Module 1
Participant Guide

Focus on Practice Standards

Section 6

Connecticut Core Standards for Mathematics

Grades 6–12

Systems of Professional Learning

Connecticut Core Standards Systems of Professional Learning

The material in this guide was developed by Public Consulting Group in collaboration with staff from the Connecticut State Department of Education and the RESC Alliance. The development team would like to specifically thank Ellen Cohn, Charlene Tate Nichols, and Jennifer Webb from the Connecticut State Department of Education; Leslie Abbatiello from ACES; and Robb Geier, Elizabeth O'Toole, and Cheryl Liebling from Public Consulting Group.

The Systems of Professional Learning project includes a series of professional learning experiences for Connecticut Core Standards District Coaches in English Language Arts, Mathematics, Humanities, Science, Technology, Engineering, Mathematics (STEM), and Student/Educator Support Staff (SESS).

Participants will have continued support for the implementation of the new standards through virtual networking opportunities and online resources to support the training of educators throughout the state of Connecticut.

Instrumental in the design and development of the Systems of Professional Learning materials from PCG were: Sharon DeCarlo, Debra Berlin, Jennifer McGregor, Michelle Wade, Nora Kelley, Diane Stump, and Melissa Pierce.

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Section 6

Section 6: Teaching with the Standards for Mathematical Practice

Asking Effective Questions

Well structured questions include three parts:

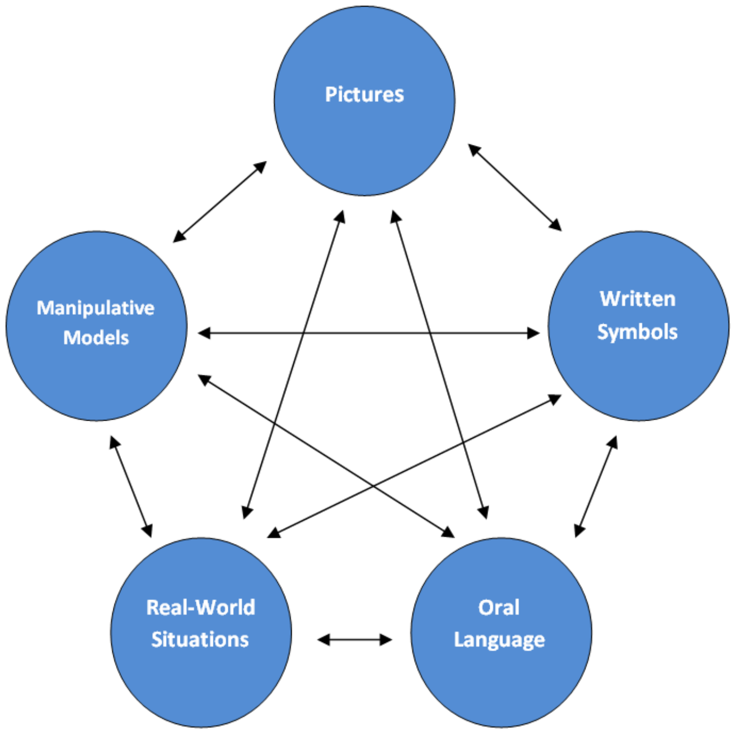
- *An invitation to think*
- *A cognitive process*
- *A specific topic*

1. **Anticipate Student Thinking.** Thinking about multiple ways that your students may solve a problem will allow you to anticipate and plan possible questions that the students might ask and that you can ask to stimulate their thinking and deepen student understanding.
2. **Link to Learning Goals.** By asking questions that relate back to the learning goals and the standards that the lesson focuses on, you are helping students to focus on the key skills and concepts. This link will then allow students to deepen their understanding and apply what they have learned in new situations.
3. **Pose Open-ended Questions.** Open-ended questions support and encourage a variety of approaches and responses. These questions also provide a manageable challenge for students as they are free to answer at their readiness level. An example of an open-ended question is: Instead of asking a student "what is 14 + 6?" you could ask "How many ways can you make 20?".
4. **Pose Questions that Actually Need to be Answered.** Rhetorical questions such as "Doesn't a square have four sides?" provide students with an answer without allowing them to engage in their own reasoning.
5. **Incorporate Verbs that Elicit Higher Levels of Bloom's Taxonomy.** Verbs such as *evaluate, justify, explain, describe, elaborate,* etc prompt students to communicate their thinking and understanding.
6. **Pose Questions that Open Up the Conversation to Include Others.** Use questions such as "How does your solution relate to _____'s solution?" or "What do you think about ____'s idea?" in order to draw more students into the discussion.
7. **Keep Questions Neutral.** Try not to qualify a question as easy or hard as some students are afraid of 'hard' questions and others are easily bored with 'easy' questions. Also, be mindful of verbal and non-verbal cues such as tone of voice and facial expressions, as these can set the tone of a question.
8. **Provide wait time.** Many students need time to process information before answering a question. Teachers that allow for a wait time of 3 seconds or more after a question tend to receive a greater quantity and quality of student responses.

