

## EQUIP Rubric for Lessons & Units: Mathematics Correlated to *Reveal Mathematics, Courses 1-3*

### I. Alignment to the Depth of the CCSS

*The lesson/units aligns with the letter and spirit of the CCSS:*

- **Targets a set of grade-level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning.**

#### **EVIDENCE:**

McGraw-Hill's *Reveal Math* follows the intended scope and conceptual development as prescribed by the Common Core State Standards (CCSS). The table of contents for each course/module can be found in the *Interactive Student Edition* and the Teacher Edition on the following pages. It includes the standards that are taught and assessed in each module. The Teacher Edition also includes a complete correlation to the CCSS, matching each standard to the lesson(s) where it is taught.

#### Interactive Student Edition:

- *Reveal Math*, Course 1: pp. iii, iv-xii
- *Reveal Math*, Course 2: pp. iii, iv-xiv
- *Reveal Math*, Course 3: pp. iii, iv-xiv

#### Teacher Edition:

- *Reveal Math*, Course 1: pp. xx-xxix, xxx-xli
- *Reveal Math*, Course 2: pp. xx-xxx, xxxi-xl
- *Reveal Math*, Course 3: pp. xx-xxx, xxxi-xl

**In order to develop the standards to their full depth, *Reveal Math* was thoughtfully designed to incorporate a balance of the three elements of rigor: conceptual understanding, procedural skills and fluency, and application.** These ***Three Pillars of Rigor*** are addressed at the beginning of each module and lesson in the Teacher Edition, and developed in each lesson of the student materials both in print and online.

#### Teacher Edition:

- *Reveal Math*, Course 1: pp. 1a, 57a, 191a, 215a, 333a, 335a, 433a, 443a
- *Reveal Math*, Course 2: pp. 1a, 49a, 125a, 127a, 277a, 317a, 445a, 447a
- *Reveal Math*, Course 3: pp. 67a, 79a, 173a, 175a, 251a, 285a, 379a, 405a

*Please refer to Section II on pages 6-9 for detailed information about how rigor is developed in *Reveal Math*.*

## I. Alignment to the Depth of the CCSS

*The lesson/units aligns with the letter and spirit of the CCSS:*

- **Standards for Mathematical Practice that are central to the lesson are identified, handled in a grade-appropriate way, and well connected to the content being addressed.**

### **EVIDENCE:**

**A strong emphasis on connecting the Standards for Mathematical Practice (MP) to the Common Core State Standards (CCSS) for content is built into McGraw-Hill's *Reveal Math*. *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. *Write About It!* questions require students to use mathematical reasoning to construct arguments, defend solutions, and analyze the arguments of others. The tasks and assessments present in the program 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, Apply problems, and Practice and **Higher-Order Thinking** exercises. Some examples are shown below.**

#### Interactive Student Edition:

- *Reveal Math*, Course 1: **Talk About It**, pp. 23, 169, 353; **Write About It**, pp. 19, 183, 355 **Higher-Order Thinking exercises**, p. 22, 176, 358
- *Reveal Math*, Course 2: **Talk About It**, pp. 4, 139, 448; **Write About It**, pp. 37, 155, 463; **Higher-Order Thinking exercises**, pp. 40, 158, 466
- *Reveal Math*, Course 3: pp. **Talk About It**, pp. 152, 179, 323; **Write About It**, pp. 141, 201, 327; **Higher-Order Thinking exercises**, pp. 136, 190, 340

Throughout each lesson of the Teacher Edition, 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 Edition, **Questions for Mathematical Discourse** are included for each example to promote high expectations, critical thinking skills, and class discussion. Examples are shown on the following pages.

#### Teacher Edition:

- *Reveal Math*, Course 1: **Teaching the Mathematical Practices**, pp. 39, 171, 341d; **Questions for Mathematical Discourse**, pp. 30, 162, 364
- *Reveal Math*, Course 2: **Teaching the Mathematical Practices**, p. 31d, 151, 448; **Questions for Mathematical Discourse**, pp. 22, 150, 458
- *Reveal Math*, Course 3: **Teaching the Mathematical Practices**, pp. 159d, 241, 351d; **Questions for Mathematical Discourse**, pp. 138, 177, 352

*Additional information describing how each Standard for Mathematical Practice is embedded in *Reveal Math* and the tasks that connect the Standards for Mathematical Practice to the content of *Reveal Math* are cited in the Appendix on pages 24 and 25.*

## I. Alignment to the Depth of the CCSS

*The lesson/units aligns with the letter and spirit of the CCSS:*

- **Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS.**

### **EVIDENCE:**

**McGraw-Hill's *Reveal Math*** is purposefully designed to support a balance between the development of conceptual understanding and the need for instilling procedural fluency. **The materials feature high-quality conceptual problems and conceptual discussion questions and feature frequent opportunities to strengthen conceptual understanding through the use of multiple representations of quantitative relationships.**

***Reveal Math* presents a seamless transition from conceptual understanding to procedural fluency.** Lessons in *Reveal Math* begin with conceptual development, often initiated in the **Explore** activity and carried through the **Learn** resource(s). 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 **Talk About It!** questions embedded at point of use in the activities. 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 and transition toward fluency by using multiple methods for solving problems (Method 1/Method 2), multiple representations such as bar diagrams and other models (words, equations/symbols, tables, graphs), animations and videos, and the use of digital tools such as WebSketchpad®, technology-enhanced items, and eTools.

Each lesson in *Reveal Math* contains step-by-step **Examples** that lead to fluency. The methods and algorithms presented are based on principles of mathematics. These properties and principles are shown with each step in the examples. Each lesson provides a sufficient number of **Practice** exercises in the *Student Interactive Edition* and online to solidify students' understanding of lesson concepts and build proficiency with lesson skills.

Examples of lessons from *Reveal Math* are shown below.

### *Interactive Student Edition:*

- *Reveal Math*, Course 1: **Lesson 2-4**, pp. 103-112; **Lesson 6-4**, pp. 359-368; **Lesson 8-2**, pp. 443-450
- *Reveal Math*, Course 2: **Lesson 3-1**, pp. 127-138; **Lesson 6-2**, pp. 289-298; **Lesson 9-1**, pp. 447-456
- *Reveal Math*, Course 3: **Lesson 3-2**, pp. 137-144; **Lesson 7-3**, pp. 405-416; **Lesson 11-1**, pp. 581-592

*Please refer to Section II on pages 8 and 9 for additional information about how conceptual understanding and procedural fluency are developed in *Reveal Math*.*

**Rating 3 2 1 0**

## II. Key Shifts in the CCSS

*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:*

- **Focus:** Lessons and units targeting the major work of the grade provide an especially in-depth treatment, with especially high expectations. Lessons and units targeting supporting work of the grade have visible connection to the major work of the grade and are sufficiently brief. Lessons and units do not hold students responsible for material from later grades.

### **EVIDENCE:**

The lessons in McGraw-Hill's *Reveal Math* were developed using the research-based instructional model: **Launch, Explore and Develop, Reflect and Practice**, which promotes in-depth understanding of the major work. Content addressing supporting or additional clusters is connected to the major work of the grade, in cases where those connections are meaningful and enhance student understanding of mathematical topics across domains. The **Focus** section at the beginning of pertinent modules and lessons in the Teacher Edition highlights the connection between the supporting work and major work of lessons that target supporting work.

Lessons targeting the major work of each grade begin at the start of the school year, allowing students ample time to make tangible progress during each year.

**The supporting content found in *Reveal Math* enriches the focus of the major work of each grade and 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.

- *Reveal Math*, Course 1: **Major Work** Modules 1-7; **Supporting Work** Modules 8-10
- *Reveal Math*, Course 2: **Major Work** Modules 1-7; **Supporting Work** Modules 8-11
- *Reveal Math*, Course 3: **Major Work** Modules 1-9; **Supporting Work** Modules 10, 11

**Note that the program does not hold students or teachers accountable for topics not introduced by the CCSS.** For example, there are no module tests or other assessment components that make students responsible for probability before Course 2 or similarity, congruence, and transformations before Course 3.

*Examples showing how the supporting work enhances the major work of each grade are cited in the Appendix on page 26.*

## II. Key Shifts in the CCSS

*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:*

- **Coherence:** The content develops through reasoning about the new concepts on the basis of previous understandings. Where appropriate, provides opportunities for students to connect knowledge and skills within or across clusters, domains, and learning progressions.

### **EVIDENCE:**

The content in McGraw-Hill's *Reveal Math* is based on the grade-by-grade progressions in the CCSS. The deliberate progression of the standards, both within and across grades, is important for ensuring students success. To see the complete grade-by-grade progression, please see *Reveal Math's Scope and Sequence Alignment Guide* for Grades 6-8 Mathematics. This document is intended for curriculum planning, particularly to demonstrate how McGraw-Hill's *Reveal Math* programs adhere to the new progressions of concepts and skills across all grades K-8 and K-12 as required by the Standards.

McGraw-Hill's *Reveal Math* provides explicit mention of **Prerequisite Skills** required for each module and lesson, and highlights connections to future concepts. Opportunities to determine if students have learned these prerequisite skills are provided in the *Interactive Student Edition* and the Teacher Edition, prior to the start of each new lesson and module. The **Coherence** section at the beginning of each lesson and module in the *Reveal Math* Teacher Edition shows how individual lessons or modules fit in the progression of content within a grade or from grade to grade. Several examples are shown below.

#### Interactive Student Edition:

- *Reveal Math*, Course 1: **Are You Ready? Quick Review and Quick Check**, pp. 260, 434, 536
- *Reveal Math*, Course 2: **Are You Ready? Quick Review and Quick Check**, pp. 176, 278
- *Reveal Math*, Course 3: **Are You Ready? Quick Review and Quick Check**, pp. 128, 434, 580

#### Teacher Edition:

- *Reveal Math*, Course 1: **Coherence**, pp. 433a, 435a; **Be Sure to Cover**, p. 433a; **Are You Ready?**, p. 434; **Warm Up**, p. 435b
- *Reveal Math*, Course 2: **Coherence**, pp. 277a, 279a; **Be Sure to Cover**, p. 277a; **Are You Ready?**, p. 278; **Warm Up**, p. 279b
- *Reveal Math*, Course 3: **Coherence**, pp. 317a, 319a; **Be Sure to Cover**, p. 317a; **Are You Ready?**, p. 318; **Warm Up**, p. 319b

The problems and activities in McGraw-Hill's *Reveal Math* make connections between clusters in a domain, or domains within a grade, where those connections are meaningful and serve to deepen students' understanding of grade-level mathematical content.

*For specific information about how *Reveal Math* develops new concepts on the basis of previous understandings and connects grade-level concepts within and across clusters, domains, and learning progressions, please refer to the Appendix on pages 28 and 29.*

## II. Key Shifts in the CCSS

*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:*

- **Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following: application, conceptual understanding, and procedural skills and fluency.**

### **EVIDENCE:**

**Reveal Math** was thoughtfully designed to incorporate a balance of the three elements of rigor. These **Three Pillars of Rigor** are addressed at the beginning of each module and lesson in the Teacher Edition, and developed in each lesson of the *Interactive Student Edition*.

*Please refer to the following pages for detailed information about how the Three Pillars of Rigor are addressed and developed in Reveal Math.*

## II. Key Shifts in the CCSS

*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:*

- **Application: Provides opportunities for students to independently apply mathematical concepts in real-world situations and solve challenging problems with persistence, choosing and applying an appropriate model or strategy to new situations.**

### **EVIDENCE:**

**Contextual problem solving is an integral part of McGraw-Hill's *Reveal Math*.** Numerous opportunities are included for students to engage in rich, problem-solving tasks, including multi-step problems, labeled as **Apply**. In the **Apply** problems, students engage in solving and discussing a rich task that allows for multiple entry points and varied solution strategies. Students come up with their own strategies for solving the problems and construct an argument that can be used to defend their solution (**Step 4** of the **Apply** problem). As they come up with their own strategies, they propose mathematical models to aid them. Teacher support is provided for these Apply problems. In the Teacher Edition, look for the **Teaching the Mathematical Practices** tips labeled with Mathematical Practices *1 Make Sense of Problems and Persevere in Solving Them*, *3 Construct Viable Arguments and Critique the Reasoning of Others*, and *4 Model with Mathematics*.

A breakdown of application problems in each grade follows.

