Instructional Materials Evaluation Toolkit (IMET)

Mathematics, High School

Your Evaluation Guide for *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* ©2020

Introduction

What Are the Purposes of the IMET?

This Math IMET is designed to help educators determine whether instructional materials are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (www.corestandards.org/other-resources/key-shifts-in-mathematics/) at the heart of the Common Core State Standards are:

- **Focus** strongly where the Standards focus.
- **Coherence:** Think across grades and link to major topics within the grade.
- **Rigor:** In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Traditionally, judging alignment has been approached as a crosswalking exercise. But crosswalking can result in large percentages of "aligned content" while obscuring the fact that the materials in question align not at all to the letter or the spirit of the standards being implemented. The IMET is designed to sharpen the alignment question and make alignment and misalignment more clearly visible. The IMET draws from the Common Core State Standards for Mathematics (www.corestandards.org/Math).

For materials passing the IMET, educators can make use of more detailed instruments available in the Materials Alignment Toolkit (www.achievethecore.org/materials-alignment-toolkit) developed collaboratively by the Council of the Great City Schools, the Council of Chief State School Officers, and Achieve to enable further analysis of supports for special populations and other aspects of quality in aligned materials.

There are important considerations for implementation of materials in addition to alignment. Evaluators may want to add their own indicators to the ones provided here in order to evaluate local considerations beyond alignment.

When to Use the IMET

1. Evaluating materials currently in use: The IMET can be used to analyze the degree of alignment of existing materials and help to highlight specific, concrete flaws in alignment. Even where materials and tools currently in use fail to meet one or more of these criteria, the pattern of failure is likely to be informative. States and districts can use the evaluation to create a thoughtful plan to modify or combine existing resources in such a way that students' actual learning experiences approach the focus, coherence, and rigor of the Standards.
2. Purchasing materials: Many factors go into local purchasing decisions. Alignment to the Standards is a critical factor to consider. This tool is designed to evaluate alignment of instructional materials to the Shifts and the major features of the CCSS. It also provides suggestions of additional indicators to consider in the materials evaluation and purchasing process.
3. Developing programs: Those developing new programs can use this tool as guidance for creating aligned curricula.

Please note that this tool was designed for evaluating comprehensive curricula (including their supplemental or ancillary materials), but it was not designed for the evaluation of standalone supplemental materials.

Who Uses the IMET?

Evaluating instructional materials requires both subject-matter and pedagogical expertise. Evaluators should be well versed in the High School Standards (www.corestandards.org/Math). This includes understanding not only the individual standards statements, but also the overall structure of CCSSM itself (see www.achievethecore.org/progressions and www.achievethecore.org/file/2530), as well as the expectations of the Standards with respect to conceptual understanding, procedural skill and fluency, and application.

Prior to Evaluation

Assemble all of the materials necessary for the evaluation. It is essential for evaluators to have materials for all courses covered by the program, as some criteria cannot be rated without having access to each course. In addition, each evaluator should have a reference copy of the Common Core State Standards for Mathematics (www.corestandards. org/Math). Reviewers may also choose to reference the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013), for additional support and guidance. (www.corestandards.org/assets/Math_Publishers_Criteria_HS_ Spring%2013_FINAL. pdf).

Before conducting the evaluation itself, it is important to develop a protocol for the evaluation process. The protocol should include having evaluators study the IMET. It will also be helpful for evaluators to get a sense of each program overall before beginning the process. At a minimum, this would include reading the front matter of the text, looking at the table of contents, and paging through multiple chapters.

Navigating the Tool

Steps 1–3 below should be completed to produce a comprehensive picture of the strengths and weaknesses of the materials under evaluation. Information about areas in need of improvement or supplementation should be shared with internal and external stakeholders.

Step 1: Non-Negotiable Alignment Criteria (p. 4)

- The Non-Negotiable Alignment Criteria must each be met in full for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. Each Non-Negotiable Alignment Criterion has one or more metrics associated with it; every one of these metrics must be met in order for the criterion as a whole to be met.
- Examine the relevant materials and use evidence to rate the materials against each criterion and its associated metric(s).
- Record and explain the evidence upon which the rating is based.

Step 2: Alignment Criteria (p. 10)

- The Alignment Criteria must each be met for materials to be considered aligned to the Shifts and the major features of the Common Core State Standards. For each Alignment Criterion, a specified number of the associated metrics must be met or partially met in order for the criterion as a whole to be met.
- Examine the materials in relation to these criteria, assigning each metric a point value. Rate the criterion as "Meets" or "Does Not Meet" based on the number of points assigned. The more points the materials receive on the Alignment Criteria, the better they are aligned.
- Record and explain the evidence upon which the rating is based.

Step 3: Evaluation Summary (p. 29)

- Compile all of the results from Sections 1 and 2 to determine if the instructional materials are aligned to the Shifts and major features of the CCSS.

All steps should be completed to produce a comprehensive picture of the strengths and weaknesses of the alignment of the materials under evaluation. Information about areas in need of improvement or supplementation should be shared with internal and external stakeholders.

Directions for Non-Negotiable 1
Focus and Coherence

Non-Negotiable 1: Materials must focus coherently on the Widely Applicable Prerequisites in a way that is consistent with the progressions in the Standards.

Focus and coherence are the two major evidence-based design principles of the Common Core State Standards for Mathematics (CCSSM, p. 3). Focus is necessary in order to fulfill the ambitious promise the states have made to their students by adopting the Standards: greater achievement at the college- and career-ready level, greater depth of understanding of mathematics, and a rich classroom environment in which reasoning, sensemaking, applications, and a range of mathematical practices flourish. In high school courses, narrowing and deepening the curriculum creates a structure that ties topics together. Thus, materials must focus coherently on the Widely Applicable Prerequisites in a way that is consistent with the progressions in the Standards.

Materials to Assemble

- Common Core State Standards for Mathematics (www.corestandards.org/wp-content/uploads/Math_Standards.pdf)

- Widely Applicable Prerequisites for College and Careers (www.achievethecore.org/prerequisites)

- From the course being evaluated: teacher and student materials

It will also be helpful for reviewers to consult the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013). (www.corestandards.org/assets/Math_Publishers_Criteria_HS_Spring%2013_FINAL.pdf).

Metrics to Review

- **NN Metric 1A:** In any single course, students spend at least 50% of their time on Widely Applicable Prerequisites.

- **NN Metric 1B:** Student work in Geometry involves significant work with applications/modeling and problems that use algebra skills.

- **NN Metric 1C:** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8.

- **NN Metric 1D:** Materials base courses on the content specified in the Standards.

Rating this Criterion

Non-Negotiable 1 is rated as Meets or Does Not Meet.

To rate Non-Negotiable 1, first rate Metrics 1A–1D. Each of these eight metrics must be rated as Meets in order for Non-Negotiable 1 to be rated as Meets. Rate each metric 1A–1D as Meets or Does Not Meet/Insufficient Evidence. If the evidence examined shows that the Criterion is met, then mark the Criterion as Meets. If the evidence examined shows that the Criterion is not met—or if there is insufficient evidence to make a determination—then mark the Criterion as Does Not Meet/Insufficient Evidence. Support all ratings with evidence.

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1A:
In any single course, students spend at least 50% of their time on Widely Applicable Prerequisites

How to Find the Evidence

Familiarize yourself with the Widely Applicable Prerequisites.

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons. (Evaluate both student and teacher materials.)

Because calculating percentage in instructional materials is difficult, reviewers should not set a precise percentage threshold for meeting Metric 1A. Instead, consider time spent on the Widely Applicable Prerequisites and judge qualitatively whether students and teachers using the materials as designed will devote the majority of time to the Widely Applicable Prerequisites.

For context, read Criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Evidence

In MHE's *Reveal Algebra 1* and *Reveal Algebra 2*, students are able to spend the majority of their time on content widely applicable as prerequisites (WAPs) for a range of college majors, postsecondary programs, and careers. In *Reveal Geometry*, students spend less than the majority of their time on the WAPs; however, there are 9 additional lessons with learning prerequisites within the Geometry category. If those lessons are included, students are spending the majority of the time of this content.

- *Reveal Algebra 1*:
  Number of lessons: 74/79 (94%)
  Pacing: 159/163 days (98%)

- *Reveal Geometry*:
  Number of lessons: 33/76 (43%)
  Pacing: 75/162 (46%)
  With additional lessons: 42/76 (55%)
  Pacing: 94/162 (58%)

  None of these domains, which include standards in Appendix A for Geometry, were included in this category: G-C Circles, G-GMD Geometric Measurement and Dimension, G-GPE Expressing Geometric Properties with Equations, or G-MG Modeling with Geometry.

- *Reveal Algebra 2*:
  Number of lessons: 56/75 (75%)
  Pacing: 122/159 (77%)

Evidence for each course is cited on page 5a.

Rating

☑ **Meets**

☐ **Does Not Meet / Insufficient Evidence**

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1B:
Student work in Geometry involves significant work with applications/ modeling and problems that use algebra skills.