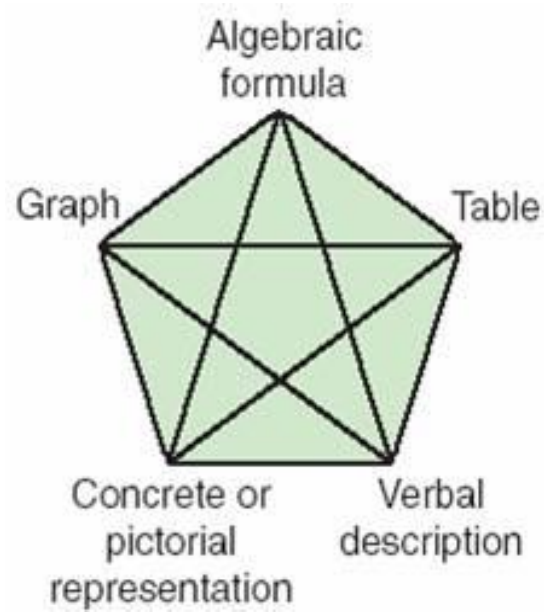
Student Achievement Division Ontario Schools (2011). *Capacity Building Series Special Edition #21 Asking Effective Questions.* Retrieved from http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_AskingEffectiveQuestions.pdf

Additional Notes:

Multiple Representations



Van de Walle, Karp, & Bay-Williams 2013. 24.



NCTM, 2001.

Steps to Getting Students Talking

Build a Community of Learners

The community of learning is embedded in the classroom culture. Have students form community agreements for how they will work together and respect each other during the learning process.

Encourage Students as Mathematicians

Encourage students to believe that they can reach their goals of being effective mathematicians. Share excitement when you hear students search for meaningful mathematics rather than just getting the right answer.

Ask Genuine Questions

Asking genuine questions that show a desire to understand another way of thinking about mathematics is a critical aspect of getting students to the point of opening up their mathematical thinking to the rest of the class. Model this type of questioning and expect students to question each other in a positive and genuine manner.

Press Students and Encourage Disequilibrium

Plan for and give the time that students need to work through productive struggle. Press for justification of thoughts and strategies, knowing that these moments offer opportunities for new learning to take place.

Promote Risk Taking

Acknowledging stages of thinking or “partial thinking” develops risk-takers and is an important move that supports effective student discourse in the mathematics classroom

Allow Private Think Time

Allow individuals the time to privately think about the mathematics before engaging in discourse so that everyone comes into the conversation with some initial thinking. Then, before a full discussion ensues, have each tell what they thought about in order to get everyone’s thinking heard.

Use Protocols

Purposefully plan the use of specific protocols to build equitable opportunities for all students to share their mathematical thinking with others.

Blanke, B. (2009). *Understanding mathematical discourse in the elementary classroom: A case study*. Retrieved from http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/11141/Dissertation_Blanke 3-29-09[Final].pdf?sequence=1

Grades 6–8: Sample 7th Grade Lesson Plan

Evaluate the lesson plan below using the specific criteria from the EQuIP Rubric. Then, in the space provided, provide suggestions for strengthening the lesson.

"Sign" your Name

Core Standard:

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

- **7.NS.1** Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

Standards for Mathematical Practice:

6. Attend to precision.
8. Look for and express regularity in repeated reasoning.

Student Outcomes:

- I can add integers.
- I can determine the absolute value of a quantity.

