

Publisher: _____ Evaluator: _____ Role: _____ Date: _____

Textbook Title: _____ Grade Level: _____

Mathematically Connected Communities (MC²) K-12 Mathematics 2013 Instructional Materials Evaluation Rubric (Long Form)

Category 1

COMMON CORE STANDARDS FOR MATHEMATICAL PRACTICE

1. The majority of lessons, activities and assessments are designed to have students *make sense of mathematics in problems and persevere in solving them* and are designed to have students *construct viable arguments and critique the reasoning of others*.

The teacher edition and student resource provide guidance for students to:

- Make sense of rigorous, real-world problems and plan a solution strategy, rather than lead students through step-by-step procedures that take away student making sense of the mathematics of the problem.
- Communicate their mathematical reasoning, provide a justification for their solutions and respond to arguments of others.
- Compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and if there is a flaw in an argument, explain what it is.
- Generate and explore examples and counter examples to make sense of the mathematics.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials
0	1	2	3	4

Category 1 (continued):

COMMON CORE
STANDARDS FOR
MATHEMATICAL
PRACTICE

2. The majority of lessons, activities and assessments are designed to have students *reason abstractly and quantitatively*. The teacher edition and student resource provide guidance for students to:
- Develop a conceptual understanding of the grade level standards and their connection to cluster headings and bigger mathematical ideas.
 - Decontextualize – Represent real-world mathematical problem situations symbolically and manipulate the symbols to solve the problems.
 - Contextualize – Understand and describe how the symbols and numbers involved represent real quantities and relationships in the context of the real-world problem

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials
0	1	2	3	4

3. The majority of lessons, activities and assessments are designed to have students *model with mathematics*. The teacher edition and student resource provide guidance for students to:
- Identify important quantities in a practical situation and map their relationship using tools such as diagrams, two-way tables, graphs, flowcharts, and formulas.
 - Interpret their mathematical results in the context of the situation, reflect on whether the results make sense, and reflect on how well their model has supported their problem solving.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials
0	1	2	3	4

Category 1 (continued):

COMMON CORE
STANDARDS FOR
MATHEMATICAL
PRACTICE

4. The majority of lessons, activities and assessments are designed to have students *use appropriate tools strategically*. The materials provide teachers and students with explicit opportunities for students to:
- Make sound decisions about what tools are most appropriate for the situation.
 - Use estimation to make sense of the situation and detect possible errors.
 - Use tools (e.g. paper/pencil, manipulatives, rulers) and technology (e.g., calculators, software, internet applications) to explore and deepen their understanding of mathematical concepts.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials
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5. The majority of lessons, activities and assessments are designed to have students *attend to precision*. The teacher edition and student resource provide guidance for students to:
- Develop precise mathematical language (e.g., using clear definitions, stating the meaning of symbols, specifying units of measure) to clearly communicate ideas and develop deeper understanding of concepts.
 - Determine answers with a degree of precision appropriate for the problem contexts.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

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<p>Category 1 (continued):</p> <p>COMMON CORE STANDARDS FOR MATHEMATICAL PRACTICE</p>	<p>6. The majority of lessons, activities and assessments are designed to have students <i>look for and make use of structure</i> and are designed to have students <i>look for and express regularity in repeated reasoning</i>.</p> <p>The teacher edition and student resource provide guidance for students to:</p> <ul style="list-style-type: none"> • Discern a pattern or structure in order to develop conceptual understanding of the mathematics and develop meaningful generalizations. • Notice if mathematical structures and calculations are repeated, and identify general procedures and shortcuts. <p>EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):</p> <table border="1" data-bbox="1226 431 1965 565"> <thead> <tr> <th>Not Present</th> <th>Barely Evident in Materials</th> <th>Some of the Materials</th> <th>Majority of Materials</th> <th>Embedded Throughout Materials</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </tbody> </table>	Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials	0	1	2	3	4
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<p>Category 2</p> <p>MATHEMATICS CONTENT ALIGNED TO CCSS-M</p>	<p>1. The majority of lessons, activities and assessments <i>focus on essential content and practices</i>.</p> <p>The teacher edition and student resource provide:</p> <ul style="list-style-type: none"> • In-depth learning experiences where students are able to develop deep conceptual understanding • Develop the ability to access concepts from a number of perspectives, thus students are able to see math as more than a set of “mnemonic devices” or “discrete procedures”. [NM CCSS Implementation Plan] <p>EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):</p> <table border="1" data-bbox="1226 1073 1965 1206"> <thead> <tr> <th>Not Present</th> <th>Barely Evident in Materials</th> <th>Some of the Materials</th> <th>Majority of Materials</th> <th>Embedded Throughout Materials</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </tbody> </table>	Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials	0	1	2	3	4
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Category 2 (continued):

**MATHEMATICS
CONTENT ALIGNED TO
CCSS-M**

2. The majority of lessons, activities and assessments *make mathematical connections across grades and within grades*. The teacher edition and student resource:
- Provide multiple, connected learning experiences provide time to focus on one mathematical concept to promote depth of understanding. (Final report of National Math Advisory Panel, Bill Schmidt)
 - Include problems that serve to connect two or more clusters in a domain, or two or more domains in a grade rather than addressing numbered standards as isolated concepts. (Refer to Math Publisher Criteria, K-8, pg. 13)

