Mc Graw Hill

Indiana Reviewer's Guide
Grades 6–8

Indiana Reveal MATH®

Reveal the Full Potential in Every Student

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Indiana Reveal MATH®

Mc Graw Hill

Program Overview

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Indiana Reveal MATH®

Reveal the Full Potential in Every Student

mheonline.com/Indiana

Reveal curiosity with mathematical exploration and discovery that deepens conceptual understanding.

Reveal understanding with insightful instructional resources to more effectively differentiate and promote a positive student mindset.

Reveal possibilities with purposeful technology that creates an active classroom experience.

The principles of *Indiana Reveal Math*® ©2023 derive from the latest research on how students learn best—through productive struggle, rich tasks, and mathematical discourse. The unique approach within *Indiana Reveal Math* ensures students don't just meet the standards—they master them!

Reveal the Power and Possibility of Math!

Indiana Reveal Math includes a wealth of print and digital resources that lead to mastery of the standards.

Student Edition, 2 volumes

Students take ownership of their learning by interacting with the content in the consumable student text. **The Student Editions are also available in Spanish!**

Student Digital Center

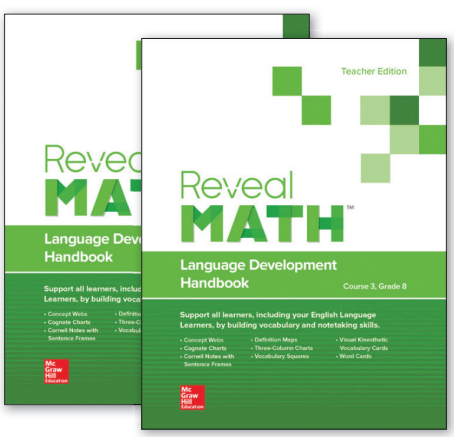
Access videos, animations, Explore activities, instructional content, assessments, and more.

Teacher Edition, 2 volumes

Teachers benefit from a user-friendly and clear Teacher Edition, with tips on when and how to incorporate digital resources.

Teacher Digital Center

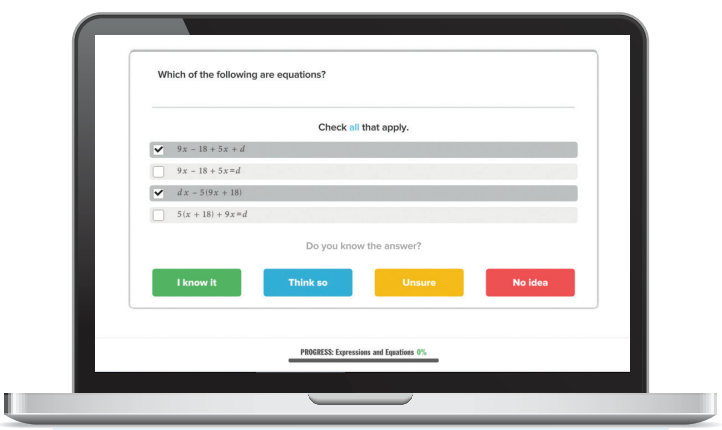
Access valuable and flexible resources for both core instruction and differentiation.



Language Development Handbook, Student Edition and Teacher Edition

Students utilize graphic organizers and note-taking strategies to build mathematical vocabulary and language development.

Teachers receive specific tips to support the language development of students building English language proficiency.



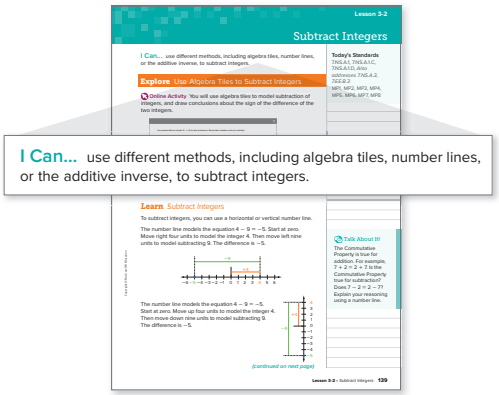
LearnSmart®

Students can access personalized topic practice and prepare for summative assessments.

The Science of Learning Meets the Art of Teaching

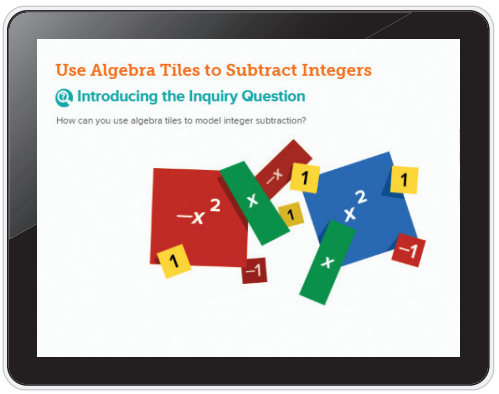
The evolving field of educational research drove the approach of *Indiana Reveal Math*. Our team was inspired by esteemed publications such as *Principles to Actions* (NCTM), *Mathematical Mindsets* (Jo Boaler), and *Making Sense of Math* (Cathy Seeley), as well as learning models including Bloom's Taxonomy and Webb's Depth of Knowledge Guide. This solid foundation of academic research and direct feedback from hundreds of educators just like you ensures that *Indiana Reveal Math* represents the cutting-edge of best practices in mathematics instruction.

Research-Based Best Practices



Build Students' Confidence in Their Abilities

Learning targets in the form of **"I Can"** statements appear at the beginning of each lesson to communicate the lesson objective in student-friendly language.



Nurture Curiosity with Rich Tasks

Online **Explore** activities begin with an open-ended question and require deep conceptual thinking from the learner. At the end of the **Explore** activity, students apply their learning in order to answer the **Inquiry Question.** The focus is on student exploration and reasoning, not just getting the right answer.

The expert advisor team behind *Indiana Reveal Math* includes thought leaders at the forefront of mathematics education.

Cathy L. Seeley, Ed.D.
Author, Educator, and NCTM President 2004–2006

Raj Shah, Ph.D.
Founder of Math Plus Academy, a STEM enrichment program

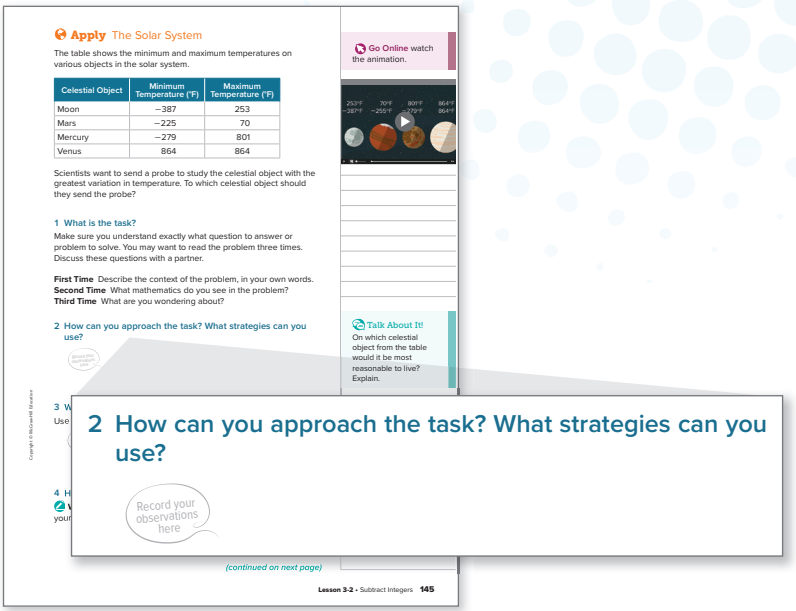
Indiana Reveal Math teaches students *how* to think—not *what* to think!

Talk About It!
Describe a situation where the difference between two numbers is greater than either number. Then explain why that happens.

Talk About It!
Why do we take the absolute value of the difference?

Talk About It!
Compare and contrast Method 1 and Method 2.

Talk About It!
Is it reasonable to have a negative answer? Why or why not?



Improve Communication While Deepening Comprehension
Talk About It! prompts build mathematical discourse skills as students learn to clarify their thinking and defend their rationale.

Teach the Value of Perseverance
Problems with multiple solution paths encourage **productive struggle** and challenge student thinking.

Cheryl R. Tobey, M.Ed.
Mathematics Program Director at Maine Mathematics and Science Alliance (MMSA)

Nevels Nevels, Ph.D.
PK–12 Mathematics Curriculum Coordinator for Hazelwood School District

Dinah Zike, M.Ed.
President of Dinah.com in San Antonio, Texas, and Dinah Zike Academy

Walter Secada, Ph.D.
Professor of Teaching and Learning at the University of Miami

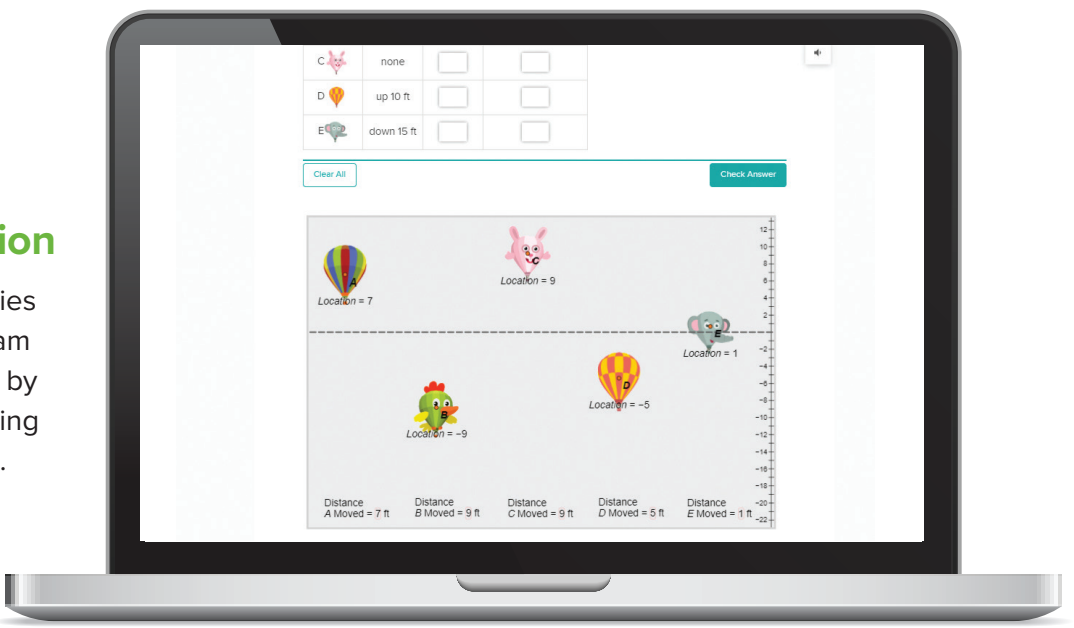
What If Math Class Were the Most Exciting Class of the Day? It Can Be!

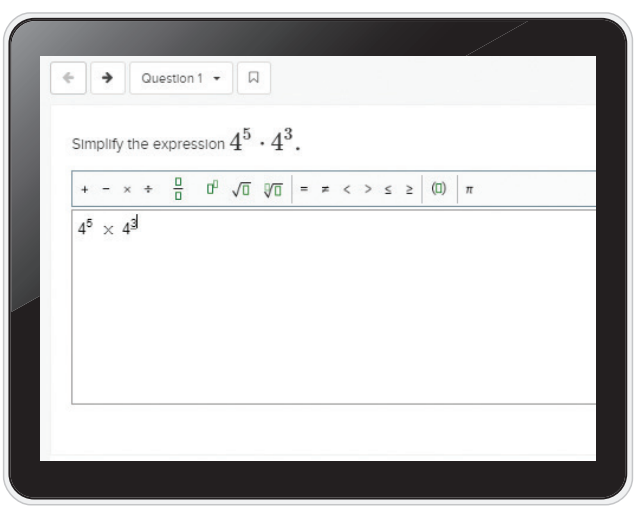
Indiana Reveal Math supports both low-tech and high-tech classrooms. The blended print and digital instructional model captures the best of both modalities and brings them together in a seamless experience that makes math meaningful for your students.

Web Sketchpad®

Visualize Math Concepts in Action

Web Sketchpad® activities included with the program enhance understanding by dynamically demonstrating math concepts in action.





Prepare Students for Computer-Based Testing

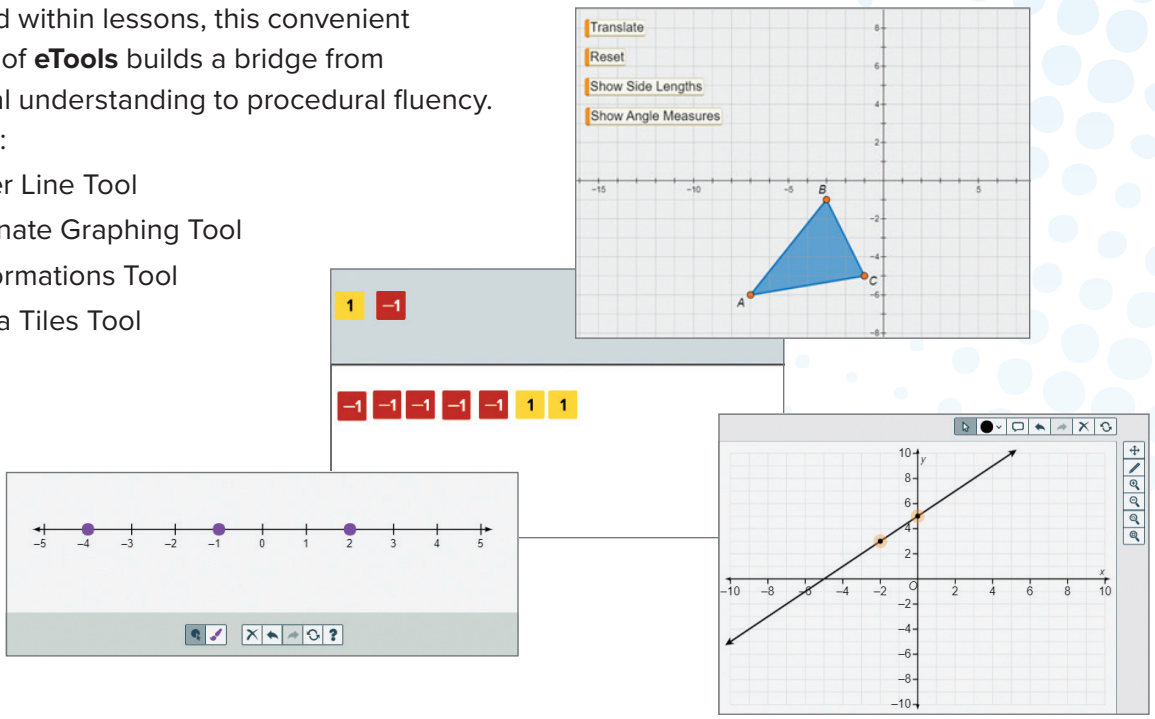
Technology-enhanced items provide students the valuable practice they need to master computer-based assessments. These items include:

- Drag-and-drop
- Equation editor problems
- Multiselect
- Open response

Utilize Digital Tools for Problem-Solving

Embedded within lessons, this convenient collection of **eTools** builds a bridge from conceptual understanding to procedural fluency. It includes:

- Number Line Tool
- Coordinate Graphing Tool
- Transformations Tool
- Algebra Tiles Tool



desmos

Explore, Model, and Apply Math

The best-in-class **Desmos scientific calculator,** easily accessible in *Reveal Math,* allows students to utilize the same resource that appears on many common standardized tests.

Motivate with Truly Enjoyable Technology

Designed with student engagement in mind, the digital resources in *Reveal Math* include **animations, videos,** and **interactive problems** to enhance context and learning.

Drive Learning With Student-Centered Instructional Tools

In *Indiana Reveal Math,* the Teacher Edition centers around opportunities to promote mathematical discourse, collaboration, and a positive student mindset.

Develop Habits of Mind With Standards for Mathematical Practices Tips

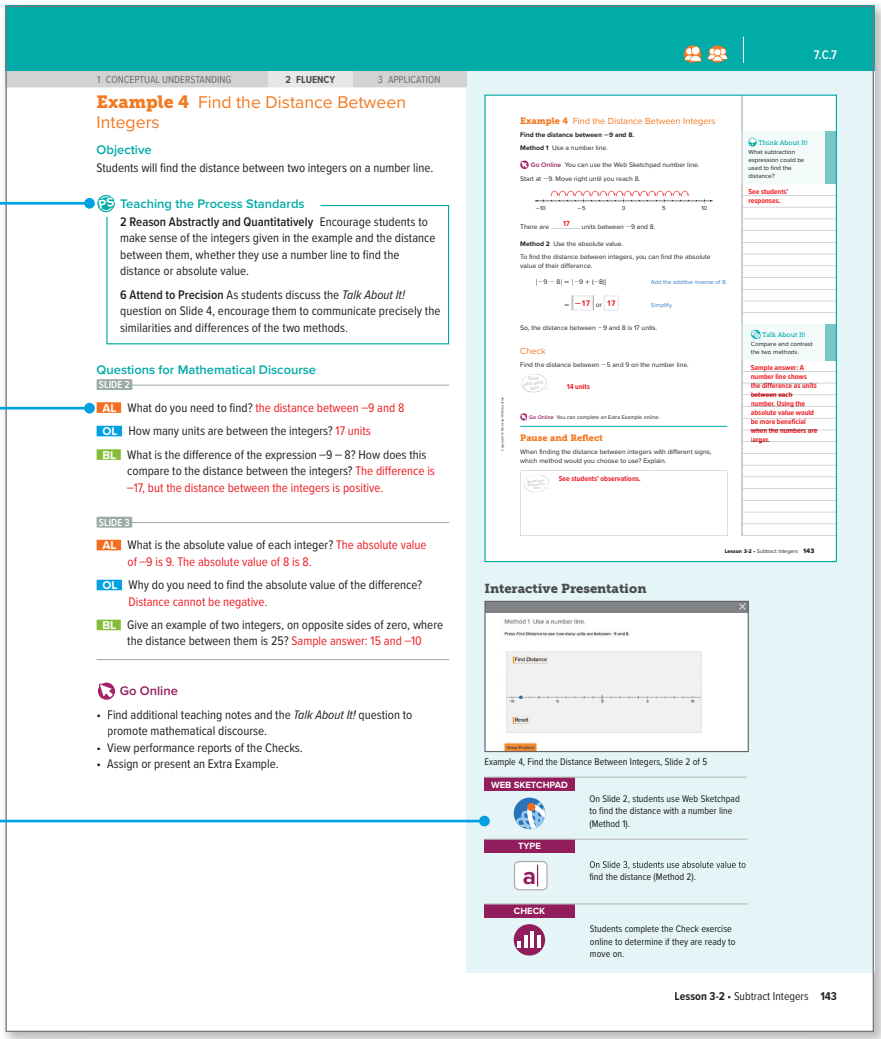
These strategies illustrate ways teachers can integrate the practices in their classroom in a practical and meaningful way.

Encourage Student Discourse

Questions for Mathematical Discourse provide point-of-use discussion prompts that teachers can use to facilitate classroom discussion.

Integrate Technology in a Way That Makes Sense

User-friendly tips in the Teacher Edition suggest when and how to integrate technology purposefully.



7.C.7

1 CONCEPTUAL UNDERSTANDING | 2 FLUENCY | 3 APPLICATION

Example 4 Find the Distance Between Integers

Objective

Students will find the distance between two integers on a number line.

Teaching the Process Standards

2 Reason Abstractly and Quantitatively Encourage students to make sense of the integers given in the example and the distance between them, whether they use a number line to find the distance or absolute value.

6 Attend to Precision As students discuss the *Talk About It!* question on Slide 4, encourage them to communicate precisely the similarities and differences of the two methods.

Questions for Mathematical Discourse

SLIDE 2

AL What do you need to find? the distance between −9 and 8

OL How many units are between the integers? 17 units

BL What is the difference of the expression −9 − 8? How does this compare to the distance between the integers? The difference is −17, but the distance between the integers is positive.

SLIDE 3

AL What is the absolute value of each integer? The absolute value of −9 is 9. The absolute value of 8 is 8.

OL Why do you need to find the absolute value of the difference? Distance cannot be negative.

BL Give an example of two integers, on opposite sides of zero, where the distance between them is 25? Sample answer: 15 and −10

Go Online

- Find additional teaching notes and the *Talk About It!* question to promote mathematical discourse.
- View performance reports of the Checks.
- Assign or present an Extra Example.

Example 4 Find the Distance Between Integers

Find the distance between −9 and 8.

Method 1 Use a number line.

Go Online You can use the Web Sketchpad number line.

Start at −9. Move right until you reach 8.

There are 17 units between −9 and 8.

Method 2 Use the absolute value.

To find the distance between integers, you can find the absolute value of their difference.

|−9 − 8| = |−9 + (−8)| Add the additive inverse of 8.

= |−17| or 17 Simplify.

So, the distance between −9 and 8 is 17 units.

Check

Find the distance between −5 and 9 on the number line.

14 units

Go Online You can complete an Extra Example online.

Pause and Reflect

When finding the distance between integers with different signs, which method would you choose to use? Explain.

See students' observations.

Think About It! What subtraction expression could be used to find the distance? See students' responses.

Talk About It! Compare and contrast the two methods. Sample answer: A number line shows the difference as units between each number. Using the absolute value would be more beneficial when the numbers are larger.

Lesson 3-2 • Subtract Integers 143

Interactive Presentation

Example 4, Find the Distance Between Integers, Slide 2 of 5

WEB SKETCHPAD

On Slide 2, students use Web Sketchpad to find the distance with a number line (Method 1).

TYPE

On Slide 3, students use absolute value to find the distance (Method 2).

CHECK

Students complete the Check exercise online to determine if they are ready to move on.

Lesson 3-2 • Subtract Integers 143

Online Professional Learning Support: Ready When You Are

Indiana Reveal Math features a digital library of self-paced professional learning videos and modules, including:

Program Implementation Support

The **Quick Start eLearning Module** explains program basics.

Plan, Teach, and Assess eLearning Modules provide deep-dives of the program instructional model and resources.

Digital Platform Support

The **Technical Support Resource Library** provides step-by-step instructions for the digital tools.