How to Find the Evidence

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, lessons, homework assignments, and assessments. (Evaluate both student and teacher materials.)

NOTE: Since Geometry contains relatively fewer Widely Applicable Prerequisites, this metric is important to help foster students' college and career readiness. Problems that use algebra skills might include, for example, algebraic geometry problems in a coordinate setting, or problems of measurement involving unknown quantities.

Evidence

In MHE's *Reveal Geometry*, students explore this metric in many ways.

- Applications: The course provides an ample number of problems and exercises to engage students in meaningful and realistic problem-solving experiences that allow them to model real-life scenarios. Lessons launch with an application of the lesson content. Each lesson also includes Examples and Practice exercises that are applications of the lesson's core concept in contextual problem-solving scenarios.

- Modeling: In the online Explore activities in the Student Digital Center, students create their own models to connect concrete understandings with written and symbolic methods. Students are also introduced to geometric modeling as they use coordinates to find perimeters and areas of two-dimensional models of real-world objects (G-GPE.7, Module 2).

- Coordinate Geometry: Coordinate geometry is used throughout the course:
  - To find the distance from a point to a line on the coordinate plane (G-MG.3, Module 3).
  - To compute perimeters of polygons and areas of triangles and rectangles. (G-GPE.7, Module 2).
  - To explore transformations on the coordinate plane (G-CO.2, Module 4).

- Algebraic Skills: Students use algebra skills throughout the course:
  - To explore congruent triangles (G-CO.7, Module 5).
  - To explore angle bisectors (G-CO.9, Module 5).
  - To find volumes of prisms, pyramids (G-GMD.3, Module 11)

Rating

☑ **Meets**

☐ **Does Not Meet / Insufficient Evidence**

Non-Negotiable 1

Focus and Coherence

Metric

NN Metric 1C:
There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6–8.

How to Find the Evidence

Evaluate lessons, chapter/unit assessments, and homework assignments.

NOTE: Problems should include application of the following topics from grades 6–8:

- Ratios and proportional relationships

- Percentage and unit conversions (e.g., in the context of complex measurement problems involving quantities with derived or compound units, such as mg/mL, kg/m^3, acre-feet, etc.)

- Basic function concepts (e.g., by interpreting the features of a graph in the context of an applied problem)

- Concepts and skills of geometric measurement (e.g., when analyzing a diagram or schematic)

- Concepts and skills of basic statistics and probability (see grades 6–8.SP)

- Performing rational number arithmetic fluently

Evidence

In MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*, exercises and activities are designed to meet students at their level. Here are some examples:

- Ratios/Proportional Relationships: Students extend their learning from middle school math to include solving more complex proportions (Alg 1, Module 2, A-REI.3) and solving rational equations (Alg 2, Module 9, A-REI.2).

- Unit Conversions: Students extend their understanding of equations in one variable to include formulas with more than one variable, dimensional analysis (Alg 1, Module 2, A-CED.4), and variations (Alg 2, Module 9, A-CED.4).

- Function Concepts: Students begin using function notation in Algebra 1 (Module 3, F-IF.2). Students also begin to interpret features of graphs in context in Module 3 (N-Q.1 and F-IF.4).

- Geometric Measurement: Students find measures of figures in Algebra 1 using geometric skills and concepts learned in middle school math. Those concepts are validated in *Reveal Geometry*, where students give informal arguments for several formulas (Module 11, G-GMD.1).

- Basic Statistics and Probability: Students use concepts learned in middle school math, such as measures of center and spread and distributions as they compare distributions in Algebra 1 (S-ID.2).

- Rational Number Arithmetic: Students extend rational number arithmetic to rational exponents in Algebra 1 (Module 8, N-RN.1 and 2).

Rating

☑ **Meets**

☐ **Does Not Meet / Insufficient Evidence**

Non-Negotiable 1

Focus and Coherence

Metric	**How to Find the Evidence**	**Evidence**

NN Metric 1D:
Materials base courses on the content specified in the Standards.

Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons in both student and teacher materials.

For context, read Criterion #3a in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* follow the intended scope and conceptual development as prescribed by the Common Core State Standards (CCSS). The program attends to the full intent of the mathematical content of the CCSS for high school mathematics.

A listing of the standards assessed in each module can be found in the *Teacher Edition* PDFs on the following pages. The correlation and pacing documents can also be found in the *Digital Teacher Center* under Program Resources: Course Materials: Teacher Edition, Correlations, and Pacing.

- *Reveal Algebra 1*: pp. xxxii-xxxvii
- *Reveal Geometry*: pp. xxxi-xxxvi
- *Reveal Algebra 2*: pp. xxxiii-xl

In the *Teacher Editions*, each module and lesson also begin with a listing of the primary standards being addressed in that module and lesson.

Rating

☑ **Meets**

☐ **Does Not Meet / Insufficient Evidence**

Non-Negotiable 1

Focus and Coherence

Non-Negotiable 1: Materials must focus coherently on the Widely Applicable Prerequisites in a way that is consistent with the progressions in the Standards.

Rating for Non-Negotiable 1

Rating

If all metrics 1A–1D were rated as Meets, then rate Non-Negotiable 1 as Meets. If one or more metrics were rated as Does Not Meet/Insufficient Evidence, then rate Non-Negotiable 1 as Does Not Meet. Check the final rating.

✔ **Meets**

☐ **Does Not Meet**

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Strengths / Weaknesses:

The content of MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* is organized to allow students to spend the majority of their time on the content from the Common Core State Standards (CCSS) that is widely applicable as prerequisites for their futures. The materials require students to engage in mathematics at a level of sophistication that builds on what students learned in middle school mathematics but is appropriate to high school. The courses follow the intended scope and conceptual development as prescribed by the CCSS. This allows districts to feel confident that by following the *Reveal Math* series, their teachers will meet the expectations of the CCSS and the requirements for success on the national assessments.

Before moving to Alignment Criterion 1, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 29.

Now continue by evaluating Alignment Criterion 1: Rigor and Balance.

Directions for Alignment Criterion 1
Rigor and Balance

Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

The Standards set expectations for all three aspects of rigor: conceptual understanding, procedural skill and fluency, and applications. Thus, materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

Materials to Assemble

- Common Core State Standards for Mathematics (www.corestandards.org/wp-content/uploads/Math_Standards.pdf)

- Widely Applicable Prerequisites for College and Careers (www.achievethecore.org/prerequisites)

- From the materials being evaluated: teacher and student materials

It will also be helpful for reviewers to consult the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013). (www.corestandards.org/assets/ Math_Publishers_Criteria_HS_Spring%2013_FINAL.pdf).

Metrics to Review

- **AC Metric 1A:** The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.

- **AC Metric 1B:** The materials are designed so that students attain the fluency and procedural skills required by the Standards.

- **AC Metric 1C:** The materials are designed so that teachers and students spend sufficient time working with applications, without losing focus on the Widely Applicable Prerequisites.

Rating this Criterion

Alignment Criterion 1 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 1, first rate metrics 1A, 1B, and 1C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). For each metric, guiding questions are provided to aid in gathering evidence.

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 1 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as rigor and balance, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1A. On page 12, record evidence for each question and rate Metric 1A.

Metric	**How to Find the Evidence**	**Evidence**

AC Metric 1A:
The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.

Identify clusters or standards from the Widely Applicable Prerequisites that relate specifically to conceptual understanding to use throughout the questions associated with this metric.

NOTE: Some examples of clusters or standards that call for conceptual understanding include: N-RN.A.1, A-APR.B, A-REI.A.1, A-REI.D.10, A.REI.D.11, F.IF.A.1, F-LE.A.1, G.SRT.A.2, G-SRT.C.6, S-ID.C.7.

This list is not exhaustive.

Where the standards explicitly require students to understand concepts, do the assignments that students work on build that understanding, and do assessment tasks reveal whether students understand the mathematics in question? Evaluate lessons, chapter/unit assessments, and homework assignments, paying attention to work aligned to standards that explicitly call for understanding or interpreting.

Do the materials feature high-quality conceptual problems and conceptual discussion questions? Evaluate lessons, chapter/unit assessments, and homework assignments. NOTE: Examples of conceptual problems might include such questions as "What is the maximum value of the function $f(t) = 5 - t^2$?" or "Is $\sqrt{2}$ a polynomial? How about $\frac{1}{2}(x + \sqrt{2}) + \frac{1}{2}(-x + \sqrt{2})$?"

Do the materials feature opportunities to identify correspondences across mathematical representations? When manipulatives are used, are they faithful representations of the mathematical objects they represent? Are manipulatives connected to written methods? Evaluate lessons, chapter/unit assessments, and homework assignments. NOTE: An example of evaluating this metric might include looking at whether materials support students in identifying correspondences among the expression that defines a function, the graph that shows the relationship, and the behavior of the phenomenon being modeled (if any).

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1A:
The materials support the development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.