#### Interactive Student Edition:

- *Reveal Math*, Course 1: There are 227 examples in Course 1. Of these, 128 are set in context (about 56%), either single-step or multi-step application problems. In Course 1, forty-six out of fifty-nine lessons (78%) include 3-4 multi-step, rich application problems labeled as **Apply**.
- *Reveal Math*, Course 2: There are 250 examples in Course 2. Of these, 137 are set in context (about 55%), either single-step or multi-step application problems. In Course 2, forty-nine out of sixty-two lessons (79%) include 3-4 multi-step, rich application problems labeled as **Apply**.
- *Reveal Math*, Course 3: There are 252 examples in Course 3. Of these, 116 are set in context (about 46%), either single-step or multi-step application problems. In Course 3, forty-one out of fifty-seven lessons (72%) include 3-4 multi-step, rich application problems labeled as **Apply**.

In 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. Look for the exercises labeled as **Apply**, **Persevere with Problems**, **Make a Conjecture**, **Make an Argument**, or **Justify Conclusions**. In the Teacher Edition, look for the **Teaching the Mathematical Practices** tips labeled with Mathematical Practice *1 Make Sense of Problems and Persevere in Solving Them* or Mathematical Practice *3 Construct Viable Arguments and Critique the Reasoning of Others*.

*Please refer to the Appendix on page 31 for specific examples where Application is addressed and developed in Reveal Math.*

## II. Key Shifts in the CCSS

*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:*

- **Conceptual Understanding:** Develops students' conceptual understanding through tasks, brief problems, questions, multiple representations and opportunities for students to write and speak about their understanding.

### **EVIDENCE:**

McGraw-Hill's *Reveal Math* is 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 and conceptual discussion questions and feature 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 online **Explore** activity and carried through the **Learn** resource(s).
- 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 **Talk About It!** questions embedded at point of use in the activities. 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 multiple methods for solving problems (Method 1/Method 2), multiple representations, animations and videos, and the use of digital tools such as WebSketchpad®, technology-enhanced items, and eTools. Students encounter **Talk About It!** question prompts that support concept development by having them engage in mathematical discourse opportunities with a partner or the entire class.

*Please refer to the Appendix on page 32 for specific examples where Conceptual Understanding is addressed and developed in Reveal Math.*



## II. Key Shifts in the CCSS

*The lesson/unit reflects evidence of key shifts that are reflected in the CCSS:*

- **Procedural Skill and Fluency:** Expects, supports, and provides guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately.

### **EVIDENCE:**

The bridge from conceptual understanding to procedural skill and fluency in McGraw-Hill's *Reveal Math* is developed from the Explore activities and Learn resources to the Examples and Practice exercises for each lesson. Each lesson in *Reveal Math* contains step-by-step **Examples** that lead to fluency. The methods and algorithms presented are based on principles of mathematics, including place-value reasoning and properties of operations. These properties and principles are shown with each step in the examples. Each lesson provides a sufficient number of **Practice** exercises in the *Student Interactive Edition* to solidify students' understanding of lesson concepts and build proficiency with lesson skills.

McGraw-Hill's *Reveal Math* also provides sufficient attention throughout the year to the individual standards that set an expectation of procedural skill and fluency. For example, in Course 1, students continue to develop procedural skill and fluency as it relates to operations with decimals (6.NS.B.3). Conceptual understanding of fraction division (6.NS.A.1), including concrete representations, is explicitly taught and connections are made to help students gain fluency in these operations. Purely procedural problems and exercises are also included. The standard algorithms for operations with decimals and fraction division are based on place-value understanding and mathematical reasoning, not on tricks. In Courses 2 and 3, students practice fluency in algebraic operations so that they can engage in higher-order critical thinking about structure and not be weighed down by the lack of computational fluency (7.EE.B.4.A).

*Please refer to the Appendix on page 34 for specific examples where Procedural Skill and Fluency is addressed and developed in Reveal Math.*

**Rating 3 2 1 0**

### III. Instructional Supports

*The lesson/unit is responsive to varied student learning needs:*

- Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media.

#### **EVIDENCE:**

McGraw-Hill's *Reveal Math* provides both print and innovative, technology-based tools designed to support teaching and learning the targeted standards. Each module begins with comprehensive guidance about the focus, coherence, and rigor of the targeted standards, including **Suggested Pacing** for the module. The materials also alert the teacher to **What Vocabulary Will You Learn?** and **Are You Ready?** that preview the vocabulary and prerequisite skills for the module.

Each lesson also begins with comprehensive guidance about the focus, coherence, and rigor of the targeted standards, including a discussion of the **Mathematical Background** of the module as well as a list of differentiated activities and ELL support. Each lesson includes a lesson goal aligned to the intent of the CCSS. Within each lesson, Explore, Learn, and Example resources have a targeted objective that is clearly stated in the Teacher Edition and aligned to the intent of the CCSS. In the Digital Student and Teacher centers, each lesson includes a **Today's Standards** resource which can be displayed to the entire class and/or visible on each student's device. This resource provides the standard(s) covered in the lesson, along with an **I Can** statement that helps students know how what they learn in this lesson will help them meet the standard(s). Some examples from the *Reveal Math* Teacher Edition follow.

#### Teacher Edition:

- *Reveal Math*, Course 1: pp. 259a, 260, 261a, 261b
- *Reveal Math*, Course 2: pp. 231a, 232, 243a, 243b
- *Reveal Math*, Course 3: pp. 251a, 252, 253a, 253b

Each lesson in the Teacher Edition contains discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questioning and differentiating strategies, and discussion of desired mathematical behaviors. Descriptions of specific kinds of tips, teaching suggestions and formative assessment strategies follow.

- Throughout each lesson of the Teacher Edition, scaffolded **Questions for Mathematical Discourse** are included for each example to guide and differentiate class discussion. **Collaboration Strategies** are also included with the Practice and Higher-Order Thinking exercises. Many of these suggested activities include having students work in pairs or groups to construct arguments, defend their reasoning to others, and listen/analyze the reason of others.
- Teaching strategies and suggestions are included in the Explores, Learns, and Examples; these are labeled **Teaching the Mathematical Practices**. Tips labeled as **5 Use Appropriate Tools Strategically** provide guidance for using technology including WebSketchpad®, eTools, digital algebra tiles, and many other types of technology-enhanced items. Additional teaching notes can be found in the Digital Teacher Center. **Differentiate** activities allow teachers to adjust their teaching based on students' needs.
- **Reveal Math** provides embedded regular formative checkpoints to monitor student learning and provide feedback to modify instruction. The resources in the Teacher Edition include **Cheryl Tobey Formative Assessment Math Probes, Checks, Exit Tickets, and Put It All Together**.

*Please refer to the Appendix on page 36 for additional references showing how Reveal Math supports teaching and learning of targeted standards.*

- **Uses and encourages precise and accurate mathematics, academic language, terminology and concrete or abstract representations (e.g., pictures, symbols, expressions, equations, graphics, models) in the discipline.**

**EVIDENCE:**

**A strong emphasis on mathematical and academic vocabulary and language development is built into McGraw-Hill's *Reveal Math*.** 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 program, students are routinely required to communicate precisely to partners, the teacher, or the entire class by using precise definitions and mathematical vocabulary (Standard for Mathematical Practice 6 *Attend to Precision*). Look for the exercises labeled as **Be Precise**. 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 labeled as *Mathematical Practice 6 Attend to Precision*.
- 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 **What Vocabulary Will You Learn?** or **What Vocabulary Will You Use?** 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.
- In the core Teacher Edition, specific **Differentiate** activities include strategies to help develop language and vocabulary skills.
- *Reveal Math* includes language development support and scaffolds throughout the Teacher Edition and **Language Development Handbook**, Teacher Edition. The *Language Development Handbook*, Student Edition, includes support for all students in vocabulary development, notetaking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers, along with English/Spanish cognates in **Dinah Zike's Visual Kinesthetic Vocabulary®**. 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** allows students to use a ready-made study organizer to record the module's key math concepts, including key vocabulary. These three-dimensional graphic organizers are accessible to all learners, including ELLs, in that they allow students to apply their conceptual understanding to a study tool.

*Please refer to the Appendix on page 37 to learn more about how a strong emphasis on mathematical and academic language development is built into Reveal Math.*

- Engages students in productive struggles through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking.

**EVIDENCE:**

A strong emphasis on using mathematical reasoning to construct arguments, defend solutions, and analyze the arguments of others for relevant, thought-provoking questions is built into McGraw-Hill's *Reveal Math*.

- Numerous opportunities are included for students to engage in rich, problem-solving tasks, including multi-step problems, labeled as *Apply*. In the *Apply* problems, students engage in solving and discussing a rich task that allows for multiple entry points and varied solution strategies. Students come up with their own strategies for solving the problems and construct an argument that can be used to defend their solution (Step 4 of the *Apply* problem).
- Throughout the program, 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 for the **Apply** problems (specifically Step 4) and the exercises labeled as **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 Edition, look for the **Teaching the Mathematical Practices** tips labeled as Mathematical Practice 3 *Construct Viable Arguments and Critique the Reasoning of Others*.
- Each lesson in the Teacher Edition contains an **Exit Ticket** in which students are asked to write about the problem or question that was posed at the beginning of the lesson. Many of these Exit Tickets ask students to construct an argument to defend their solution. Look for the **Write About It!** question prompts in the Exit Tickets.

*Please refer to the Appendix on page 38 for specific examples where mathematical thinking is addressed and developed in Reveal Math.*

- **Addresses instructional expectations and is easy to understand and use.**

**EVIDENCE:**

**McGraw-Hill's *Reveal Math* supports students in engaging thoughtfully with the subject.**

- The interactive, write-in nature of the ***Interactive Student Edition*** allows students to take notes, record responses, and show their work when solving problems. Write-on lines indicate places in which students interact with the text, making navigation through the text clear and allowing students to take ownership of their learning.
- Prior to beginning each module, students rate their knowledge of each concept listed in the ***What Will You Learn?*** section, which lists the targeted standards for the module in easy-to-understand language. After they complete the module, they will return to this section to re-rate their knowledge.
- The program also features **Dinah Zike's Foldables**. Each module's Foldables Study Organizer allows students to use a ready-made graphic organizer to record key concepts of the module. At the end of the module, students can use their completed Foldable as a study guide.
- ***Pause and Reflect*** conceptual discussion questions provide many opportunities for the students to reflect on their learning at important places in each module. They answer questions such as *Are you ready to move on to the next Example?*, *What questions do you still have?*, and *Where in the lesson did you feel most confident?*
- At the end of the module, students complete a ***Rate Yourself!*** activity, where they write about one thing they learned in the module and one question they still have. They also ***Reflect on the Module***, where they use what they have learned in the module to answer the Essential Question.

**Interactive Student Edition:**

- *Reveal Math*, Course 1: pp. 1, 34, 62, 73, 74
- *Reveal Math*, Course 2: pp. 61, 70, 78, 121, 122
- *Reveal Math*, Course 3: pp. 67, 76, 88, 123, 124

- **Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners.**
- **Supports diverse cultural and linguistic backgrounds, interest and styles.**

**EVIDENCE:**

**McGraw-Hill's *Reveal Math*** includes language development support and scaffolds throughout the Teacher Edition and *Language Development Handbook*, Teacher Edition.

- The ***Language Development Handbook***, Student Edition, includes support for all students in vocabulary development, notetaking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers, along with English/Spanish cognates in Dinah Zike's Visual Kinesthetic Vocabulary®. 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.
- In the core Teacher Edition, **specific Differentiate activities include strategies to help develop language and vocabulary skills.**
- Each lesson in the Student and Teacher Digital Center includes ***What Vocabulary Will You Learn/Use?*** 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 13 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 use a ready-made 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.

*Please refer to the Appendix on page 39 to learn more about how Reveal Math addresses the needs of diverse student populations.*

- Provides extra supports for students working below grade level.

**EVIDENCE:**

**McGraw-Hill's *Reveal Math* addresses the needs for all students.** Each lesson includes a list of suggested Differentiated resources that are based on data from the ***Check*** assessments placed after each Example. Resources range from Remediation (Review resources) that target prerequisite skill knowledge to Enrichment (Extension resources) that extend student knowledge on the lesson topic.

- Online **Review** resources target prerequisite knowledge that is required for each lesson.
- The Teacher Edition includes **Reteaching Activity** suggestions at-point-of-use for students who would benefit from additional support or scaffolding.
- The Teacher Edition includes **Language Development Activity** suggestions at point-of-use that provide support for students building mathematical vocabulary.
- The **Language Development Handbook** is appropriate for all students to support their vocabulary and language development growth. The Teacher Edition includes scaffolded activities appropriate for varying proficiency levels of students building English Language proficiency.
- In the Teacher Edition, **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.

