

# **MATHLINKS**

## **Response to Ed Reports Evaluation**

The Center for Mathematics and Teaching (CMAT) is a non-profit educational organization dedicated to igniting and nurturing passion in middle school students and teachers about the elegance and utility of mathematics. Our team worked in the UCLA Mathematics Department until 2010. At that time we left the university to write a common core mathematics curriculum from the ground up (called *MathLinks*), and to provide professional development for teachers.

*MathLinks*: Grades 6, 7, and 8 was completed in summer 2015 and then reviewed by EdReports. We thank reviewers for their work throughout the evaluation process.

The purpose of this document is to summarize CMAT's understandings of the EdReports' findings for *MathLinks*: Grades 6, 7, and 8, and to provide additional information where we believe it contributes to a more accurate report. We also encourage consumers of EdReports to learn about [methodology concerns](#) that have been expressed by NCTM and NCSM.

Please visit our website at [www.mathandteaching.org](http://www.mathandteaching.org) for more information about *MathLinks*.

### **MATHLINKS: GRADE 6**

EdReports identified the following strengths in *MathLinks*: Grade 6.

- Materials assess grade level content.
- Geometry and statistics lessons were cited as evidence of supporting work that connected to the major work of the grade level.
- The amount of content is appropriate for one school year.
- Materials foster coherence through connections at the grade level.

*MathLinks*: Grade 6 fully develops the CCSS-M content and practice standards, but it did not meet EdReport expectations, primarily because the program did not devote at least 65% of the time to standards they define as “the major work of the grade.” In fact:

- *MathLinks* devotes about 55-60% of the school year to dividing fractions, concepts with integers, proportional reasoning, expressions and equations (considered major work).
- *MathLinks* devotes about 25-35% of the school year to fluency with division, geometry, and statistics (considered supporting work).
- *MathLinks* carves out up to 20% of the school year for work with fractions and decimals (below grade level work) if needed. We include this work because we know that large populations of students currently enter 6<sup>th</sup> grade without a full understanding and fluency of these concepts, which are essential for success in higher mathematics. We address the topics using mature approaches so that students will deepen understanding while attending to the math practice standards.

*MathLinks* authors logged more than 40 years as classroom teachers, and we could not, in good conscience, hit the ground running with fraction division (6.NS.A1) in many 6<sup>th</sup> grade classrooms. Our approach was a deliberate editorial decision, and we stand by it. Countless teachers have thanked us for including this important review, and they use it with students who need it. We welcome potential users to contact us for evidence that the program meets all criteria for a 6<sup>th</sup> grade CCSS-M program, including all aspects of completeness, coherence, and rigor.

## **MATHLINKS: GRADE 7**

EdReports found that this program did not meet their expectations. We summarize the findings by individual indicators, because it paints a more useful picture for consumers. We applied the EdReports color scheme for clarity.

<b>GATEWAY 1</b>	
<b>1a</b>	Materials assess grade level content.
<b>1b</b>	Materials spend the majority of class time on the major clusters of the grade.
<b>1c</b>	Materials partially meet the coherence criterion, but show strengths in geometry and statistics.
<b>1d</b>	The amount of content is reasonable for one school year, but reviewers had concerns about pacing and depth.
<b>1e<sup>1</sup></b>	Materials are partially representative of the progressions in the standards. Work with proportionality may be limited.
<b>1f</b>	Materials foster coherence through connections at the 7 <sup>th</sup> grade level.
<b>GATEWAY 2</b>	
<b>2a</b>	Conceptual understanding is evident throughout student lessons and teacher materials.
<b>2b</b>	There are abundant opportunities to develop fluency and procedural skills.
<b>2c<sup>2</sup></b>	Materials partially meet the expectation that students work with engaging applications without losing focus on major work of the grade.
<b>2d<sup>2</sup></b>	Based on findings from 2c, the materials do not include all three aspects of rigor.
<b>2e</b>	Materials regularly and meaningfully connect math practices to the content standards within and throughout the grade.
<b>2f</b>	The materials attend to the full meaning of each practice standard, with multiple opportunities to engage in every practice standard throughout the year.
<b>2gi<sup>3</sup></b>	Materials often ask students to explain, but fall short of the full meaning of Math Practice Standard 3.
<b>2gii</b>	Materials assist and encourage teachers to engage students in constructing viable arguments and analyzing the arguments of others.
<b>2giii</b>	Materials explicitly and consistently attend to specialized language of mathematics.