Evidence

Where the standards explicitly require students to understand concepts, do the assignments that students work on build that understanding, and do assessment tasks reveal whether students understand the mathematics in question?
MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* are purposefully designed to support a balance between the development of conceptual understanding, the need for instilling procedural fluency, and the desire to make the mathematics rich and meaningful to every student. The materials feature high-quality conceptual problems, conceptual discussion questions, and frequent opportunities to strengthen conceptual understanding through the use of multiple representations of quantitative relationships. Conceptual understanding is treated as distinct from fluency work or applications. Lessons in *Reveal Math* begin with conceptual development, often initiated in the Explore activity and carried through the Learn resource. In the Explore activities, students begin to build conceptual understanding by working collaboratively to explore new math concepts and discuss their thinking by orally responding to conceptual questions embedded at point of use in the activities. Students use digital manipulatives in these activities, including WebSketchpad®, eTools, and algebra tiles, among others. Evidence for each course is cited on page 12a.

Do the materials feature high-quality conceptual problems and conceptual discussion questions?
Yes. Throughout the Explore and Learn resources, students encounter discussion question prompts that support concept development by having them engage in mathematical discourse opportunities with a partner or the entire class. The Practice sections at the end of each lesson feature high-quality conceptual problems. These problems provide opportunities for students to engage in mathematical discourse to describe or defend their solutions and reasoning as they exhibit their critical thought process.

Do the materials feature opportunities to identify correspondences across mathematical representations? When manipulatives are used, are they faithful representations of the mathematical objects they represent? Are manipulatives connected to written methods?
Yes. In the Learn resources, students build conceptual development in a variety of ways, including multiple methods for solving problems (Method 1/Method 2), multiple representations (such as with words, equations/symbols, tables, and graphs), animations and videos, and the use of digital tools such as WebSketchpad®, technology-enhanced items, and eTools.

Rating

✅ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1B. On page 14, record evidence for each question and rate Metric 1B.

Metric	**How to Find the Evidence**	**Evidence**
AC Metric 1B: The materials are designed so that students attain the fluency and procedural skills required by the Standards.	Identify clusters or standards from the Widely Applicable Prerequisites that relate specifically to fluency and procedural skill to use throughout the questions associated with this metric. NOTE: Some examples of standards that call for procedural skill and fluency include: A-SSE.A.1b, A-SSE.2, A-APR.A.1, A-APR.C.6, F-BF.B.3, G-GPE.B.4, G-GPE.B.5, G-GPE.B.7, G-CO.A.1, G-SRT.B.5. This list is not exhaustive. For context, read Criterion #2b in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).	Is progress toward fluency and procedural skill interwoven with the student's developing conceptual understanding of the skills in question? Evaluate lessons, chapter/unit assessments, daily routines, and homework assignments for evidence that the development of fluency and procedural skill is supported by conceptual understanding.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1B:
The materials are designed so that students attain the fluencies and procedural skills required by the Standards.

Evidence

Is progress toward fluency and procedural skill interwoven with the student's developing conceptual understanding of the skills in question?
MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* provide multiple avenues for students to develop the procedural skills and fluency necessary for success. The main bridge from conceptual understanding to procedural skill and fluency is developed from the online *Explore* activities and *Learn* resources to the *Examples* and *Practice* exercises for each lesson. Students are also motivated toward procedural skill and fluency through other program resources.

Evidence for each course is cited on page 14a.

Rating

✓ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 1

Rigor and Balance

Use the questions on this page to evaluate Metric 1C. On page 16, record evidence for each question and rate Metric 1C.

Metric	**How to Find the Evidence**	**Evidence**
AC Metric 1C: The materials are designed so that teachers and students spend sufficient time working with applications, without losing focus on the Widely Applicable Prerequisites.	Identify clusters or standards from the Widely Applicable Prerequisites that relate specifically to application to use throughout the questions associated with this metric. NOTE: Some examples of clusters or standards that call for application include: N-Q.A, A-SSE.B.3, A-REI.D.11, F-IF.B, F-IF.C.7, F-BF.A.1, G-SRT.C.8, S-ID.A.2, S-IC.A.1. This list is not exhaustive. For context, read Criterion #2c in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).	Are there single- and multi-step contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving? Where the standards require students to solve multi-step and real-world problems, do the assignments that students work on allow them to do that, and do assessment tasks reveal whether students can do that? Evaluate lessons, chapter/unit assessments, and homework assignments. Do application problems particularly stress applying the Widely Applicable Prerequisites? Evaluate lessons, chapter/unit assessments, and homework assignments. Are there ample opportunities for students to engage with modeling problems? Do materials require students to use both individual parts of the modeling cycle as well as the full modeling cycle? Read the pages on High School—Modeling in the Standards for Mathematics (pp. 72 and 73). Evaluate lessons, chapter/unit assessments, and homework assignments.

Alignment Criterion 1

Rigor and Balance

Metric

AC Metric 1C:
The materials are designed so that teachers and students spend sufficient time working with applications, without losing focus on the Widely Applicable Prerequisites.

Evidence

Are there single- and multi-step contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving? Where the standards require students to solve multi-step and real-world problems, do the assignments that students work on allow them to do that, and do assessment tasks reveal whether students can do that?
Yes. Contextual problem solving is an integral part of MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*. Numerous opportunities are included for students to engage in rich contextual problem-solving tasks, including multi-step Examples and Practice exercises. Throughout the Practice exercises, students are presented with numerous opportunities to solve single-step and multi-step application problems and respond to higher-order thinking questions that involve constructing arguments. Evidence for each course is cited on page 16a.
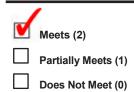
Do application problems particularly stress applying the Widely Applicable Prerequisites?
Yes. Application problems are present in every lesson, and those application problems target the same standards that are the focus of the lesson. So given that the majority of lessons focus on the Widely Applicable Prerequisites, the majority of the application problems do as well. Evidence for each course is cited on page 16a.

Are there ample opportunities for students to engage with modeling problems? Do materials require students to use both individual parts of the modeling cycle as well as the full modeling cycle?
MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* address the modeling standards thoroughly throughout the program. Students must model real-life situations with mathematics, interpret their results in the context of the situation, and reflect on whether the results make sense. Here are some examples:
- *Reveal Algebra 1*: In Lesson 11-8, students model the growth in video streaming. (S-ID.6a)
- *Reveal Geometry*: In Lesson 2-3, students use geometric modeling to find perimeters and areas of two-dimensional models of real-world objects by using the Distance Formula (G-GPE.7).
- *Reveal Algebra 2*: In Lesson 7-5, students find a model to represent the growth in coffee shop locations (A-CED.2).

Some of these exercises will require students to use the full modeling cycle, and some will require them to use parts of the cycle. Evidence for each course is cited on page 16a.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 1

Rigor and Balance

Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.

Points Assigned for Alignment Criterion 1

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn fewer than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

6 Total (6 points possible)

☑ **Meets**

☐ **Does Not Meet**

Strengths/ Weaknesses:

The organization of MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* was purposefully designed to support a balance between the development of conceptual understandings, the need for instilling proficiency, and the desire to make the mathematics rich and meaningful to every student.

The materials feature high-quality conceptual problems and conceptual discussion questions and feature frequent opportunities to identify multiple representations. Progress toward fluency—particularly fluency in algebraic operations—is interwoven with conceptual understanding and applied within and across courses. The courses contain high-quality contextual problems that develop the mathematics of the grade and engage students in problem solving at many levels.

Before moving to Alignment Criterion 2, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 29.

Directions for Alignment Criterion 2

Standards for Mathematical Practice

Alignment Criterion 2: Materials must authentically connect content standards and practice standards.

The Standards require that designers of instructional materials connect the mathematical practices to mathematical content in instruction (CCSSM, p. 8). Thus, materials must demonstrate authentic connections between content standards and practice standards.

Materials to Assemble

- Common Core State Standards for Mathematics (www.corestandards.org/wp-content/uploads/Math_Standards.pdf)

- Widely Applicable Prerequisites for College and Careers (www.achievethecore.org/prerequisites)

- From the course being evaluated: teacher and student materials

It will also be helpful for reviewers to consult the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013). (www.corestandards.org/assets/ Math_Publishers_Criteria_HS_Spring%2013_FINAL.pdf).

Metrics to Review

- **AC Metric 2A:** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practice standards strengthen the focus of the course instead of detracting from it, in both teacher and student materials.

- **AC Metric 2B:** Tasks and assessments of student learning are designed to provide evidence of students' proficiency in the Standards for Mathematical Practice.

- **AC Metric 2C:** Materials support the Standards' emphasis on mathematical reasoning.

Rating this Criterion

Alignment Criterion 2 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 2, first rate metrics 2A, 2B, and 2C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points). For metrics 2B and 2C, guiding questions are provided to aid in gathering evidence.

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 2 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as mathematical practices, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM.

Alignment Criterion 2
Standards for Mathematical Practice

Metric

AC Metric 2A:
Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practice standards strengthen the focus of the course instead of detracting from it, in both teacher and student materials.