In addition, the program ensures a seamless connection for students who need extra topic support with **embedded *Arrive Math Booster* mini-lessons**. These mini-lessons, *Take Another Look*, are included with the program to provide students with direct support related to the lesson objective. The Differentiate chart at the end of each lesson directs teachers when it may be appropriate to assign these *Take Another Look* mini-lessons based on assessment results.

*Please refer to the Appendix on page 41 to learn more about how *Reveal Math* addresses the needs of all students.*

- Provides extensions for student with high interest or working above grade level.

**EVIDENCE:**

**McGraw-Hill's *Reveal Math* addresses the needs for all students.** Each lesson includes a list of suggested Differentiated resources that are based on data from the **Check** assessments placed after each Example. Resources range from Remediation (Review resources) that target prerequisite skill knowledge to Enrichment (Extension resources) that extend student knowledge on the lesson topic.

- Online **Extension** activities are included for the majority of lessons. In these activities, students extend their understanding of mathematical topics related to the lesson.
- The Teacher Edition includes **Enrichment Activity** suggestions at point-of-use for students who would benefit from a challenge or opportunity to extend their learning.
- The Teacher Edition includes **Language Development Activity** suggestions at point-of-use that provide support for students building mathematical vocabulary.
- The **Language Development Handbook** is appropriate for all students to support their vocabulary and language development growth. The Teacher Edition includes scaffolded activities appropriate for varying proficiency levels of students building English Language proficiency.
- In the Teacher Edition, **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.

*Please refer to the Appendix on page 41 to learn more about how *Reveal Math* addresses the needs of all students.*



*A unit or longer lesson should:*

- **Recommend and facilitate a mix of instructional approaches for a variety of learners such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, pair-share.**

**EVIDENCE:**

The materials in each module of **McGraw-Hill's *Reveal Math*** attend to the needs of all learners.

- The interactive, write-in nature of the *Interactive Student Edition* allows students to take notes, record responses, show their work when solving problems, and take ownership of their own learning.
- In the **Learn** resources, students build conceptual development and transition toward fluency by using multiple methods for solving problems (Method 1/Method 2), multiple representations such as bar diagrams and other models (words, equations/symbols, tables, graphs), animations and videos, and the use of digital tools such as WebSketchpad®, technology-enhanced items, and eTools.
- **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 using a variety of solution strategies.
- **Multiple representations**, such as models/bar diagrams, tables, graphs, words, and algebraic/symbolic representations, help students build conceptual understanding and make connections across representations.
- Online, students engage in **exploratory activities** utilizing WebSketchpad, eTools, and other digital interactives.
- Students also watch **animations and videos** to help them learn mathematical concepts.
- The **Language Development Handbook** includes support for all students in vocabulary development, notetaking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers. The Teacher Edition includes strategies to support students who are building English proficiency. The activities include scaffolds for Entering/Emerging, Developing/Expanding, and Bridging proficiency levels.
- The Teacher Edition includes **Language Development Activity** suggestions at point-of-use that provide strategies and activities to help students build mathematical and academic vocabulary.
- **Common student errors and 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. In the *Take Action* section of the teacher notes accompanying these probes, suggested resources are included to help teachers address any misconceptions that students may have. In addition, each lesson includes a Common Misconception highlighted in the Teacher Edition with suggested tips for correction or prevention.

*Please see the Appendix on page 43 for specific instructional approaches used in Reveal Math.*

- **Gradually remove supports, requiring students to demonstrate their mathematical understanding independently.**

**EVIDENCE:**

**Reveal Math gradually removes supports as it transitions from conceptual understanding to procedural fluency.** Lessons in *Reveal Math* begin with conceptual development, often initiated in the **Explore** activity and carried through the **Learn** resource. Each lesson in *Reveal Math* contains step-by-step **Examples** that lead to fluency. The methods and algorithms presented are based on principles of mathematics. These properties and principles are shown with each step in the examples. Each lesson provides a sufficient number of **Practice** exercises in the *Student Interactive Edition* so that students can demonstrate their mathematical understanding independently. Some examples follow.

**Reveal Math, Course 1**

Students are introduced to one-step equations in a very thoughtful process. In *Explore* activities in Lesson 6-2, students use bar diagrams to write one-step addition equations and then use a digital balance to solve equations. In the *Learn* resource and *Example 2*, students transition from the concrete to the abstract using algebra tiles that are connected to the Subtraction Property of Equality. Finally, in *Example 3, Multi-Step Example*, and the *Practice* exercises, students are expected to solve equations using only the properties of equality. (pages 341-350) Similar development occurs in Lessons 6-3, 6-4, and 6-5 for solving other kinds of one-step equations. Later in the course, students are expected to fluently solve one-step equations in mathematical and real-world problems in geometry. (pages 438, 446, 458)

**Reveal Math, Course 2**

Developing fluency with algebraic operations continues in Course 2 and is based on the work students completed in Course 1 but extended to include integer and other rational number solutions. In *Explore* activities in Lesson 7-2, students explore how to solve two-step equations of the form  $px + q = r$  using bar diagrams and using algebra tiles. In the *Learn* resource, students view an animation showing an example that transitions from concrete to the abstract. Finally, in *Examples 1-4, Multi-Step Example*, and the *Practice* exercises, students are expected to solve equations using only the properties of equality. (pages 290-298) Similar development occurs in Lesson 6-4 for solving two-step equations of the form  $p(x + q) = r$ . Later in the course, students are expected to fluently solve equations in mathematical and real-world problems in geometry. (pages 395, 397, 398, 404, 405, 407, 408)

**Reveal Math, Course 3**

Developing fluency with solving equations is based on the work students completed in Course 2. In the *Explore* activity in Lesson 3-1, students learn to solve equations with variables on each side using a digital balance. In the *Learn* resource, students transition from the concrete to the abstract using algebra tiles that are connected to the properties of equality. Finally, in *Examples 1-3* and the *Practice* exercises, students are expected to solve equations using only the properties of equality. Some of these equations have rational coefficients and rational solutions. (pages 129-136) By the time students are in Grade 8, they rely less and less on physical manipulatives for conceptual understanding. In Lessons 3-3 and 3-4, students rely only on the properties of equality to solve multi-step equations. Later in the course, students will use Web Sketchpad in the *Explore* activity on page 319, where they first solve systems of linear equations by graphing. Students are then expected to fluently solve systems of equations by substitution (pages 341-350) and elimination (pages 351-362).

- **Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time.**

**EVIDENCE:**

The content in McGraw-Hill's *Reveal Math* is based on the grade-by-grade progressions in the CCSS. The deliberate progression of the standards, both within and across grades, is important for ensuring that concepts and skills advance and deepen over time, without any gaps or overlaps. Some examples follow.

***Reveal Math, Course 1***

The cluster 6.NS.C *Apply and extend previous understandings of numbers to the system of rational numbers* is addressed in Module 4. The lessons in Module 4 are organized with the intent of applying student understanding of whole numbers to integers and rational numbers.

***Reveal Math, Course 2***

The cluster 7.NS.A *Apply and extend previous understandings of operations with fractions* is addressed in Modules 3-4. The lessons in Modules 3-4 are organized with the intent of applying student understanding of operations with whole numbers and fractions to operations with integers and rational numbers.

***Reveal Math, Course 3***

The cluster 8.EE.B *Understand the connections between proportional relationships, lines, and linear equations* is primarily addressed in Module 4. The lessons in Module 4 are organized with the intent of applying their understanding of proportional relationships from Courses 1-2 and extend it to both proportional and non-proportional linear relationships.

*For in-depth descriptions of each of the modules mentioned above, please see the Appendix on page 46.*

- **Expect, support and provide guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards for the grade) to be performed quickly and accurately.**

**EVIDENCE:**

**McGraw-Hill's *Reveal Math*** provides sufficient attention throughout the year to the individual standards that set an expectation of procedural skill and fluency. For example, in Course 1, students continue to develop procedural skill and fluency as it relates to operations with decimals (6.B.3). Conceptual understanding of fraction division, including concrete representations, is explicitly taught and connections are made to help students gain fluency in these operations (6.A.1). Purely procedural problems and exercises are also included. The standard algorithms for operations with decimals and fraction division are based on place-value understanding and mathematical reasoning, not on tricks. In Courses 2 and 3, students practice fluency in algebraic operations so that they can engage in higher-order critical thinking about structure and not be weighed down by the lack of computational fluency (7.EE.B.4.A).

Interactive Student Edition and Teacher Edition:

- *Reveal Math*, Course 1: pp. 143-154, 155-166, 167-176
- *Reveal Math*, Course 2: pp. 299-306, 317-324, 373-384
- *Reveal Math*, Course 3: pp. 341-350, 351-362, 363-374

**Rating 3 2 1 0**

#### IV. Assessment

*The lesson/units regularly assesses whether students are mastering standards-based content and skills:*

- **Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS.**

**EVIDENCE:**

Summative assessments in **McGraw-Hill's *Reveal Math*** evaluate student learning at the conclusion of each module by comparing it against the targeted CCSS. The **Test Practice** at the end of each module helps students review module content and prepare for end-of-year assessments. The exercises in each Test Practice are correlated to the CCSS and mirror the types of questions students will see on online assessments, such as multiple choice, open response, and equation editor.

**Build Your Own** assessments, available online, are focused on standards or objectives. Access to banks of thousands of questions, including those with tech-enhanced capabilities, enable a wide range of options to mirror high-stakes assessment formats.

- **Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.**

**EVIDENCE:**

Problem contexts that are familiar to diverse learners and appropriate grade-level language are used in all instructional components of **McGraw-Hill's *Reveal Math***, including assessments.

- **Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance.**

**EVIDENCE:**

Answer keys and aligned rubrics are available for all assessment items in **McGraw-Hill's *Reveal Math***. The Teacher Edition contains answers for every question, problem, and assessment item in the Student Edition. **Complete solutions are available in the eSolutions Manual**. Rubrics for module Performance Tasks are available online. They include content and practice standards, and describe common student errors.

**McGraw-Hill's *Reveal Math*** also provides clear, instructionally actionable data with the *Reveal Math* Reporting Dashboard.

- **Activity Report** Real-time class and student reporting of activities completed by the class, such as average score and skills covered for the class and each student.
- **Item Analysis Report** Review a detailed analysis of response rates and patterns, answers, and question types in a class snapshot or by student.
- **Standards Report** Performance data by class or individual student is aggregated by standards, skills, or objectives linked to the related activities completed.

*A unit or longer lesson should:*

- **Use varied modes of curriculum-embedded assessments that may include pre-, formative, summative, and self-assessment measures.**

**EVIDENCE:**

**Reveal Math provides a comprehensive array of assessment tools**, with both print and digital administration options, to measure student understanding and progress. **Pre-assessments**, including **Are You Ready?** (print), **Module Pretest** (online), and **Diagnostic and Placement Test** (online), evaluate student readiness for the module and course.

**Formative** checkpoints are embedded regularly at the lesson-level to monitor student learning and provide feedback that can be used to modify instruction.

- Each Example in every lesson includes a formative assessment checkpoint, called **Check**, that can be used to determine if students understand the math concept presented in the Example and are ready to move on. Teachers receive recommendations for adjusting or differentiating instruction for all students.
- Each module includes 1-3 mid-module formative assessment checkpoints called **Put It All Together**, that can be used to determine if students understand and integrate the math concept presented in related topics/lessons.
- Each lesson concludes with an **Exit Ticket** that asks students to return to the scenario presented in the Launch the Lesson from the start of the lesson and write about what they learned.
- Each module 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.

**Summative** assessments evaluate student learning at the module and course conclusion by comparing it against the state standards covered.

- Test Practice (print)
- Module Vocabulary Test (online)
- Leveled Module Tests (AL, OL, BL) (online)
- Module Performance Task (online)
- End of Course Test (online)
- Benchmark Tests (online)

**Self-assessment** options are embedded into each module so students can rate own their understanding.

- Prior to beginning each module, students rate their knowledge of each item listed in the **What Will You Learn?** section, which lists the targeted standards for the module in easy-to-understand language. After they complete the module, they will return to this section to re-rate their knowledge.
- **Pause and Reflect** conceptual discussion questions provide many opportunities for the students to reflect on their learning at important places.
- At the end of modules, students complete a **Rate Yourself!** activity, where they write about one thing they learned in the module and one question they still have. They also **Reflect on the Module**, where they use what they have learned in the module to answer the Essential Question.

Teachers can also **Build Your Own** assessments, with access to thousands of questions, including those with tech-enhanced capabilities.