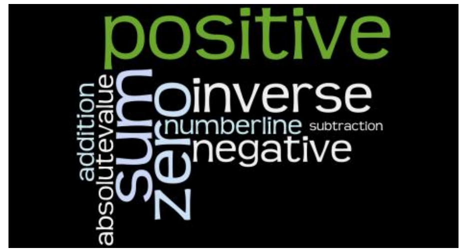
Materials:

- "Sign" Your Name handout
- Internet access to create a class Wordle of student names; http://www.wordle.net/

Advance Preparation:

- Students should be familiar with signed numbers and how to use a number line to help with signed addition.
- Students need to have an understanding that absolute value is the distance from zero on a number line.

Directions:



1. Show students the integer Wordle and discuss why some words appear larger and others appear smaller. Tell them that the activity today will allow them to create a class Wordle and that we will mathematically determine the size of our names in the Wordle. The Integer Wordle can be found at the following link: http://www.wordle.net/show/wrdl/5512350/Integers
2. Provide students a copy of the "Sign" Your Name handout.
3. Students should complete each question of the task to practice using a number line when adding integers.
4. At the end of the lesson, allow students to design a Wordle on the computer with the names of all students in the class (http://www.wordle.net/). Use the absolute value of each student's first name. Have each student type their first name in the Wordle the number of times that equals the absolute value of their name. Print out the class Wordle and display.

Example: JULIE = -3 + 8 + (-1) + (-4) + (-8) = -8; |-8| = 8
DAN = -9 + (-12) + 1 = -20; |-20| = 20
ALISAN = -12 + (-1) + (-4) + 6 + (-12) + 1 = -22; |-22| = 22
NANCY = 1 + (-12) + 1 + (-10) + 12 = -8; |-8| = 8

Using the example above, Julie will type her name 8 times in the Wordle program. Dan will type his name 20 times, Alisan 22 times and Nancy 8 times. The student whose name has the largest absolute value will appear the largest in the Wordle. The student whose name has the smallest absolute value will appear the smallest in the Wordle.

5. Now have the students create a Wordle that will display the true value of their first name. Student names that have negative values will be typed in backwards to represent the additive inverse value. Since we cannot type a name in Wordle a negative amount of times, the issue of negatives will be addressed by adding one more than the absolute value of the smallest valued name. Using the example above, ALISAN has the smallest valued name at -22. The absolute value of -22 is 22 then add one more to obtain a new value of 23. Adding 23 to each student's first name value will ensure that the student with the lowest name value will appear as the smallest in the Wordle which will be equal to 1. This same rule will now be applied to all students in the class. Thus, JULIE now has a value of -8 + 23 or 15; DAN will be -20 + 23 or 3; ALISAN is now -22 + 23 or 1, and NANCY is now -8 + 23 or 15. The amount added to each student's name value will depend on the smallest value in each class. The end result should be that the student with the lowest name value will enter their name in the Wordle one time. Use the same process as in the previous Wordle by having students type their name in the Wordle program with their new value. A cool twist is to have the students whose first name was originally negative (before adding 23 as in our example), type their name in backwards so that is will be clear on the Wordle that their name value was in fact negative.

Questions to Pose:

Before

- Can you predict which student's name in our class will have the highest value when we apply the given code? Can you predict who will have the lowest valued name?
- What is your reasoning for your predictions?

During

- What patterns did you notice when adding integers on the number line?
- Can we make some general rules for adding integers, those with like signs and those with different signs?
- Would the order of the values in a name matter when finding the total?

After

- How does your name size on the absolute value Wordle compare to your name size on the adjusted true value Wordle?
- What is the reasoning for the change in your name size?
- What is the reasoning for some names being typed in backwards?

Possible Misconceptions/Suggestions:

Students often misunderstand the value of negative numbers. For example, students often state that -1 < -10, as if the numbers were positive.

- Review with students that when comparing two positive integers, the number further to the right on the number line is always larger. The same reasoning applies to negative numbers on the number line. The larger value will always be the one further to the right.