Mindset Matters

"Not Yet" Doesn't Mean "Never"

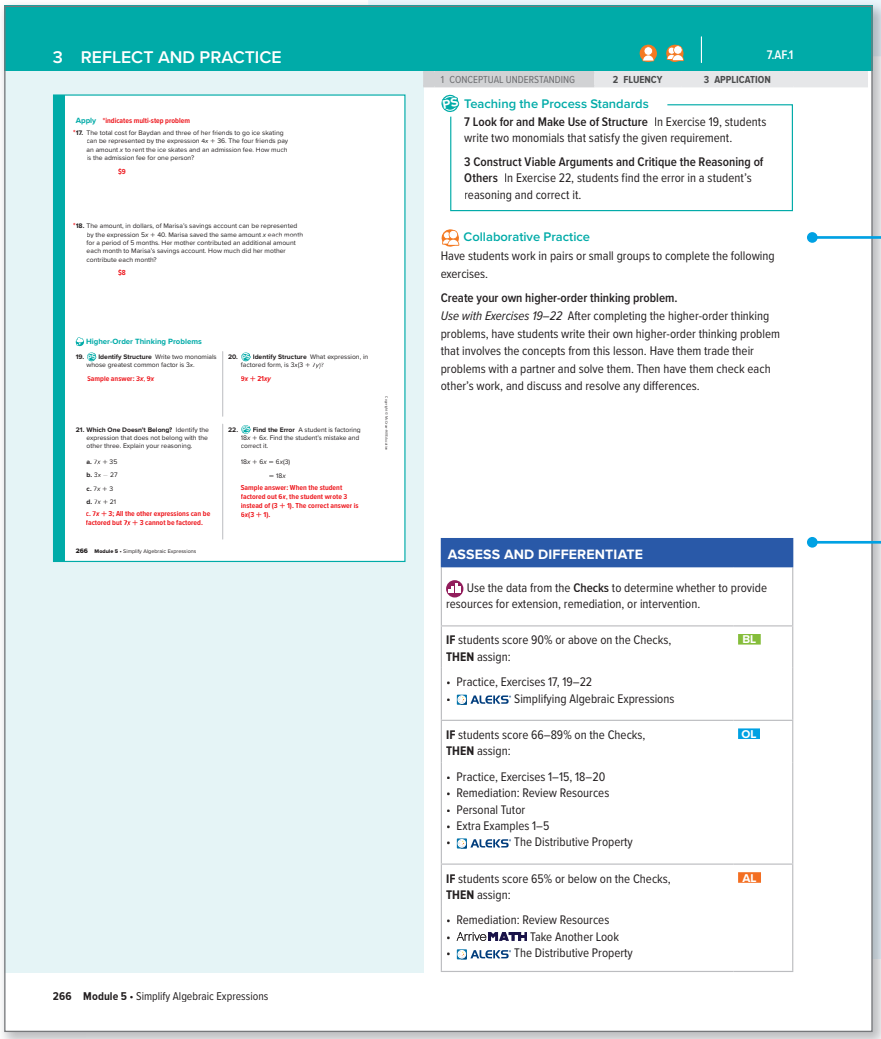
Students with a growth mindset understand that just because they haven't yet found a solution, that does not mean they won't find one with additional effort and reasoning. It can take time and continued effort to reason through different strategies that can be used to solve a problem.

How Can I Apply It?

Assign students the **Formative Assessment Math Probes** that are available for each module. Have them complete the probe before starting the module, and then again at the specified lesson within the module, or at the end of the module so that they can see their progress.

Fuel Growth by Encouraging a Positive Mindset

Mindset Matters tips at the beginning of each module provide strategies for encouraging a growth mindset and productive approaches to problem-solving.



3 REFLECT AND PRACTICE 7.AF.1

1 CONCEPTUAL UNDERSTANDING | 2 FLUENCY | 3 APPLICATION

Apply *Indicates multi-step problem

*17. The total cost for Baydan and three of her friends to go ice skating can be represented by the expression $4x + 36$. The four friends pay an amount x to rent the ice skates and an admission fee. How much is the admission fee for one person?

$9

*18. The amount, in dollars, of Marisa's savings account can be represented by the expression $5x + 40$. Marisa saved the same amount x each month for a period of 5 months. Her mother contributed an additional amount each month to Marisa's savings account. How much did her mother contribute each month?

$8

Higher-Order Thinking Problems

19. Identify Structure Write two monomials whose greatest common factor is $3x$.

Sample answer: $3x$, $9x$

20. Identify Structure What expression, in factored form, is $3x(3 + /y)$?

$9x + 2$?y

21. Which One Doesn't Belong? Identify the expression that does not belong with the other three. Explain your reasoning.

a. $7x + 35$

b. $3x - 27$

c. $7x + 3$

d. $7x + 21$

c. $7x + 3$; All the other expressions can be factored but $7x + 3$ cannot be factored.

22. Find the Error A student is factoring $18x + 6x$. Find the student's mistake and correct it.

$18x + 6x = 6x(3)$

$= 18x$

Sample answer: When the student factored out 6x, the student wrote 3 instead of $(3 + 1)$. The correct answer is $6x(3 + 1)$.

266 Module 5 • Simplify Algebraic Expressions

Teaching the Process Standards

7 Look for and Make Use of Structure In Exercise 19, students write two monomials that satisfy the given requirement.

3 Construct Viable Arguments and Critique the Reasoning of Others In Exercise 22, students find the error in a student's reasoning and correct it.

Collaborative Practice

Have students work in pairs or small groups to complete the following exercises.

Create your own higher-order thinking problem.

Use with Exercises 19–22 After completing the higher-order thinking problems, have students write their own higher-order thinking problem that involves the concepts from this lesson. Have them trade their problems with a partner and solve them. Then have them check each other's work, and discuss and resolve any differences.

ASSESS AND DIFFERENTIATE

Use the data from the **Checks** to determine whether to provide resources for extension, remediation, or intervention.

IF students score 90% or above on the Checks, **THEN** assign: BL

- Practice, Exercises 17, 19–22
- ALEKS Simplifying Algebraic Expressions

IF students score 66–89% on the Checks, **THEN** assign: OL

- Practice, Exercises 1–15, 18–20
- Remediation: Review Resources
- Personal Tutor
- Extra Examples 1–5
- ALEKS The Distributive Property

IF students score 65% or below on the Checks, **THEN** assign: AL

- Remediation: Review Resources
- ArriveMATH Take Another Look
- ALEKS The Distributive Property

Accelerate Learning with Collaboration

Collaborative Practice tips offer suggestions on how students can work together to write their own problems or make sense of existing problems.

Provide In-the-Moment Differentiation

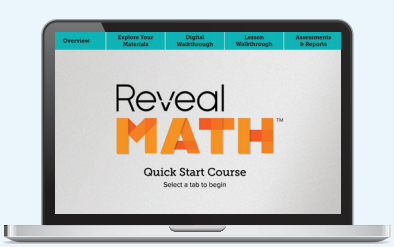
An **Assess and Differentiate** feature at the end of each lesson provides suggestions to reach every learner.

Address Student Needs Based on Their Depth of Knowledge (DOK)

DOK charts in the Teacher Edition recommend which practice exercises to assign to students based on their needs.

Ongoing Pedagogy Support

- **Classroom Videos** model lessons from a real classroom.
- **Math Misconception Videos** address common misconceptions and strategies to help students overcome them.
- **Content and Pedagogy Videos** provide tips for teaching difficult math concepts.
- **Interviews with Experts** examine the "why" behind the math and best practices.
- **Content Progression Resources** show the progression of math concepts from elementary through high school math.



Indiana Reveal Math Meets You Where You Are and Goes Where You're Growing

Lesson Model

Launch

WARM UP

The **Warm Up** covers the prerequisite skills needed for the lesson.

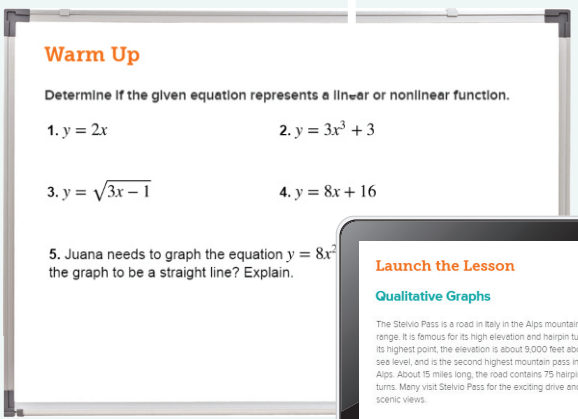
Teachers can also project the "**What Vocabulary Will You Learn?**" and "**Today's Standards**" slides to review what topics will be covered in the lesson with their class.

LAUNCH THE LESSON

In **Launch the Lesson,** teachers utilize a hook to engage students and pique their interest.

Talk About It! prompts initiate student thinking about the lesson content.

Warm Up



Launch the Lesson

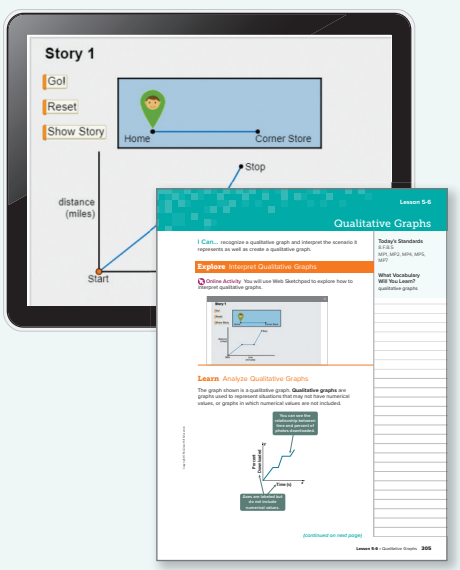
- INDIVIDUAL ACTIVITY
- GROUP ACTIVITY
- CLASS ACTIVITY

Explore and Develop

EXPLORE

Students complete rich tasks in online **Explore** activities while working in collaborative groups, allowing them to share ideas and approaches with their peers.

Explore



Teachers can project the digital features, or students can access them on their own devices.

The abundant print and digital resources within *Indiana Reveal Math* intersect in a meaningful way to heighten the learning experience. Interactive print and digital tools increase student engagement while simultaneously deepening comprehension. The *Indiana Reveal Math* classroom is an active classroom experience that brings math to life!

Reflect and Practice

LEARN

In the **Learn** portion of the lesson, students' understanding is formalized through guided instruction.

Teachers can use the aligned print and digital content to create the most effective instructional pathway for their students.

EXAMPLES & CHECK

Students work through one or more **Examples** tied to the key concepts, followed by a quick **Check** (formative assessment) to measure their understanding.

Examples and **Checks** can be completed in the print **Interactive Student Edition** or online. When **Checks** are completed online, performance data is instantly captured for the teacher.

EXIT TICKET

The **Exit Ticket** provides a quick formative assessment opportunity that encourages students to reflect on their learning.

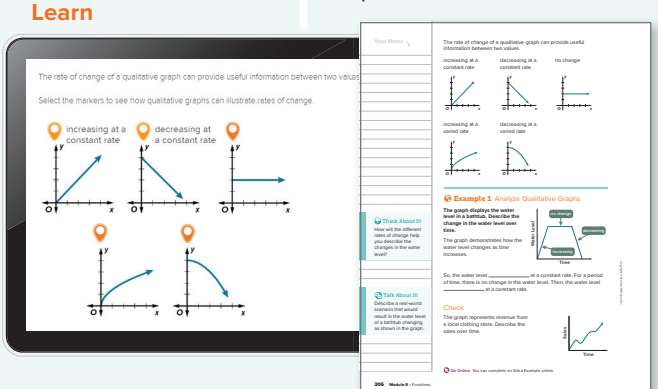
Write About It! prompts provide an opportunity for students to integrate writing skills in the math classroom.

PRACTICE

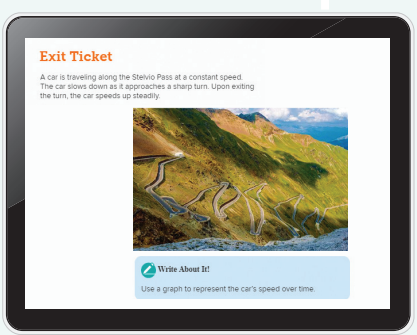
Students complete the **Practice** either online or in their print **Interactive Student Edition** to apply what they've learned and build procedural fluency.

When the **Practice** is completed online, performance data is instantly captured for the teacher.

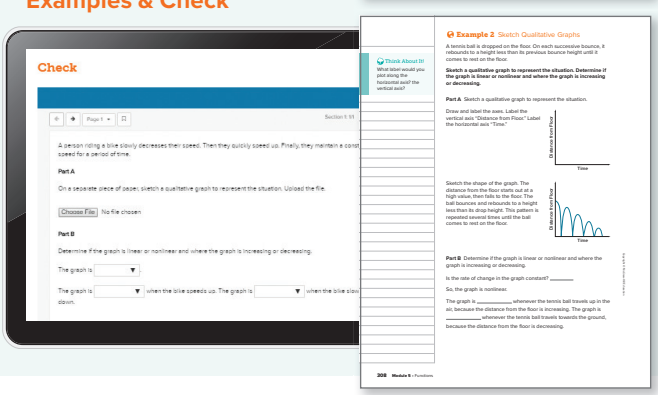
Learn



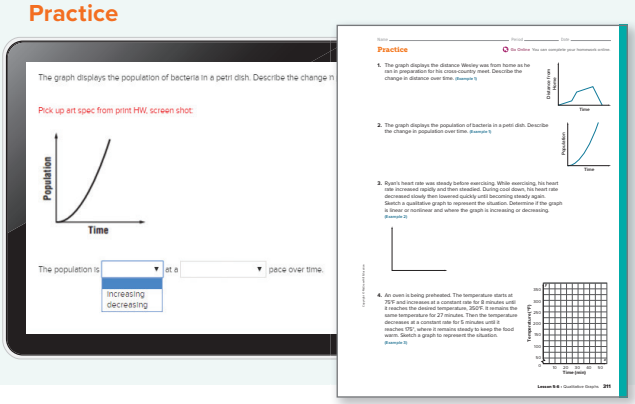
Exit Ticket



Examples & Check

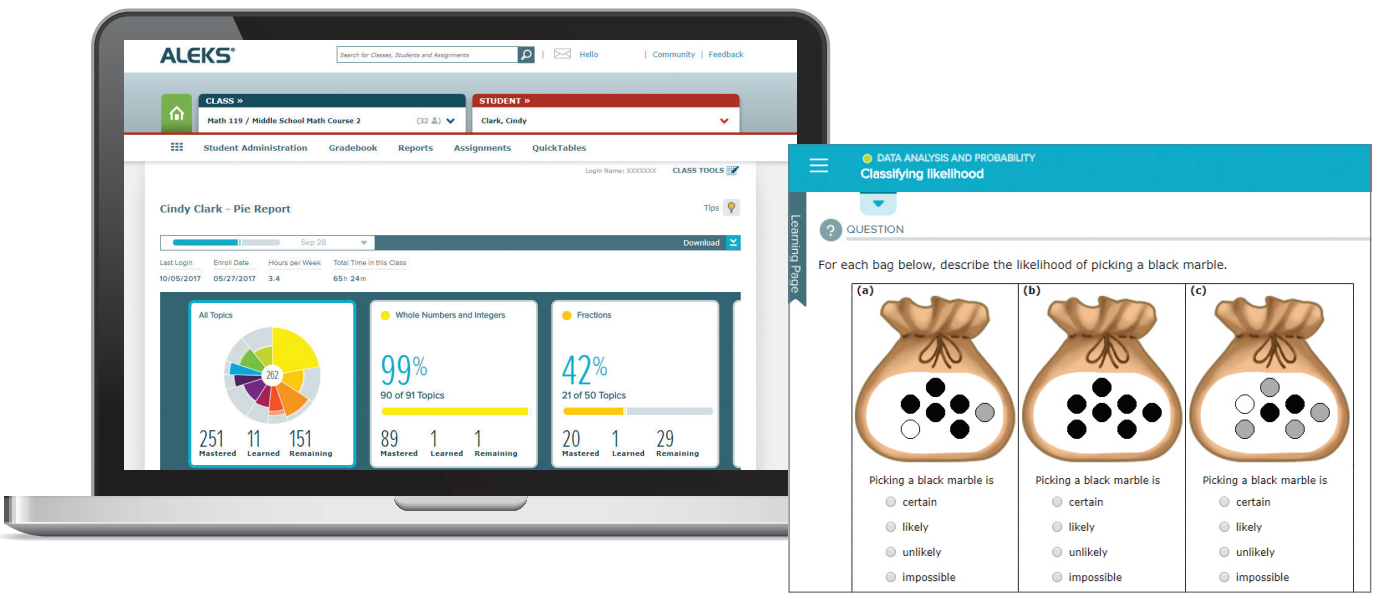


Practice



Support Every Student

Indiana Reveal Math empowers teachers with the tools they need to provide in-the-moment differentiation and deliver insightful instruction that reaches every learner.



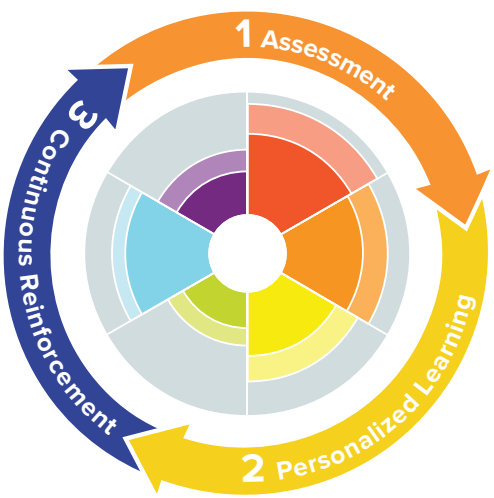
ALEKS®

Reveal the Power of Personalized Learning

ALEKS® is an online math solution for Grades 6–12 that uses adaptive technology to identify and provide instruction on the topics each student is most ready to learn. Through a continuous cycle of assessment, learning, and reinforcement, *ALEKS* develops a personalized learning path for each student to ensure measurable success.

Benefits of Using *ALEKS*:

- Provide standards-based instruction
- Focus on appropriate topics to prevent boredom or frustration
- Offer bilingual courses in English and Spanish
- Easily differentiate with remediation, on-level, and enrichment opportunities
- Pie reports allow you to see which students know the concepts in each module's topic and adjust instruction as appropriate
- Access dynamic data at the student, class, school, and district level to inform classroom instruction

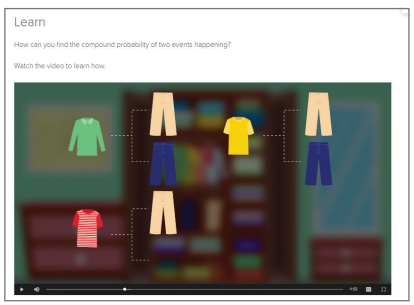


Make an Impact with Embedded Reteach Support

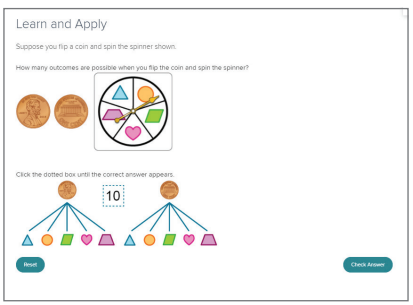
The digital ***Take Another Look*** mini-lessons in ***Arrive Math***™ supplement core instruction with targeted skill support and extra practice. About 100 of these digital, student-driven lessons are included in each *Indiana Reveal Math* course.

To receive access to all 1,160 Take Another Look lessons, plus hands-on lessons and games, ask your sales representative about purchasing ***Arrive Math Booster,*** a K–8 supplemental intervention program.

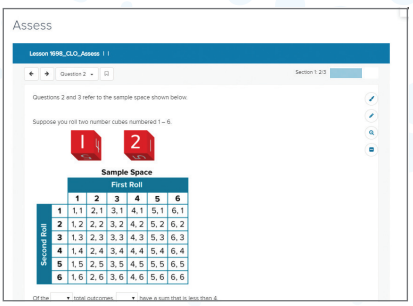
Each 15-minute student-driven, digital lesson contains three parts:



Part 1: Model Concept



Part 2: Interactive Practice



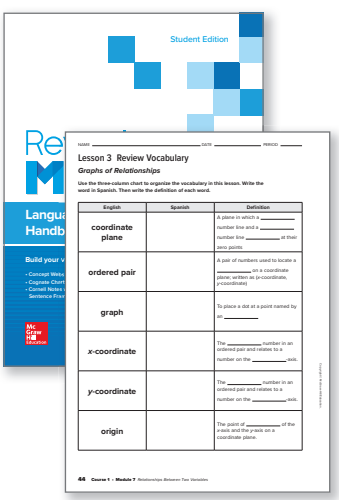
Part 3: Data Check

Build Language Skills in the Math Classroom

The **Language Development Handbooks** empower teachers to meet the language needs of all learners.

The **Language Development Handbook Student Edition** includes:

- Word Cards
- Vocabulary Squares
- Three-Column Charts (with English/Spanish cognates)
- Definition Maps
- Concept Webs
- Dinah Zike's Visual Kinesthetic Vocabulary Cards



The **Language Development Handbook Teacher Edition** includes:

- English Learner Instructional Strategies
- English Language Development Leveled Activities
- Multicultural Teacher Tips

Resources for Spanish Speakers

- Spanish Interactive Student Editions for Course 1, Course 2, and Course 3
- Language Development Handbook for Course 1, Course 2, and Course 3 *(Teacher and Student Editions)*
- Spanish Personal Tutors
- Multilingual eGlossary
- *ALEKS* Bilingual Courses in Spanish

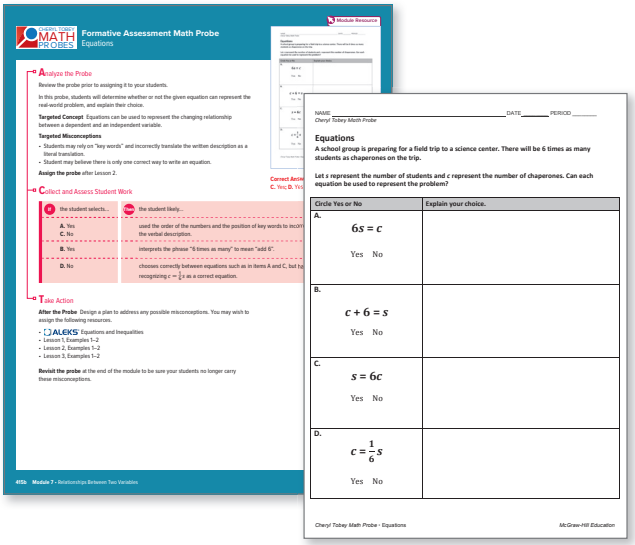
Practice and Assessment

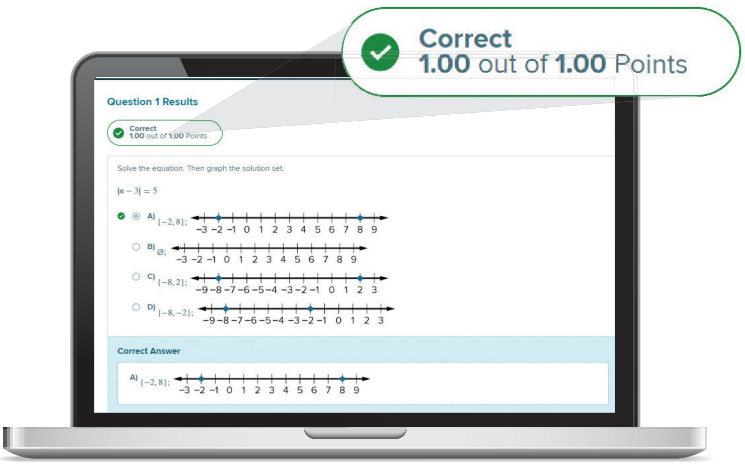
With *Indiana Reveal Math,* students apply their learning in a variety of practice options and assessments to demonstrate that they can explain both the what and the why of mathematics—not just the *how.*

Teach Students That Mistakes Are an Opportunity for Growth

Each module features a **Cheryl Tobey Formative Assessment Math Probe**—exclusive to McGraw Hill!