**Rating 3 2 1 0**

## Appendix

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## How Mathematical Practice Standards are Embedded in *Reveal Math*

Mathematical Practice	<i>Reveal Math</i>
<b>MP1</b> Make sense of problems and persevere in solving them.	A strong problem-solving strand is present throughout <i>Reveal Math</i> with an emphasis on having students explain to themselves and others the meanings of problems and plan their solution strategies. Look for the <b>Apply</b> problems and exercises labeled as <b>Persevere with Problems</b> . In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips.
<b>MP2</b> Reason abstractly and quantitatively.	Students are routinely asked to make sense of quantities and their relationships, and attend to the meaning of quantities as opposed to just computing with them. Many <b>Talk About It!</b> prompts and <b>Reason Abstractly</b> exercises ask students to reason about relationships between quantities. Students are often asked to decontextualize the quantities in a real-world problem in order to represent them symbolically, solve the problem, and interpret the solution back within the context of the problem. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.
<b>MP3</b> Construct viable arguments and critique the reasoning of others.	Students are required to justify their reasoning and to find the errors in another student's reasoning or work. Look for the <b>Apply</b> problems (Step 4) and the exercises labeled as <b>Make a Conjecture</b> , <b>Find the Error</b> , <b>Use a Counterexample</b> , <b>Make an Argument</b> , or <b>Justify Conclusions</b> . Many <b>Talk About It!</b> question prompts ask students to justify conclusions and/or critique another student's reasoning. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.
<b>MP4</b> Model with mathematics.	Students apply the mathematics they know to solve real-world problems by beginning to use mathematical modeling. In the <b>Apply</b> problems, students generate their own strategies and propose mathematical aids to help them represent and solve the problem. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.
<b>MP5</b> Use appropriate tools strategically.	In addition to traditional tools such as estimation, mental math, or measurement tools, students are encouraged to use digital tools, such as Web Sketchpad, eTools, and so on, to help solve problems. Look for the <b>Use Math Tools</b> exercises. Many <b>Explore</b> activities ask students to select and use appropriate tools as they progress through the activities. In the <b>Apply</b> problems, as students generate their own strategies, they may select tools to aid them. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.
<b>MP6</b> Attend to precision.	Students are routinely required to communicate precisely to partners, the teacher, or the entire class by using precise definitions and mathematical vocabulary. Look for the exercises labeled as <b>Be Precise</b> . Many <b>Talk About It!</b> prompts ask students to clearly and precisely explain their reasoning. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.
<b>MP7</b> Look for and make use of structure.	Students are routinely encouraged to look for patterns or structure present in problem situations. For example, students look for structure present in algebraic expressions and use the structure of three-dimensional figures to create nets. Look for the exercises labeled as <b>Identify Structure</b> . Many <b>Talk About It!</b> question prompts ask students to study the structure of expressions and figures. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.
<b>MP8</b> Look for and express regularity in repeated reasoning.	Students are encouraged to look for repeated calculations that lead them to sound mathematical conclusions. Look for the exercises labeled as <b>Identify Repeated Reasoning</b> . Several <b>Talk About It!</b> question prompts ask students to look for repeated calculations. In the Teacher Edition, look for the <b>Teaching the Mathematical Practices</b> tips labeled as this mathematical practice.



## Examples of Tasks Connecting Standards for Mathematical Practice with Content Standards

Mathematical Practice Standard	Examples of Tasks Connecting Standards for Mathematical Practice with Content Standards
<b>MP1</b> Make sense of problems and persevere in solving them.	<b>Apply</b> problems, <i>Talk About It!</i> questions, <i>Persevere with Problems</i> exercises, <i>Performance Tasks</i> <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice
<b>MP2</b> Reason abstractly and quantitatively.	<b>Explore</b> activities, <b>Apply</b> problems, <i>Learn</i> and <i>Example</i> resources, <i>Talk About It!</i> questions, <i>Reason Abstractly</i> exercises <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice, <i>Questions for Mathematical Discourse</i>
<b>MP3</b> Construct viable arguments and critique the reasoning of others.	<b>Apply</b> problems (Step 4), <i>Talk About It!</i> questions, exercises labeled as <i>Make a Conjecture</i> , <i>Find the Error</i> , <i>Use a Counterexample</i> , <i>Make an Argument</i> , or <i>Justify Conclusions</i> <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice, <i>Questions for Mathematical Discourse</i>
<b>MP4</b> Model with mathematics.	<b>Apply</b> problems, <i>Explore</i> activities, <b>Apply</b> practice exercises, <i>Performance Tasks</i> <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice
<b>MP5</b> Use appropriate tools strategically.	<b>Apply</b> problems, <i>Explore</i> activities, <i>Learn</i> and <i>Example</i> resources, <i>Talk About It!</i> questions, <i>Use Math Tools</i> exercises, <i>Performance Tasks</i> <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice, <i>Questions for Mathematical Discourse</i>
<b>MP6</b> Attend to precision.	<b>Apply</b> problems, <i>Explore</i> activities, <i>Learn</i> and <i>Example</i> resources, <i>Talk About It!</i> questions, <i>Be Precise</i> exercises <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice, <i>Questions for Mathematical Discourse</i>
<b>MP7</b> Look for and make use of structure.	<b>Apply</b> problems, <i>Explore</i> activities, <i>Learn</i> and <i>Example</i> resources, <i>Talk About It!</i> questions, <i>Identify Structure</i> exercises <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice, <i>Questions for Mathematical Discourse</i>
<b>MP8</b> Look for and express regularity in repeated reasoning.	<b>Apply</b> problems, <i>Explore</i> activities, <i>Learn</i> and <i>Example</i> resources, <i>Talk About It!</i> questions, <i>Identify Repeated Reasoning</i> exercises <i>Teacher Support: Teaching the Mathematical Practice</i> tips labeled as this mathematical practice, <i>Questions for Mathematical Discourse</i>

## **Focus: Connecting Supporting Work to Major Work**

<b>Reveal Math, Course 1</b>
Supporting Work 6.NS.B <ul style="list-style-type: none"><li>• In Lesson 5-5, students use the greatest common factor to rewrite and factor numerical and algebraic expressions using the Distributive Property. (major work 6.EE.A.3)</li></ul>
Supporting Work 6.G.A <ul style="list-style-type: none"><li>• In Lessons 8-1, 8-2, and 8-3, students write and solve equations to find missing dimensions, given the area of two-dimensional figures. (major work 6.EE.B.6, 6.EE.B.7)</li><li>• In Lesson 9-1, students write and solve equations to find missing dimensions, given the volume of a three-dimensional figure. (major work 6.EE.B.6, 6.EE.B.7)</li><li>• Throughout Modules 8 and 9, students write, read, and evaluate expressions in which letters stand for numbers as they work with volume and surface formulas. (major work 6.EE.A.2, 6.EE.A.2.c)</li></ul>
Supporting Work 6.SP.A, 6.SP.B <ul style="list-style-type: none"><li>• In Lesson 10-3, students write and solve equations to find a missing data value given the mean. (major work 6.EE.B.6, 6.EE.B.7)</li><li>• In Lesson 10-5, students use absolute value to calculate the mean absolute deviation of a set of data. (major work 6.NS.C.7)</li></ul>
<b>Reveal Math, Course 2</b>
Supporting Work 7.G.A, 7.G.B <ul style="list-style-type: none"><li>• In Lessons 8-1 and 8-2, students write and solve equations to find missing angle measures. (major work 7.EE.B.4.a)</li><li>• In Lessons 9-1 and 9-2, students write and solve equations to find missing dimensions involving the circumference and area of circles. (major work 7.EE.B.4.a)</li><li>• In Lesson 9-4, students write and solve equations to find missing dimensions given the volume of a three-dimensional figure. (major work 7.EE.B.4.a)</li></ul>
Supporting Work 7.SP.A, 7.SP.B, 7.SP.C <ul style="list-style-type: none"><li>• In Lessons 10-2 and 10-3, students relate the relative frequency and theoretical probability of a simple event to ratios and use ratio and proportional reasoning to make predictions from relative frequencies. (major work 7.RP.A.3)</li><li>• In Lesson 11-2, students use ratio and proportional reasoning to make predictions based on data gathered using a valid sampling method. (major work 7.RP.A.3)</li></ul>

**Reveal Math, Course 3**

Supporting Work 8.NS.A

- In Lesson 2-2, students use square root and cube root symbols to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where  $p$  is a positive rational number. (major work 8.EE.A.2)

Supporting Work 8.G.C

- In Lesson 10-4, students write and solve equations to find missing dimensions given the volume of cylinders, cones, and spheres. (major work 8.EE.A.2)
- In Lesson 11-3, students interpret the equation  $y = mx + b$  as defining a linear function by writing equations for lines of fit to represent a scatter plot. By doing so, they construct a function to model a linear relationship between two quantities, and determine the rate of change and initial value. (major work 8.F.A.3, 8.F.B.4)

Supporting Work 8.SP.A

- In Lesson 11-3, students interpret the equation  $y = mx + b$  as defining a linear function by writing equations for lines of fit to represent a scatter plot. By doing so, they construct a function to model a linear relationship between two quantities, and determine the rate of change and initial value. (major work 8.F.A.3, 8.F.B.4)

## Coherence: Connecting Content to Previous Grade Levels

### Reveal Math, Course 1

In Course 1, the following cluster headings use the phrase “apply and extend previous understanding” to connect grade-level concepts to prior knowledge.

- **6.NS.A** *Apply and extend previous understandings of multiplication and division to divide fractions by fractions.*  
In Module 3, students use their knowledge of multiplication of fractions to find multiplicative inverses and apply the Inverse Property of Multiplication. Students also use bar diagrams and their prior knowledge of division with unit fractions to division with fractions and mixed numbers.
- **6.NS.C** *Apply and extend previous understandings of numbers to the system of rational numbers.*  
In Module 4, students draw on their knowledge of number lines gained in prior grades to begin to develop understanding of integers and rational numbers.
- **6.EE.A** *Apply and extend previous understandings of arithmetic to algebraic expressions.*  
In Module 5, students connect their prior understanding of the four basic arithmetic operations to algebra. Students study the structure of numerical expressions before writing algebraic expressions. In the same module, students extend their knowledge of properties with whole numbers to include properties with variables, and formalize their understanding of the Distributive Property.

### Reveal Math, Course 2

In Course 2, the following cluster heading uses the phrase “apply and extend previous understanding” to connect grade-level concepts to prior knowledge.

- **7.NS.A** *Apply and extend previous understandings of operations with fractions.*  
In Modules 3 and 4, students apply their previous understandings of operations with positive rational numbers (whole numbers, positive decimals, positive fractions) to perform operations with integers (Module 3) and rational numbers (Module 4).

### Reveal Math, Course 3

In Course 3, while there are no cluster headings that use the phrase “apply and extend previous understanding”, material still connects grade-level concepts to prior knowledge.

- **8.NS.A** *Know that there are numbers that are not rational, and approximate them by rational numbers.*  
In Module 2, students extend their previous understandings of rational numbers to the real number system and study irrational numbers and their rational-number approximations.
- **8.EE.B** *Understand the connections between proportional relationships, lines, and linear equations.*  
In Module 4, students extend their previous understandings of proportional relationships to linear relationships, both proportional and nonproportional. They solidify their understanding of slope as the unit rate in a proportional linear relationship.
- **8.EE.C** *Analyze and solve linear equations and pairs of simultaneous linear equations.*  
In Module 3, students extend their previous understandings of solving equations to solve equations with variables on both sides and multi-step equations. In Module 6, students extend their previous understandings of algebraic manipulation, solving equations, and graphing equations to solve systems of equations.

## Coherence: Connecting Clusters, Domains, and Learning Progressions

### Reveal Math, Course 1

#### Connecting two or more clusters in a domain:

- In Module 7, students use their understanding of variables and equations (clusters 6.EE.A and 6.EE.B) to represent relationships between independent and dependent variables (cluster 6.EE.C.9).
- In Module 10, students use their understanding of statistical variability (cluster 6.SP.A) to summarize and describe distributions (6.SP.B).

#### Connecting two or more domains in a grade:

- In Lesson 5-5, students use the greatest common factor (6.NS.B.4) to rewrite and factor numerical and algebraic expressions using the Distributive Property (6.EE.A.3)
- In Module 7, students use their understanding of graphing relationships (clusters 6.RP.A and 6.NS.C) to graph relationships between two variables (cluster 6.EE.C.9).
- In Lessons 8-1, 8-2, and 8-3, students write and solve equations to find missing dimensions, given the area of two-dimensional figures. (6.EE.B.6, 6.EE.B.7)
- In Lesson 9-1, students write and solve equations to find missing dimensions, given the volume of a three-dimensional figure. (6.EE.B.6, 6.EE.B.7)

### Reveal Math, Course 2

#### Connecting two or more clusters in a domain:

- In Module 6, students apply their knowledge of properties of operations and equivalent expressions (cluster 7.EE.A) to solve two-step equations of the form  $p(x + q) = r$  by use of the Distributive Property (cluster 7.EE.B).