How to Find the Evidence

Familiarize yourself with the Widely Applicable Prerequisites.

Evaluate teacher and student materials for evidence that the mathematical practices support and connect to the focus of the course.

NOTE: Examples of evaluating this metric might include looking at whether materials use regularity in repeated reasoning to illuminate formal algebra as well as functions, particularly recursive definitions of functions.

Evidence

A strong emphasis on connecting the Standards for Mathematical Practice (MP) to the Common Core State Standards (CCSS) for content is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*.

- Throughout the program, *Think About It!* and *Talk About It!* questions encourage critical thinking and mathematical discourse among students to help them develop the habits of mind described in the practice standards.

- Throughout each lesson of the *Teacher Editions*, strategies and suggestions for demonstrating the Standards for Mathematical Practice are found in the *Explores*, *Learns*, and *Examples*; these are labeled Teaching the Mathematical Practices.

- Also included in the *Teacher Editions* and *Digital Teacher Centers*, *Questions for Mathematical Discourse* (*Leveled Discussion Questions*) are included for each example to promote high expectations, critical thinking skills, and class discussion.

- In addition, the materials in *Reveal Math* promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.

Evidence for each mathematical practice standard is cited on pages 19a-19b.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 2
Standards for Mathematical Practice

Metric

AC Metric 2B:
Tasks and assessments of student learning are designed to provide evidence of students' proficiency in the Standards for Mathematical Practice.

How to Find the Evidence

Evaluate the variety of tasks and assessments provided (e.g., observation checklists, portfolio recommendations, performance tasks, tests and quizzes) to see whether students have opportunities to demonstrate proficiency with each of the Standards for Mathematical Practice over the course of the year.
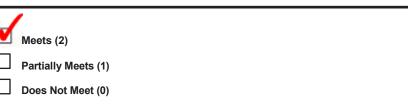
Evidence

The tasks and assessments present in MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* are specifically designed to provide evidence of student proficiency in the Standards for Mathematical Practice.

Throughout the program, tasks include, but are not limited to, Explore activities, Practice and Higher-Order Thinking exercises, and Module Ignite Activities. Please see specific examples of ways in which students demonstrate proficiency on the Standards for Mathematical Practice on pages 19a-19b.

Assessments are present at the course level, module level, and lesson level and are carefully designed to elicit observable evidence of student proficiency of the CCSS and Standards for Mathematical Practice. The following gives the breakdown of assessments in *Reveal Math*.

• Course-Level: Diagnostic and Placement Tests (online), End-of-Course Test (online)

• Module-Level: Are You Ready? (print), Test Practice (print), Put It All Togethers (online), Module Pretest (online), Module Vocabulary Test (online), 3 Leveled Module Tests (online), Module Performance Tasks (online)

• At the lesson level, each Example includes a formative assessment checkpoint, called *Check*, that can be used to determine if students understand the math presented in the Example and are ready to move on. Each lesson concludes with an Exit Ticket that helps teachers determine whether students understand the concepts and skills presented in that lesson.

Each module also includes a *Formative Assessment Math Probe* that is intended to be assigned after students have completed a particular lesson. The probe is a formative assessment targeting one or more common misconceptions.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 2
Standards for Mathematical Practice

Use the questions on this page to evaluate Metric 2C. On page 22, record evidence for each question and rate Metric 2C.

Metric	**How to Find the Evidence**	**Evidence**
AC Metric 2C: Materials support the Standards' emphasis on mathematical reasoning.	Evaluate the units, chapters, and lessons in both the teacher and student materials. NOTE: In order for students to reason mathematically, the mathematics in the materials must be accurate. Any concerns about mathematical accuracy should be collected as evidence for this metric. For context, read Criterion #8 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).	Do the materials support students in constructing viable arguments and critiquing the arguments of others concerning course-level mathematics that is detailed in the content standards? Read Standard for Mathematical Practice 3. Evaluate teacher and student materials to ensure that students are given opportunities to reason with grade-level mathematics. Do the materials support students in producing not only answers and solutions, but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc., especially in the Widely Applicable Prerequisites? Familiarize yourself with the Widely Applicable Prerequisites. Evaluate teacher and student materials to understand the types of work students are expected to produce. Do materials explicitly attend to the specialized language of mathematics? Is the language of argument, problem solving, and mathematical explanations taught rather than assumed? Evaluate teacher and student materials, paying attention to how mathematical language is taught. NOTE: An example of evaluating this metric might include looking at whether students are supported in: basing arguments on definitions using the method of providing a counterexample, or recognizing that examples alone do not establish a general statement.

Alignment Criterion 2
Standards for Mathematical Practice

Metric

AC Metric 2C:
Materials support the Standards' emphasis on mathematical reasoning.

Evidence

Do the materials support students in constructing viable arguments and critiquing the arguments of others concerning course-level mathematics that is detailed in the content standards?

Yes. A strong emphasis on using mathematical reasoning to construct arguments, defend solutions, and analyze the arguments of others concerning grade-level mathematics is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*.

- Throughout the *Interactive Student Editions*, students are routinely required to justify their reasoning, construct arguments, and to find errors in another student's reasoning or work (Standard for Mathematical Practice 3 Construct Viable Arguments and Critique the Reasoning of Others). Look closely at the Higher Order Thinking Skills exercises where students have to make a conjecture, find the error, use a counterexample, make an argument, or justify conclusions. Many Talk About It! question prompts ask students to justify conclusions and/or critique another student's reasoning.

- In the *Teacher Editions*, look at the Teaching the Mathematical Practices tips.

Additional evidence is cited on page 22a.

Do the materials support students in producing not only answers and solutions, but also, in a course-appropriate way, arguments, explanations, diagrams, mathematical models, etc., especially in the Widely Applicable Prerequisites?

Yes. MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* provide teachers with specific tips, suggestions, and activities to engage students in constructing and analyzing arguments concerning the key course-appropriate mathematics outlined in the Common Core State Standards (CCSS). Additional evidence is cited on page 22a.

Do materials explicitly attend to the specialized language of mathematics? Is the language of argument, problem solving, and mathematical explanations taught rather than assumed?

Yes. A strong emphasis on mathematical and academic vocabulary and language development is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*. Correspondences between language and multiple representations (diagrams, tables, graphs, symbols) are clearly identified to help students make connections and build conceptual understanding of academic and mathematical vocabulary. Additional evidence is cited on page 22b.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 2
Standards for Mathematical Practice

Alignment Criterion 2: Materials must authentically connect content standards and practice standards.

Points Assigned for Alignment Criterion 2

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn fewer than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

6 Total (6 points possible)

✓ Meets

☐ Does Not Meet

Strengths/ Weaknesses:

A strong emphasis on using mathematical reasoning to construct arguments, defend solutions, and analyze the arguments of others concerning appropriate course-level mathematics is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*. Throughout the *Interactive Student Editions*, students are routinely required to justify their reasoning, construct arguments, and to find errors in another student's reasoning or work. Many *Talk About It!* question prompts ask students to justify conclusions and/or critique another student's reasoning. In the *Teacher Editions*, look for the *Teaching the Mathematical Practices* tips. In addition, the *Teacher Editions* provide teachers with specific tips, suggestions and activities to engage students in constructing and analyzing arguments concerning the key grade-level mathematics outlined in the Common Core State Standards (CCSS).

A strong emphasis on mathematical and academic vocabulary and language development is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*. Correspondences between language and multiple representations (diagrams, tables, graphs, symbols) are clearly identified to help students make connections and build conceptual understanding of academic and mathematical vocabulary. Throughout the *Interactive Student Editions*, students are routinely required to communicate precisely to partners, the teacher, or the entire class by using precise definitions and mathematical vocabulary. In the *Teacher Editions*, look for the *Teaching the Mathematical Practices* tips.

Before moving to Alignment Criterion 3, record the final Meets or Does Not Meet rating in the Evaluation Summary on Page 29.

Directions for Alignment Criterion 3
Access to the Standards for All Students

Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.

Because the Standards are for all students, evaluation requires that careful attention be paid to ensure that all students, including English Language Learners and those with different learning needs, have access to high-quality, aligned materials. The IMET is designed primarily to help educators determine whether instructional materials are aligned to the Shifts and major features of the CCSS. The IMET also allows room for local considerations to ensure that selected materials provide access for the specific set of students who will be using those materials.

Materials to Assemble

- Common Core State Standards for Mathematics (www.corestandards.org/wp-content/uploads/Math_Standards.pdf)

- From the course being evaluated: teacher and student materials

Metrics to Review

- **AC Metric 3A:** Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.

- **AC Metric 3B:** Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners with gradual removal of supports, when needed, to allow students to demonstrate their mathematical understanding independently.

- **AC Metric 3C:** Design of lessons attends to the needs of a variety of learners (e.g., using multiple representations, deconstructing/reconstructing the language of problems, suggestions for addressing common student difficulties).

Rating this Criterion

Alignment Criterion 3 is rated as Meets or Does Not Meet.