Students complete an activity that is designed to target common misconceptions about a particular mathematical concept. Teacher resources include support for diagnosing and correcting these misconceptions.





Provide Students Rich Practice Opportunities

Every lesson includes a variety of practice sets that provide students varied question type formats, immediate feedback, support, and multiple question attempts. Extra practice sets are also available to be assigned at the teacher's discretion. When assigned digitally, student work is auto-scored to reduce the time invested in manual grading.

Assessment Options

Diagnostic Assessment

- Diagnostic and Placement Test with Scoring Guide
- Module Pretests

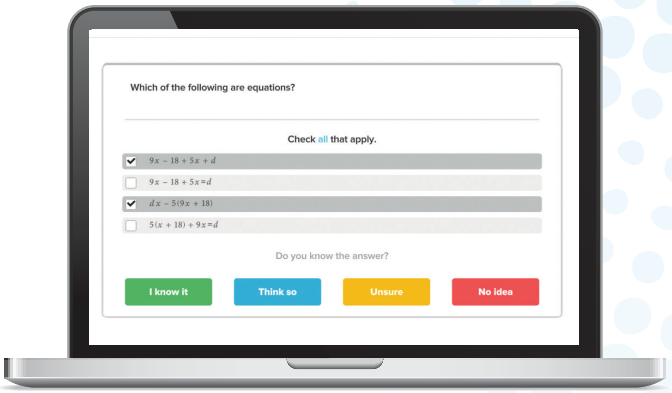
Formative Assessment

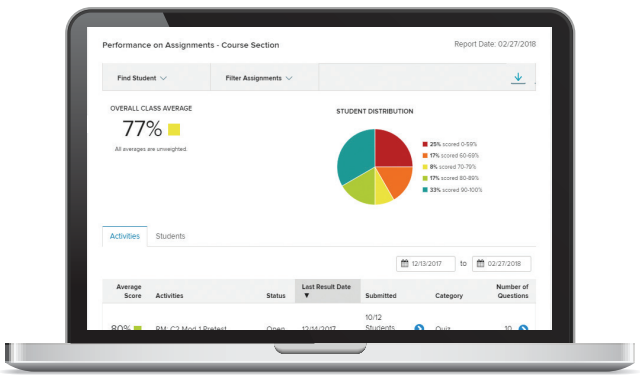
- Cheryl Tobey Formative Assessment Math Probes
- Checks
- Exit Tickets
- Put It All Together
- *LearnSmart®*

Ensure Topic Mastery

LearnSmart®, included with *Indiana Reveal Math,* provides students with access to an online, interactive study tool.

LearnSmart assesses a student's proficiency and knowledge within a specific course, tracks which topics have been mastered, and identifies areas that need more study prior to mid-year or end-of-course assessments.





Drive Instruction With Actionable Data

Drawing on performance data from student assessments and activities, the *Indiana Reveal Math* reports and recommendations provide teachers and administrators with the information they need to monitor and adjust instruction on a daily basis.

Activity Report

- Overall class or student average score
- Overall class or student progress over time
- Performance by activity type (e.g., homework, quiz, exam)
- Average score per activity

Standards Report

Class and individual average score per standard, skill, or objective.

Administrator Report

Activity, standards, progress, and usage reports.

Summative Assessment

- Leveled Module Tests
- Module Review
- Module Vocabulary Tests
- Performance Tasks
- End-of-Course Test

PLUS

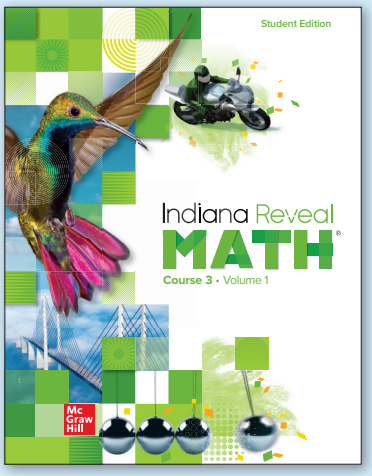
Build your own assessments with access to question banks featuring technology-enhanced items.

Indiana Reveal
MATH®

The K–12 Solution for Today's Mathematics Classroom

Indiana Reveal Math is a coherent, vertically aligned K–12 core math solution that empowers educators to uncover the mathematician in every student through powerful explorations, rich mathematical discourse, and timely individualized learning opportunities.

6–8



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SCOPE AND SEQUENCE

SCOPE AND SEQUENCE

Scope and Sequence
Courses 1–3

NUMBER SENSE

Indiana Reveal Math Course 1	Module-Lesson
6.NS.1: Understand that positive and negative numbers are used to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent and compare quantities in real-world contexts, explaining the meaning of 0 in each situation.	4-1, 4-2
6.NS.2: Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself (e.g., –(–3) = 3), and that 0 is its own opposite.	4-2, 4-6
6.NS.3: Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.	4-3, 4-4
6.NS.4: Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	4-2, 4-3
6.NS.5: Know commonly used fractions (halves, thirds, fourths, fifths, eighths, tenths) and their decimal and percent equivalents. Convert between any two representations (fractions, decimals, percents) of positive rational numbers without the use of a calculator.	2-3
6.NS.6: Identify and explain prime and composite numbers.	5-5
6.NS.7: Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.	5-5, 5-6
6.NS.8: Interpret, model, and use ratios to show the relative sizes of two quantities. Describe how a ratio shows the relationship between two quantities. Use the following notations: a/b, a to b, a:b .	1-1, 1-2, 1-4
6.NS.9: Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.	1-7, 1-8
6.NS.10: Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).	1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 2-4, 2-5, 2-6, 10-7
***Indiana Reveal Math* Course 2**	**Module-Lesson**
7.NS.1: Find the prime factorization of whole numbers and write the results using exponents.	IN Lesson: Prime Factorization
7.NS.2: Understand the inverse relationship between squaring and finding the square root of a perfect square whole number. Find square roots of perfect square whole numbers.	IN Lesson: Roots
7.NS.3: Know there are rational and irrational numbers. Identify, compare, and order rational and common irrational numbers (√2, √3, √5, ∏) and plot them on a number line.	IN Lesson: Compare Real Numbers
***Indiana Reveal Math* Course 3**	**Module-Lesson**
8.NS.1: Give examples of rational and irrational numbers and explain the difference between them. Understand that every number has a decimal equivalent. For rational numbers, show that the decimal equivalent terminates or repeats, and convert a repeating decimal into a rational number.	2-1, 2-3, 2-5
8.NS.2: Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.	2-4, 2-5
8.NS.3: Given a numeric expression with common rational number bases and integer exponents, apply the properties of exponents to generate equivalent expressions.	1-1
8.NS.4: Use square root symbols to represent solutions to equations of the form x^2 = p, where p is a positive rational number.	2-2, 6-3

COMPUTATION

Indiana Reveal Math Course 1	Module-Lesson
6.C.1: Divide multi-digit whole numbers fluently using a standard algorithmic approach.	3-1
6.C.2: Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	3-2, 3-3, 3-4, 3-5

6.C.3: Solve real-world problems with positive fractions and decimals by using one or two operations.	3-2, 3-3, 3-4, 3-5
6.C.4: Compute quotients of positive fractions and solve real-world problems involving division of fractions by fractions. Use a visual fraction model and/or equation to represent these calculations.	3-3, 3-4, 3-5
6.C.5: Evaluate positive rational numbers with whole number exponents.	5-1, 5-2, 5-4
6.C.6: Apply the order of operations and properties of operations (identity, inverse, commutative properties of addition and multiplication, associative properties of addition and multiplication, and distributive property) to evaluate numerical expressions with nonnegative rational numbers, including those using grouping symbols, such as parentheses, and involving whole number exponents.	5-2, 5-4, 5-6
***Indiana Reveal Math* Course 2**	**Module-Lesson**
7.C.1: Understand p + q as the number located a distance |q| from p, in the positive or negative direction, depending on whether q is positive or negative. Show on a number line that a number and its opposite have a sum of 0 (are additive inverses). Find and interpret sums of rational numbers in real-world contexts.	3-1, 4-2
7.C.2: Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	3-2, 4-3
7.C.3: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers.	3-3, 4-4, 4-5
7.C.4: Understand that integers can be divided, provided that the divisor is not zero. Understand that if p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$.	3-4, 4-1, 4-5
7.C.5: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	1-1
7.C.6: Use proportional relationships to solve ratio and percent problems with multiple operations (e.g. simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease).	1-6, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 8-4, 11-2
7.C.7: Compute fluently with rational numbers using an algorithmic approach.	3-1, 3-2, 3-3, 3-4, 3-5, 4-1, 4-2, 4-3, 4-4, 4-5, 4-6
7.C.8: Solve real-world problems with rational numbers by using one or two operations.	3-1, 3-2, 3-3, 3-4, 3-5, 4-1, 4-2, 4-4, 4-5, 4-6
***Indiana Reveal Math* Course 3**	**Module-Lesson**
8.C.1: Solve real-world problems with rational numbers by using multiple operations.	1-1, 1-6, 2-1, 2-2, 5-3, 5-5, 7-5, 8-1, 8-2, 8-3, 8-5
8.C.2: Solve real-world and other mathematical problems involving numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Interpret scientific notation that has been generated by technology, such as a scientific calculator, graphing calculator, or excel spreadsheet.	1-5, 1-6

ALGEBRA AND FUNCTIONS

***Indiana Reveal Math* Course 1**	**Module-Lesson**
6.AF.1: Evaluate expressions for specific values of their variables, including expressions with whole-number exponents and those that arise from formulas used in geometry and other real-world problems.	5-4
6.AF.2: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.	5-7
6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.	5-3
6.AF.4: Understand that solving an equation or inequality is the process of answering the following question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	6-1, 6-6
6.AF.5: Solve equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real-world problems using equations of these forms and solve such problems.	6-2, 6-3, 6-4, 6-5, 7-2, 7-3, 7-4
6.AF.6: Write an inequality of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$, where c is a rational number, to represent a constraint or condition in a real-world or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.	6-6
6.AF.7: Understand that signs of numbers in ordered pairs indicate the quadrant containing the point. Identify rules or patterns in the signs as they relate to the quadrants. Graph points with rational number coordinates on a coordinate plane.	4-5, 4-6

6.AF.8: Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	4-5, 4-6, 4-7
6.AF.9: Make tables of equivalent ratios relating quantities with whole- number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.	1-2, 1-3, 1-4, 1-7, 7-3, 7-4
6.AF.10: Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	7-2, 7-3, 7-4
***Indiana Reveal Math* Course 2**	**Module-Lesson**
7.AF.1: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process.	5-1, 5-4
7.AF.2: Solve equations of the form px + q= r and p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems.	6-2, 6-3, 6-4, 6-5
7.AF.3: Solve inequalities of the form px +q (> or ≥) r or px + q (< or ≤) r, where p, q, and r are specific rational numbers. Represent real-world problems using inequalities of these forms and solve such problems. Graph the solution set of the inequality and interpret it in the context of the problem.	7-1, 7-2
7.AF.4: Define slope as vertical change for each unit of horizontal change and recognize that a constant rate of change or constant slope describes a linear function. Identify and describe situations with constant or varying rates of change.	12-1, 12-2
7.AF.5: Graph a line given its slope and a point on the line. Find the slope of a line given its graph.	12-2, 12-5, 12-6
7.AF.6: Decide whether two quantities are in a proportional relationship (e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin).	1-3, 1-4
7.AF.7: Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationships.	1-3, 1-4, 1-5, 8-4
7.AF.8: Explain what the coordinates of a point on the graph of a proportional relationship mean in terms of the situation, with special attention to the points (0, 0) and (1,r), where r is the unit rate.	1-4
7.AF.9: Represent real-world and other mathematical situations that involve proportional relationships. Write equations and draw graphs to represent proportional relationships. Recognize that these situations are described by a linear function in the form y = mx, where the unit rate, m, is the slope of the line.	12-4
***Indiana Reveal Math* Course 3**	**Module-Lesson**
8.AF.1: Solve linear equations and inequalities with rational number coefficients fluently, including those whose solutions require expanding expressions using the distributive property and collecting like terms. Represent real-world problems using linear equations and inequalities in one variable and solve such problems.	3-1, 3-2, 3-3, 3-4, 3-6
8.AF.2: Generate linear equations in one variable with one solution, infinitely many solutions, or no solutions. Justify the classification given.	3-2, 3-4, 3-5
8.AF.3: Understand that a function assigns to each x-value (independent variable) exactly one y-value (dependent variable), and that the graph of a function is the set of ordered pairs (x,y).	4-1
8.AF.4: Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear, has a maximum or minimum value). Sketch a graph that exhibits the qualitative features of a function that has been verbally described.	4-6
8.AF.5: Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. Describe similarities and differences between linear and nonlinear functions from tables, graphs, verbal descriptions, and equations.	4-5
8.AF.6: Construct a function to model a linear relationship between two quantities given a verbal description, table of values, or graph. Recognize in y = mx + b that m is the slope (rate of change) and b is the y-intercept of the graph, and describe the meaning of each in the context of a problem.	4-3
8.AF.7: Compare properties of two linear functions given in different forms, such as a table of values, equation, verbal description, and graph (e.g., compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed).	4-4
8.AF.8: Understand that solutions to a system of two linear equations correspond to points of intersection of their graphs because points of intersection satisfy both equations simultaneously. Approximate the solution of a system of equations by graphing and interpreting the reasonableness of the approximation.	5-1, 5-2, 5-5

GEOMETRY AND MEASUREMENT

Indiana Reveal Math Course 1	Module-Lesson
6.GM.1: Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.	1-6
6.GM.2: Know that the sum of the interior angles of any triangle is 180° and that the sum of the interior angles of any quadrilateral is 360°. Use this information to solve real-world and mathematical problems.	IN Lesson: Angles of Triangles IN Lesson: Polygons and Angles
6.GM.3: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.	8-5
6.GM.4: Find the area of complex shapes composed of polygons by composing or decomposing into simple shapes; apply this technique to solve real-world and other mathematical problems.	8-6
6.GM.5: Find the volume of a right rectangular prism with fractional edge lengths using unit cubes of the appropriate unit fraction edge lengths (e.g., using technology or concrete materials), and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V = lwh and V = Bh to find volumes of right rectangular prisms with fractional edge lengths to solve real-world and other mathematical problems.	9-1
6.GM.6: Construct right rectangular prisms from nets and use the nets to compute the surface area of prisms; apply this technique to solve real-world and other mathematical problems.	9-2
***Indiana Reveal Math* Course 2**	**Module-Lesson**
7.GM.1: Explore triangles with given conditions from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	8-3
7.GM.2: Identify and describe similarity relationships of polygons including the angle-angle criterion for similar triangles, and solve problems involving similarity.	12-3, 12-4, IN Lesson: Similar Triangles and Indirect Measurement
7.GM.3: Solve real-world and other mathematical problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.	8-4, 9-5
7.GM.4: Solve real-world and other mathematical problems that involve vertical, adjacent, complementary, and supplementary angles.	8-1, 8-2
7.GM.5: Understand the formulas for area and circumference of a circle and use them to solve real-world and other mathematical problems; give an informal derivation of the relationship between circumference and area of a circle.	9-1, 9-2
7.GM.6: Solve real-world and other mathematical problems involving volume of cylinders and three-dimensional objects composed of right rectangular prisms.	9-3, 9-5
7.GM.7: Construct nets for right rectangular prisms and cylinders and use the nets to compute the surface area; apply this technique to solve real-world and other mathematical problems.	9-4, 9-5
***Indiana Reveal Math* Course 3**	**Module-Lesson**
8.GM.1: Identify, define and describe attributes of three-dimensional geometric objects (right rectangular prisms, cylinders, cones, spheres, and pyramids). Explore the effects of slicing these objects using appropriate technology and describe the two-dimensional figure that results.	8-6
8.GM.2: Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres.	9-1, 9-2, 9-3, 9-4, 9-5
8.GM.3: Verify experimentally the properties of rotations, reflections, and translations, including: lines are mapped to lines, and line segments to line segments of the same length; angles are mapped to angles of the same measure; and parallel lines are mapped to parallel lines.	7-1, 7-2, 7-3, 8-1, 8-2
8.GM.4: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations. Describe a sequence that exhibits the congruence between two given congruent figures.	8-1
8.GM.5: Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations. Describe a sequence that exhibits the similarity between two given similar figures.	8-3
8.GM.6: Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane.	7-1, 7-2, 7-3, 7-4
8.GM.7: Use inductive reasoning to explain the Pythagorean relationship.	6-3
8.GM.8: Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and other mathematical problems in two dimensions.	6-3

8.GM.9: Apply the Pythagorean Theorem to find the distance between two points in a coordinate plane.	6-5

DATA ANALYSIS, STATISTICS (AND PROBABILITY FOR GRADES 7–8)

Indiana Reveal Math Course 1	Module-Lesson
6.DS.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	10-1, 10-4, 10-7
6.DS.2: Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	10-2, 10-3, 10-4, 10-6, 10-7
6.DS.3: Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).	10-1
6.DS.4: Summarize numerical data sets in relation to their context in multiple ways, such as: **a.** Report the number of observations **b.** Describe the nature of the attribute under investigation, including how it was measured and its units of measurement **c.** Determine quantitative measures of center (mean and/or median) and spread (range and interquartile range) **d.** Describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered **e.** Relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered	10-1, 10-2, 10-3, 10-4, 10-5, 10- 6, 10-7
***Indiana Reveal Math* Course 2**	**Module-Lesson**
7.DSP.1: Understand that statistics can be used to gain information about a population by examining a sample of the population. Understand that conclusions and generalizations about a population from a sample are valid only if the sample is representative of that population and that random sampling tends to produce representative samples and support valid inferences.	11-1
7.DSP.2: Use data from a random sample to draw inferences about a population. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.	11-1, 11-2, 11-3
7.DSP.3: Find, use, and interpret measures of center (mean and median) and measures of spread (range, interquartile range, and mean absolute deviation) for numerical data from random samples to draw comparative inferences about two populations.	11-4
7.DSP.4: Make observations about the degree of visual overlap of two numerical data distributions represented in line plots or box plots. Describe how data, particularly outliers, added to a data set may affect the mean and/or median.	11-4, 11-5
7.DSP.5: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Understand that a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. Understand that a probability of 1 indicates an event certain to occur and a probability of 0 indicates an event impossible to occur. Identify probabilities of events as impossible, unlikely, equally likely, likely, or certain.	10-1
7.DSP.6: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its relative frequency from a large sample.	10-2, 10-4
7.DSP.7: Develop probability models that include the sample space and probabilities of outcomes to represent simple events with equally likely outcomes. Predict the approximate relative frequency of the event based on the model. Compare probabilities from the model to observed frequencies; evaluate the level of agreement and explain possible sources of discrepancy.	10-5
***Indiana Reveal Math* Course 3**	**Module-Lesson**
8.DSP.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantitative variables. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	10-1
8.DSP.2: Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and describe the model fit by judging the closeness of the data points to the line.	10-2
8.DSP.3: Write and use equations that model linear relationships to make predictions, including interpolation and extrapolation, in real-world situations involving bivariate measurement data. Interpret the slope and y-intercept in context.	10-3
8.DSP.4: Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. Understand and use appropriate terminology to describe independent, dependent, complementary, and mutually exclusive events.	10-6
8.DSP.5: Represent sample spaces and find probabilities of compound events (independent and dependent) using organized lists, tables, and tree diagrams.	10-6
8.DSP.6: For events with a large number of outcomes, understand the use of the multiplication counting principle. Develop the multiplication counting principle and apply it to situations with a large number of outcomes.	IN Lesson: Fundamental Counting Principle

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Lesson 2: Dot Plots and Histograms

Lesson 3: Measures of Center

Lesson 4: Interquartile Range and Box Plots

Lesson 5: Mean Absolute Deviation

Lesson 6: Outliers

Lesson 7: Interpret Graphical Displays

Indiana Reveal Math Course 2

Unit 1: Proportional Relationships

Lesson 1: Unit Rates Involving Ratios of Fractions

Lesson 2: Understand Proportional Relationships

Lesson 3: Tables of Proportional Relationships

Lesson 4: Graphs of Proportional Relationships

Lesson 5: Equations of Proportional Relationships

Lesson 6: Solve Problems Involving Proportional Relationships

Unit 2: Solve Percent Problems

Lesson 1: Percent of Change

Lesson 2: Tax

Lesson 3: Tips and Markups

Lesson 4: Discounts

Lesson 5: Interest

Lesson 6: Commission and Fees

Lesson 7: Percent Error

Unit 3: Operations with Integers

Lesson 1: Add Integers

Lesson 2: Subtract Integers

Lesson 3: Multiply Integers

Lesson 4: Divide Integers

Lesson 5: Apply Integers

Unit 4: Operations with Rational Numbers

Lesson 1: Rational Numbers

Lesson 2: Add Rational Numbers

Lesson 3: Subtract Rational Numbers

Lesson 4: Multiply Rational Numbers

Lesson 5: Divide Rational Numbers

Lesson 6: Apply Rational Number Operations

Unit 5: Simplify Algebraic Expressions

Lesson 1: Simplify Algebraic Expressions

Lesson 2: Add Linear Expressions

Lesson 3: Subtract Linear Expressions

Lesson 4: Factor Linear Expressions

Lesson 5: Combine Operations with Linear Expressions

IN Lesson: Prime Factorization

IN Lesson: Roots

IN Lesson: Compare Real Numbers

Unit 6: Write and Solve Equations

Lesson 1: Write and Solve One-Step Equations

Lesson 2: Solve Two-Step Equations: $px + q = r$

Lesson 3: Write and Solve Two-Step Equations: $px + q = r$

Lesson 4: Solve Two-Step Equations: $p(x + q) = r$

Lesson 5: Write and Solve Two-Step Equations: $p(x + q) = r$

Unit 7: Write and Solve Inequalities

Lesson 1: Solve One-Step Addition and Subtraction Inequalities

Lesson 2: Write and Solve One-Step Addition and Subtraction Inequalities

Lesson 3: Solve One-Sep Multiplcation and Division Inequalities with Positive Coefficients