#### Connecting two or more domains in a grade:

- In Lessons 2-3, 2-4, and 2-6, students apply their understanding of solving percent problems (7.RP.A.3) to equivalent expressions (7.EE.A).
- In Lessons 3-1, 3-3, and 3-5, students apply their understanding of integer operations (7.NS.A) to evaluate algebraic expressions for specific integer values of the variables (7.EE.B).
- In Lesson 6-1, students apply knowledge of rational number operations (7.NS.A) to solve one-step equations with rational numbers (7.EE.B).
- In Lessons 8-1 and 8-2, students write and solve equations (7.EE.B.4a) to find missing angle measures (7.G.B).
- In Lessons 9-1 and 9-2, students write and solve equations (7.EE.B.4a) to find missing dimensions involving the circumference and area of a circle (7.G.B).
- In Lesson 9-4, students write and solve equations (7.EE.B.4a) to find missing dimensions given the volume of a figure (7.G.B)
- In Lessons 10-2 and 10-3, students relate the relative frequency and theoretical probability of a simple event to ratios and use ratio and proportional reasoning (7.RP.A.3) to make predictions from relative frequencies (7.SP.C).
- In Lesson 11-2, students use ratio and proportional reasoning (7.RP.A.3) to make predictions based on data gathered using a valid sampling method (7.SP.A).

**Reveal Math, Course 3**

*Connecting two or more clusters in a domain:*

- In Module 5, students construct functions to model relationships between quantities (cluster 8.F.B) by interpreting the equation  $y = mx + b$  as defining a linear function (cluster 8.F.A) and thus finding the initial value and rate of change.
- In Module 6, students solve systems of linear equations (cluster 8.EE.C) by understanding the connection between a linear equation and its graph (8.EE.B).

*Connecting two or more domains in a grade:*

- In Lesson 2-2, students use square root and cube root symbols (8.EE.A.2) to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where  $p$  is a positive rational number (8.NS.A).
- In Lesson 10-4, students write and solve equations (8.EE.A.2) to find missing dimensions given the volume of cylinders, cones, and spheres. (8.G.C.9)
- In Lesson 11-3, students interpret the equation  $y = mx + b$  as defining a linear function by writing equations for lines of fit to represent a scatter plot (8.SP.A.3). By doing so, they construct a function to model a linear relationship between two quantities, and determine the rate of change and initial value. (8.F.A.3, 8.F.B.4)

## ***Rigor: Application***

### ***Reveal Math, Course 1***

#### Multi-step Contextual Problems

- Lesson 3-2, p. 142 Practice Exercise 15
- Lesson 4-7, p. 251 Apply problem (opportunities for modeling)
- Lesson 8-1, p. 439 Apply problem (opportunities for modeling)
- Lesson 9-1, p. 491 Apply problem (opportunities for modeling)

### ***Reveal Math, Course 2***

#### Multi-step Contextual Problems

- Lesson 2-3, pp. 85-88, Example 3, Apply problem (opportunities for modeling)
- Lesson 2-4, pp. 92-93 and 95-96, Example 2, Apply problem (opportunities for modeling)
- Lesson 5-2, p. 247, Apply problem (opportunities for modeling)
- Lesson 9-3, p. 471, Apply problem (opportunities for modeling)

### ***Reveal Math, Course 3***

#### Multi-step Contextual Problems

- Lesson 4-5, p. 233, Apply problem (opportunities for modeling)
- Lesson 5-4, p. 289, Apply problem (opportunities for modeling)
- Lesson 7-3, p. 416, Exercise 7
- Lesson 8-2, p. 444, Exercises 7-8
- Lesson 10-1, p. 439, Apply problem (opportunities for modeling)

## Rigor: Conceptual Understanding

### Reveal Math Course 1

The cluster 6.RP.A *Understand ratio concepts and use ratio reasoning to solve problems* is addressed in Modules 1-2.

Conceptual understanding is developed through the Explore activities and Learn resources for each lesson. Some specific examples are cited below.

- Lesson 1-1; online Explore activity *Compare Two Quantities* and corresponding teacher support in the Teacher Edition pp. 3c-3d
- Lesson 1-1; Learn *Understand Ratio Relationships* in the *Interactive Student Edition* pp. 3-4 and corresponding teacher support in the Teacher Edition pp. 3-4 (includes bar diagram representations of ratio relationships and *Talk About It!* conceptual discussion questions)
- Lesson 1-2; online Explore activity *Equivalent Ratios* and corresponding teacher support in the Teacher Edition pp. 13c-13d
- Lesson 1-2; Learn *Equivalent Ratios and Ratio Tables* in the *Interactive Student Edition* pp. 13-14 and corresponding teacher support in the Teacher Edition pp. 13-14 (includes multiple representations of ratio relationships – bar diagrams and ratio tables – and *Talk About It!* conceptual discussion questions)
- Lesson 1-3; Learn *Ratios as Ordered Pairs* in the *Interactive Student Edition* p. 23 and corresponding teacher support in the Teacher Edition p. 23 (includes multiple representations of ratio relationships – tables, ordered pairs, and graphs – and *Talk About It!* conceptual discussion questions)
- Lesson 1-4; Learn *Use Graphs to Compare Ratio Relationships* and Learn *Use Tables to Compare Ratio Relationships* in the *Interactive Student Edition* pp. 29 and 31 and corresponding teacher support in the Teacher Edition pp. 29 and 31 (includes multiple representations of ratio relationships – tables, ordered pairs, and graphs – and *Talk About It!* conceptual discussion questions)
- Lesson 1-5; Learn *Use Bar Diagrams to Solve Ratio Problems* and Learn *Use Double Number Lines and Equivalent Ratios to Solve Ratio Problems* in the *Interactive Student Edition* pp. 37 and 40-41 and corresponding teacher support in the Teacher Edition pp. 37 and 40-41 (includes multiple representations of ratio relationships – bar diagrams and double number lines – and *Talk About It!* conceptual discussion questions)
- Lesson 1-6; Learn *Unit Ratios and Measurement Conversions*, Learn *Convert Larger Units to Smaller Units*, and Learn *Convert Smaller Units to Larger Units* in the *Interactive Student Edition* pp. 47-49 and 51-52 and corresponding teacher support in the Teacher Edition pp. 47-49 and 51-52 (includes multiple representations of ratio relationships among measurement units – bar diagrams and equivalent ratios – and *Talk About It!* conceptual discussion questions)
- Lesson 1-7; online Explore activity *Compare Quantities with Different Units* and corresponding teacher support in the Teacher Edition pp. 57c-57d
- Lesson 1-7; Learn *Understand a Rate and a Unit Rate* and Learn *Unit Price* in the *Interactive Student Edition* pp. 57-58 and 60 and corresponding teacher support in the Teacher Edition pp. 57-58 and 60 (includes multiple representations of rates – bar diagrams, words, units, example – and *Talk About It!* conceptual discussion questions)
- Lesson 1-8; Learn *Use Bar Diagrams to Solve Rate Problems* and Learn *Use Double Number Lines and Equivalent Rates to Solve Rate Problems* in the *Interactive Student Edition* pp. 65 and 67 and corresponding teacher support in the Teacher Edition pp. 65 and 67 (includes multiple representations of rates – bar diagrams, double number lines, equivalent rates – and *Talk About It!* conceptual discussion questions)



### Reveal Math Course 2

The cluster 7.NS.A *Apply and extend previous understandings of operations with fractions* is addressed in Modules 3-4.

Conceptual understanding is developed through the Explore activities and Learn resources for each lesson. Some specific examples are cited below.

- Lesson 3-1; online Explore activity *Add Integers* and corresponding teacher support in the Teacher Edition pp. 127c-127d
- Lesson 3-1; Learn *Add Integers with the Same Sign*, Learn *Find Additive Inverses*, and Learn *Add Integers with Different Signs* in the *Interactive Student Edition* pp. 127-128, 130, 131-132, and corresponding teacher support in the Teacher Edition pp. 127-128, 130, 131-132 (includes multiple representations and *Talk About It!* conceptual discussion questions)
- Lesson 3-2; online Explore activities *Use Algebra Tiles to Subtract Integers* and *Find Distance on a Number Line* and corresponding teacher support in the Teacher Edition pp. 139c-139d and pp. 142a-142b
- Lesson 3-2; Learn *Subtract Integers* and Learn *Find the Distance Between Integers* in the *Interactive Student Edition* pp. 139-140 and 142, and corresponding teacher support in the Teacher Edition pp. 139-140 and 142 (includes multiple representations of subtracting integers and *Talk About It!* conceptual discussion questions)
- Lesson 3-3; online Explore activity *Use Algebra Tiles to Multiply Integers* and corresponding teacher support in the Teacher Edition pp. 149c-149d
- Lesson 3-3; Learn *Multiply Integers with Different Signs* and Learn *Multiply Integers with the Same Sign* in the *Interactive Student Edition* pp. 149 and 151, and corresponding teacher support in the Teacher Edition pp. 149 and 151 (includes multiple representations of multiplying integers)
- Lesson 3-4; online Explore activity *Use Algebra Tiles to Divide Integers* and corresponding teacher support in the Teacher Edition pp. 159c-159d
- Lesson 3-4; Learn *Divide Integers with Different Signs* and Learn *Divide Integers with the Same Sign* in the *Interactive Student Edition* pp. 159 and 161, and corresponding teacher support in the Teacher Edition pp. 159 and 161 (includes multiple representations of multiplying integers)

### Reveal Math Course 3

The cluster 8.EE.B *Understand the connections between proportional relationships, lines, and linear equations* is addressed in Module 4.

Conceptual understanding is developed through the Explore activities and Learn resources for each lesson. Some specific examples are cited below.

- Lesson 4-1; online Explore activity *Rate of Change* and corresponding teacher support in the Teacher Edition pp. 175c-175d
- Lesson 4-1; Learn *Proportional Relationships* and Learn *Unit Rate and Slope* in the *Interactive Student Edition* pp. 175-176, and corresponding teacher support in the Teacher Edition pp. 175-176 (includes multiple representations of proportional relationships and *Talk About It!* conceptual discussion questions)
- Lesson 4-3; online Explore activity *Right Triangles and Slope* and corresponding teacher support in the Teacher Edition pp. 205c-205d
- Lesson 4-3; Learn *Similar Triangles* and Learn *Similar Triangles and Slope* in the *Interactive Student Edition* pp. 205-207, and corresponding teacher support in the Teacher Edition pp. 205-207 (includes multiple representations of similar triangles and slope triangles and *Talk About It!* conceptual discussion questions)
- Lesson 4-4; online Explore activity *Derive the Equation  $y = mx$*  and corresponding teacher support in the Teacher Edition pp. 213c-213d
- Lesson 4-4; Learn *Direct Variation* in the *Interactive Student Edition* pp. 213-214, and corresponding teacher support in the Teacher Edition pp. 213-214 (includes multiple representations of direct variation proportional relationships and *Pause and Reflect* conceptual discussion questions)
- Lesson 4-5; online Explore activity *Derive the Equation  $y = mx + b$*  and corresponding teacher support in the Teacher Edition pp. 225c-225d
- Lesson 4-5; Learn *Slope-Intercept Form of a Line* in the *Interactive Student Edition* pp. 225-226, and corresponding teacher support in the Teacher Edition pp. 225-226 (includes multiple representations of linear relationships)

## Rigor: Procedural Skill and Fluency

### Reveal Math Course 1

The cluster 6.NS.A *Apply and extend previous understandings of multiplication and division to divide fractions by fractions* is addressed in Module 3.

The bridge from conceptual understanding to procedural skill and fluency is developed from the Explore activities and Learn resources to the Examples and Practice exercises for each lesson. Some specific examples are cited below.

- In Lesson 3-3, students complete an online Explore activity *Divide Whole Numbers by Fractions* in which they explore how this kind of division problem can be represented using bar diagrams. Students continue to develop this conceptual understanding in the Learn resource *Divide Whole Numbers by Fractions* (pp. 157-158) using concrete representations (bar diagrams) and relate it to using the definition of fraction division. See teacher support on pages 157a-157b, 157-158 of the Teacher Edition.
- In Lesson 3-3, students build fluency with dividing whole numbers by fractions (Examples 4-5, pp. 159-162 and Practice exercises pp. 165-166) and make connections between their conceptual understanding (bar diagrams) and procedural fluency (multiplying by the reciprocal).
- In Lesson 3-4, students continue to connect conceptual understanding of fraction division using bar diagrams and procedural skills (multiplying by the reciprocal) to build fluency dividing fractions by fractions in the Learn *Divide Fractions by Fractions*, p. 167, Examples 1-3, pp. 168-172, and Practice exercises, pp. 175-176.
- In Lesson 3-5, students continue to connect conceptual understanding of fraction division using concrete representations (bar diagrams) and procedural skills (multiplying by the reciprocal) to build fluency dividing with whole and mixed numbers in the online Explore activity *Divide Fractions by Whole Numbers* (teacher support pp 177c-177d), the Learn resources *Divide Fractions by Whole Numbers* and *Divide Mixed Numbers*, pp. 177-178 and 181, Examples 1-3, pp. 179-182, and Practice exercises, pp. 185-186.