To rate Alignment Criterion 3, first rate metrics 3A, 3B, and 3C. Rate each metric as Meets (2 points), Partially Meets (1 point), or Does Not Meet (0 points).

Since there are three metrics, and each metric is worth up to 2 points, the maximum possible rating across all three metrics is 6 points. Ideally, aligned materials will earn all 6 points; materials are judged to have met Alignment Criterion 3 if the materials rate 5 or 6 points. This threshold recognizes that evaluators sometimes differ in how they assess features such as support for special populations, while at the same time ensuring that no single metric can receive a rating of zero and be aligned to the Shifts and major features of the CCSSM. (If reviewers notice that materials have strong supports for some populations but weak supports for others, then reviewers can consider disaggregating scores for this Alignment Criterion to ensure that the selected materials provide access for the specific students who will be using the materials.)

Alignment Criterion 3
Access to the Standards for All Students

Metric

AC Metric 3A:
Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.
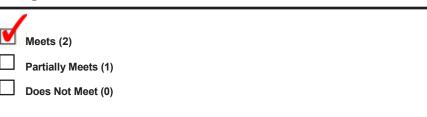
How to Find the Evidence

Evaluate teacher and student materials, paying attention to supports offered for special populations. Supports provided should ensure that all students are engaging with grade-level standards. For example, supports for English Language Learners should include attention to and analysis of the language of mathematical problems.

Evidence

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* include language development support and scaffolds throughout the *Teacher Editions* and *Language Development Handbooks*, Teacher Editions.

- The *Interactive Student Editions* will be available in Spanish.
- The *Language Development Handbook* includes support for all students in vocabulary development, note-taking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers, along with English/Spanish cognates. The Teacher Editions of the handbooks include strategies, activities, and tips to support students who are building English proficiency.
- In the core *Teacher Editions*, specific Differentiate activities include strategies to help develop language and vocabulary skills.
- Each lesson in the Student and Teacher Digital Center includes *Today's Vocabulary* resources that come with classroom discussion questions.
- A course-level digital and print *Glossary* is provided with words translated in English and Spanish. A digital *Multilingual eGlossary* is provided that contains mathematics terms translated into 14 languages. In addition, Spanish Personal Tutors are available online.
- Each lesson includes a *language objective* that is explicitly stated online and related to the content objective of the lesson.
- The program also features Dinah Zike's Foldables. Each module's *Foldables Study Organizer* allows students to make a graphic organizer to record and study the module's key math concepts. These three-dimensional study organizers are accessible to all learners, including ELLs, in that they allow students to apply and organize their conceptual understanding to a study tool.

Evidence for each course is cited on page 25a.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 3
Access to the Standards for All Students

Metric

AC Metric 3B:
Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners with gradual removal of supports, when needed, to allow students to demonstrate their mathematical understanding independently.

How to Find the Evidence

Evaluate teacher and student materials, paying attention to whether materials provide differentiation that will lead all learners to engage with on-grade-level content. For example, materials may offer suggestions for distinguishing between difficulties in conceptual understanding versus developing English proficiency and should offer suggestions for supporting learners in both circumstances.

Evidence

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* address the needs of all students. Each lesson includes a list of suggested Differentiated resources that are based on assessment data from the Checks placed after each Example. Resources range from remediation that targets prerequisite skill knowledge to enrichment that extends student knowledge.

- Online *Review* resources target prerequisite knowledge that is required for each lesson.
- At point of use, the *Teacher Editions* include Reteaching Activity suggestions for students who would benefit from additional support or scaffolding and Enrichment Activity suggestions for students who would benefit from a challenge or opportunity to extend their learning.
- In online *Extension* activities, included for every lesson, students extend their understanding of mathematical topics related to the lesson.
- The *Teacher Editions* include Language Development Activity suggestions that provide support for students building mathematical vocabulary.
- The *Language Development Handbooks* are appropriate for all students to support their vocabulary and language development growth. The Teacher Editions of the handbooks include scaffolded activities appropriate for varying proficiency levels of students building English Language proficiency.
- In the *Teacher Editions*, Questions for Mathematical Discourse are included for each example to promote high expectations, critical thinking skills, and class discussion. On-level (OL) questions and beyond-level (BL) questions are appropriate for all students to answer, while approaching-level (AL) questions are included if students need more scaffolded support.

Evidence for each course is cited on page 26a.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 3
Access to the Standards for All Students

Metric

AC Metric 3C:
Design of lessons attends to the needs of a variety of learners (e.g., using multiple representations, deconstructing/reconstructing the language of problems, suggestions for addressing common student difficulties).

How to Find the Evidence

Evaluate teacher materials, noting lesson design for whole class and differentiated lessons and activities.

NOTE: The examples in parentheses are not all required and there may be different approaches that developers use to meet this metric

Evidence

The materials in MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* attend to the needs of all learners.
- The interactive, write-in nature of the *Interactive Student Editions* allows students to take notes, record responses, show their work when solving problems, and take ownership of their own learning.
- *Think About It!* and *Talk About It!* question prompts engage students in mathematical discourse with a partner or the entire class.
- *Multiple methods* (Method 1/Method 2) are presented when solving problems. Students are encouraged to solve problems by using a variety of strategies.
- *Multiple representations*, such as models, tables, graphs, words, and algebraic/symbolic representations help students build conceptual understanding and make connections across representations.
- Online, students engage in *Explore* activities utilizing WebSketchpad, eTools, and other digital interactives.
- Students also watch *animations and videos* to learn mathematical concepts.
- The *Language Development Handbook* includes support for all students in vocabulary development, note-taking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers. The Teacher Editions of the handbooks include strategies to support students who are building English proficiency.
- The *Teacher Editions* include Language Development Activity suggestions that provide strategies and activities to help students build mathematical and academic vocabulary.
- *Common Errors* and *Common Misconceptions*, including methods for correction and prevention, are integrated throughout the program. Each module includes a Formative Assessment Math Probe that targets one or more common misconceptions of the mathematics covered in the module.

Evidence for each course is cited on pages 27a-27b.

Rating

☑ **Meets (2)**

☐ **Partially Meets (1)**

☐ **Does Not Meet (0)**

Alignment Criterion 3
Access to the Standards for All Students

Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.
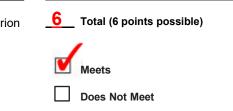
Points Assigned for Alignment Criterion 3

Materials must earn at least 5 out of 6 points to meet this Alignment Criterion. If materials earn fewer than 5 points, the Criterion has not been met. Check the final rating.

Then, briefly describe the strengths and weaknesses of these materials in light of the above Criterion.

Rating

6 Total (6 points possible)

✓ Meets

☐ Does Not Meet

Strengths/ Weaknesses:

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* include support, embedded in every lesson, for English language learners and other special populations. The materials provide appropriate scaffolding and differentiation for a broad range of learners, including materials for remediation/reteaching, intervention, enrichment/extension, and language development support.

Move to the Evaluation Summary on the following page to record the final Meets or Does Not Meet rating.

IMET Evaluation Summary 1 of 2

Program: *Reveal Algebra 1, Reveal Geometry, and Reveal Algebra 2*

Name of Evaluator(s):

Publisher: McGraw-Hill Education

Date of Evaluation:

Date of Publication: ©2020

Signature of Each Evaluator:

Non-Negotiable Criteria

The Non-Negotiable Criterion must be Met.

Non-Negotiable 1:
Focus and Coherence

☑ **Meets**

☐ **Does Not Meet**

Alignment Criteria

Each Alignment Criteria must be met with a sufficient number of points in order for Alignment Criteria to be labeled as "Meets" overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1:
Rigor and Balance

Points: **6** of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

☑ **Meets**

☐ **Does Not Meet**

Alignment Criterion 2:
Standards for Mathematical Practice

Points: **6** of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

☑ **Meets**

☐ **Does Not Meet**

Alignment Criterion 3:
Access to Standards for All Learners

Points: **6** of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

☑ **Meets**

☐ **Does Not Meet**

Alignment Criteria Overall

☑ **Meets**

☐ **Does Not Meet**

IMET Evaluation Summary 2 of 2

Program: _Reveal Algebra 1, Reveal Geometry, and Reveal Algebra 2_

Name of Evaluator(s):

Publisher: McGraw-Hill Education

Date of Evaluation:

Date of Publication: ©2020

Signature of Each Evaluator:

Summary

If the materials meet the Non-Negotiable Criterion and each Alignment Criterion, they are aligned to the Shifts and major features of the CCSS.

Do the materials meet every Non-Negotiable and Alignment Criterion?

☑ **Yes**

☐ **No**

What are the specific areas of strength and weakness based on this evaluation?
Publishers or those implementing curricula can use this information in order to modify the materials or use them differently to improve alignment.

Evidence for Non-Negotiable Metric 1A *In any single course, students spend at least 50% of their time on Widely Applicable Prerequisites.*

The content of *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* is organized to allow students to spend the majority of their time on the content from the Common Core State Standards (CCSS) that is widely applicable as prerequisites for students' futures. The following charts indicate the instructional time and number of lessons devoted to the major work of each grade. The percent of coverage is calculated. The supporting content enriches the focus of the major work of each grade. Supporting content occurs primarily after the major work in each grade is completed. This positioning provides opportunities to use supporting work to enhance the major work of each grade.