Special Notes:

Some student names may require movement or result in a sum larger than the length of the provided number line. Based on the need of your students, a longer number line may be provided for assistance. The goal is for students to develop or recall the patterns when adding integers instead of relying solely on the number line.

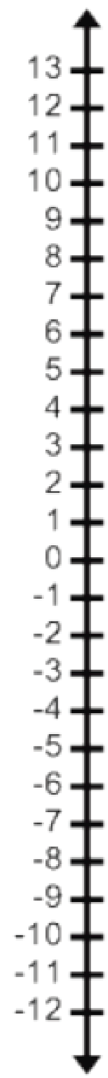
Adapted from North Carolina Department of Public Instruction
http://maccss.ncdpi.wikispaces.net/file/view/CCSSMathTasks-Grade7.pdf/460716188/CCSSMathTasks-Grade7.pdf

Student Handout

"Sign" your Name

Letter	Value
A	-12
B	-11
C	-10
D	-9
E	-8
F	-7
G	-6
H	-5
I	-4
J	-3
K	-2
L	-1
M	0

Letter	Value
N	+1
O	+2
P	+3
Q	+4
R	+5
S	+6
T	+7
U	+8
V	+9
W	+10
X	+11
Y	+12
Z	+13



Use the values for each letter in the charts above to find the amounts described below. Do not use a calculator. Use the provided number line and/or show your thinking.

1. The value of your first name:
2. The value of your middle name, if applicable:
3. The value of your last name:
4. The value of your entire name:
5. The absolute value of your first name:
6. The absolute value of your middle name, if applicable:
7. The absolute value of your last name:
8. The absolute value of your full name:
9. The value and absolute value of your teacher's last name:

NC DEPARTMENT OF PUBLIC INSTRUCTION SEVENTH GRADE

Evaluation Notes:

Strengths	Recommendations

Grade 9-12: Sample Algebra Lesson Plan

Evaluate the lesson plan below using the specific criteria from the EQuIP Rubric. Then, in the space provided, provide suggestions for strengthening the lesson.

Graphing quadratic equations:

This lesson will help students quickly graph a quadratic equation. It will also help them to understand the purpose of completing the square.

Core Standards:

<u>High School: Algebra</u>

Reasoning with Equations & Inequalities

- **ALG.REI.4** Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation in x into an equation of the form (x – p)2 = q that has the same solutions. Derive the quadratic formula from this form. Solve...

<u>High School: Functions</u>

Interpreting Functions

- **FUN.IF.7** Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Graph linear and quadratic functions and show intercepts, maxima, and minima. Graph square root,...
- **FUN.IF.8** Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and...

Learning outcomes:

Students will sketch the graph of a quadratic equation, and put a quadratic equation in general graph form y=(x-h)^2 +k by completing the square.

Teacher planning time:

50 minutes

Materials:

Classroom board, graph paper, pencils, student graphing calculators are a bonus, but not a must, overhead graphing calculator, overhead

Pre-activities:

- Students should be able to complete the square before beginning this lesson.
- Your warm-up on this day should be an activity on completing the square. If that was the homework from the night before, go over the homework and do a few problems. If completing the square wasn't the homework, give the students these problems as a warm-up.
    1. 0=x^2+4x+3
    2. 0=x^2+8x-5
    3. 0=2x^2+12x+4
    4. 0=x^2+5x+9
- Go over the review problems slowly so that the students get a good review of completing the square.

Activities:

- Start the class with the graphing calculator on the overhead.