### Reveal Math Course 2

The cluster 7.EE.A *Use properties of operations to generate equivalent expressions* is addressed in Modules 2-7.

The bridge from conceptual understanding to procedural skill and fluency is developed from the Explore activities and Learn resources to the Examples and Practice exercises for each lesson. Some specific examples are cited below.

- In Lesson 6-2, students complete the online Explore activities *Solve Two-Step Equations Using Bar Diagrams* and *Solve Two-Step Equations Using Algebra Tiles* in which they explore how two-step equations of the form  $px + q = r$  can be represented using bar diagrams and algebra tiles. From this foundation of conceptual understanding, students learn how to use the properties of operations to undo operations in the reverse order of the order of operations (p. 290) to build procedural fluency in solving equations by algebraic manipulation. See teacher support on pages 289c-289f, 290 of the Teacher Edition.
- In Lesson 6-2, students build fluency with solving two-step equations of the form  $px + q = r$  (Examples 1-4, pp. 290-292 and Practice exercises pp. 297-298) and make connections between their conceptual understanding and procedural fluency as they compare arithmetic methods and algebraic methods (pp. 293-294).
- In Lesson 6-4, students complete the online Explore activities *Solve Two-Step Equations Using Bar Diagrams* and *Solve Two-Step Equations Using Algebra Tiles* in which they explore how two-step equations of the form  $p(x + q) = r$  can be represented using bar diagrams and algebra tiles. From this foundation of conceptual understanding, students build procedural fluency (p. 308) by using two different methods to solve equations of this form. See teacher support on pages 307c-307f, 308 of the Teacher Edition.
- In Lesson 6-4, students build fluency with solving two-step equations of the form  $p(x + q) = r$  (Examples 1-4, pp. 308-311 and Practice exercises pp. 315-316) and make connections between their conceptual understanding and procedural fluency as they compare arithmetic methods and algebraic methods (p. 312).

### Reveal Math Course 3

The cluster 8.EE.C *Analyze and solve linear equations and simultaneous linear equations* is addressed in Modules 3 and 6.

The bridge from conceptual understanding to procedural skill and fluency is developed from the Explore activities and Learn resources to the Examples and Practice exercises for each lesson. Some specific examples are cited below.

- In Lesson 6-1, students complete an online Explore activity *Systems of Equations* in which they explore what it means when two linear equations intersect. Students also learn what the solution of a system of equations means in the Learn resource *Systems of Equations* (p. 319) and how systems of equations with no solution, one solution, or infinitely many solutions are represented graphically. This foundation of conceptual understanding is developed prior to building fluency with solving systems of equations by graphing or algebraic manipulation. See teacher support on pages 319c-319d, 319 of the Teacher Edition.
- In Lesson 6-1, students build fluency with graphing systems of linear equations, including writing equations in slope-intercept form prior to graphing (Examples 1-4, pp. 320-326 and Practice exercises pp. 329-330).
- In Lesson 6-2, students extend their conceptual understanding gained in Lesson 6-1 about how systems of equations with no solution, one solution, or infinitely many solutions are represented graphically and build fluency by studying the structure of the algebraic equations, noting what the slopes and  $y$ -intercepts tell about the solution of the system, as opposed to graphing the system (Learn resource *Systems of Equations: Compare Slopes and  $y$ -Intercepts*, p. 332, Examples 1-4, pp. 332-336, and Practice exercises, pp. 339-340)
- Drawing on their conceptual understanding foundation from Lessons 6-1 and 6-2, students build procedural fluency with algebraic manipulation in Lessons 6-3 and 6-4 to solve systems using the substitution and elimination methods. Students solve simple cases by inspection, analyzing the structure of the equations (MP7) because they have developed the conceptual understanding of what a solution of a system means. (pp. 341-362)

## Supporting Teaching and Learning the Targeted Standards

<b>Reveal Math, Course 1</b>			
<u>Teaching the Mathematical Practices</u> <ul style="list-style-type: none"> <li>• Lesson 1-1, pp. 9, 12</li> <li>• Lesson 1-2, p. 12</li> <li>• Lesson 5-2, p. 279</li> <li>• Lesson 5-6, p. 315</li> <li>• Lesson 6-4, p. 362</li> </ul>	<u>Collaborative Practice</u> <ul style="list-style-type: none"> <li>• Lesson 4-5, p. 236</li> <li>• Lesson 4-6, p. 244</li> <li>• Lesson 5-4, p. 304</li> </ul>	<u>Cheryl Tobey Formative Assessment Probes</u> <ul style="list-style-type: none"> <li>• Module 1, p. 1b</li> <li>• Module 3, p. 133b</li> <li>• Module 5, p. 259b</li> </ul>	<u>Differentiate activities</u> <ul style="list-style-type: none"> <li>• Lesson 7-2, p. 410</li> <li>• Lesson 7-3, p. 455</li> <li>• Lesson 8-3, p. 454</li> </ul>
<b>Reveal Math, Course 2</b>			
<u>Teaching the Mathematical Practices</u> <ul style="list-style-type: none"> <li>• Lesson 1-1, p. 9</li> <li>• Lesson 1-4, p. 31d</li> <li>• Lesson 3-2, p. 139</li> <li>• Lesson 7-4, p. 357</li> <li>• Lesson 8-1, pp. 391-392</li> <li>• Lesson 8-3, p. 413</li> <li>• Lesson 9-6, p. 500</li> <li>• Lesson 10-2, p. 519</li> </ul>	<u>Collaborative Practice</u> <ul style="list-style-type: none"> <li>• Lesson 1-2, p. 20</li> <li>• Lesson 1-3, p. 30</li> <li>• Lesson 8-4, p. 434</li> </ul>	<u>Cheryl Tobey Formative Assessment Probes</u> <ul style="list-style-type: none"> <li>• Module 1, p. 1b</li> <li>• Module 2, p. 61b</li> <li>• Module 3, p. 125b</li> </ul>	<u>Differentiate activities</u> <ul style="list-style-type: none"> <li>• Lesson 3-1, p. 130</li> <li>• Lesson 4-4, p. 205</li> <li>• Lesson 8-4, p. 426</li> </ul>
<b>Reveal Math, Course 3</b>			
<u>Teaching the Mathematical Practices</u> <ul style="list-style-type: none"> <li>• Lesson 1-4, p. 33d</li> <li>• Lesson 2-1, pp. 73, 78</li> <li>• Lesson 2-4, p. 110</li> <li>• Lesson 2-5, p. 122</li> <li>• Lesson 4-6, p. 246</li> <li>• Lesson 5-2, p. 272</li> <li>• Lesson 5-4, p. 292</li> <li>• Lesson 7-3, p. 405d</li> </ul>	<u>Collaborative Practice</u> <ul style="list-style-type: none"> <li>• Lesson 2-1, p. 78</li> <li>• Lesson 2-4, p. 110</li> <li>• Lesson 5-2, p. 272</li> </ul>	<u>Cheryl Tobey Formative Assessment Probes</u> <ul style="list-style-type: none"> <li>• Module 1, p. 1b</li> <li>• Module 2, p. 67b</li> <li>• Module 3, p. 127b</li> </ul>	<u>Differentiate activities</u> <ul style="list-style-type: none"> <li>• Lesson 3-1, p. 130</li> <li>• Lesson 3-3, p. 145</li> <li>• Lesson 7-3, p. 406</li> </ul>

## Developing Mathematical and Academic Language

<b>Reveal Math, Course 1</b>		
<p><u>Interactive Student Edition and Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 217, 341, 550, Learn <i>Talk About It!</i> questions</li> <li>p. 329, Foldable and pp. FL3-FL4 (Volume 2)</li> <li>Learn resources: pp. 3-4, 13-14, 23, 135</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 215b and p. 397b, <i>What Vocabulary Will You Learn?</i></li> <li>pp. 4, 37, 47, 57, 58, 86, 143, 170, 172, 202, 210, 227, 239, 278, 299, 315, 341, 351, 397, 443, 454, 512, 521, 537, 569, Differentiate: Language Development Activities</li> </ul>	<p><u>Digital Student and Teacher Centers:</u></p> <ul style="list-style-type: none"> <li>Lesson 4-4 <i>What Vocabulary Will You Learn?</i></li> <li>Lesson 7-1 <i>What Vocabulary Will You Learn?</i></li> <li>Digital Glossary and Multilingual eGlossary located in Program Resources: Glossaries</li> </ul> <p><u>Digital Teacher Center:</u> <i>Module Vocabulary Activity (RM C1 M7)</i> and <i>Module Vocabulary Test (RM C1 M7)</i></p>	<p><u>Language Development Handbook, Student Edition:</u></p> <ul style="list-style-type: none"> <li>p. 45, Lesson 8-2, Vocabulary graphic organizer: Definition Map</li> <li>starting on pp. VKV1, Visual Kinesthetic Vocabulary Cards</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. T45, Lesson 8-2, Sensory Support: Models</li> </ul>
<b>Reveal Math, Course 2</b>		
<p><u>Interactive Student Edition and Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 36, Example 4 <i>Talk About It!</i> Question</li> <li>Example resources: pp. 23, 198, 414, 482</li> <li>p. 441, Foldable and pp. FL9-FL10 (Volume 2)</li> <li>Learn resources: pp. 127-128, 130, 131-132, 139-140, 142, 149, 151, 159, 161</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 177b, p. 233b, <i>What Vocabulary Will You Learn?</i></li> <li>pp. 14, 25, 31, 65, 107, 130, 177, 205, 243, 279, 294, 341, 373, 397, 413, 447, 490, 511, 534, 576, 578, 605, 614, Differentiate: Language Development Activities</li> </ul>	<p><u>Digital Student and Teacher Centers:</u></p> <ul style="list-style-type: none"> <li>Lesson 4-1 <i>What Vocabulary Will You Learn?</i></li> <li>Lesson 5-1 <i>What Vocabulary Will You Learn?</i></li> <li>Digital Glossary and Multilingual eGlossary located in Program Resources: Glossaries</li> </ul> <p><u>Digital Teacher Center:</u> <i>Module Vocabulary Activity (RM C2 M3)</i> and <i>Module Vocabulary Test (RM C2 M3)</i></p>	<p><u>Language Development Handbook, Student Edition:</u></p> <ul style="list-style-type: none"> <li>p. 29, Lesson 5-5, Vocabulary graphic organizer: Four-Square Chart</li> <li>starting on pp. VKV1, Visual Kinesthetic Vocabulary Cards</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. T29, Lesson 5-5, Vocabulary Support: Math Word Wall</li> </ul>
<b>Reveal Math, Course 3</b>		
<p><u>Interactive Student Edition and Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 19, p. 27, p. 71, p. 82, p. 605, Example <i>Talk About It!</i> questions</li> <li>p. 247, Foldable and pp. FL9-FL10 (Volume 1)</li> <li>Learn resources pp. 175-176, pp. 205-207, pp. 213-214, pp. 225-226</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 3b, p. 465b, <i>What Vocabulary Will You Learn?</i></li> <li>p. 82, p. 395, p. 605, Teaching the Mathematical Practices</li> <li>p. 175, p. 225, Differentiate</li> </ul>	<p><u>Digital Student and Teacher Centers:</u></p> <ul style="list-style-type: none"> <li>Lesson 1-1 <i>What Vocabulary Will You Learn?</i></li> <li>Lesson 8-4 <i>What Vocabulary Will You Learn?</i></li> <li>Digital Glossary and Multilingual eGlossary located in Program Resources: Glossaries</li> </ul> <p><u>Digital Teacher Center:</u> <i>Module Vocabulary Activity (RM C3 M4)</i> and <i>Module Vocabulary Test (RM C3 M4)</i></p>	<p><u>Language Development Handbook, Student Edition:</u></p> <ul style="list-style-type: none"> <li>p. 29, Lesson 6-1, Vocabulary graphic organizer: Definition Map</li> <li>pp. VKV1-VKV40, Visual Kinesthetic Vocabulary Cards</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. T29, Lesson 6-1, Graphic Support: K-W-L Chart</li> </ul>