Course	Instructional Time/Number of Lessons		Supporting or Additional Comments
Reveal Algebra 1	Instructional Time Number of Lessons	159/163 days (98%) 74/79 (94%)	Students are spending the majority of their time on the content widely applicable as prerequisites for a range of college majors, postsecondary programs, and careers.
Reveal Geometry	Instructional Time Number of Lessons With additional lessons: Instructional Time Number of Lessons	75/162 days (46%) 33/76 (43%) 94/162 days (58%) 42/76 (55%)	Students are spending less than the majority of their time on the content widely applicable as prerequisites; however, there are 9 additional lessons with learning prerequisites within the Geometry category. If those lessons are included, students are spending the majority of the time of this content. Standards that are Relatively Important G-CO.1, G-CO.9, G-CO.10, G-SRT.5, G-SRT.6, G-SRT.7, G-SRT.8 are primarily covered in Modules 1-3, 5, 6, and 9. Standards with Learning Prerequisites G-CO.2-5, G-CO.6-8, and G-SRT.1-3 are primarily covered in Modules 4 and 8. However, none of these domains, which include standards in the Appendix A for Geometry, were included in this category: G-C Circles, G-GMD Geometric Measurement and Dimension, G-GPE Expressing Geometric Properties with Equations, or G-MG Modeling with Geometry.
Reveal Algebra 2	Instructional Time Number of Lessons	122/159 days (77%) 56/75 (75%)	Students are spending the majority of their time on the content widely applicable as prerequisites for a range of college majors, postsecondary programs, and careers. However, none of these domains, which include standards in Appendix A for Algebra 2, were included in this category: F-TF Trigonometric Functions, N-CN The Complex Number System, S-CP Conditional Probability and the Rules of Probability, S-IC Making Inferences and Justifying Conclusions, or S-ID Interpreting Categorical and Quantitative Data.

In MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*, lessons begin with conceptual development, often initiated in the online Explore activity and carried through the Learn resource.

- In the online *Explore* activities, students begin to build conceptual understanding by working collaboratively to explore new math concepts, and discuss their thinking by orally responding to question prompts embedded at point of use. In these activities, students use digital manipulatives including WebSketchpad®, eTools, digital algebra tiles, and many other types of digital tools.
- In the *Learn* resources, students build conceptual development in a variety of ways, including using multiple methods for solving problems, multiple representations, animations, videos, and digital tools such as WebSketchpad®, digital interactions, and eTools. Students encounter question prompts that support concept development by having them engage in mathematical discourse opportunities with a partner or the entire class.

Here are two examples from each course:

Course	Example 1	Example 2
Reveal Algebra 1	Lesson 3-3 (F-IF.4) Explore: Representing Discrete and Continuous Functions Lesson: Linearity and Continuity of Graphs	Lesson 7-5 (A-REI.12) Explore: Solutions of Systems of Inequalities Lesson: Systems of Inequalities
Reveal Geometry	Lesson 4-4 (G-CO.5) Explore: Reflections in Two Lines Compositions of Transformations	Lesson 10-1 (G-GMD.1) Explore: Discovering the Formula for Circumference Lesson: Circles and Circumference
Reveal Algebra 2	Lesson 3-4 (F-IF.8a) Explore: Finding the Solutions of Quadratic Equations by Factoring Lesson: Solving Quadratic Equations by Factoring	Lesson 4-1 (F-IF.7c) Explore: Power Functions Lesson: Polynomial Functions

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* provide multiple avenues for students to develop the procedural skills and fluency necessary for success. The main bridge from conceptual understanding to procedural skill and fluency is developed from the online *Explore* activities and *Learn* resources to the *Examples* and *Practice* exercises for each lesson. Students are also motivated toward procedural skill and fluency through other program resources.

- **In Standards:** As indicated by the CCSS, some lessons are designed to help students build and master fluency. Some specific examples are cited below.
  - *Reveal Algebra 1:*
    A-REI.3: Lessons 2-2 through 2-7, 6-1, and 6-2, Students solve linear equations and inequalities, including equations with coefficients.

  - *Reveal Geometry:*
    G-GPE.7: Lesson 2-3, Students use coordinates to compute perimeters of polygons and areas of triangles and rectangles.

  - *Reveal Algebra 2:*
    A-APR.1: Lessons 9-1 and 9-2, Students add, subtract, and multiply polynomials.

- **In Vocabulary:** Precise use of mathematical vocabulary is modeled throughout the program. Clear definitions are given, and *Think About It!* and *Talk About It!* questions require students to explain concepts and solutions accurately as well as justify their thinking. The *Module Review* reinforces understanding of vocabulary and key concepts.
- **In Practice:** For each lesson, students have a variety of *Examples* and *Practice* exercises they can use to develop fluency. In some cases, students use algebraic operations to work toward critical thinking. In others, students write or interpret given expressions and equations to explore mathematical representations of real-world and mathematical situations. Students also interpret expressions by relating variables to their meanings.
- **In Modeling:** Transitioning from concrete to abstract concepts is critical to success in higher mathematics. In the online *Explore* activities in the Student Digital Center, students use digital tools to investigate concepts, which are reinforced with representations in diagrams and pictures and then connected to written and symbolic representations. These and other opportunities allow students to create their own models to connect concrete understandings with written and symbolic methods.

Contextual problem solving is an integral part of MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*. Numerous opportunities are included for students to engage in rich, problem-solving tasks.

- **In Standards:** As indicated by the CCSS, some standards are designed to have students apply their knowledge by solving problems. Some specific examples are cited below.
  - *Reveal Algebra 1:* S-ID.6: Lesson 5-5, Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. a. Fit a function to the data; use functions fitted to data to **solve problems in the context of the data**. *Use given functions or choose a function suggested by the context. Emphasize linear and exponential models.*
  - *Reveal Geometry:* G-SRT.8: Lesson 9-2, Use trigonometric ratios and the Pythagorean Theorem to **solve right triangles in applied problems**.
  - *Reveal Algebra 2:* A-SSE.4: Lesson 7-4, Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to **solve problems**.
- **In Launch:** In *Launch the Lesson,* students view a real-world scenario and image to pique their interest in the lesson content. They will use concepts they learn in the lesson to model and solve problems presented in the scenario. *Launch the Module* videos are also designed to relate the mathematics of the module to the real world.

- **In Practice:** Each lesson includes *Examples* and *Practice* exercises that are applications of the lesson's core concept in relevant problem-solving situations. Some specific examples are cited below.

Course	Launch	Examples and Practice
Reveal Algebra 1	Lesson 2-7, Launch the Lesson Lesson 7-1, Launch the Lesson Module 9, Launch the Module Video	Lesson 8-2, Example 2 (Chemistry) Lesson 8-3, Exercise 24 (Astronomy) Lesson 8-5, Exercise 26 (Physical Science)
Reveal Geometry	Lesson 9-3, Launch the Lesson Lesson 11-5, Launch the Lesson Module 10, Launch the Module Video	Lesson 5-3, Example 3 (Playground) Lesson 8-2, Exercise 34 (Biology) Lesson 10-5, Exercise 39 (Modeling)
Reveal Algebra 2	Lesson 2-1, Launch the Lesson Lesson 13-2, Launch the Lesson Module 3, Launch the Module Video	Lesson 6-5, Exercise 57 (Racing) Lesson 7-2, Exercise 54 (Economics) Lesson 8-5, Example 2 (Science)

A strong emphasis on connecting the Standards for Mathematical Practice (MP) to the Common Core State Standards (CCSS) for content is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*.

- Throughout the program, *Talk About It!* questions encourage critical thinking and mathematical discourse among students to help them develop the habits of mind described in the practice standards.
- Throughout each lesson of the *Teacher Editions*, strategies and suggestions for demonstrating the Standards for Mathematical Practice are found in the *Explores*, *Learns*, and *Examples*; these are labeled Teaching the Mathematical Practices.
- Also included in the *Teacher Editions* and Teacher Digital Centers, *Questions for Mathematical Discourse* (*Leveled Discussion Questions*) are included for each example to promote high expectations, critical thinking skills, and class discussion.
- In addition, the materials in *Reveal Math* promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.