Lesson 4: Solve One-Step Multiplication and Division Inequalities with Negative Coefficients

Lesson 5: Write and Solve One-Step Multiplication and Division Inequalities

Unit 8: Geometric Figures

Lesson 1: Vertical and Adjacent Angles

Lesson 2: Complementary and Supplementary Angles

Lesson 3: Triangles

Lesson 4: Scale Drawings

IN Lesson: Similar Triangles and Indirect Measurement

Unit 9: Measure Figures

Lesson 1: Circumference of Circles

Lesson 2: Area of Circles

Lesson 3: Volume

Lesson 4: Surface Area

Lesson 5: Volume and Surface Area of Composite Figures

Unit 10: Probability

Lesson 1: Find Likelihoods

Lesson 2: Relative Frequency of Simple Events

Lesson 3: Theoretical Probability of Simple Events

Lesson 4: Compare Probabilities of Simple Events

Lesson 5: Simulate Chance Events

Unit 11: Sampling and Statistics

Lesson 1: Biased and Unbiased Samples

Lesson 2: Make Predictions

Lesson 3: Generate Multiple Samples

Lesson 4: Compare Two Populations

Lesson 5: Assess Visual Overlap

Unit 12: Linear Relationship and Slope

Lesson 1: Proportional Relationships and Slope

Lesson 2: Slope of a Line

Lesson 3: Similar Triangles and Slope

Lesson 4: Direct Variation

Lesson 5: Slope-Intercept Form

Lesson 6: Graph Linear Equations

Indiana Reveal Math Course 3

Unit 1: Exponents and Scientific Notation

Lesson 1: Powers and Exponents

Lesson 2: Multiply and Divide Monomials

Lesson 3: Powers of Monomials

Lesson 4: Zero and Negative Exponents

Lesson 5: Scientific Notation

Lesson 6: Compute with Scientific Notation

Unit 2: Real Numbers

Lesson 1: Terminating and Repeating Decimals

Lesson 2: Roots

Lesson 3: Real Numbers

Lesson 4: Estimate Irrational Numbers

Lesson 5: Compare and Order Real Numbers

Unit 3: Solve Equations with Variables on Each Side

Lesson 1: Solve Equations with Variables on Each Side

Lesson 2: Write and Solve Equations with Variables on Each Side

Lesson 3: Solve Multi-Step Equations

Lesson 4: Write and Solve Multi-Step Equations

Lesson 5: Determine the Number of Solutions

Lesson 6: Write and Solve Two-Step Inequalities

Unit 4: Functions

Lesson 1: Identify Functions

Lesson 2: Function Tables

Lesson 3: Construct Linear Functions

Lesson 4: Compare Functions

Lesson 5: Nonlinear Functions

Lesson 6: Qualitative Graphs

Unit 5: Systems of Linear Equations

Lesson 1: Solve Systems of Equations by Graphing

Lesson 2: Determine Number of Solutions

Lesson 3: Solve Systems of Equations by Substitution

Lesson 4: Solve Systems of Equations by Elimination

Lesson 5: Write and Solve Systems of Equations

Unit 6: Triangles and the Pythagorean Theorem

Lesson 1: Angle Relationships and Parallel Lines

Lesson 2: Angle Relationships and Triangles

Lesson 3: The Pythagorean Theorem

Lesson 4: Converse of the Pythagorean Theorem

Lesson 5: Distance on the Coordinate Plane

Unit 7: Transformations

Lesson 1: Translations

Lesson 2: Reflections

Lesson 3: Rotations

Lesson 4: Dilations

Lesson 5: Three-Dimensional Figures

Unit 8: Congruence and Similarity

Lesson 1: Congruence and Transformations

Lesson 2: Congruence and Corresponding Parts

Lesson 3: Similarity and Transformations

Lesson 4: Similarity and Corresponding Parts

Lesson 5: Indirect Measurement

Lesson 6: Three-Dimensional Figures

Unit 9: Volume

Lesson 1: Volume of Cylinders

Lesson 2: Volume of Cones

Lesson 3: Volume of Spheres

Lesson 4: Find Missing Dimensions

Lesson 5: Volume of Composite Solids

Unit 10: Scatter Plots and Two-Way Tables

Lesson 1: Scatter Plots

Lesson 2: Draw Lines of Fit

Lesson 3: Equations for Lines of Fit

Lesson 4: Two-Way Tables

Lesson 5: Associations in Two-Way Tables

Lesson 6: Probability of Compound Events

IN Lesson: Fundamental Counting Principle

Notes

Notes

Notes

ACADEMIC SUPPORTS

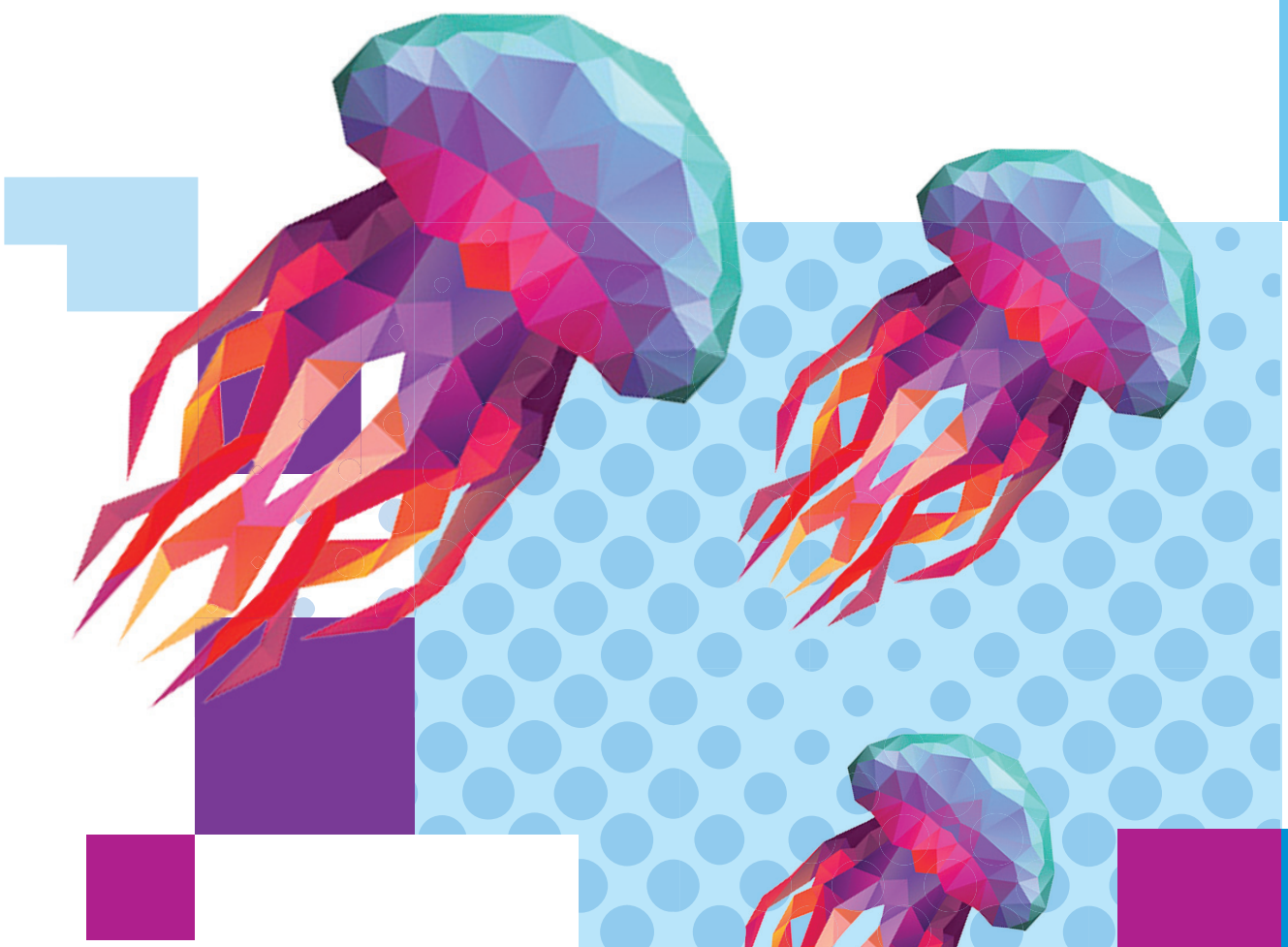
Mc Graw Hill

Academic Supports Overview

Grades 6–12

Indiana Reveal MATH®

Academic Supports for the Whole Learner



mheonline.com/Indiana

Supporting All Learners

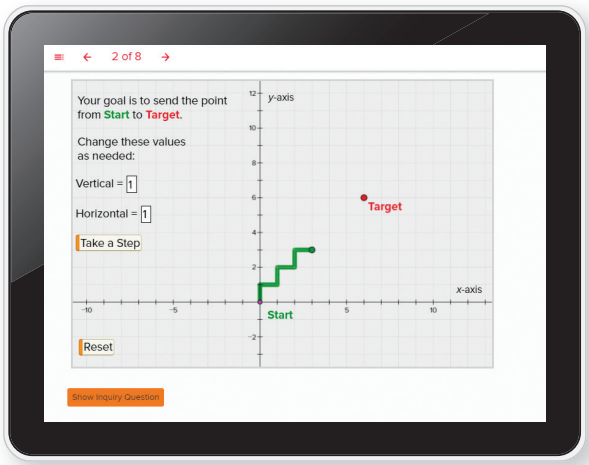
As a learning science company, McGraw Hill's commitment to educational equity is fundamentally embedded within our company's vision to unlock the potential of each learner. We believe that all students should have access to the right resources at the right moment in their education.

We incorporate approaches that respect the whole individual and each student's personal learning journey, providing next generation learning solutions that are intuitive and engaging which empowers teachers to build effective student learning environments.

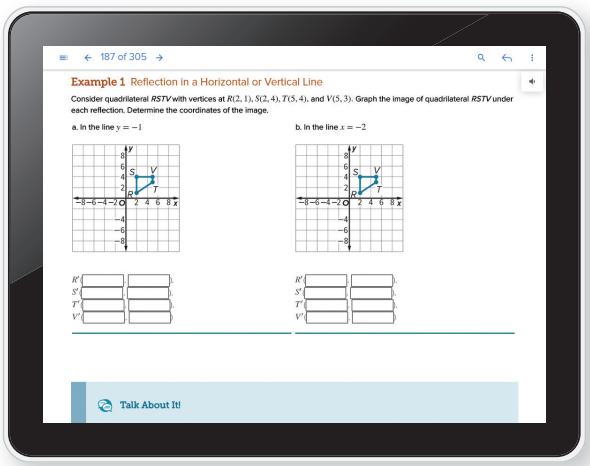
These principles and resources are strategically embedded throughout the *Indiana Reveal Math*® program to improve the learning outcomes for all students.

Support Equity in Your Classroom

Throughout *Indiana Reveal Math* you'll find numerous resources that provide equitable instructional opportunities for a diverse range of learners. These resources help you build an environment that allows all students to succeed as they increase their mathematical knowledge.



Explores are rich tasks found in each lesson and contain multiple entry points (low floor/high ceiling). These activities encourage student choice of strategies to reach solutions, so that all students can access the mathematical content.

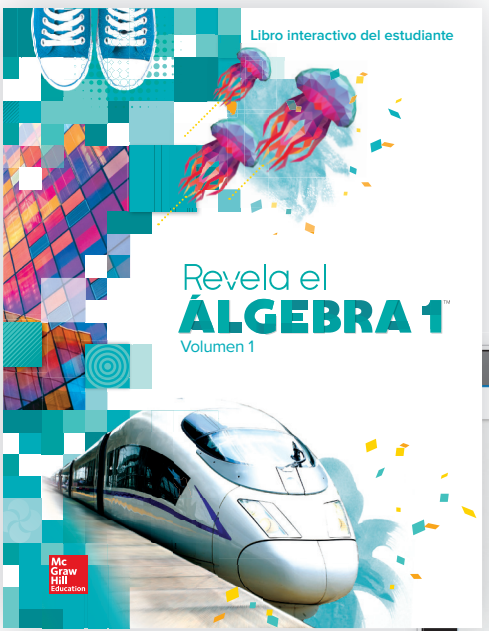


The **Interactive eBook** allows students to use the device that best meets their needs as the pages dynamically adjust to the size of the display. Students also have the option to adjust text size and font, in addition to other view settings. If students do not have internet at home, the eBook is still accessible through the McGraw-Hill ReadAnywhere app.

Accessibility resources and tools built into *Indiana Reveal Math* ensure students with visual impairment can access the materials. The eBook and digital resources include an audio read function that reads the text on the screen aloud. All images are also accompanied by alternative descriptive text that allow the audio reader to describe the images. *Indiana Reveal Math* print resources are also available for conversion to specialized formats for students with a visual impairment.

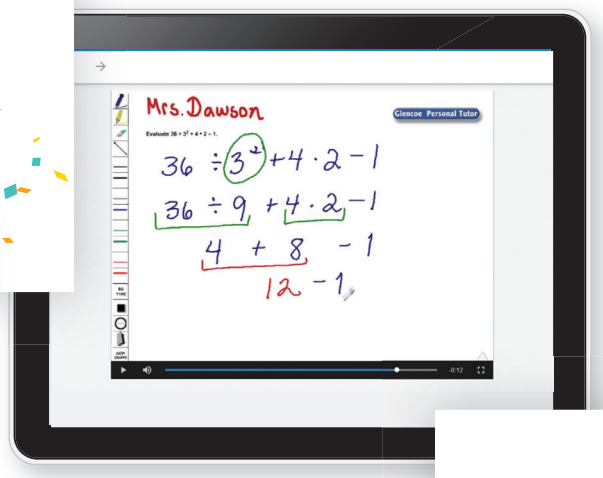
Address Language Development for All

Indiana Reveal Math also includes student and teacher resources to support students who are simultaneously learning grade-level math and building their English and math language proficiency.



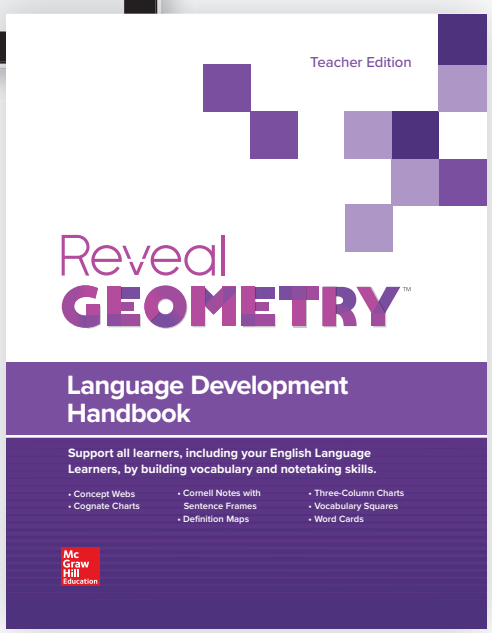
Spanish Student Editions let ELL students take ownership of their learning through write-in content, rich exploratory tasks, and application opportunities.

Spanish Personal Tutor videos are available to provide ELL students additional support and review opportunities for the concepts presented in the module.

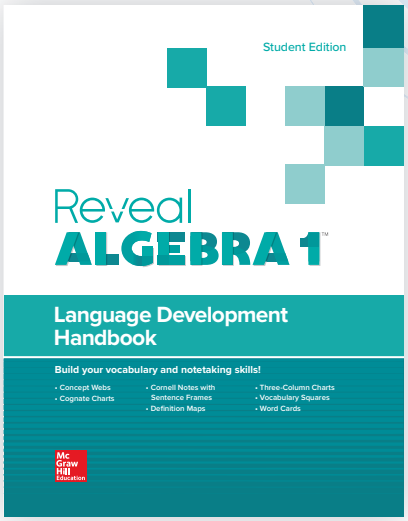


The **Language Development Handbook Teacher Edition** empowers teachers to meet the mathematical language needs of all learners using instructional strategies, leveled activities, and multicultural teacher tips.

English Language Development Activities in these handbooks are tiered for varying levels of support and focus on vocabulary, concepts, and skills in each lesson.



The **Language Development Handbook Student Edition** helps students build their mathematical vocabulary and language development by using graphic organizers and note-taking strategies.



Think About It!

How would you evaluate $a[(b - c) \div d] - f$ if you were given values of a, b, c, d, and f? How would you evaluate the expression differently if the expression were $a \cdot b - c \div d - f$?

Talk About It!

Compare the intervals over which each shot is positive and/or negative. Does this make sense in the context of the situation? Explain your reasoning.

Think About It! and **Talk About It!** prompts in the Interactive Student Editions provide students opportunities to engage in mathematical discourse and reasoning by practicing the language, vocabulary, and skills learned in that lesson.

Language Development Activities, provided in the Teacher Editions, provide opportunities for teachers to help ELL students understand the lesson's vocabulary and how to use it properly.

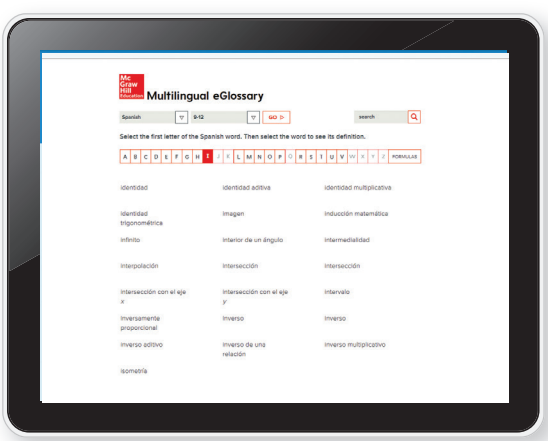
Language Development Activity ELL

Explore the similarities with *quotient* and *difference* compared to *product* and *sum*. Review instances when the order of operations in a written expression must be the same as the order in the numerical or algebraic expression. Also review instances where that order does not have to be maintained, and when the order may be the opposite.

a) The quotient of 8 and 4 means $8 \div 4$; $\frac{8}{4}$ does not mean $4 \div 8$ or $\frac{4}{8}$. Write a sentence or phrase with the same meaning using a phrase like *goes into*. How many times does 4 go into 8?

b) Subtract 8 from 12 means $12 - 8$. How would you say the same thing using *difference*? The difference of 12 and 8 means $12 - 8$.

Expand the discussion to include synonyms for these operations, and how the overall order of words does not always translate to the same order of operations.



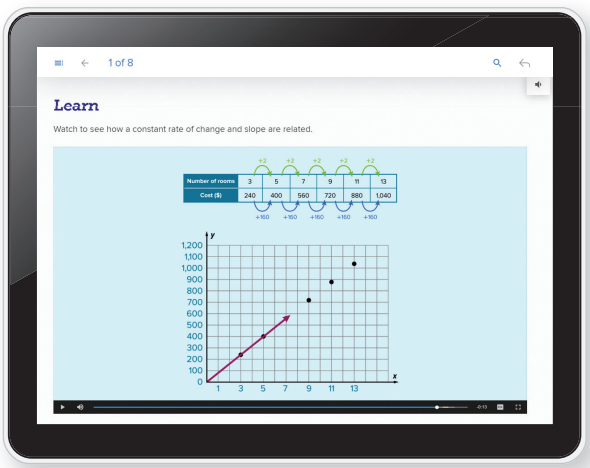
The **Multilingual eGlossary** provides mathematics vocabulary translated into 13 common world languages.

***ALEKS* Bilingual Courses** allow Spanish-speaking students the same opportunity to use this powerful adaptive technology that identifies and provides instruction on topics the student is ready to learn.

Mc Graw Hill | ALEKS®

Differentiation For Each Learner

When needed, resources are available to differentiate math instruction for students who may need to see a concept in a different way, practice prerequisite skills, or are ready to extend their learning.



Take Another Look Mini-Lessons supplement core instruction with Tier 2 targeted skill support and a reteaching opportunity. About 100 of these digital, student-driven lessons are included in each course of *Indiana Reveal Math* Courses 1—3 and Algebra 1.

Quick Review Math Handbook resources are provided in Algebra 1, Geometry, and Algebra 2 for students who may need a refresher of the lesson's skills.

Reteaching Activities are provided for students who may need to see a concept in a different way or practice prerequisite skills. **Enrichment Activities** give students an opportunity to further their understanding during the Learn phase of the instructional model. Both activities can be found in the Teacher Editions.

Online **Review** activities in each lesson give students a refresher of prerequisite skills needed for that lesson's content.

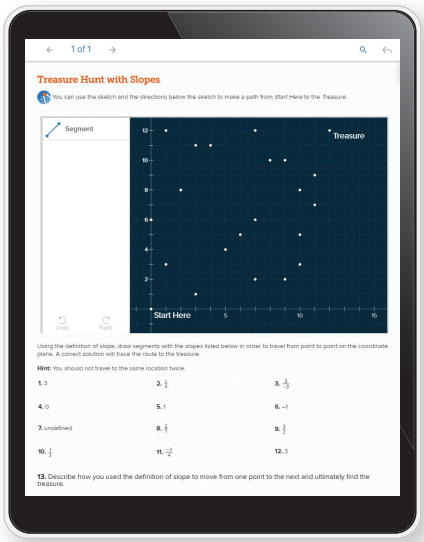
Reteaching Activity AL ELL

IF students have difficulty interpreting qualitative graphs,
THEN have them think about the *y*-axis as a "thermometer," and use the idea of the temperature reading rising, falling, and remaining constant to determine whether the parts of the graph indicate that the values are increasing, decreasing, or remaining constant.

Enrichment Activity AL BL ELL

Have students describe real-world situations that can be described by discrete functions, and real-world situations that can be described by continuous functions. Encourage students to explain what it is about each situation that makes the related function discrete or continuous.

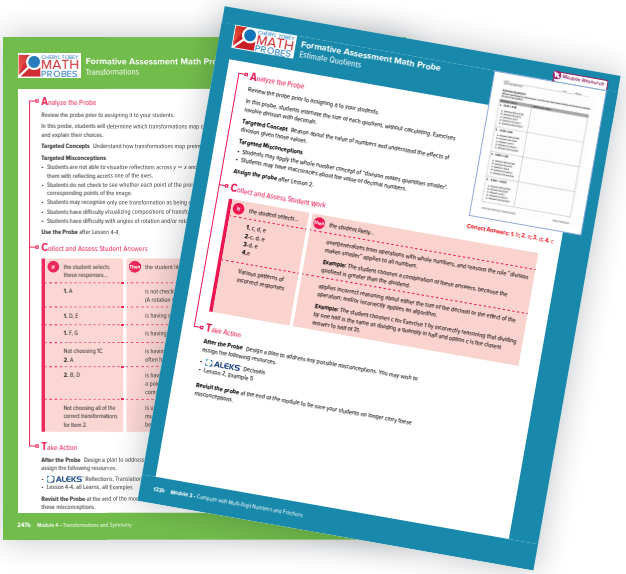
Approaching Level Module Tests come in digital and printable versions. These can be administered to students to identify skill mastery prior to the Module Assessment. These are labeled as module Test Form B in the Digital Center.