## Developing Mathematical Thinking

### Reveal Math, Course 1

#### Interactive Student Edition and Teacher Edition:

- Lesson 1-1, p. 9, *Write About It!*
- Lesson 1-1, p. 12, Exercises 10-11
- Lesson 1-2, p. 13, Learn, *Talk About It!*
- Lesson 1-6, p. 46, Exercise 11
- Lesson 8-2, p. 450, Exercises 11 and 14
- Lesson 9-1, p. 494, Exercise 9
- Lesson 9-4, p. 520, Example 2, *Talk About It!*

#### Digital Student and Teacher Centers:

- Lesson 1-2, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 1-2
- Lesson 1-5, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 1-5
- Lesson 2-3, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 2-3

### Reveal Math, Course 2

#### Interactive Student Edition and Teacher Edition:

- Lesson 1-1, p. 9, *Write About It!*
- Lesson 1-4, p. 40, Exercises 7 and 8
- Lesson 4-2, p. 196, Exercises 20 and 21
- Lesson 8-3, p. 413, Learn, *Talk About It!*
- Lesson 8-5, p. 438, Example 3, *Talk About It!*
- Lesson 9-6, p. 500, Example 2

#### Digital Student and Teacher Centers:

- Lesson 3-5, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 3-5
- Lesson 5-1, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 5-1
- Lesson 7-5, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 7-5

### Reveal Math, Course 3

#### Interactive Student Edition and Teacher Edition:

- Lesson 1-1, p. 7, Example 3 *Talk About It!*
- Lesson 1-1, p. 8 Examples 4-5 *Talk About It!*
- Lesson 1-1, p. 12, Exercises 12-15
- Lesson 2-1, p. 78, Exercise 16
- Lesson 2-3, p. 97, Example 5 *Talk About It!*
- Lesson 2-4, p. 110, Exercises 14 and 17
- Lesson 4-3, p. 206, Learn *Talk About It!*
- Lesson 8-2, p. 454, Exercise 9

#### Digital Student and Teacher Centers:

- Lesson 4-1, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 4-1
- Lesson 4-3, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 4-3
- Lesson 7-4, *Exit Ticket Write About It!* located in the Reflect and Practice section of Lesson 7-4

## Supporting Diverse Student Populations

### Reveal Math, Course 1

#### Interactive Student Edition:

- pp. 217, 341, 550, *Talk About It!* questions
- pp. 40-42, Learn/Example 3 (Method 1/Method 2)
- p. 329, Foldable and pp. FL3-FL4 (Volume 1)

#### Teacher Edition:

- pp. 236, 244, 304, Collaborative Practice
- p. 215b, p. 397b, *What Vocabulary Will You Learn?* discussion questions
- pp. 410, 415, 454, Differentiate

#### Language Development Activities

- pp. 4, 37, 47, 57, 58, 86, 143, 170, 172, 202, 210, 227, 239, 278, 299, 315, 341, 351, 397, 443, 454, 512, 521, 537, 569

#### Language Development Handbook:

- p. 45: Lesson 8-2 (Student Edition)
- p. xiii, English Language Development Activities (Teacher Edition)
- p. T45, Lesson 8-2, English Learner Instructional Strategy and Leveled Activities (Teacher Edition)

#### Digital Student Center:

- Explore activity *Use Algebra Tiles to Model the Distributive Property*, located in the Explore and Develop section of Lesson 5-6
- Explore activity *Parallelograms and Area of Triangles*, located in the Explore and Develop section of Lesson 8-2
- Animation in Learn *Find Area of Trapezoids by Decomposing*, located in the Explore and Develop section of Lesson 8-3

#### Student and Teacher Digital Centers:

- Lesson 4-4, Lesson 7-1, *What Vocabulary Will You Learn?*
- Digital Glossary and Multilingual eGlossary located in the Program Resources: Glossaries section of the course after Module 10

#### Language Objective, Digital Teacher Center:

- Lesson 1-7, *Solve Ratio Problems*, Lesson Goal at top of lesson landing page in the Information section.
- Lesson 7-1, *Relationships Between Two Variables*, Lesson Goal at top of lesson landing page in the Information section.

### Reveal Math, Course 2

#### Interactive Student Edition:

- pp. 36, 127-132, 139-142, 149 *Talk About It!* questions
- p. 128, Example 1 (Method 1/Method 2)
- pp. 308-310, Examples 1-2 (Method 1/Method 2)
- p. 416, Learn (online video, teacher notes for recreating the activity)

#### Teacher Edition:

- pp. 20, 30, 434, Collaborative Practice
- p. 177b, p. 233b, *What Vocabulary Will You Learn?* discussion questions
- pp. 130, 205, 426 490, Differentiate

#### Language Development Activities

- pp. 14, 25, 31, 65, 107, 130, 177, 205, 243, 279, 294, 341, 373, 397, 413, 447, 490, 511, 534, 576, 578, 605, 614

#### Language Development Handbook:

- p. 29, Lesson 5-5 (Student Edition)
- p. xiii, English Language Development Activities (Teacher Edition)
- p. T29, Lesson 5-5, English Learner Instructional Strategy and Leveled Activities (Teacher Edition)

#### Digital Student Center:

- Explore activity *Use Algebra Tiles to Add Integers*, located in the Explore and Develop section of Lesson 3-1
- Explore activities *Solve Two-Step Equations Using Bar Diagrams* and *Solve Two-Step Equations Using Algebra Tiles*, located in the Explore and Develop section of Lesson 6-2
- Explore activity *Area of Circles*, located in the Explore and Develop section of Lesson 9-2
- Explore activity *Long-Run Relative Frequencies*, located in the Explore and Develop section of Lesson 10-3

#### Student and Teacher Digital Centers:

- Lesson 1-4, Lesson 4-1, Lesson 5-1, *What Vocabulary Will You Learn?*
- Digital Glossary and Multilingual eGlossary located in the Program Resources: Glossaries section of the course after Module 11

#### Language Objective, Digital Teacher Center:

- Lesson 3-5, *Order of Integer Operations*, Lesson Goal at top of lesson landing page in the Information section.
- Lesson 8-1, *Vertical and Adjacent Angles*, Lesson Goal at top of lesson landing page in the Information section.

## Reveal Math, Course 3

### Interactive Student Edition:

- p. 73, Learn *Talk About It!* question
- p. 138, Example 1 *Talk About It!* question
- p. 160, Example 1 *Talk About It!* question
- p. 179, Example 2 *Talk About It!* question
- p. 238, Example 2 *Talk About It!* question
- p. 386, Learn (online video, teacher notes for recreating the activity)
- p. 394, Learn (online video, teacher notes for recreating the activity)
- p. 398, Learn (online video, teacher notes for recreating the activity)
- p. 481, Learn (online video, teacher notes for recreating the activity)

### Teacher Edition:

- p. 3b, p. 465b, *What Vocabulary Will You Learn?*
- p. 175, p. 182, p. 225, p. 381, Differentiate
- p. 24, p. 78, p. 362, Collaborative Practice

### Language Development Handbook, Student Edition:

- p. 29, Lesson 6-1, Vocabulary graphic organizer: Definition Map

### Language Development Handbook, Teacher Edition:

- p. xiii, English Language Development Activities
- pp. T29, English Learner Instructional Strategy and Leveled Activities
- pp. VKV1-VKV40, Visual Kinesthetic Vocabulary Cards

### Digital Student Center:

- Explore activity *Develop Concepts of Slope*, located in the Explore and Develop section of Lesson 4-2
- Explore activity *Systems of Equations*, located in the Explore and Develop section of Lesson 6-1
- Animation in Learn *Estimate Irrational Numbers Using a Number Line*, located in the Explore and Develop section of Lesson 2-4

### Student and Teacher Digital Centers:

- Lesson 1-1, Lesson 8-4, *What Vocabulary Will You Learn?*
- Digital Glossary and Multilingual eGlossary located in the Program Resources: Glossaries section of the course after Module 11

### Language Objective, Digital Teacher Center:

- Lesson 1-3, *Powers of Monomials*, Lesson Goal at top of lesson landing page in the Information section.
- Lesson 6-1, *Solve Systems of Equations by Graphing*, Lesson Goal at top of lesson landing page in the Information section.



## Addressing the Needs of All Students

<b>Reveal Math, Course 1</b>			
<b>Review/Remediation/Reteaching Resources</b>	<b>Extension/Enrichment Resources</b>	<b>Language Development Support</b>	<b>Scaffolded Questions for Mathematical Discourse</b>
<p><u>Teacher Digital Center:</u></p> <ul style="list-style-type: none"> <li>Lesson 4-6, Review resources: Learn – <i>Use Integers to Represent Quantities</i>, Example – <i>Use Integers to Represent Quantities</i>, located in the Additional Resources section, within the Differentiate section, of Lesson 4-6</li> <li>Lesson 4-6, <i>Take Another Look: Reflected Points</i> from the <i>Arrive Math</i> Intervention program, located in the Additional Resources section, within the Differentiate section of Lesson 4-6</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 23, 136, 170, Differentiate: Reteaching Activity</li> </ul>	<p><u>Teacher Digital Center:</u></p> <ul style="list-style-type: none"> <li>Lesson 4-6, Extension: <i>Translations in the Coordinate Plane</i>, located in the Additional Resources section, within the Differentiate section, of Lesson 4-6</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 336, 359, 423, Differentiate: Enrichment Activity</li> </ul>	<p><u>Teacher Edition:</u></p> <p><i>Language Development Activities</i></p> <ul style="list-style-type: none"> <li>pp. 4, 37, 47, 57, 58, 86, 143, 170, 172, 202, 210, 227, 239, 278, 299, 315, 341, 351, 397, 443, 454, 512, 521, 537, 569</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. xiii, English Language Development Activities</li> <li>p. T45, Lesson 8-2, English Learner Instructional Strategy and Leveled Activities</li> </ul>	<p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 5-8, Examples 1-3</li> </ul>
<b>Reveal Math, Course 2</b>			
<b>Review/Remediation/Reteaching Resources</b>	<b>Extension/Enrichment Resources</b>	<b>Language Development Support</b>	<b>Scaffolded Questions for Mathematical Discourse</b>
<p><u>Teacher Digital Center:</u></p> <ul style="list-style-type: none"> <li>Lesson 6-3, Review resources: Learn – <i>Write One-Step Equations</i>, Example – <i>Write and Solve One-Step Equations</i>, located in the Additional Resources section, within the Differentiate section, of Lesson 6-3</li> <li>Lesson 6-3, <i>Take Another Look: Solving Real-World Problems with Two-Step Equations</i> from the <i>Arrive Math</i> Intervention program, located in the Additional Resources section, within the Differentiate section of Lesson 6-3</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 21, 279, 299, Differentiate: Reteaching Activity</li> </ul>	<p><u>Teacher Digital Center:</u></p> <ul style="list-style-type: none"> <li>Lesson 6-3, Extension: <i>Consecutive Integers Equations</i>, located in the Additional Resources section, within the Differentiate section, of Lesson 6-3</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 285, 289, 317, Differentiate: Enrichment Activity</li> </ul>	<p><u>Teacher Edition:</u></p> <p><i>Language Development Activities</i></p> <ul style="list-style-type: none"> <li>pp. 14, 25, 31, 65, 107, 130, 177, 205, 243, 279, 294, 341, 373, 397, 413, 447, 490, 511, 534, 576, 578, 605, 614</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. xiii, English Language Development Activities</li> <li>p. T29, Lesson 5-5, English Learner Instructional Strategy and Leveled Activities</li> </ul>	<p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 5-8, Examples 1-2</li> </ul>

**Reveal Math, Course 3**

Review/Remediation/Reteaching Resources	Extension/Enrichment Resources	Language Development Support	Scaffolded Questions for Mathematical Discourse
<p><u>Teacher Digital Center:</u></p> <ul style="list-style-type: none"> <li>Lesson 4-2, Review resources: Learn – <i>Subtract Integers</i>, Example – <i>Subtract Integers</i>, located in the Additional Resources section, within the Differentiate section, of Lesson 4-2</li> <li>Lesson 4-2, <i>Take Another Look: The Slope of a Line</i> from the <i>Arrive Math</i> Intervention program, located in the Additional Resources section, within the Differentiate section of Lesson 4-2</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 182, p. 196, p. 381, Differentiate: Reteaching Activity</li> </ul>	<p><u>Teacher Digital Center:</u></p> <ul style="list-style-type: none"> <li>Lesson 4-2, Extension: <i>Slope of Perpendicular Lines</i>, located in the Additional Resources section, within the Differentiate section, of Lesson 4-2</li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 175, p. 225, p. 341, Differentiate: Enrichment Activity</li> </ul>	<p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 175, 225, Differentiate: Language Development Activity</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. xiii, English Language Development Activities</li> <li>p. T29, Lesson 6-1, English Learner Instructional Strategy and Leveled Activities</li> </ul>	<p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>pp. 364-370, Examples 1-4</li> </ul>