Mathematical Practice Standard	Evidence in *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*
MP1 Make sense of problems and persevere in solving them.	• Students use a four-step plan to solve problems. See A1, Lesson 5-1, Example 4; G, Lesson 1-3, Example 4; A2, Lesson 5-5, Example 4. • Students examine different methods for solving problems. See A1, Lesson 12-5, Example 1; A2, Lesson 4-3, Examples 2 and 3. • Students analyze alternate methods for solving problems. See A1, Lesson 6-4, online Example 1; G, Lesson 6-4, online Example 1; A2, Lesson 8-1, online Example 7.
MP2 Reason abstractly and quantitatively.	• Students study dimensional analysis. See A1, Lesson 2-7. • Students define variables throughout the program. See A1, Lesson 2-2; A2, Lesson 1-5. • Students solve problems that require them to reason abstractly. See A1, Lesson 7-3, Exercises 60 and 61; G, Lesson 10-4, Exercises 57-59; A2, Lesson 9-2, Exercise 59.
MP3 Construct viable arguments and critique the reasoning of others.	• Students examine cases. See A1, Lesson 2-5, Example 1; G, Lesson 10-5, online Learn 1; A2, Lesson 8-2, online Learn 1. • Students critique the reasoning of others. See A1, Lesson 9-5, Exercise 49; G, Lesson 3-2, Exercise 49; Lesson 2-1, Exercise 47. • Students find and use counterexamples. See A1, Lesson 8-5, Exercise 79; G, Lesson 3-1, Example 5, Lesson 7-2, Exercise 38; A2, Lesson 1-5, Exercise 64. • Students recognize and avoid common errors. See A1, Lesson 3-4, online Example 8; G, Lesson 4-3, online Example 1; A2, Lesson 4-4, online Example 5.

Mathematical Practice Standard	Evidence in *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*
MP4 Model with mathematics.	• Students apply mathematics to solve problems. See A1, Lesson 8-5, Exercise 26 (Physical Science); G, Lesson 5-3, Example 3 (Playground); A2, Lesson 7-2, Exercise 54 (Economics). • Students identify when assumptions are being made. See A1, Lesson 4-2, online Example 2 Study Tip; G, Lesson 5-3, online Example 3 Study Tip; A2, Lesson 7-2, online Example 2 Study Tip. • Students map relationships by using tools, such as diagrams, two-way tables, graphs, flowcharts, and formulas. See A1, Lesson 4-1 online Explore, Lesson 12-7; G, Lesson 3-4, Lesson 7-2 Exercise 34; A2, Lesson 7-5, Lesson 8-3. • Students analyze relationships mathematically to draw conclusions. See the Higher-Order Thinking Skills exercises in the Practice section of each lesson.
MP5 Use appropriate tools strategically.	• Students analyze graphs of functions and solutions generated by using a graphing calculator. See A1, Lesson 5-5; A2, Lesson 7-1 online Explore. • Students use estimation to detect possible errors. See A1, Lesson 4-3, Example 7; G, Lesson 6-3, Example 3; A2, Lesson 7-2, Example 2. • Students use external resources to solve problems. See A1, Lesson 3-1, Example 5; G, Lesson 4-3, Example 2; A2, Lesson 6-6, Example 7. • Students use technological tools to explore concepts. See A1, Lessons 10-2, 11-8 online Explores; G, Lessons 5-1, 8-2 online Explore; A2, Lessons 4-4, 5-1 online Explore.
MP6 Attend to precision.	• Students state the meanings of the symbols they choose. See A1, Lesson 2-2; A2, Lesson 1-5. • Students specify units of measure and label axes. See A1, Lessons 2-7, 3-1, Example 3; G, Lesson 5-7; A2, Lesson 7-1, Example 4. • Students make explicit use of definitions. See the Higher-Order Thinking Skills exercises in the Practice section of each lesson.
MP7 Look for and make use of structure.	• Students discern patterns or structures. See A1, Lessons 4-5, 5-3; G, Lessons 3-1, 4-5; A2, Lessons 5-2, 7-4. • Students draw auxiliary lines. See G, online Lesson 5-1, Lesson 11-1, Example 4, Study Tip. • Students see complicated expressions as single objects. See A1, Lesson 2-7; G, Lesson 11-6; A2, Lesson 4-2.
MP8 Look for and express regularity in repeated reasoning.	• Students explore slope, rate of change, and derive the slope formula. See A1, Lesson 4-2; G, Lesson 3-8, online Expand 8-4; A2, Lesson 3-1. • Students explore patterns that lead to general formulas. See A1, Lesson 4-5; G, Lesson 11-3 online Explore; A2, Lesson 7-4.

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* provide teachers with specific tips, suggestions and activities to engage students in learning and applying mathematical reasoning across the series.

- Throughout each lesson, tips and suggestions are provided in each *Teacher Edition* to support students as they construct and analyze arguments are found in the Explores, Learns, Examples and Practice sections; these are labeled Teaching the Mathematical Practices. As students are frequently required to justify their reasoning and to analyze the arguments of others, these tips provide teachers with suggestions for how to engage and support their students.

- In the Practice section of each lesson, students are routinely required to root out errors and misconceptions.

  - In the *Interactive Student Editions*, students are presented with Find the Error Exercises and Talk About It! questions that ask them to identify an error in another student's reasoning.

  - In the *Digital Student Center*, students answer Avoid a Common Error questions as they navigate through examples.

  - In the *Teacher Editions*, every lesson includes a Common Error and/or Common Misconception with suggested tips for correction or prevention.

- Each module includes a Cheryl Tobey Formative Assessment Math Probe that is designed to target common misconceptions students may have about a key concept covered in that module. Each probe is designed to be used after a specific lesson. In the activity, students must construct an argument to explain their choice for selecting a certain response. Support is provided in the *Teacher Edition* indicating likely misconceptions that students may have if they select certain responses. In many probes, students may select a correct response, but their argument defending their response shows incorrect reasoning.

- Many of the Differentiate activities in the *Teacher Editions* include having students work together to make a conjecture about a mathematical concept and/or construct an argument to defend their reasoning/solution to a mathematical problem posed in the activity.

A strong emphasis on mathematical and academic vocabulary and language development is built into MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2*. Correspondences between language and multiple representations (diagrams, tables, graphs, symbols) are clearly identified to help students make connections and build conceptual understanding of academic and mathematical vocabulary.

- Throughout the *Interactive Student Editions*, students are routinely required to communicate precisely to partners, the teacher, or the entire class by using precise definitions and mathematical vocabulary. Many *Talk About It!* question prompts ask students to clearly and precisely explain their reasoning. In the Teacher Edition, look for the *Teaching the Mathematical Practices tips*.

- In the *Learn* and *Example* resources, students build academic vocabulary through the use of multiple representations and multiple means (Method 1/Method 2) for solving problems. Students encounter *Talk About It!* question prompts that support vocabulary and language development by having them engage in mathematical discourse opportunities with a partner or the entire class.

- Each lesson begins with a *Today's Vocabulary* online slide that can be projected for the class. This resource contains discussion questions related to the vocabulary terms of the lesson.

- Each module includes an online *Module Vocabulary Activity* that can be used as a practice test or formative assessment checkpoint prior to the summative *Module Vocabulary Test*.

- Each *Interactive Student Edition* includes an English-Spanish *Glossary*, and each course includes a *Multilingual eGlossary* (14 languages) in the *Digital Student Center*.

- In the core Teacher Edition, specific *Differentiate* activities include strategies to help develop language and vocabulary skills.

- *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* include language development support and scaffolds throughout the *Teacher Edition* and *Language Development Handbook*, Teacher Edition. The *Language Development Handbook* includes support for all students in vocabulary development, note-taking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers, along with English/Spanish cognates. The Teacher Edition of the handbook includes strategies, activities, and tips to support students who are building English proficiency. The activities include specific scaffolds for Entering/Emerging, Developing/Expanding, and Bridging English Language Learners.

- The program also features *Dinah Zike's Foldables*. Each module's *Foldables Study Organizer* shows students to make a study organizer to record the module's key math concepts, including key vocabulary. These three-dimensional graphic organizers are accessible to all learners in that they allow students to apply their conceptual understanding to a study tool.

MHE's *Reveal Algebra 1*, *Reveal Geometry*, and *Reveal Algebra 2* include thoughtful and comprehensive supports for English Language Learners and other special populations.

- The *Language Development Handbook* includes support for all students in vocabulary development, note-taking, and writing skills through the use of word cards, vocabulary squares, three-column charts, definition maps, concept webs and other graphic organizers. The Teacher Edition of the handbook includes strategies, activities, and tips to support students who are building English proficiency.

- In the core *Teacher Editions*, specific Differentiate activities include strategies to help develop language and vocabulary skills.

- The program also features Dinah Zike's Foldables. Each module's Foldables Study Organizer allows students to make a graphic organizer to record and study the module's key math concepts. These three-dimensional study organizers are accessible to all learners, including ELLs, in that they allow students to apply and organize their conceptual understanding to a study tool.