1. Graph the line y=x^2. You are going to leave this graph on your screen for the entire lesson.
2. Enter the graph of the parabola y=x^2 + 3. Before you hit the graph key, ask the students to predict what they think will happen. Ask the students what they notice about the relationship between this graph and the previous graph. They should notice that the vertex moves to the point (0,3).
3. Now enter the equation y=x^2 -4. Again ask for a prediction, then graph to confirm the prediction.
4. Delete the last 2 graphs, leaving y=x^2.
5. Enter y=(x+2)^2. Ask for a prediction. When you graph, you should notice that the vertex of your parabola moves to the point (-2,0).
6. Enter the graph y=(x-5)^2. Again ask for a prediction, then graph.
7. Now combine what they have learned by asking the students to predict the graph y=(x+1)^2 + 4. They should be able to tell you the vertex will be at the point (-1, 4).
8. Delete all the graphs except y=x^2.
9. Now give the students the graph y=-x^2. Ask them what they think might happen. Confirm with them that the graph flips to open down instead of up.
10. Give the students the parabola y=-(x+2)^2-5. Ask students to sketch this graph on their own. Look at the results, then graph on the overhead to show them the answer.
11. Now we are going to make the connection between completing the square and graphing a parabola. Give the students the equation y=x^2+4x+4. Show them the graph on the overhead calculator. Look at the vertex of that graph. Where is it? It should be at the point (-2,0). Ask the students what equation of that parabola would look like in general graph form. They should come up with the answer y=(x+2)^2 based on the pattern you have shown them.
12. Ask the students if anyone can find an algebraic method for transforming x^2+4x+4 into (x+2)^2. If no one can, help them make the connection: Show the students that by factoring the perfect square trinomial of y=x^2+4x+4 you get y=(x+2)^2.
13. Ask them to complete the square of y=x^2+4x+5. They should get y=(x+2)^2+1. Students should now know that this means the vertex of the equation is on the point (-2, 1).

Assessment:
Now give the students some extra practice to do on their own. Ask them to do the following problems. The teacher should walk around and check the students work. When most students have completed the problems, ask some students to put the correct graphs on the board so all students can check their work.

Extra Practice:

1. y=x^2+8
2. y=(x-5)^2
3. y=(x+1)^2-3
4. y=-(x+4)^2+1
5. y=x^2+18x+81
6. y=x^2+16x+10

Challenge Problem:
y=3x^2+6x-2
Only give this problem to the students who are above the ability level of the rest of the class.

Evaluation Notes:

Strengths	Recommendations

Examine the following task. Then, in the space provided, provide guidance to a teacher who is considering using this task within their lesson. Help the teacher to think about questions to be asked, how students may work on the task, guidance for getting students to talk if working in groups, which of the practices they may want to focus on, the precise language, notations, and symbols they want students to use, and so forth.

Middle School Problem: The Average Price of Jeans

The Fashion First Clothing store says that the average price of a pair of jeans in its store is $50. They sell 10 different styles of jeans. What might be the prices of the jeans?

- Develop 2 different lists of 10 prices whose average is $50.
- Develop another list that includes one style that costs $250.
- Develop another list that includes one style that costs $17 and one that costs $129
- Develop another list that includes five different styles that each cost $30.

- Make a frequency distribution of each list.
- Find the median of each group.

Instructional Suggestions

Examine the following task. Then, in the space provided, provide guidance to a teacher who is considering using this task within their lesson. Help the teacher to think about questions to be asked, how students may work on the task, guidance for getting students to talk if working in groups, which of the practices they may want to focus on, the precise language, notations, and symbols they want students to use, and so forth.

Algebra Problem: Phone Plans

Dorothy saw advertisements for two cellular phone companies. Keeping-in-Touch offers phone service for a basic fee of $20.00 a month plus $0.10 for each minute used. ChitChat has no monthly basic fee but charges $0.45 a minute. Both companies use technology that allows them to charge for the exact amount of time used; they don't "round up" the time to the nearest minute, as many of the competitors do. Compare these two companies' charges for the time used each month. Which do you think is a better deal and why?

Instructional Suggestions

Examine the following task. Then, in the space provided, provide guidance to a teacher who is considering using this task within their lesson. Help the teacher to think about questions to be asked, how students may work on the task, guidance for getting students to talk if working in groups, which of the practices they may want to focus on, the precise language, notations, and symbols they want students to use, and so forth.

Algebra Problem: The Warehouse Problem

In a warehouse, you obtain a 20% discount but you must pay a 15% sales tax. Which would you prefer to have calculated first, discount or tax? Explain how you know what's best.

From: Burton & Stacey (1985) *Thinking Mathematically*. Addison Wesley Publishing

Instructional Suggestions

Examine the following task. Then, in the space provided, provide guidance to a teacher who is considering using this task within their lesson. Help the teacher to think about questions to be asked, how students may work on the task, guidance for getting students to talk if working in groups, which of the practices they may want to focus on, the precise language, notations, and symbols they want students to use, and so forth.