## Instructional Strategies for a Variety of Learners

Reveal Math, Course 1			
<p><b>Multiple Representations</b></p> <p><u>Interactive Student Edition and Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>Lesson 1-1; Learn <i>Understand Ratio Relationships</i>, pp. 3-4 (includes bar diagram representations of ratio relationships)</li> <li>Lesson 1-2; Learn <i>Equivalent Ratios and Ratio Tables</i>, pp. 13-14 (includes bar diagrams and ratio tables to represent ratio relationships)</li> <li>Lesson 1-3; Learn <i>Ratios as Ordered Pairs</i>, p. 23 (includes tables, graphs, and ordered pairs to represent ratio relationships)</li> </ul>	<p><b>Variety of Instructional Tools</b></p> <p><u>Student Digital Center:</u></p> <ul style="list-style-type: none"> <li><b>Web Sketchpad:</b> Lesson 1-1, Explore activity <i>Compare Two Quantities</i> and Teacher Edition pages 3c-3d</li> <li><b>eTools:</b> Lesson 1-3, Example 2 and Teacher Edition page 25</li> <li><b>Technology-Enhanced Items:</b> Lesson 5-7, located within the Learn resource <i>Use Properties to Identify Equivalent Expressions</i></li> <li><b>Animations/Videos:</b> Lesson 4-1, located within the Learn resource <i>Use Integers to Represent Quantities</i></li> </ul> <p><u>Interactive Student Edition:</u></p> <ul style="list-style-type: none"> <li><b>Foldables:</b> pp. FL1-FL10 in Volume 1</li> <li><b>Method 1/Method 2:</b> pp. 40-42, Learn/Example 3</li> </ul>	<p><b>Language Development Support</b></p> <p><u>Teacher Edition:</u> <i>Language Development Activities</i></p> <ul style="list-style-type: none"> <li>pp. 4, 37, 47, 57, 58, 86, 143, 170, 172, 202, 210, 227, 239, 278, 299, 315, 341, 351, 397, 443, 454, 512, 521, 537, 569</li> </ul> <p><u>Language Development Handbook, Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. xiii, English Language Development Activities</li> <li>p. T45, Lesson 8-2, English Learner Instructional Strategy and Leveled Activities</li> </ul>	<p><b>Common Misconceptions Support</b></p> <p><u>Interactive Student Edition:</u></p> <ul style="list-style-type: none"> <li>p. 4, Learn <i>Talk About It!</i></li> <li>p. 5, Example 1 <i>Talk About It!</i></li> </ul> <p><u>Teacher Edition:</u></p> <ul style="list-style-type: none"> <li>p. 259b, Cheryl Tobey Formative Assessment Math Probe</li> <li>pp. 11, 27, Common Misconception</li> </ul>

**Reveal Math, Course 2**

**Multiple Representations**

Interactive Student Edition and Teacher Edition:

- Lesson 3-1; Learn *Add Integers with the Same Sign*, Learn *Find Additive Inverses*, and Learn *Add Integers with Different Signs* pp. 127-128, 130, 131-132, (includes multiple representations and *Talk About It!* discussion questions)
- Lesson 3-2; Learn *Subtract Integers* and Learn *Find the Distance Between Integers* pp. 139-140 and 142 (includes multiple representations of subtracting integers and *Talk About It!* discussion questions)
- Lesson 3-3; Learn *Multiply Integers with Different Signs* and Learn *Multiply Integers with the Same Sign* pp. 149 and 151 (includes multiple representations of multiplying integers)
- Lesson 3-4; Learn *Divide Integers with Different Signs* and Learn *Divide Integers with the Same Sign* pp. 159 and 161 (includes multiple representations of multiplying integers)

**Variety of Instructional Tools**

Student Digital Center:

- **Web Sketchpad:** Lesson 8-1, Explore activity *Vertical and Adjacent Angle Pairs* and Teacher Edition pages 393a-393b
- **eTools:** Lesson 1-4, Examples 1-2 and Teacher Edition pages 32-33
- **Technology-Enhanced Items:** Lesson 5-4, located within the Learn resource *Greatest Common Factor of Monomials*
- **Animations/Videos:** Lesson 4-6, located within the Apply problem

Interactive Student Edition:

- **Foldables:** pp. FL1-FL10 in Volume 1
- **Method 1/Method 2:** p. 128 Example 1, pp. 308-310, Examples 1-2

**Language Development Support**

Teacher Edition:

*Language Development Activities*

- pp. 14, 25, 31, 65, 107, 130, 177, 205, 243, 279, 294, 341, 373, 397, 413, 447, 490, 511, 534, 576, 578, 605, 614

Language Development

Handbook, Teacher Edition:

- p. xiii, English Language Development Activities
- p. T29, Lesson 5-5, English Learner Instructional Strategy and Leveled Activities

**Common Misconceptions**

Interactive Student Edition:

- p. 196, Exercises 20 and 21
- p. 438, Example 3 *Talk About It!*
- p. 500, Example 3 *Talk About It!*

Teacher Edition:

- p. 125b, Cheryl Tobey Formative Assessment Math Probe
- p. 43, Common Misconception
- p. 211, Common Misconception
- p. 455, Common Misconception

**Reveal Math, Course 3**

**Multiple Representations**

Interactive Student Edition and Teacher Edition:

- Lesson 4-1; Learn *Proportional Relationships* and Learn *Unit Rate and Slope* in the *Interactive Student Edition* pp. 175-176, and corresponding teacher support in the Teacher Edition pp. 175-176 (includes multiple representations of proportional relationships and *Talk About It!* conceptual discussion questions)
- Lesson 4-3; Learn *Similar Triangles* and Learn *Similar Triangles and Slope* in the *Interactive Student Edition* pp. 205-207, and corresponding teacher support in the Teacher Edition pp. 205-207 (includes multiple representations of similar triangles and slope triangles and *Talk About It!* conceptual discussion questions)
- Lesson 4-4; Learn *Direct Variation* in the *Interactive Student Edition* pp. 213-214, and corresponding teacher support in the Teacher Edition pp. 213-214 (includes multiple representations of direct variation proportional relationships and *Pause and Reflect* conceptual discussion questions)
- Lesson 4-5; Learn *Slope-Intercept Form of a Line* in the *Interactive Student Edition* pp. 225-226, and corresponding teacher support in the Teacher Edition pp. 225-226 (includes multiple representations of linear relationships)

**Variety of Instructional Tools**

Student Digital Center:

- **Web Sketchpad:** Lesson 4-2, Explore activity *Develop Concepts of Slope* and Teacher Edition pages 191c-191d
- **eTools:** Lesson 4-6, Examples 1-4 and Teacher Edition pages 237-241
- **Technology-Enhanced Items:** Lesson 1-2, located within the Learn resource *Monomials*
- **Animations/Videos:** Lesson 8-3, located within the Learn resource *Rotations About a Vertex*

Interactive Student Edition:

- **Foldables:** pp. FL1-FL4 in Volume 1
- **Method 1/Method 2:** p. 133, Learn (algebra tiles), Examples 1-2

**Language Development Support**

Teacher Edition:

- p. 175, 225, Differentiate: Language Development Activity

Language Development Handbook, Teacher Edition:

- p. xiii, English Language Development Activities
- p. T29, Lesson 6-1, English Learner Instructional Strategy and Leveled Activities

**Common Misconceptions**

Interactive Student Edition:

- p. 8, Example 4 *Talk About It!*
- p. 12, Exercises 13 and 15
- p. 458, Learn *Talk About It!*

Teacher Edition:

- p. 127b, Cheryl Tobey Formative Assessment Math Probe: *Solve Multi-Step Equations*
- p. 283, Common Misconception
- p. 329, Common Misconception

## Developing Concepts over Time

### Reveal Math, Course 1

The cluster 6.NS.C *Apply and extend previous understandings of numbers to the system of rational numbers* is addressed in Module 4. The lessons in Module 4 are organized with the intent of applying student understanding of whole numbers to integers and rational numbers.

- In Lesson 4-1, students draw on their understanding of using number lines to represent whole numbers (gained in prior grades) to develop understanding of integers.
- In Lesson 4-2, students draw on their understanding of graphing integers on number lines (gained in Lesson 4-1) to develop understanding of opposites of integers and absolute value.
- In Lesson 4-4, students draw on their understanding of whole numbers (gained in prior grades) and integers (gained in Lessons 4-1 and 4-2) to develop understanding of rational numbers.
- In Lesson 4-5, students draw on their understanding of graphing whole-number ordered pairs in the first quadrant of the coordinate plane (gained in prior grades) to develop understanding of graphing integer and rational-number ordered pairs in all four quadrants of the coordinate plane.
- In Lesson 4-6, students draw on their understanding of graphing rational-number ordered pairs in all four quadrants of the coordinate plane (gained in Lesson 4-5) to develop understanding of reflections of points and the connection to the signs of the  $x$ - and  $y$ -coordinates.
- In Lesson 4-7, students apply their understanding of absolute value, rational-number ordered pairs, and the coordinate plane (gained in Lessons 4-1 through 4-6) to find horizontal and vertical distance on the coordinate plane.

### Reveal Math, Course 2

The cluster 7.NS.A *Apply and extend previous understandings of operations with fractions* is addressed in Modules 3-4. The lessons in Modules 3-4 are organized with the intent of applying student understanding of operations with whole numbers and fractions to operations with integers and rational numbers.

- In Lessons 3-1, 3-2, 3-3, and 3-4, students draw on their understanding of integers (gained in Course 1) and operations with whole numbers (gained in prior grades) to develop understanding of integer addition, integer subtraction, integer multiplication, and integer division.
- In Lesson 3-5, students draw on their knowledge of operations with integers (gained in prior lessons in this module) and the order of operations (gained in Course 1) to develop fluency of integer operations that involve more than one operation.
- In Lesson 4-1, students draw on their understanding of rational numbers (gained in Course 1) and fraction division (gained in prior grades) to develop understanding of how rational numbers can be expressed as decimals or fractions.
- In Lessons 4-2, 4-3, 4-4, and 4-5, students draw on their understanding of rational numbers (gained in Course 1) and integer operations (gained in Module 3) to develop understanding of the addition, subtraction, multiplication, and division of rational numbers.
- In Lesson 4-6, students draw on their understanding of rational numbers (gained in Course 1), integer operations (gained in Module 3), and rational number operations (gained in prior lessons in this module), to develop fluency of rational number operations that involve more than one operation.

### **Reveal Math, Course 3**

The cluster 8.EE.B *Understand the connections between proportional relationships, lines, and linear equations* is primarily addressed in Module 4. The lessons in Module 4 are organized with the intent of applying their understanding of proportional relationships from Courses 1-2 and extend it to both proportional and non-proportional linear relationships.

- In Lesson 4-1, students draw on their understanding of unit rates and proportional relationships (gained in Courses 1-2) to develop understanding of slope. They come to understand that the constant rate of change, or unit rate, in a proportional relationship is the same as the slope of the line representing the proportional relationship. In Lesson 4-2, students continue to develop their understanding of the slope of a line.
- In Lesson 4-3, students draw on their understanding of slope (gained in prior lessons in this module) and proportional relationships (gained in Courses 1-2) to learn that right triangles with hypotenuses on the same nonvertical line, or slope triangles, are similar. Because the ratio of the rise to the run for each triangle is the same, the slope is the same between any two points on the line.
- In Lesson 4-4, students draw on their understanding of proportional relationships (gained in Courses 1-2) and slope (gained in prior lessons in this module) to develop understanding of direct variation, and relate it to proportional linear relationships. They learn that the equation  $y = mx$ , where  $m$  represents the slope (unit rate, constant of proportionality) is the equation representing a proportional linear relationship.
- In Lesson 4-5, students extend their understanding of slope and proportional linear relationships to develop understanding of non-proportional linear relationships. They learn that the equation  $y = mx + b$ , where  $m$  represents the slope and  $b$  represents the  $y$ -intercept, is the equation representing a non-proportional linear relationship. By comparing proportional linear relationships and non-proportional linear relationships, the slope of a non-proportional linear relationship is not the unit rate or constant of proportionality. Only a proportional linear relationship has a unit rate or constant of proportionality, which is the same as the slope of the line.