Course	*Language Development Handbook*, Teacher Editions	*Teacher Editions*	*Student Editions*
Reveal Algebra 1	• English Language Development Activities, p. xii • Vocabulary Support: Activate Prior Knowledge, p. T39 • Vocabulary Support: Making Connections through Patterns, p. T46 • Vocabulary Support: Signal Words/Phrases, p. T52	Differentiate, pp. 220, 324, 346	• Foldables Study Organizers, pp. 133, 203 • Glossary · Glossario
Reveal Geometry	• English Language Development Activities, p. xii • Vocabulary Support: Build Background Knowledge, p. T47 • Vocabulary Support: Physical Response, p. T50 • Vocabulary Support: Signal Words, p. T51	Differentiate, pp. 408, 414, 421, 424	• Foldables Study Organizers, pp. 271, 327 • Glossary · Glossario
Reveal Algebra 2	• English Language Development Activities, p. xii • Vocabulary Support: Activate Prior Knowledge, p. T1 • Vocabulary Support: Internalize Language with Mnemonic Devices, p. T16 • Vocabulary Support: Anchor Charts, p. T52	Differentiate, pp. 386, 405, 473	• Foldables Study Organizers, pp. 211, 253 • Glossary · Glossario

Online :
- Interactive Student Edition eBooks, Spanish, located in Course Materials
- Today's Vocabulary, located in the Launch section of each lesson
- Today's Standards (for language objectives), located in the Launch section of each lesson
- Spanish Personal Tutors, located in the Differentiate section of each lesson
- Glossary (English and Spanish), located in Program Resources, Glossaries
- Multilingual eGlossary (14 languages), located in Program Resources, Glossaries

Evidence for Alignment Criterion Metric 3B *Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners with gradual removal of supports, when needed, to allow students to demonstrate their mathematical understanding independently.*

Review/Remediation Resources	Extension/Enrichment Resources	Language Development Resources	Scaffolded Questions for Mathematical Discourse
Reveal Algebra 1			
Digital Teacher Center: Lesson 5-3, Review: Learn – Equations for Lines of Best Fit and Review: Example – Equations for Lines of Best Fit, located in the Differentiate section *Teacher Edition:* Differentiate, pp. 325, 346, 371	*Digital Teacher Center:* Lesson 5-3, Extension: Latitude and Temperature, located in Differentiate section *Teacher Edition:* Differentiate, pp. 312, 314, 324	*Teacher Edition:* Lesson 5-5, Differentiate, Language Development, p. 324 *Language Development Handbook:* *Student Edition:* Lesson 5-3, Vocabulary Chart, p. 29 *Teacher Edition:* Lesson 5-3, English Learner Instructional Strategy and Leveled Activities, p. T29	*Teacher Edition:* Lesson 5-3, Questions for Mathematical Discourse, pp. 311, 313
Reveal Geometry			
Digital Teacher Center: Lesson 4-1, Review: Learn – Find Slope Using the Slope Formula and Review: Example – Find Slope Using the Slope Formula, located in the Differentiate section *Teacher Edition:* Differentiate, pp. 260, 265, 292	*Digital Teacher Center:* Lesson 4-2, Extension: Reflections Over Parallel Lines, located in the Differentiate section *Teacher Edition:* Differentiate, pp. 260, 302, 323	*Teacher Edition:* Lesson 4-1, Differentiate, Language Development, p. 233 *Language Development Handbook:* *Student Edition:* Lesson 4-2, Vocabulary Chart, p. 27 *Teacher Edition:* Lesson 4-2, English Learner Instructional Strategy and Leveled Activities, p. T27	*Teacher Edition:* Lesson 4-2, Questions for Mathematical Discourse, pp. 237-238
Reveal Algebra 2			
Digital Teacher Center: Lesson 4-1, Review: Learn – Standard Form of Polynomials and Review: Example – Standard Form of a Polynomial, located in the Differentiate section *Teacher Edition:* Differentiate, pp. 379, 525, 541	*Digital Teacher Center:* Lesson 4-1, Extension: Approximation by Means of Polynomials, located in Differentiate section *Teacher Edition:* Differentiate, pp. 526, 533, 584	*Teacher Edition:* Lesson 4-1, Differentiate, Language Development, p. 211 *Language Development Handbook:* *Student Edition:* Lesson 4-1, Vocabulary Chart, p. 25 *Teacher Edition:* Lesson 4-1, English Learner Instructional Strategy and Leveled Activities, p. T25	*Teacher Edition:* Lesson 4-1, Questions for Mathematical Discourse, pp. 212-214

Evidence for Alignment Criterion Metric 3C *Design of lessons attends to the needs of a variety of learners (e.g., using multiple representations, deconstructing/reconstructing the language of problems, suggestions for addressing common student difficulties).*

Multiple Representations	Variety of Instructional Tools	Language Development Support	Common Errors and Misconceptions
Reveal Algebra 1			
Digital Student Center: • Lesson 1-3, Learn resource, Properties of Equality, Key Concept • Lesson 3-1, Learn resource, Representing Relations, and Example 1/Extra Example 1, Representations of a Relation • Lesson 5-6, Learn resource, Inverses of Relations, Key Concept	*Digital Student Center:* • **Web Sketchpad**: Lesson 11-2 Explore activity, Transforming Quadratic Functions • **eTools**: Lesson 10-2 Explore activity, Using Algebra Tiles to Find Products of Polynomials and Monomials • **Technology-Enhanced Items**: Lesson 11-2, Transformations of Quadratic Functions, Learn resource • **Animations/Videos**: Lesson 4-1, Linearity and Continuity of Graphs, Launch the Lesson resource, and Lesson 4-6, Example 1, Graphing Piecewise-Defined Functions *Interactive Student Edition:* • **Foldables:** pp. 335, 377 • **Method 1/Method 2:** Lesson 12-5, Example 1	*Teacher Edition:* pp. 35, 324, 590, Differentiate: Language Development Activity *Language Development Handbook, Teacher Edition:* • p. xii, English Language Development Leveled Activities • p. T51, Lesson 9-2, English Learner Instructional Strategy and Leveled Activities	*Interactive Student Edition:* • p. 416, Example 3, Talk About It! • p. 394, Exercise 63, Find the Error *Teacher Edition:* • p. 425b, Cheryl Tobey Formative Assessment Math Probe: Rational Exponents • p. 417, Common Error • p. 427, Common Misconception
Reveal Geometry			
Digital Student Center: • Lesson 1-3, Learn resource, Line Segment Congruence, Key Concept and Copy a Line Segment video using three different methods • Lesson 2-6, Two-Dimensional Representations of Three-Dimensional Figures, whole lesson • Lesson 5-1, Learn resource, Exterior Angles of Triangles, Key Concept	*Digital Student Center:* • **Web Sketchpad**: Lesson 8-3 Explore activity, Similarity Transformations and Triangles • **eTools**: Lesson 10-7 Explore activity, Exploring Equations of Circles • **Technology-Enhanced Items**: Lesson 5-3, Extra Example 1, Use SSS to Prove Triangles Congruent • **Animations/Videos**: Lesson 5-3, Proving Triangles Congruent: SSS, SAS, Launch the Lesson resource, and Lesson 5-2, Learn	*Teacher Edition:* pp. 233, 374, 420, Differentiate: Language Development Activity *Language Development Handbook, Teacher Edition:* • p. xii, English Language Development Leveled Activities	*Interactive Student Edition:* • p. 357, Learn, Think About It! • p. 340, Exercise 36, Find the Error *Teacher Edition:* • p. 385b, Cheryl Tobey Formative Assessment Math Probe: Is It a Parallelogram?

Multiple Representations	Variety of Instructional Tools	Language Development Support	Common Errors and Misconceptions
	Resource, Congruent Triangles Using Transformations *Interactive Student Edition:* • **Foldables:** pp. 231, 267 • **Method 1/Method 2:** Lesson 7-3, Explore activity, Constructing Parallelograms	• p. T40, Lesson 6-2, English Learner Instructional Strategy and Leveled Activities	• p. 397, Common Misconception, Common Error
Reveal Algebra 2			
Digital Student Center: • Lesson 1-4, Example 4, Compare Properties of Linear Functions • Lesson 4-4, Dividing Polynomials by Using Long Division, Key Concept • Lesson 6-1, Learn resource, Compositions of Functions, Key Concept	*Digital Student Center:* • **Web Sketchpad**: Lesson 9-3 Explore activity, Transforming Reciprocal Functions • **eTools**: Lesson 5-3 Extra Example 1, Find an Inverse Relation • **Technology-Enhanced Items**: Lesson 11-2, Launch 2 resource, Quadrantal Angles • **Animations/Videos**: Lesson 8-5, Using Exponential and Logarithmic Functions, Launch the Lesson resource, and Lesson 7-1, Learn Resource, Graphing Exponential Decay Functions *Interactive Student Edition:* • **Foldables:** pp. 287, 339 • **Method 1/Method 2:** Lesson 4-3, Examples 2 and 3	*Teacher Edition:* pp. 161, 211, 385, Differentiate: Language Development Activity *Language Development Handbook, Teacher Edition:* • p. xii, English Language Development Leveled Activities • p. T44, Lesson 7-4, English Learner Instructional Strategy and Leveled Activities	*Interactive Student Edition:* • p. 386, Examples 1-3, Think About It! • p. 392, Exercise 77, Find the Error *Teacher Edition:* • p. 383b, Cheryl Tobey Formative Assessment Math Probe: Properties of Logarithms • p. 396, Common Error • p. 409, Common Misconception