Extensions can be assigned digitally to your students who finish early or those who are ready for a challenge. You may choose to assign these to individual students, pairs, or small groups.

Beyond Level Module Tests come in digital and printable versions for students who could benefit from a more challenging assessment. These are labeled as module Test Form C in the Digital Center.

Cheryl Tobey Formative Assessment Math Probes help teachers address common misconceptions about key math topics within each module. Teachers are provided with a list of support resources to be assigned based on students' responses.



Questions for Mathematical Discourse

AL Is the relation a function? Explain. Yes; each x-value is mapped to only one y-value.

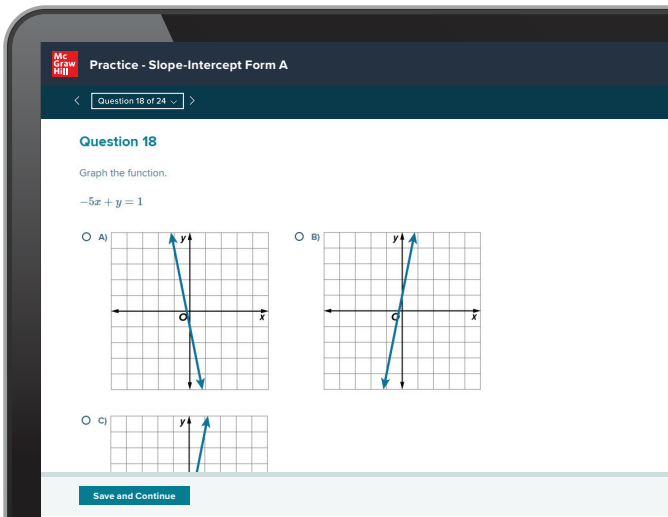
OL Why is the number of books the independent variable and the price the dependent variable? Sample answer: The price depends on how many books someone buys, so it has to be the dependent variable.

BL Could the store adjust its pricing so that the function representing price was continuous? Explain. Sample answer: No; because you cannot have a part or a piece of a book.

Questions for Mathematical Discourse are offered at three different levels so teachers can choose the question(s) most appropriate at any given moment.

Practice is available after every lesson. These practice assignments come in three differentiated levels and can be auto-scored if administered digitally or printed and handed out.

On-Level Module Tests are provided in three versions. These tests contain the same questions with different values to be interchanged between classes. These tests can be auto-scored if administered digitally or can be printed and handed out.

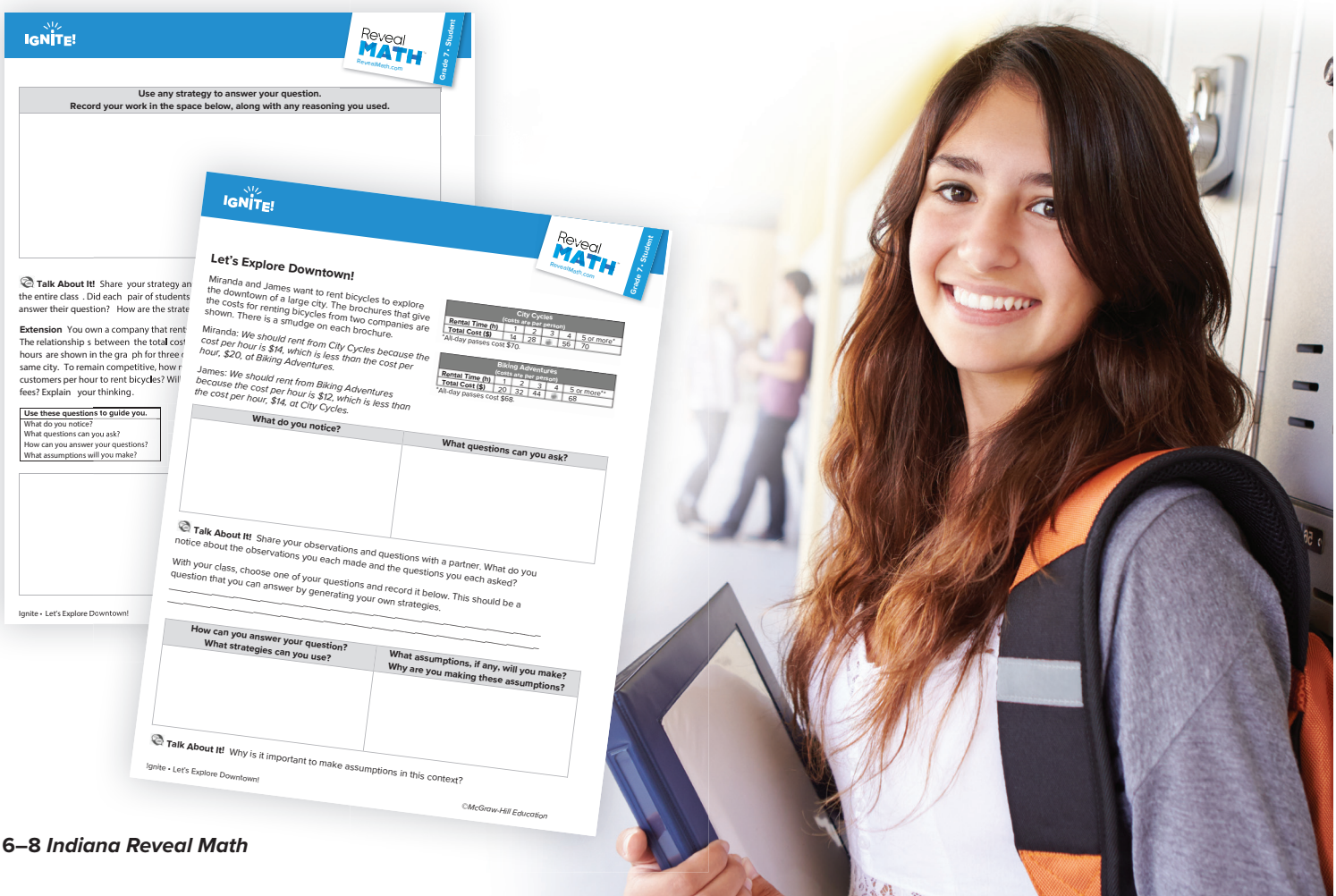


Implement Powerful Social and Emotional Learning

The Collaborative for Academic, Social and Emotional Learning (CASEL) framework provides five overarching core competencies to be addressed in the classroom. These competencies are used by students in *Indiana Reveal Math* resources and provide a structured opportunity for teachers to effectively implement them in the classroom.

Ignite! Activities help students develop and apply skills called for by the Standards for Mathematical Practice while providing the opportunity to exercise the SEL core competencies. Each module begins with an **Ignite! Activity** to give students an opportunity to incorporate the modeling process, collaborate, and engage with one another to spark their mathematical curiosity.

The table on the next page will show how the Standards for Mathematical Practice are addressed when using the Ignite! Activities and which of the SEL core competencies are incorporated.



Teaching the Mathematical Practices with the Ignite! Activities	Social and Emotional Learning Competencies
1 **Make sense of problems and persevere in solving them.** The Ignite! Activities are designed to present a problem and allow students to find their own solution method and persevere until the problem is solved.	• Display determination and productive struggle • Work toward goals • Seek help when needed
2 **Reason abstractly and quantitatively.** With many of the Ignite! Activities, students are expected to decontextualize – that is, to represent the problem situation in a symbolic way. Once problems are solved, students should be able to contextualize – that is, to make sense of the solution in the context of the problem.	• Regulate own emotions while problem solving • Think metacognitively
3 **Construct viable arguments.** In order to convince their peers, students have to be able to explain their solutions and solution methods for Ignite! problems.	• Organize own thoughts • Understand others' perspectives
4 **Model with mathematics.** The Ignite! Activities require students to model with mathematics. In some cases, they model with graphs. In others, they model with expressions and equations.	• Know own strengths • Recognize need for improvement
5 **Use appropriate tools strategically.** As they complete the Ignite! Activities, students will make graphs, use graphing software, or make concrete models. Students will also need to find mathematical information via external sources.	• Decide when to use a tool and which tool is best • Motivate self to deepen understanding
6 **Attend to precision.** As the Ignite! Activities are designed to be completed collaboratively, students must be sure that their input is clear in order for the team to move forward in the solution process.	• Be aware of others' thoughts and feelings • Regulate own thoughts and behaviors
7 **Look for and make use of structure.** In many cases, students must discover a pattern in order to solve the problems included.	• Keep looking when a pattern has not yet been found • Manage own progress
8 **Look for and express regularity in repeated reasoning.** As students work through the Ignite! Activities, they may notice repeated calculations or repeated reasoning and use that to draw conclusions.	• Plan to use organizational strategies when needed • Be able to appraise own work

More *Indiana Reveal Math* Resources to Incorporate SEL Core Competencies	Social and Emotional Learning Competencies
Talk About It! engages students and facilitates class discussion.	• Understand others' perspectives • Be aware of others' thoughts and feelings
Practice, when done collaboratively, provides the opportunity to practice concepts and skills.	• Understand others' perspectives • Teamwork
Think About It! prompts give your students a chance to process and contextualize what they've learned.	• Know own strengths • Motivate self to deepen understanding
Write About It! helps students explain their thinking during the Explore and Develop stage of the lesson model.	• Regulate own thoughts and behaviors • Recognizing strengths and limitations
"I Can" statements begin each lesson to help students establish the goal of the lesson.	• Work towards goals • Know own strengths
Mindset Matters Tips assist teachers in getting students in the right mindset before each module.	• Organize own thoughts • Motivate self to deepen understanding
Apply problems provide students with opportunities to engage in rich-problem solving tasks.	• Display grit, determination, and productive struggle
What Will You Learn? charts in the beginning of each module allows students to track their learning progress.	• Be able to appraise own work • Accurate self-perception • Manage own progress

Incorporate Cultural Representation

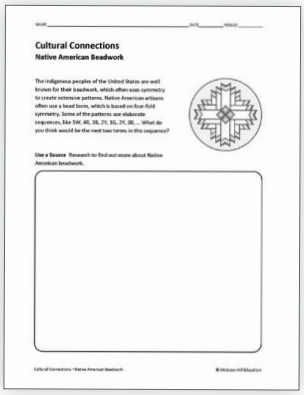
Indiana Reveal Math incorporates appropriate and equitable representation of diverse perspectives and supports culturally responsive practices throughout the instructional materials.

Talk About It!

In the example, the slope of is negative. Will this always be the cases when multiplying a linear function by –1?
Justify your argument.

Talk About It! prompts are placed strategically in each lesson to provide plenty of opportunities for mathematical discourse. These prompts lay the foundation for students to share their perspectives as informed by their cultural backgrounds and reference points while giving every student an equal voice.

Cultural Connections activities in each module in the high school courses highlight contributions that people of various cultures have made to mathematics.


Cultural Connections
Native American Beadwork

These can be found in the Teacher Digital Center where they can be assigned to Student Digital Centers or printed and handed out. The problems presented in these resources reflect a wide variety of backgrounds to Incorporate diversity.

Math History Minute

In the 1960's, **Christine Darden (1942–)** became one of the "human computers" who crunched numbers for engineers at NASA's Langley Research Center. After earning a doctorate degree in mechanical engineering, Darden became one of few female engineers at NASA Langley. For most of her career, her foucu was sonic boom minimization.

Math History Minutes, in the Interactive Student Editions, highlight multicultural, global mathematics influencers and how they affected the real-world with their work.

Multicultural Teacher Tips

English learners may lack the background knowledge to understand common practices of compensation and payment in the United States. For example, the concept of flat rate, found in a word problem about publishing in this lesson, may present learners with both linguistic and cultural difficulties in understanding. Restaurant tipping and sales tax are additional customs that many other countries do not practice. Ensure student comprehension by providing explanation or additional assistance as they evaluate information within word problems.

Multicultural Teacher Tips in the Language Development Handbook Teacher Edition provide insight on academic and cultural differences you may encounter in your classroom. These tips also provide an opportunity to draw on students' backgrounds and incorporate them into class discussion.

Mc Graw Hill

Indiana Reveal MATH®

The Solution for Today's Mathematics Classroom

Indiana Reveal Math is a coherent, vertically aligned core math solution that empowers educators to uncover the mathematician in every student through powerful explorations, rich mathematical discourse,and timely individualized learning opportunities.

Learn more at **mheonline.com/indiana**

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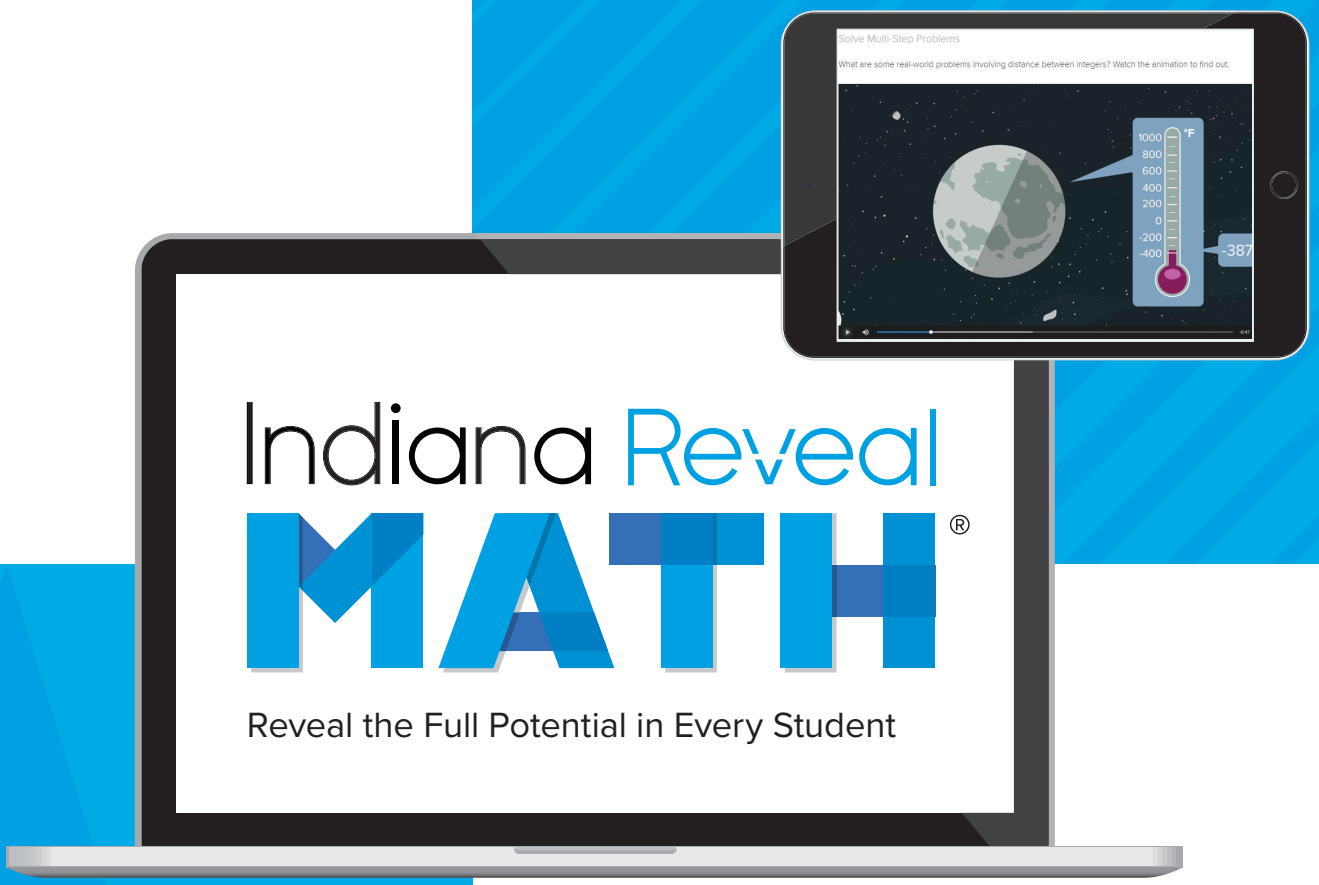


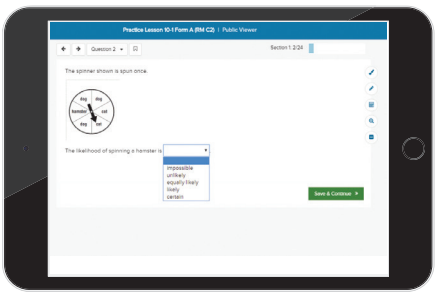
Digital Walkthrough and Feature Guide

Grades 6–8

mheonline.com/Indiana

Welcome to *Indiana Reveal Math*®

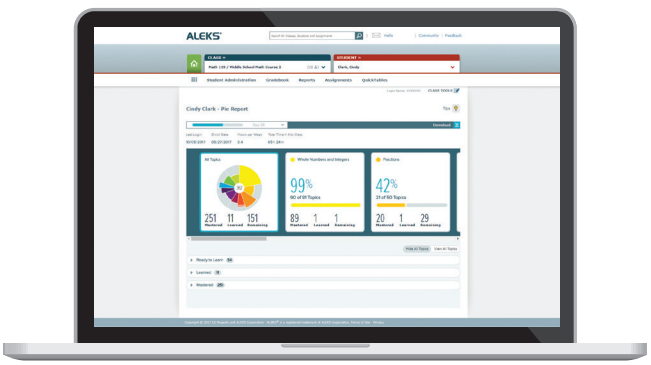
Indiana Reveal Math, a K–12 core math program, provides a truly **active classroom experience** through a seamless approach to **blended print and digital delivery.** With purposefully integrated technology and plentiful opportunities for students to **explore, collaborate,** and **reflect,** *Indiana Reveal Math* increases both student engagement and students' confidence in their math abilities.



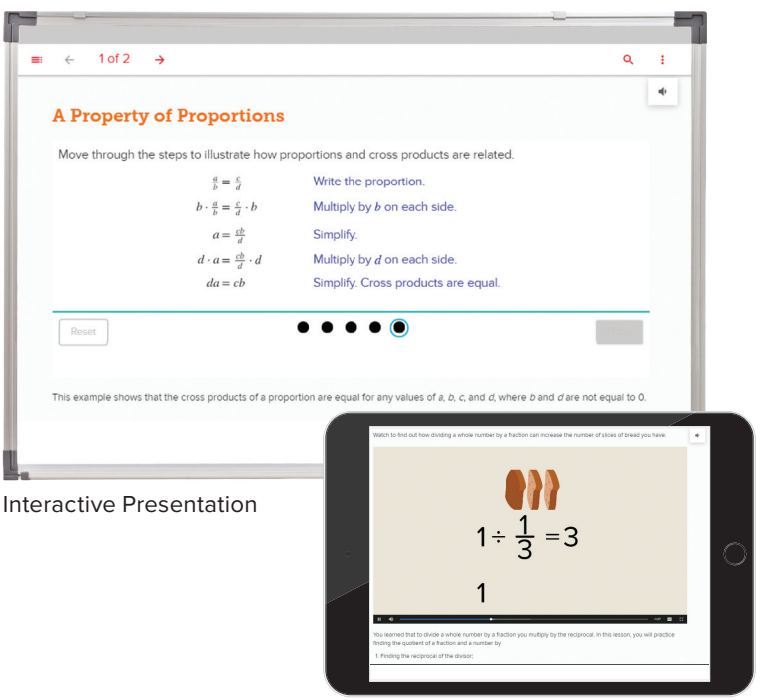
Interactive problem

For Students

- **Animations, videos,** and **interactive problems**
- Rich exploratory digital tasks—the **Explore** activities
- Highly visual and dynamic **Web Sketchpad**® activities
- **Interactive question types,** like drag-and-drop, open response, and multiselect
- Personalized learning pathways with the power of ***ALEKS***®
- ***Desmos***®, the best-in-class graphing calculator
- Topic mastery practice through ***LearnSmart***®



ALEKS®



Interactive Presentation

Take Another Look mini-lesson

For Educators

- **Flexible implementation options,** to meet low-tech and 1:1 classrooms, and every classroom in between
- Ready-made, customizable **classroom presentations**
- **Ability for teachers to add their own resources,** including Google Classroom resources and hyperlinks to other internet resources
- Integrated intensive support via ***Arrive Math Booster*** **Take Another Look** digital mini-lessons
- Easily assignable homework and assessments with **in-the-moment** performance data
- **Auto-scoring** of online homework
- **Activity** and **Standards** reports

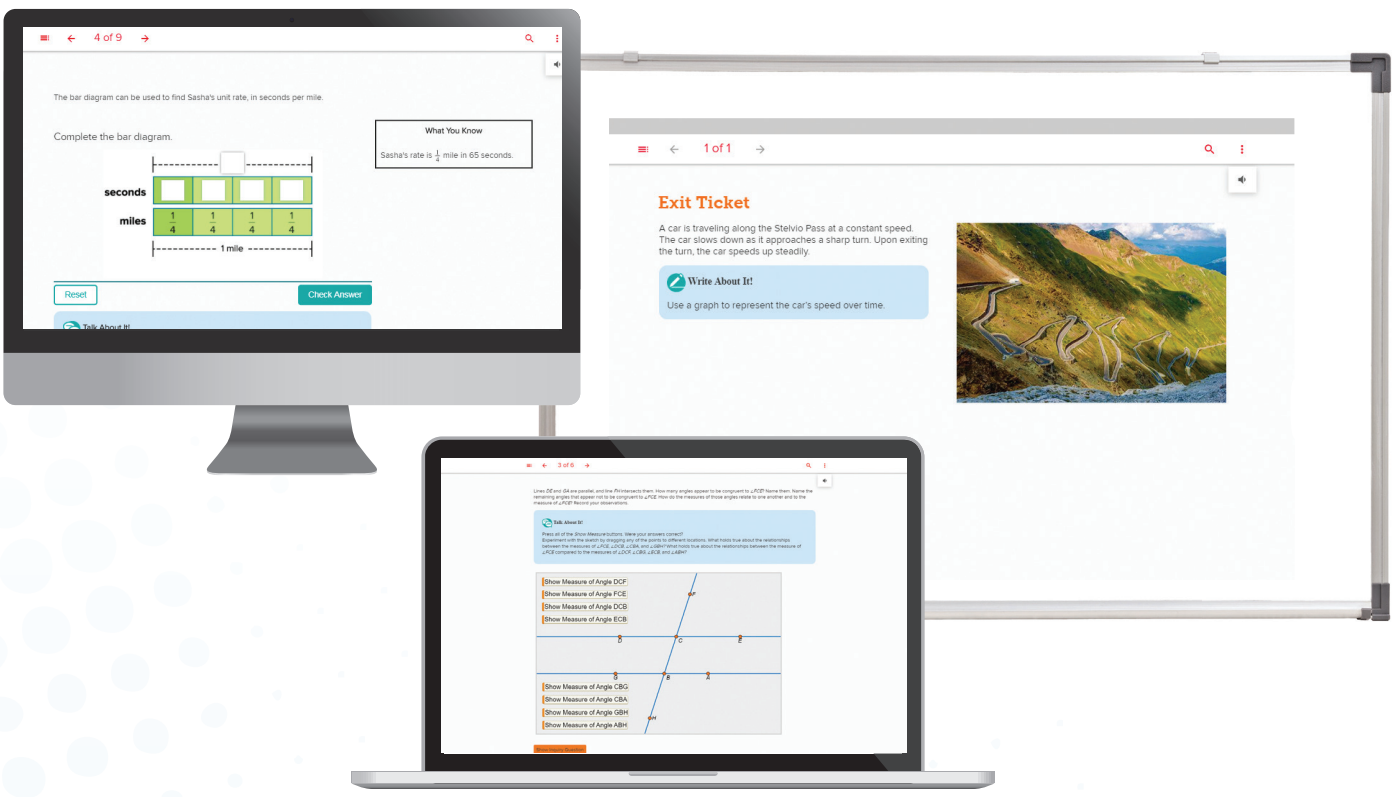
Flexible Implementation Options for Every Classroom

Indiana Reveal Math is built for McGraw Hill's newest platform.