Notes:

<sup>1</sup>We relied heavily on the standards documents, progressions documents, and other exemplars to inform scope, depth, and choice of problems for this domain. About one-fourth of the school year is allocated to proportional reasoning. See [additional evidence for 1e](#).

<sup>2</sup>We have concerns about the methodology used to arrive at this finding. The program includes real-world applications related to major work of the grade in 14 lessons, 9 tasks, and 8 proficiency challenges. See [additional evidence for 2cd](#).

<sup>3</sup>In addition to “explain” and “justify” prompts, we wonder if reviewers considered prompts in the student materials where students were required to critique a statement, perform error analysis, or apply another student’s reasoning, to name a few. See [additional evidence for 2gi](#).

We encourage potential users to contact us ([info@mathandteaching.org](mailto:info@mathandteaching.org)) for further discussion of this report.

## **MATHLINKS: GRADE 8**

EdReports found that this program partially met their expectations. We summarize the findings by individual indicators here, because it paints a more useful picture for consumers. We applied the EdReports color scheme for clarity.

<b>GATEWAY 1</b>	
<b>1a</b>	Materials assess grade level content.
<b>1b</b>	Materials spend the majority of class time on the major clusters of the grade.
<b>1c</b>	Materials partially meet the coherence criterion, with strengths in statistics.
<b>1d</b>	The amount of content is reasonable for one school year.
<b>1e<sup>1</sup></b>	Materials are partially representative of the progressions in the standards. Work with functions may be limited.
<b>1f</b>	Materials foster coherence through connections within and between packets.
<b>GATEWAY 2</b>	
<b>2a</b>	Materials provide high quality conceptual development of mathematical ideas.
<b>2b</b>	There are abundant opportunities to develop fluency and procedural skills.
<b>2c<sup>2</sup></b>	Materials did not spend sufficient time working with engaging applications.
<b>2d<sup>2</sup></b>	Based on findings from 2c, materials did not include all three aspects of rigor.
<b>2e</b>	Materials regularly and meaningfully connect math practices to the content standards within and throughout the grade.
<b>2f</b>	The materials attend to the full meaning of each practice standard.
<b>2gi<sup>3</sup></b>	Materials often ask students to explain, but fall short of the full meaning of Math Practice Standard 3.
<b>2gii</b>	Materials assist and encourage teachers to engage students in constructing viable arguments and analyzing the arguments of others.
<b>2giii</b>	Materials explicitly and consistently attend to specialized language of mathematics.

Notes:

<sup>1</sup> We relied heavily on the standards documents, progressions documents, and other exemplars to inform scope, depth, and choice of problems for this domain. About half of the school year is allocated to work with functions. See [additional evidence for 1e](#).

<sup>2</sup>We have concerns about the methodology used to arrive at these findings, as EdReports applies a very narrow definition for “application.” The program includes real-world applications in 10 lessons (20% of all lessons), 11 tasks, and 9 proficiency challenge questions. Reviewers found only 8 lessons, 1 task and 6 proficiency challenges. See [additional evidence for 2cd](#).

<sup>3</sup>In addition to “explain” and “justify” prompts, we wonder if reviewers considered prompts in the student materials where students were required to critique a statement, perform error analysis, or apply another student’s reasoning, to name a few.

We encourage potential users to contact us ([info@mathandteaching.org](mailto:info@mathandteaching.org)) for further discussion of this report.