then given additional information that may or may not influence those recommendations. This would give deeper meaning to the data in ratio form and require students to truly understand the focused concepts.</p>
<p><b>Rating: 2 – Meets many of the criteria in the dimension</b></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"> <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 knowledge and skills</li> </ul>	<p>This lesson targets major work for grade 6 in the Ratios and Proportions domain. The standards that are focused on require a deep understanding in order to arrive at a reasonable solution.</p> <p>A review of prior grade level work with fractions and decimals connect these standards to secure knowledge gained in previous years.</p> <p>The components of Rigor are addressed in the following ways:</p> <p><b>Application:</b> There is some initial independent work but most of this lesson involves group work. The work is challenging and requires students to analyze and compare data to arrive at a recommendation. Opportunities for students to individually apply their understanding of these concepts are present within the lesson.</p> <p><b>Conceptual understanding:</b> This lesson builds on students' understanding of ratios and comparing numbers to the application of these understandings to a real-world problem. They make recommendations</p>
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<p>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>based on work they have done comparing ratios, then they need to explain/justify their recommendations in writing.</p> <p>Procedural skill and fluency: Calculations must be performed accurately in order to make reasonable recommendations.</p>
<p>Rating: <b>3 – Meets most to all of the criteria in the dimension</b></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"> <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>The structure of this lesson is laid out in an understandable way. All resource materials are either referenced or attached to the lesson.</p> <p>This lesson involves an open-ended problem in which students could choose their own way of solving as long as it was justifiable and supported by mathematics. There is not a focus on academic language or a specific way to solve the problem. Key terminology is included and supports the focus of the lesson.</p> <p>This lesson does require students to think and struggle with the given problem and use their understandings of ratios to compare players.</p> <p>The organization and format are clear and easily understood. Sufficient guidance for teachers would allow even new teachers to be able to follow this lesson.</p> <p>Provisions for diverse learners are included in this lesson, however, more in-depth descriptions would make this lesson stronger. Some suggestions for meeting the needs of diverse learners include flexible grouping, adjusting the numbers within the problem, and providing templates for the letter writing activity. You might consider allowing students to provide their recommendations in a format other than a written letter. For some students, they might not be able to demonstrate their mathematical thinking through a written letter. Perhaps they could include tables to support their reasoning or provide a presentation using technology.</p>
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<p><u>A unit or longer lesson should:</u></p> <ul style="list-style-type: none"> <li><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).</li> <li><input type="checkbox"/> Gradually remove supports, requiring students to demonstrate their mathematical understanding independently.</li> <li><input type="checkbox"/> Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time.</li> <li><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.</li> </ul>	
<p>Rating: <b>3 – Meets most to all of the criteria in the dimension</b></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"> <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>✓ 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><input type="checkbox"/> Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures.</li> </ul>	<p>This lesson provides many opportunities for students to work collaboratively to demonstrate their understanding as well as opportunities for students to demonstrate their individual understanding.</p> <p>This lesson allows students to represent their solutions to the given problem in multiple ways as long as they are able to explain and/or justify their solutions using mathematics.</p> <p>Answer keys are provided as well as rubrics for the writing of the letters and group collaboration. The "Championship Volleyball Team MEA Rubric" is detailed and will be helpful for teachers to be consistent in scoring final projects. However, it is not clear how the 10% for each of the six sections should be used. What comprises the remaining 40% of the grade? Are the students also expected to complete these rubrics or are they intended for use by the teachers? Benchmark example papers provide additional support for scoring student work.</p>
<p>Rating: <b>3 – Meets most to all of the criteria in the dimension</b></p>	

#### Summary Comments

The strength of this lesson lies in the real world application and the links to background information that make it accessible. Relevant questions are provided. This lesson provides an engaging context for students to apply their understanding about ratios. Another strength of the lesson is the opportunity for students to make sense of the problem and justify their reasoning. The Standards for Mathematical Practice, while listed, are not described nor explained throughout the lesson. Teachers would benefit from having some commentary about how the practices are explicitly connected within the lesson.

### **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.