**K-12 MATH Rubric for Evaluating A Unit of Study**

**Educators Evaluating Quality Instructional Products (EQuIP)**

**Name of Unit: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Critiqued by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Dimension I: Alignment to the Depth of the MATH Core** | **Questions to guide conversations about a lesson/unit? (EQuIP)** | **Summary Observations****and Suggestions for Improvement:** |
| * Is the lesson/unit instructionally tight?
* Does it live up to the spirit and intent of the CCSS?
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| *The lesson/unit* *content and performance aligns with the spirit and letter of the Math Core:* | **Note**: The context of a lesson might be helpful when using the criterion, but it is not necessary to complete a review of a lesson or unit. |
| * **Targets** a set of grade-level CCSS mathematics standard(s) to the full **depth** of the standards for teaching and learning.
 | * Does the lesson/unit articulate alignment to a reasonable standard or set of standards?
* Do the assignments, tasks, and activities suggest that a standard or set of standards has been targeted for instruction?
* Do the assignments and activities make sense given the standards listed?
* Does the lesson/unit address the targeted standards at the full depth defined in the standards?
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| * **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.
 | * Which Standards for Mathematical Practice are identified?
* Which mathematical practices do the assignments and activities provide opportunity for students to demonstrate?
* Is a focused set of mathematical practices identified that are central to the lesson/unit?
* Are the mathematical practices tied closely to the content of the lesson or unit?
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| * Presents a **balance** of mathematical procedures and deeper conceptual understanding inherent in the CCSS.
 | * Do the assignments and activities provide opportunities for students to practice mathematical procedures and deepen the emphasized concepts with a balance appropriate for the content and for the grade level?
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| **Dimension II: Key Shifts in the Math Core** | **Questions to guide conversations about a lesson/unit? (EQuIP)** | **Summary Observations****and Suggestions for Improvement** |
| *The lesson/unit reflects evidence of key shifts that are reflected in the Math Core:*  |  |
| * **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.
 | * Does the content of the lesson/unit belong to the Common Core State Standards’ emphases (major work) for the grade?
* Are any aspects of the lesson that relate to supporting work of the grade closely tied to this grade-level focus?
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| * **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.
 | * Does the lesson/unit provide teachers with connections to related expectations in earlier and later grades?
* Does it address the “big picture” as specified in the relevant cluster heading?
* Does it help students make connections among standards within a cluster, clusters within a domain, or domains within a grade?
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| * **Rigor**: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:
* **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.
 | * The three aspects of rigor are concepts, procedures/fluency and application. Does the lesson or unit emphasize some aspect(s) more than others? (For example, the lesson or unit might emphasize conceptual understanding but not application or procedure.)
* Given the goals of the lesson or unit, is the emphasis appropriate and logical? (A lesson involving only a single aspect of rigor may be just right, provided the single aspect of rigor that is present is handled well in the lesson.)
* For a unit or longer lesson: How do the instructional materials present a balance of application, conceptual understanding, and procedural skill and fluency?
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| **Dimension III: Instructional Supports** | **Questions to guide conversations about a lesson/unit? (EQuIP)** | **Summary Observations****and Suggestions for Improvement** |
| *The lesson/unit is responsive to varied student learning needs:* | **Note**: Focus on the language in the criterion to understand the criterion. |
| * Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media.
 | * Does the lesson/unit provide clear directions and guidance so that even an inexperienced teacher can successfully guide students to an understanding of the targeted standards?
* If appropriate, are technology and/or media applied in the lesson/unit?
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| * 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.
 | * Does this set of instructional materials clearly identify and work to develop key academic language and accurate and precise mathematics?
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| * Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking.
 | * Do you see evidence that all students are given opportunities to engage in a productive struggle through thought-provoking questions with little scaffolding?

**Note**: This criterion is primarily about opportunity. Note that criterion 3 asks reviewers to look for evidence that all students are given opportunities to engage with problems and tasks that require them to struggle productively in their solution. Criterion 3 does not require evidence of scaffolds specific to special learning or language needs. Rather, criterion 3 asks for evidence that all students are expected to and given opportunity to do challenging mathematical work. |  |
| * Addresses instructional expectations and is easy to understand and use.
 | * Does the lesson include expectations for how the instruction should take place and whether the overall organization/format is easy to understand and use?
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| * 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.
 | * Is there evidence in the lesson/unit that support is provided for a range of learners, including students working both below and above grade level and those who are English language learners?

**Note:** Criterion 5 to 8 are primarily about access. Note that criterion 5 does require evidence that the lesson/unit includes supports that address a range of learning and language needs.  |  |
| 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).*
 | * Is there a mix of instructional approaches, a gradual removal of supports, and an effective sequence for the activities of the lesson/unit?
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| * *Gradually remove supports, requiring students to demonstrate their mathematical understanding independently.*
 | * Is there a mix of instructional approaches, a gradual removal of supports, and an effective sequence for the activities of the lesson/unit?
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| * *Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time.*
 | * Is there opportunity for student understanding to deepen over the course of the lesson/unit?
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| * *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.*
 | * Does the lesson/unit emphasize and support an appropriate balance of procedural and conceptual understanding?
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| **Dimension IV: Assessment** | **Questions to guide conversations about a lesson/unit? (EQuIP)** |  **Summary Observations****and Suggestions for Improvement** |
| *The lesson/unit regularly assesses whether students are mastering standards-based content and skills:* | **Note**: This dimension is about what is happening in the student brain. |
| * Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS.
 | * Does the lesson/unit provide opportunities for students to independently demonstrate their understanding?

**Note**: This criterion is about coherence.Evidence of what students can do may be produced by the assessment but it may not provide evidence of proficiency of the targeted standards. When evaluating the unit for this criterion, reviewers should consider all of the assessment across the entire unit, not only the summative assessment at the end. This is not about looking good, but a true alignment of standards, tasks, and assessment. |  |
| * Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.
 | * Do students have multiple ways to show what they have learned?

**Note**: This criterion is about unbiased. |  |
| * Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance.
 | * Is there evidence that the assessments produce a description of how close students have come to meeting expectations (e.g., annotated student work, descriptive rubrics/checklists)?

**Note:** This criterion is about support. |  |
| *A unit or longer lesson should:* |  |  |
| * *Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self- assessment measures.*
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| **Overall Rating: Summary Comments** | **Note**: An exemplar unit is coherent. | **Overall Summary:** |
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