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

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3. The majority of lessons, activities and assessments reflect the *PARCC Model Content Framework (MCF)* and the *Instructional Shifts* as outlined in CCSS-M that help students meet the rigorous expectations by providing a balance of the three following areas:
- Develops students' conceptual understanding of key mathematics concepts as defined by the major clusters as defined by the Model Content Framework.
 - Gives attention throughout the year to individual standards that set an expectation for fluency defined as effective and efficient strategies based on strong conceptual understanding.
 - Allows teachers and students using the materials as designed to spend substantial time working with engaging mathematical applications that are part of the major focus of the grade level. The resource provides opportunities for students to apply math concepts in “real world” situations and choose the appropriate application for the given situation. [NM CCSS Implementation Plan]

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

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Category 3**INSTRUCTIONAL SUPPORTS**

The majority of lessons, activities and assessments provide explicit instructional strategies for teachers to enact the CCSS-M in the classroom so that ALL students have access to the mathematics, particularly how to integrate the Mathematics Content Standards and the Mathematical Practice Standards as described in the categories below:

1. Provides suggestions to ***engage students in the mathematical practices and provide cognitively demanding questions*** to deepen student understanding and ability to communicate mathematical knowledge.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials
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2. Provides ***appropriate level and type of scaffolding, differentiation, and intervention*** for a broad range of learners (including students working above or below grade level, and second language learners) so ALL students have opportunities to deeply understand and operate confidently and competently within a mathematical concept.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

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3. Includes variety of formats for students to ***demonstrate understanding***, such as: participating in mathematical discussions with other students; presenting mathematical reasoning; creating representations with manipulatives, pictures, words and symbols; writing narratively about their mathematical understanding; and using technology and media.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

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<p>Category 3 (continued):</p> <p>INSTRUCTIONAL SUPPORTS</p>	<p>4. Includes specific strategies for development of mathematical vocabulary and academic language such as concrete and abstract representations, anchor charts, word walls, sentence starters, routines, clear learning goals.</p> <p>EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):</p> <table border="1" data-bbox="1226 277 1965 412"> <thead> <tr> <th>Not Present</th> <th>Barely Evident in Materials</th> <th>Some of the Materials</th> <th>Majority of Materials</th> <th>Embedded Throughout Materials</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </tbody> </table>	Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials	0	1	2	3	4										
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<p>Category 4</p> <p>ASSESSMENT</p>	<p>1. Student assessment integrates content and mathematical practice standards in the instructional program. Assessment activities are similar to learning activities. Assessment activities examine the extent to which students have integrated and made sense of information, whether they can apply it to situations that require reasoning and creative thinking, and whether they can use mathematics to communicate their ideas orally, on paper, with pencil and with technology.</p> <p>EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):</p> <table border="1" data-bbox="1226 781 1965 915"> <thead> <tr> <th>Not Present</th> <th>Barely Evident in Materials</th> <th>Some of the Materials</th> <th>Majority of Materials</th> <th>Embedded Throughout Materials</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </tbody> </table> <p>2. Variety of types and purposes including summative, formative informal and formal. Include diagnostic, observational and peer to peer assessment. Suggestions are provided for assessing students, individually or in small groups, through observations, oral and written work, student demonstrations or presentations, and student self-assessment. Assessment is built into instructional materials as a continuous dynamic and often informal process.</p> <p>EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):</p> <table border="1" data-bbox="1226 1247 1965 1382"> <thead> <tr> <th>Not Present</th> <th>Barely Evident in Materials</th> <th>Some of the Materials</th> <th>Majority of Materials</th> <th>Embedded Throughout Materials</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </tbody> </table>	Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials	0	1	2	3	4	Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials	0	1	2	3	4
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Category 4 (continued):

ASSESSMENT

3. Assessment tasks include connections between mathematical ideas. Rich mathematical tasks with appropriately high cognitive demand, types and kinds of thinking with connections between concepts are used to. Assessment is not of separate or isolated competencies, although one aspect of mathematical knowledge might be emphasized more than another in a particular assessment. Assessments are written to assess at the cluster heading level and for fluency as defined as efficient, effective and based on strong conceptual understanding.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

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4. Conceptual understanding and procedural knowledge are frequently assessed through tasks that ask students to apply information about a given concept in novel situations.

EVIDENCE TO SUPPORT RATING (e.g., pages, examples, etc.):

Not Present	Barely Evident in Materials	Some of the Materials	Majority of Materials	Embedded Throughout Materials
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Referenced, adapted, and formatted from the following document

- K-8 Publisher’s Criteria for the Common Core State Standards for Mathematics, National Governors Association, CCSSO, Achieve, Council of Great City Schools, National Association of State Boards of Education (July 2012)
- PARCC Model Content Framework, Revised August 2012.
- Albuquerque Public Schools, K-12 Instructional Materials Evaluation Criteria (2006)
- Missoula County Public Schools Textbook Evaluation Tool (1997)