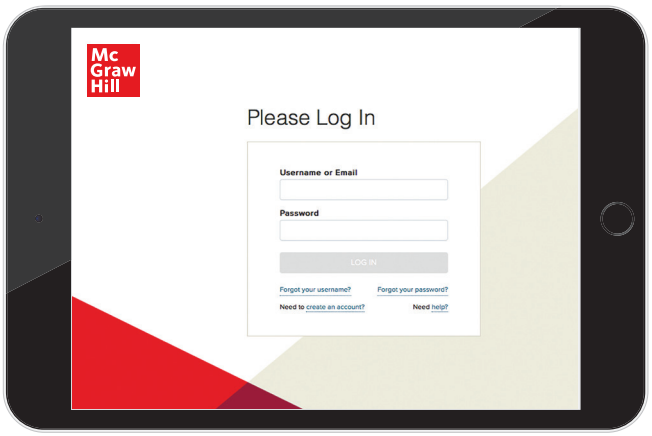
Benefits of this new digital learning experience include:

- Seamless print/digital delivery
- Clean, modern look and functionality
- Easy navigation
- Flexible and customizable lessons
- Data-enabled decision-making
- Accessible from any device, at any time

The digital resources in *Indiana Reveal Math* are optimized for use with an overhead projector, interactive whiteboard, laptop, desktop, or tablet. Educators can choose the delivery method that works best for their classrooms.



Log In to Explore the Potential of *Indiana Reveal Math*!



1. Go to **my.mheducation.com**
2. Enter your username and password.

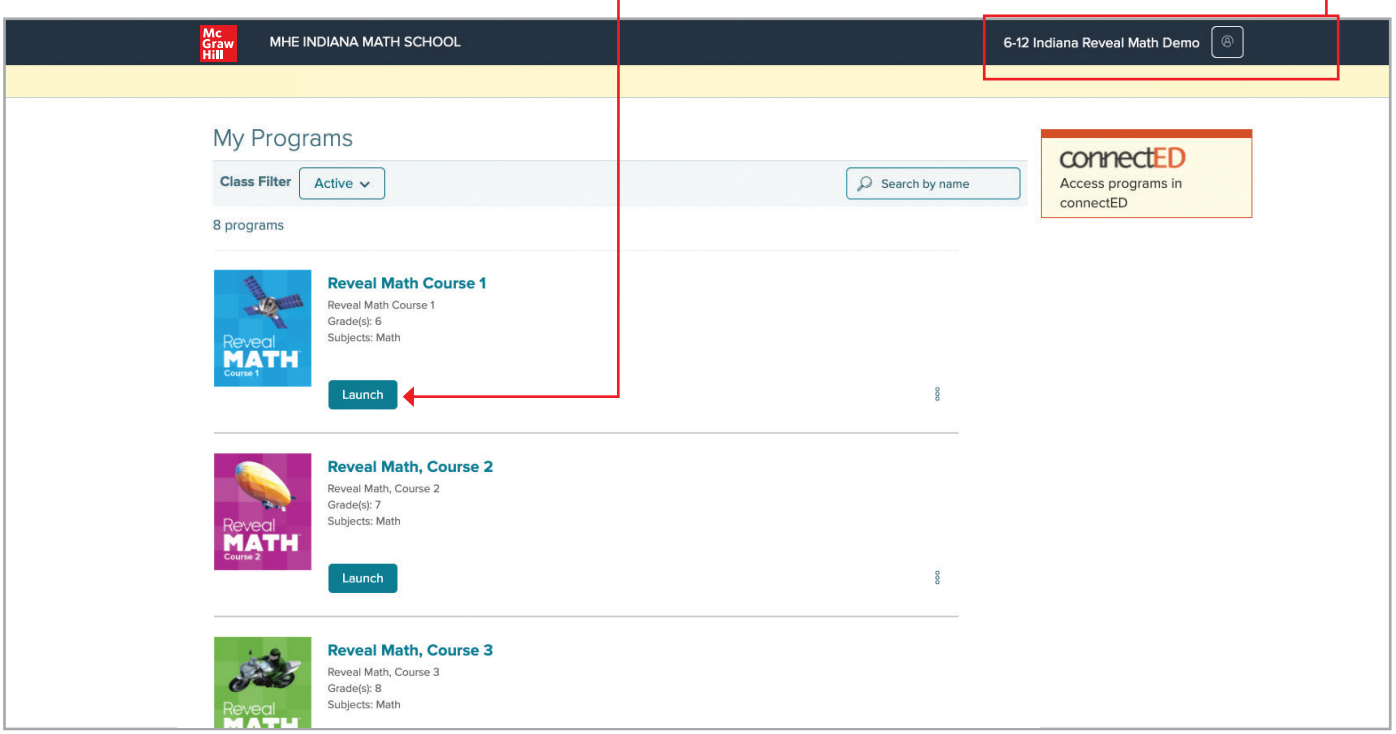
   Username: 612IndianaReveal
   Password: IndianaLovesReveal

For the most useful review experience, plan to review the *Indiana Reveal Math* print and digital resources side-by-side.

My Programs

The **My Programs** screen shows all the classes assigned to a teacher. On the **My Programs** screen, click **Launch** for the course you wish to review.

Hover over the user profile in the upper right corner to access the **Help** menu for additional detailed information.



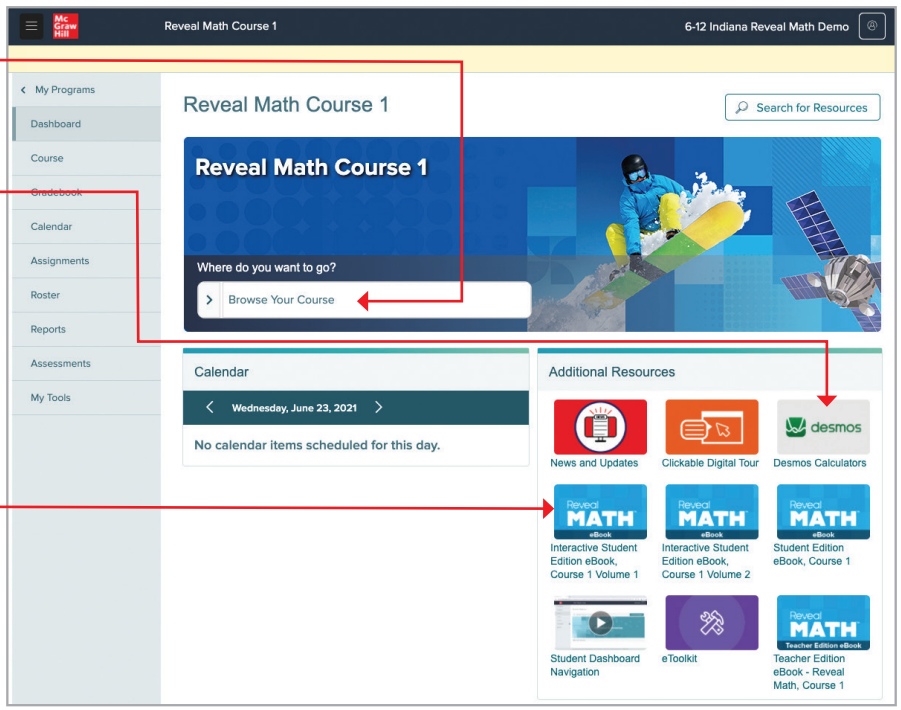
Dashboard

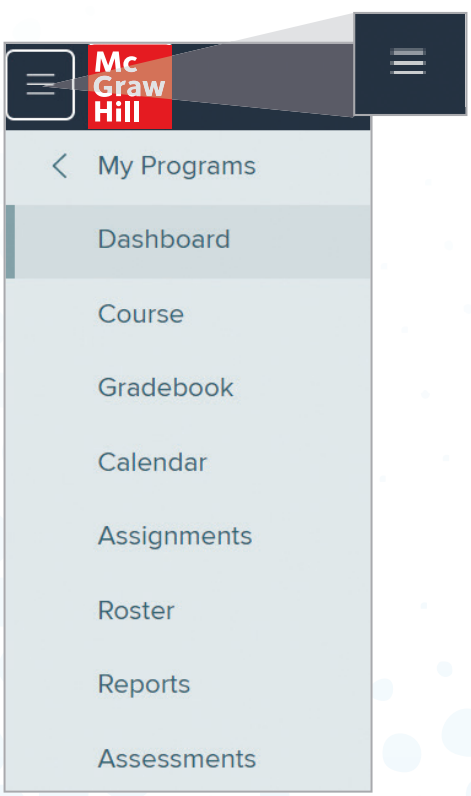
The **Dashboard** screen provides access to all of the teaching resources for the course.

Browse the **Course Navigation Menu** to go directly to a module or lesson.

Additional Resources provides links to helpful resources.

eBook shortcuts for the Teacher Edition and Student Editions are available on the dashboard. The **Print Student Edition eBook** matches the physical Student Edition to allow the teacher to project for the whole class or for students to quickly access the book at home. The **Interactive Student Edition eBook** (ISE) provides students with an interactive experience.





The menu icon in the upper left corner closes and opens the left-hand resources menu.

This menu provides access to:

- **My Programs**—Click to return to the list of classes.
- **Dashboard**—Click to return back to the Dashboard page.
- **Course**—View a Table of Contents to navigate to specific modules or lessons.
- **Gradebook**—View student grades.
- **Calendar**—Access and customize the class schedule.
- **Assignments**—View assignments, create new assignments, and assign work to specific individuals, select groups, or the entire class.
- **Roster**—Add students to the class, create student groups, and view student login history.
- **Reports**—Review class or individual student progress against standards and progress within the course.
- **Assessments**—Customize, create, and assign assessments.

Course Page

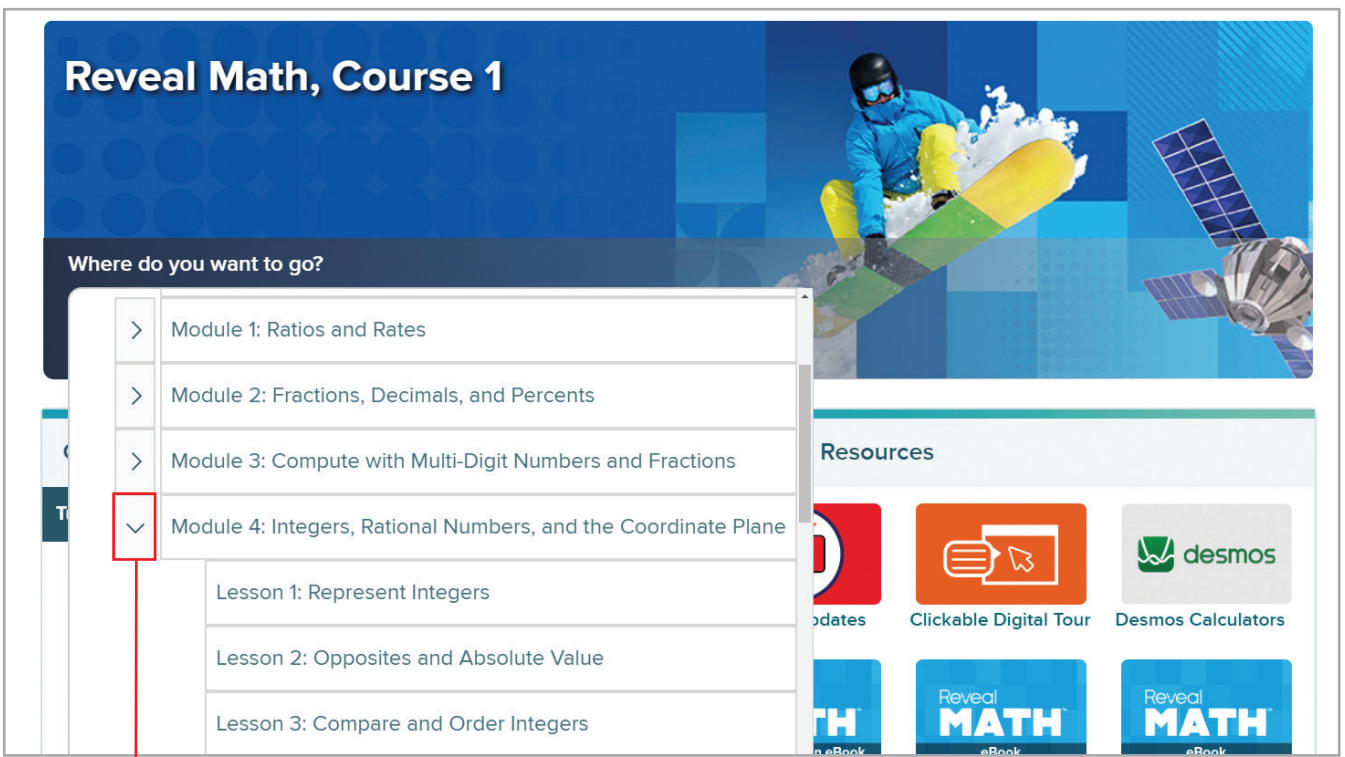
Select the **Course Navigation Menu** and, depending on the course selected, click on one of the following modules.

Course 1 Module 4: Integers, Rational Numbers, and the Coordinate Plane

Course 2 Module 3: Operations with Integers

Course 3 Module 5: Functions

The images in this guide follow along with **Course 1 Module 4,** but you can follow the same steps for any course.



You can click the arrows next to each module to view the lessons. Click on a Module title to go to the **Module Page**, or click on the Lesson title to go to the **Lesson Page.**

Module Page

On the **Module Page,** teachers can access module-level resources beneath each menu.

Launch

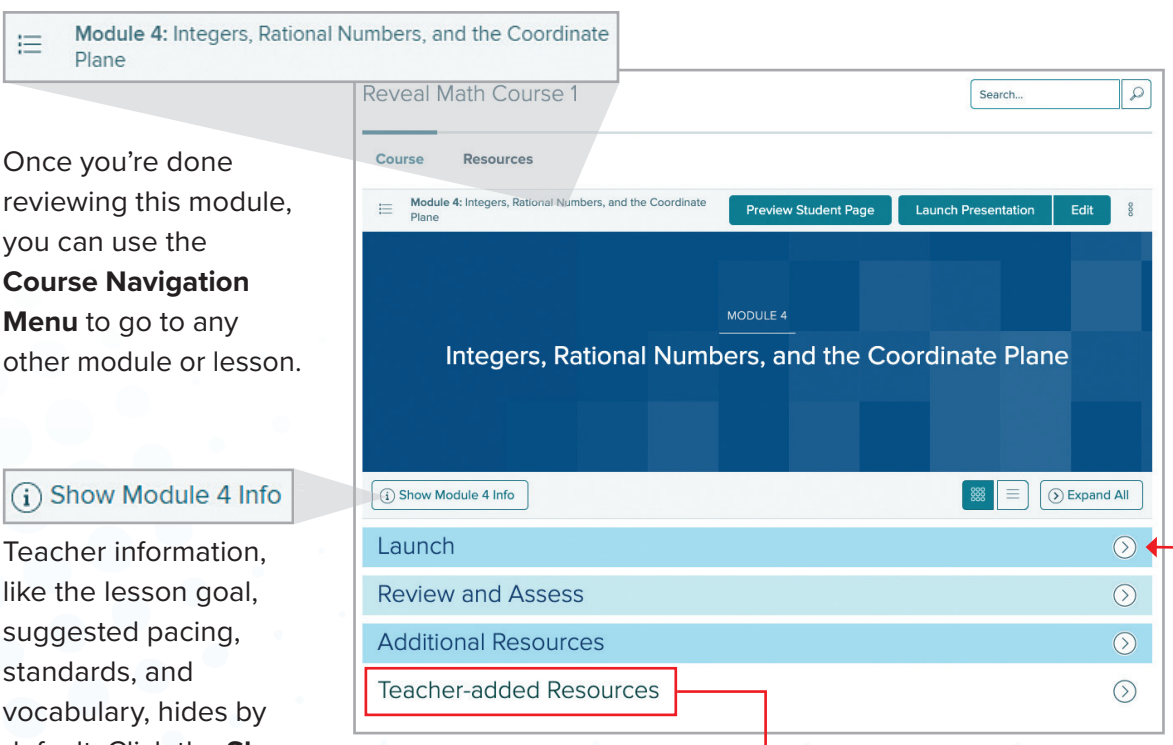
- Family Letter
- Ignite! Activity
- Module Pretest
- Launch the Module Video
- Problem Solving Strategies

Review and Assess

- Cheryl Tobey Formative Assessment Math Probes
- Personal Tutor videos in English and Spanish
- Dynamic Module Practice (Practice questions that change values on each attempt)
- Module Review
- Module Vocabulary Activity
- Module Vocabulary Test
- Leveled Module Tests (Digital and printable versions)
- Performance Task with Scoring Rubric
- eSolutions

Additional Resources

- *LearnSmart®*



Once you're done reviewing this module, you can use the **Course Navigation Menu** to go to any other module or lesson.

Show Module 4 Info

Teacher information, like the lesson goal, suggested pacing, standards, and vocabulary, hides by default. Click the **Show Info** button to see it.

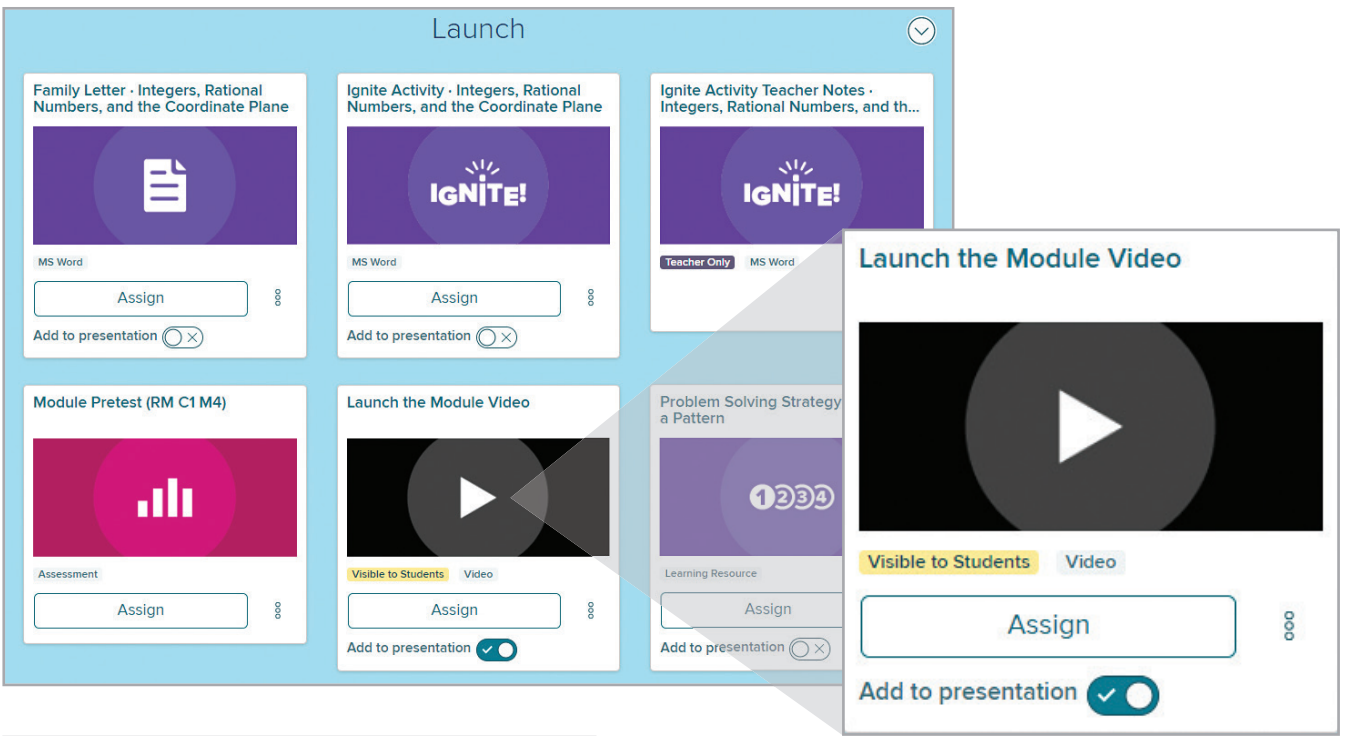
Click the arrows to open each menu.

At the bottom of every **Module Page** and **Lesson Page** is an area where teachers can add their own resources. Once resources are added to the Module Page or Lesson Page, they can then be assigned, added to the Student Digital Center, or included in the presentations.

Feature Highlight: Launch the Module Video

Each module contains a **Launch the Module Video** that presents real-world math applications.

To view the video, open the **Launch** menu from the **Teacher Digital Center**, and then click the **Launch the Module Video** tile.