Geometry Problem: Exploration–Angles and Polygons

Draw some convex polygons. Make them all different. You should have a couple with 4 sides, 5, 6, and more. In each one, pick one vertex and draw all the diagonals from that vertex. Count how many triangles you have. Find the sum of all the angles in all the triangles. Make a chart showing the number of sides in the polygon, the number of triangles, and the sum of the angles of the triangles.

Find a way to use this information to make a rule for finding the sum of the angles of a polygon.

Instructional Suggestions

I. Alignment to the Depth of the CCSS	II. Key Shifts in the CCSS	III. Instructional Supports	IV. Assessment
The lesson/unit aligns with the letter and spirit of the CCSS: ○ Targets a set of grade-level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning. ○ 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. ○ Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS.	*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:* ○ **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. ○ **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. ○ **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 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. *<u>A unit or longer lesson should:</u>* ○ 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). ○ 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.	*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. *<u>A unit or longer lesson should:</u>* ○ Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative and self-assessment measures.
Rating: 3 2 1 0	**Rating: 3 2 1 0**	**Rating: 3 2 1 0**	**Rating: 3 2 1 0**

EQuIP Rubric for Lessons & Units: Mathematics

Directions: The Quality Review Rubric provides criteria to determine the quality and alignment of lessons and units to the Common Core State Standards (CCSS) in order to: (1) Identify exemplars/ models for teachers' use within and across states; (2) provide constructive criteria-based feedback to developers; and (3) review existing instructional materials to determine what revisions are needed.

Step 1 – Review Materials

- Record the grade and title of the lesson/unit on the recording form.
- Scan to see what the lesson/unit contains and how it is organized.
- Read key materials related to instruction, assessment and teacher guidance.
- Study and work the task that serves as the centerpiece for the lesson/unit, analyzing the content and mathematical practices the tasks require.

Step 2 – Apply Criteria in Dimension I: Alignment

- Identify the grade-level CCSS that the lesson/unit targets.
- Closely examine the materials through the "lens" of each criterion.
- Individually check each criterion for which clear and substantial evidence is found.
- Identify and record input on specific improvements that might be made to meet criteria or strengthen alignment.
- Enter your rating 0 – 3 for Dimension I: Alignment.

Note: Dimension I is non-negotiable. In order for the review to continue, a rating of 2 or 3 is required. If the review is discontinued, consider general feedback that might be given to developers/teachers regarding next steps.

Step 3 – Apply Criteria in Dimensions II – IV

- Closely examine the lesson/unit through the "lens" of each criterion.
- Record comments on criteria met, improvements needed and then rate 0 – 3.

When working in a group, individuals may choose to compare ratings after each dimension or delay conversation until each person has rated and recorded their input for the remaining Dimensions II – IV.

Step 4 – Apply an Overall Rating and Provide Summary Comments

- Review ratings for Dimensions I – IV adding/clarifying comments as needed.
- Write summary comments for your overall rating on your recording sheet.
- Total dimension ratings and record overall rating E, E/I, R, N – adjust as necessary.

If working in a group, individuals should record their overall rating prior to conversation.

Step 5 – Compare Overall Ratings and Determine Next Steps

- Note the evidence cited to arrive at final ratings, summary comments and similarities and differences among raters. Recommend next steps for the lesson/unit and provide recommendations for improvement and/or ratings to developers/teachers.

Additional Guidance on Dimension II: Shifts - When considering *Focus* it is important that lessons or units targeting additional and supporting clusters are sufficiently brief – this ensures that students will spend the strong majority of the year on major work of the grade. See the *K-8 Publishers Criteria for the Common Core State Standards in Mathematics*, particularly pages 8-9 for further information on the focus criterion with respect to major work of the grade at www.corestandards.org/assets/Math_Publishers_Criteria_K-8_Summer%202012_FINAL.pdf. With respect to *Coherence* it is important that the learning objectives are linked to CCSS cluster headings (see www.corestandards.org/Math).

Rating Scales

Rating for Dimension I: Alignment is non-negotiable and requires a rating of 2 or 3. If rating is 0 or 1 then the review does not continue.

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)**

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.