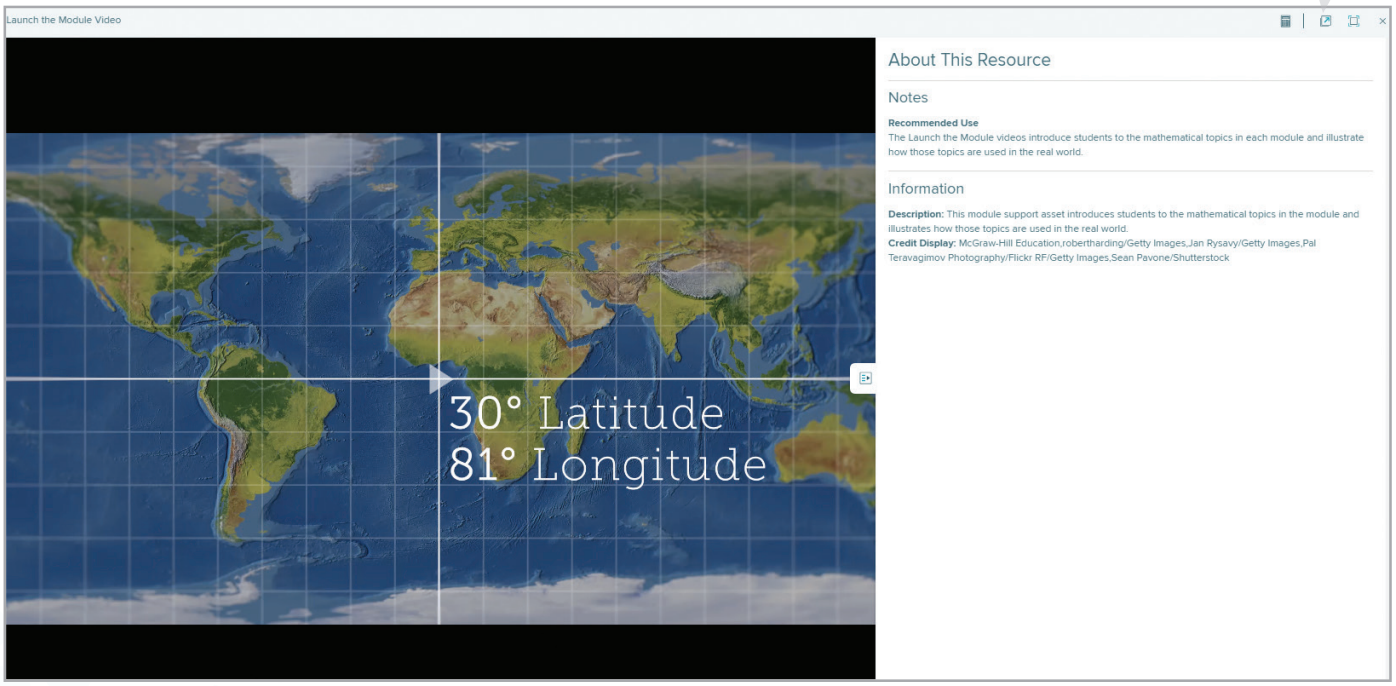
Take a look at the Teacher Edition for the module you have chosen. You'll notice that it provides tips for when and how to integrate digital resources.

Resources that are part of the **Interactive Presentation** (a digital instructional tool), are highlighted in the sidebar of the Teacher Edition. These resources can be displayed by the teacher or added to the student page so students can access them on their own devices.

Course 1 Teacher Edition, Module 4

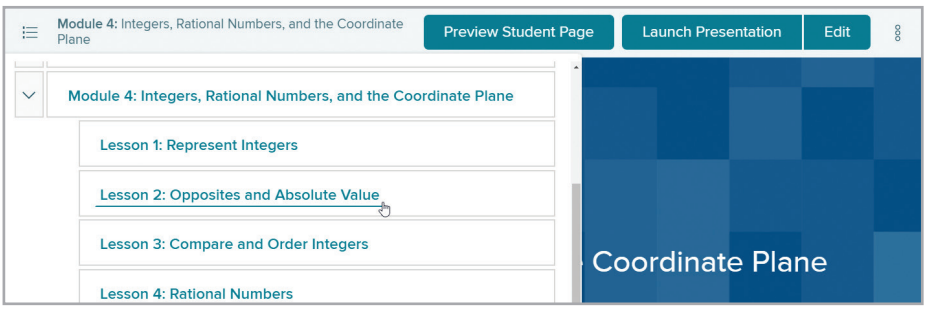
Feature Highlight:
Launch the Module Video, *cont'd.*

- Click to open the resource in a new tab.
- Click to view the resource in full screen mode.
- Click to close the resource window and return to the previous page.



Lesson Page

In the Course Navigation Menu, select a lesson to go to the **Lesson Page.**



This example shows Course 1, Module 4, Lesson 2.

On the **Lesson Page,** shaded menus correspond to the three-part instructional model: **Launch, Explore and Develop,** and **Reflect and Practice.** There is also a section for **Additional Resources** that includes resources for differentiation. Click the arrow next to each menu to see the resources in that section.

Launch

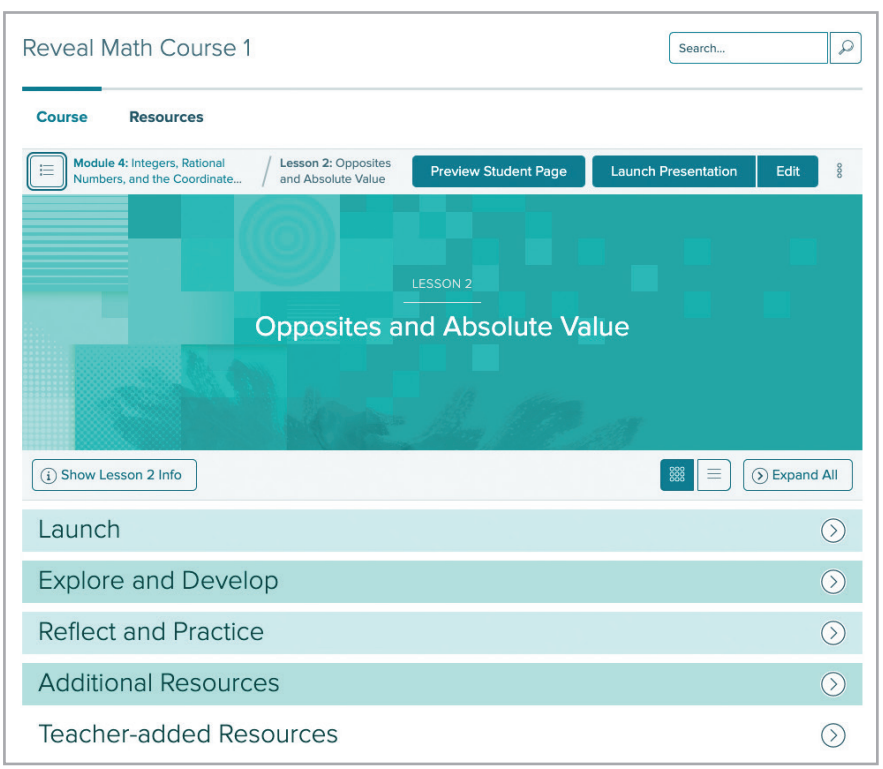
- Warm Up
- Launch the Lesson
- Today's Standards
- What Vocabulary Will You Learn?

Explore and Develop

- Explore
- Learn
- Examples and Extra Examples
- Checks (embedded on the last slide of each Example tile)

Reflect and Practice

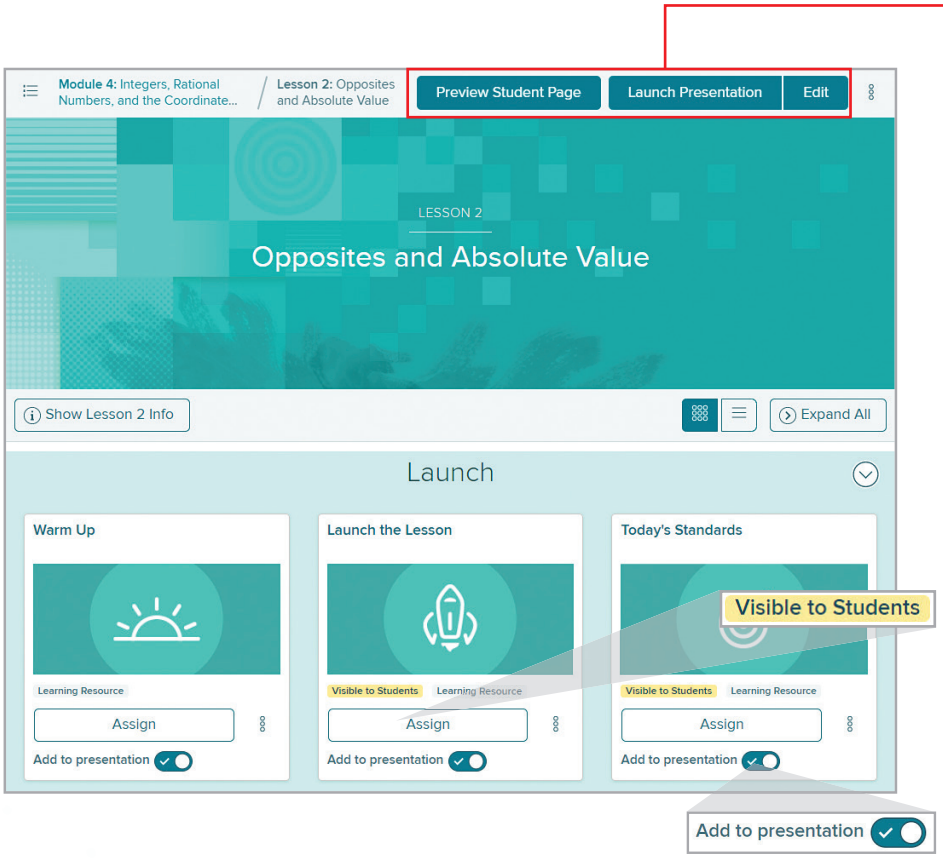
- Spiral Review
- Exit Ticket
- Practice
- eSolutions



Additional Resources

- Explore Recording Worksheet
- Language Development Handbook
- Student Edition PDF with Answers
- Collaboration Strategies
- Review Activities
- Extension Activities
- Take Another Look mini-lessons

Lesson Page, *cont'd.*



Click **Preview Student Page** to view which resources students will see and have access to in their **Student Digital Center.**

The **Launch Presentation** button opens the digital **Interactive Presentation.**

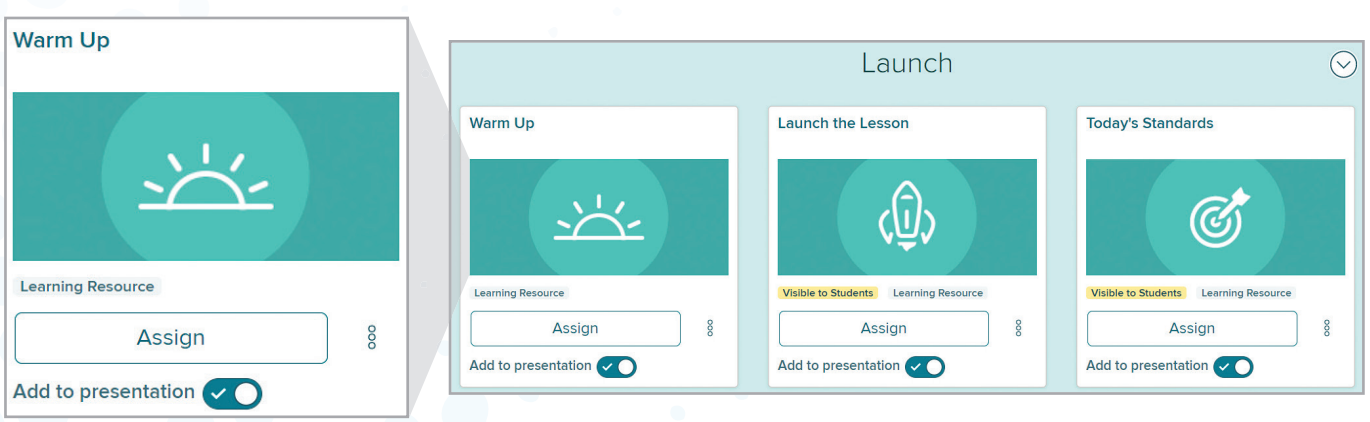
The **Edit** button opens the **Presentation Planning Toolbar.**

The **Visible to Students** tag indicates that the resource is viewable to students on their Student Digital Center.

When the **Add to Presentation** toggle is checked, it indicates that the resource is part of the digital **Interactive Presentation.**

Click the arrow next to the **Launch** menu to view the resources associated with that part of the lesson.

Click on the **Warm Up** tile to view the resource.

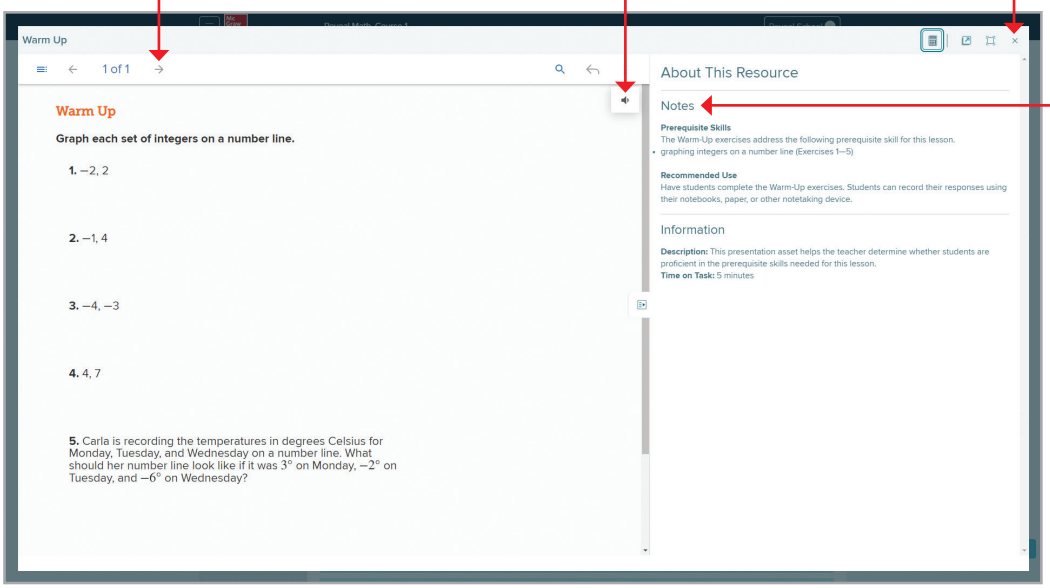


Resource View: Warm Up

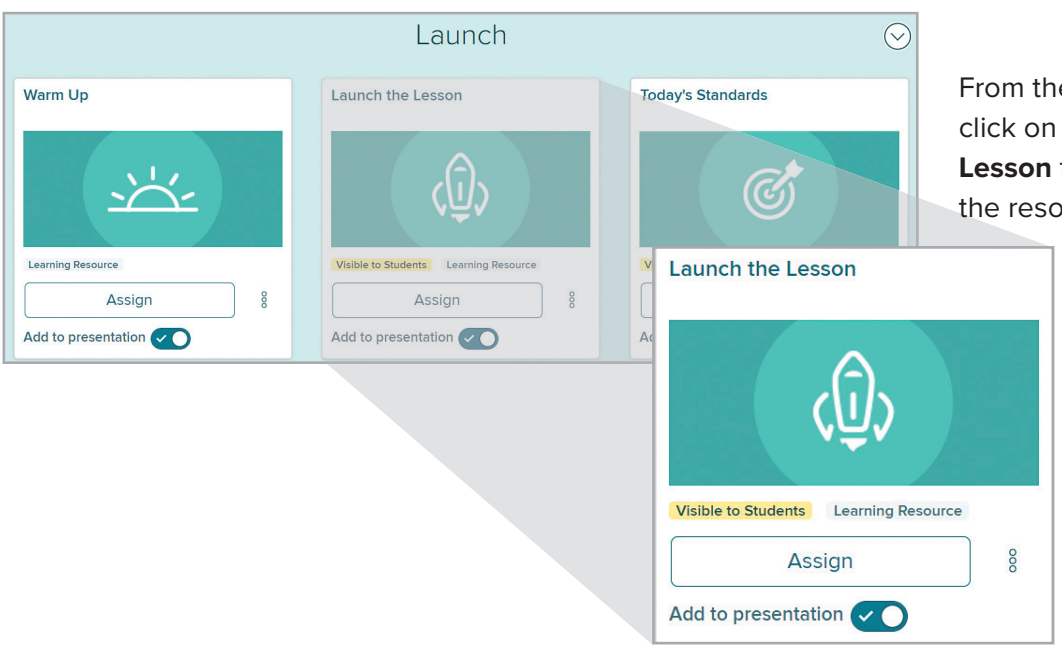
Some resources have multiple slides. Navigate through additional slides within the resource by clicking the blue left and right arrows *(where applicable)*.

Click the speaker icon to hear the audio.

Click the **X** to close the resource and return to the **Lesson Page.**



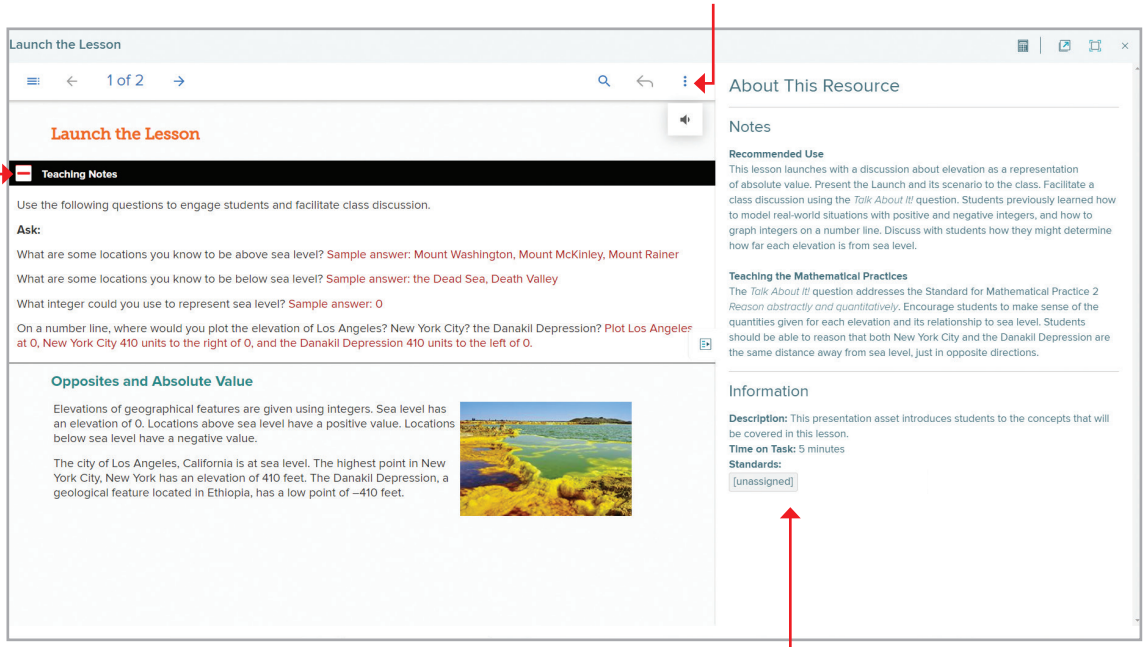
Teacher notes are not included in the audio read function, in presentation mode, or when students access the resources from their Student Digital Center.



From the **Launch Menu**, click on the **Launch the Lesson** tile to view the resource.

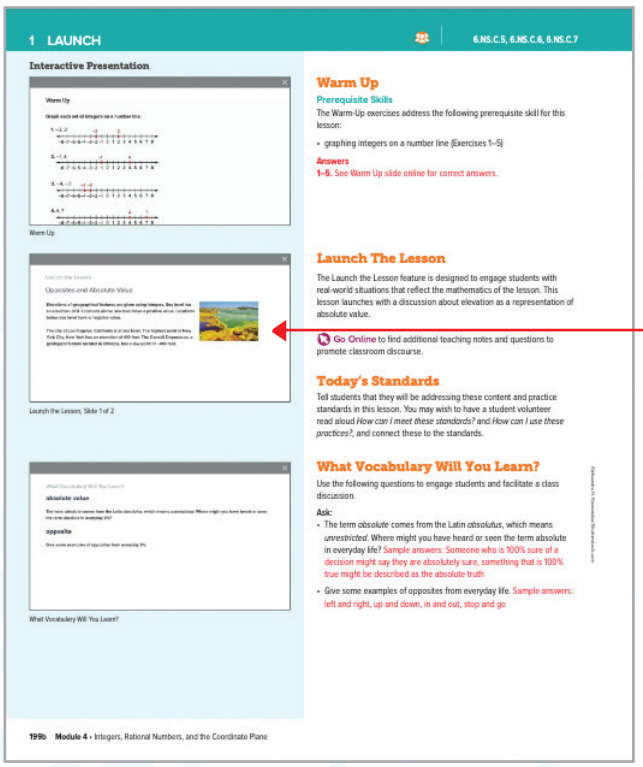
Resource View: Launch the Lesson

Click the three vertical dots to access the Highlighter tool and toggle the **Teaching Notes** on and off by unchecking **Teacher Content.**



Click the plus or minus sign to open and close **Teaching Notes** for the resource *(where applicable).*

The **Notes** and **Information** provide planning information related to the resource. These do not display in presentation mode.



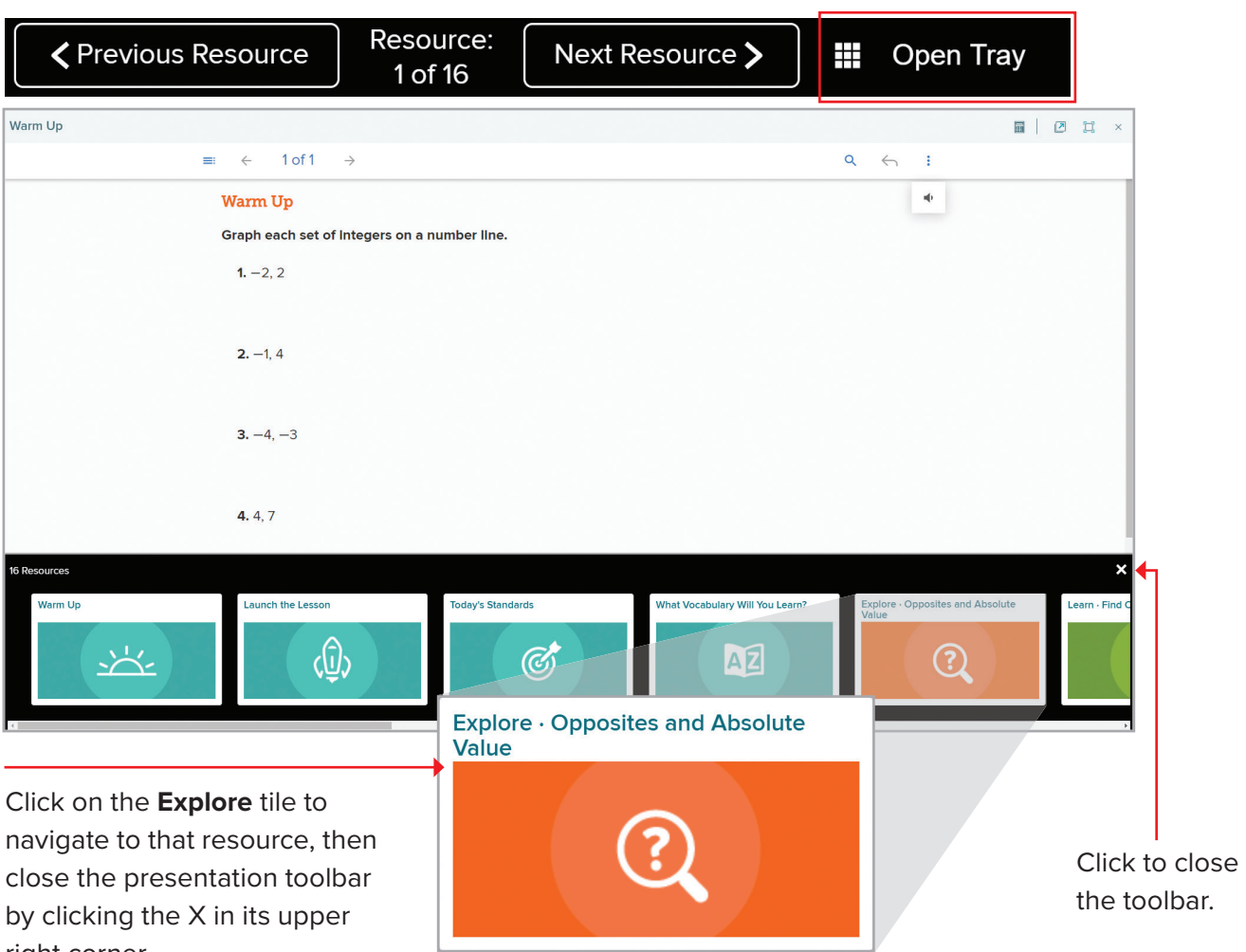
Course 1 Teacher Edition, Lesson 4-2

Note that the **Interactive Presentation** column in the Teacher Edition shows the resources that are available online for easier planning.

Presentation Planning Toolbar

From the **Lesson Page**, click **Launch Presentation** to view the **Interactive Presentation.**

Click the **Open Tray** button at the bottom toolbar to open the presentation planning toolbar. Notice that these are the same resources seen on the **Lesson Page.** In this toolbar, teachers can navigate directly to any resource that has been included in the presentation. By clicking the **Edit** button from the **Lesson Page**, teachers can quickly customize their presentation by dragging and dropping tiles to rearrange the order of resources within the presentation.

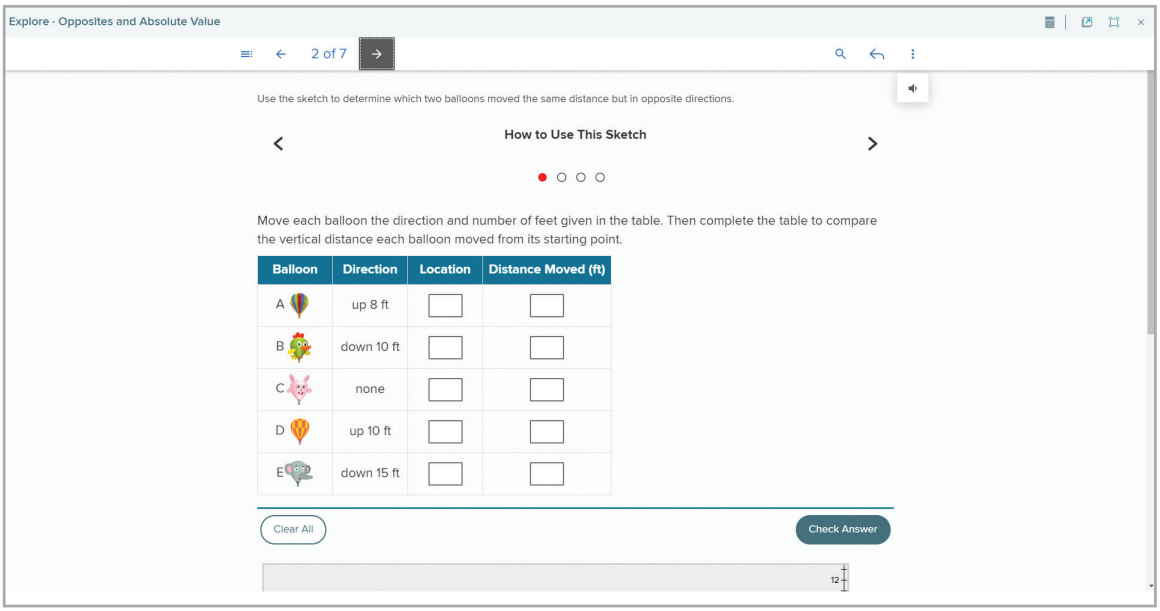


Click on the **Explore** tile to navigate to that resource, then close the presentation toolbar by clicking the X in its upper right corner.

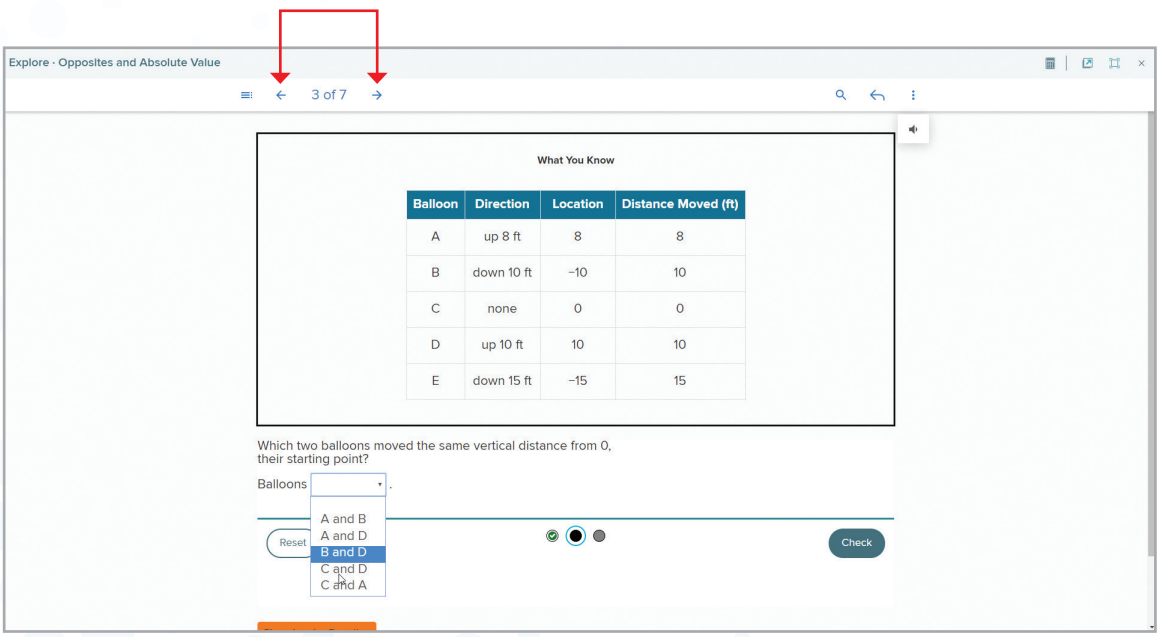
Click to close the toolbar.

Feature Highlight: Explore Activity

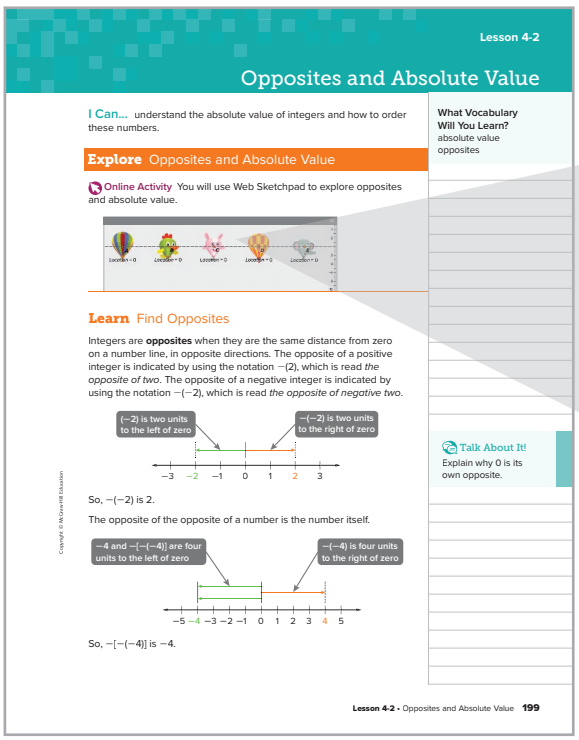
The **Explore** activity appears in most lessons to provide students with an open-ended opportunity to explore a problem. Many **Explore** activities, like this one, utilize **Web Sketchpad**®—highly visual integrated activities that demonstrate math concepts in action.



Students can use the blue arrows at the top of the resource to navigate through additional slides and work through exercises associated with the activity.



Seamless Blended Print/Digital Delivery



Lesson 4-2

Opposites and Absolute Value

I Can... understand the absolute value of integers and how to order these numbers.

What Vocabulary Will You Learn?
absolute value
opposites

Explore Opposites and Absolute Value

Online Activity You will use Web Sketchpad to explore opposites and absolute value.

Learn Find Opposites

Integers are **opposites** when they are the same distance from zero on a number line, in opposite directions. The opposite of a positive integer is indicated by using the notation −(2), which is read *the opposite of two*. The opposite of a negative integer is indicated by using the notation −(−2), which is read *the opposite of negative two*.

(−2) is two units to the left of zero

−(−2) is two units to the right of zero

So, −(−2) is 2.

The opposite of the opposite of a number is the number itself.

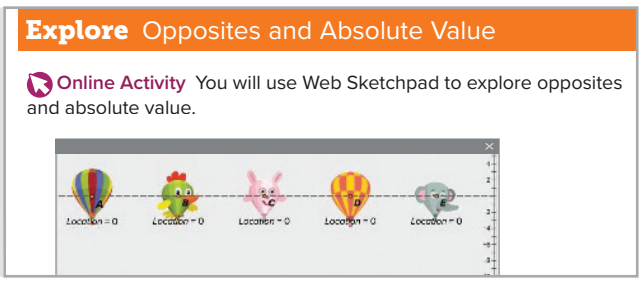
−4 and −[−(−4)] are four units to the left of zero

−(−4) is four units to the right of zero

So, −[−(−4)] is −4.

Talk About It!
Explain why 0 is its own opposite.

Lesson 4-2 • Opposites and Absolute Value 199

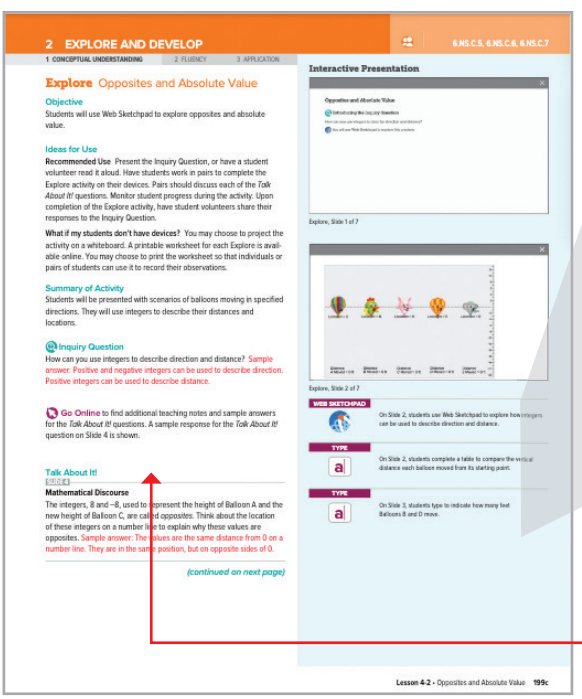


Explore Opposites and Absolute Value

Online Activity You will use Web Sketchpad to explore opposites and absolute value.

The Student Edition indicates when an **Online Activity** is available to help students deepen their conceptual understanding through engaging digital tools.

Course 1 Student Edition, Lesson 4-2



2 EXPLORE AND DEVELOP

6.NS.C.5, 6.NS.C.6, 6.NS.C.7

1 CONCEPTUAL UNDERSTANDING 2 FLUENCY 3 APPLICATION

Explore Opposites and Absolute Value

Objective
Students will use Web Sketchpad to explore opposites and absolute value.

Ideas for Use
Recommended Use Present the Inquiry Question, or have a student volunteer read it aloud. Have students work in pairs to complete the Explore activity on their devices. Pairs should discuss each of the *Talk About It!* questions. Monitor student progress during the activity. Upon completion of the Explore activity, have student volunteers share their responses to the Inquiry Question.

What if my students don't have devices? You may choose to project the activity on a whiteboard. A printable worksheet for each Explore is available online. You may choose to print the worksheet so that individuals or pairs of students can use it to record their observations.

Summary of Activity
Students will be presented with scenarios of balloons moving in specified directions. They will use integers to describe their distances and locations.

Inquiry Question
How can you use integers to describe direction and distance? Sample answer: Positive and negative integers can be used to describe direction. Positive integers can be used to describe distance.

Go Online to find additional teaching notes and sample answers for the *Talk About It!* questions. A sample response for the *Talk About It!* question on Slide 4 is shown.

Talk About It!
SLIDE 4
Mathematical Discourse
The integers, 8 and −8, used to represent the height of Balloon A and the new height of Balloon C, are called opposites. Think about the location of these integers on a number line to explain why these values are opposites. Sample answer: The values are the same distance from 0 on a number line. They are in the same position, but on opposite sides of 0.

(continued on next page)

Interactive Presentation

Explore, Slide 1 of 7

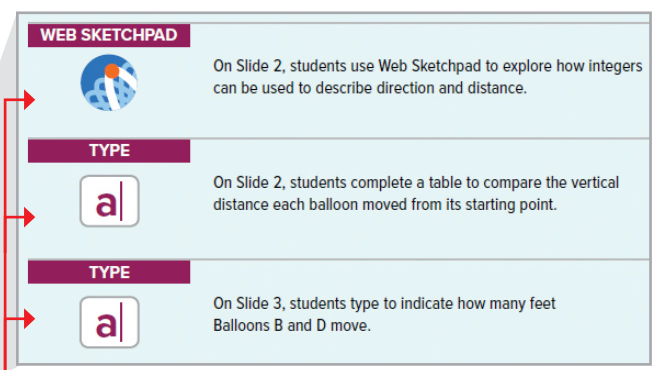
Explore, Slide 2 of 7

WEB SKETCHPAD

TYPE

TYPE

Lesson 4-2 • Opposites and Absolute Value 199c



WEB SKETCHPAD

On Slide 2, students use Web Sketchpad to explore how integers can be used to describe direction and distance.

TYPE

On Slide 2, students complete a table to compare the vertical distance each balloon moved from its starting point.

TYPE

On Slide 3, students type to indicate how many feet Balloons B and D move.

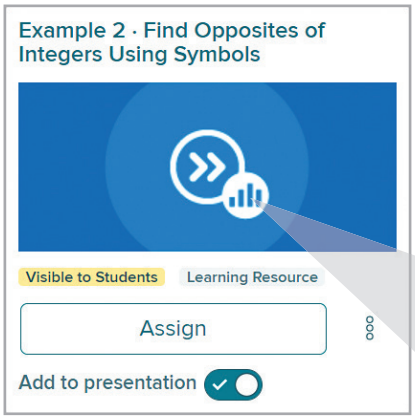
Look at the corresponding pages in the **Teacher Edition** and notice the support provided for incorporating digital resources into the classroom.

The Teacher Edition includes purple icons to identify exactly which types of interactivity students will encounter at each point in the lesson.

Teaching notes provide more information about the activity, as well as sample answers to mathematical discourse prompts that appear within the online activities.

Course 1 Teacher Edition, Lesson 4-2

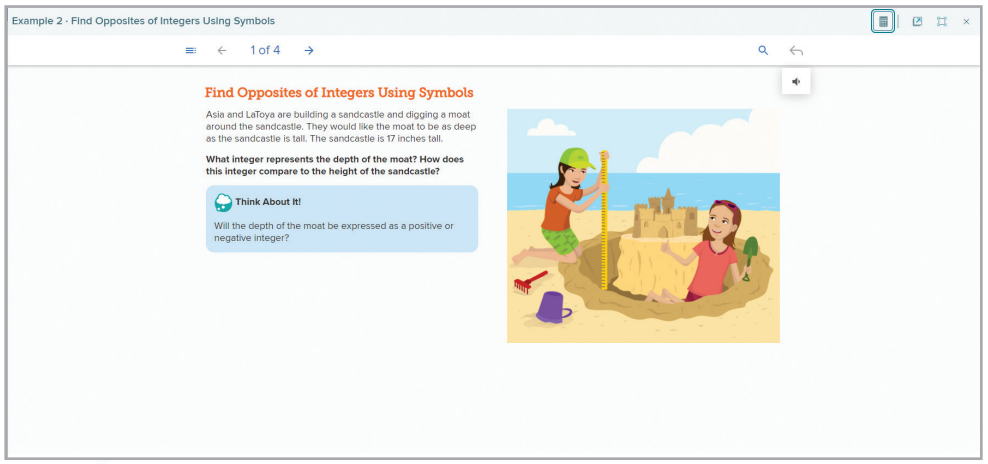
Feature Highlight: Example and Check



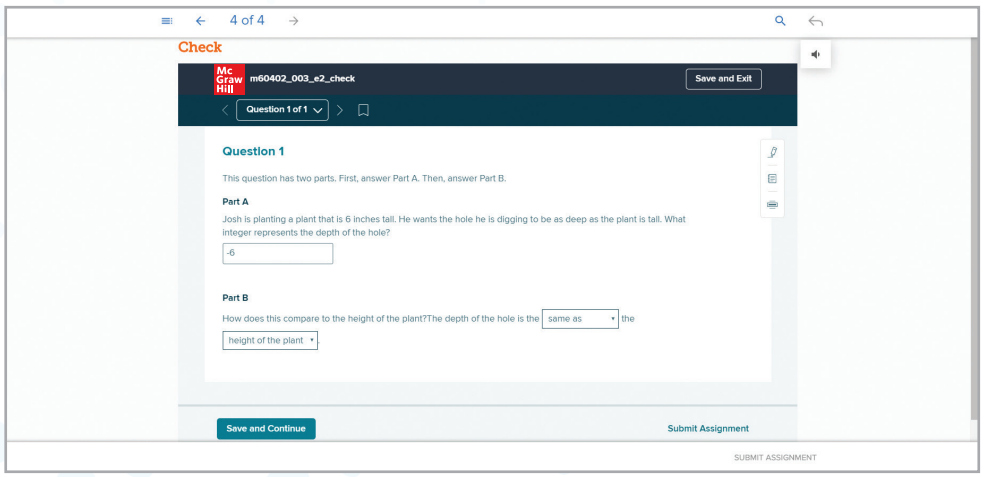
Return to the **Lesson Page.** Open the **Explore and Develop** drop-down menu. Click on the **Check** tile with the data icon. The **Check** is the final slide of each **Example,** and it provides a formative assessment opportunity for teachers. The data icon indicates that, when students are assigned and complete the **Check** online, data is collected for the teacher.

Data Icon

Example

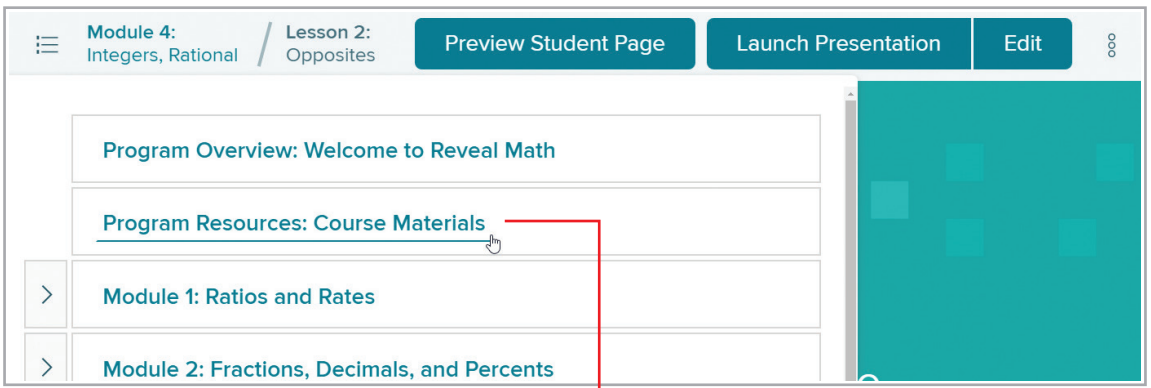


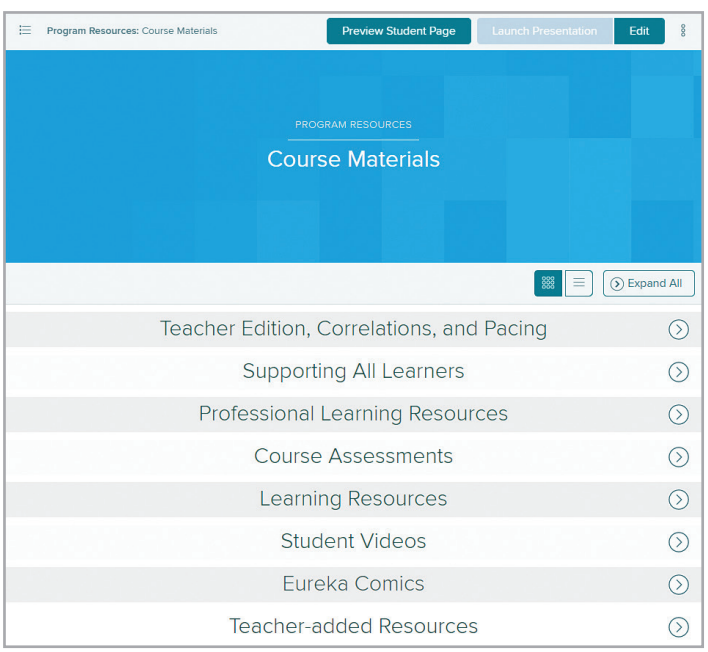
Check



Course Materials

Return to the **Lesson Page.** From the **Course Navigation Menu,** select **Program Resources: Course Materials.**





Course Materials, *cont'd.*

Click the arrow next to each section to view its associated resources.

Teacher Edition, Correlations, and Pacing

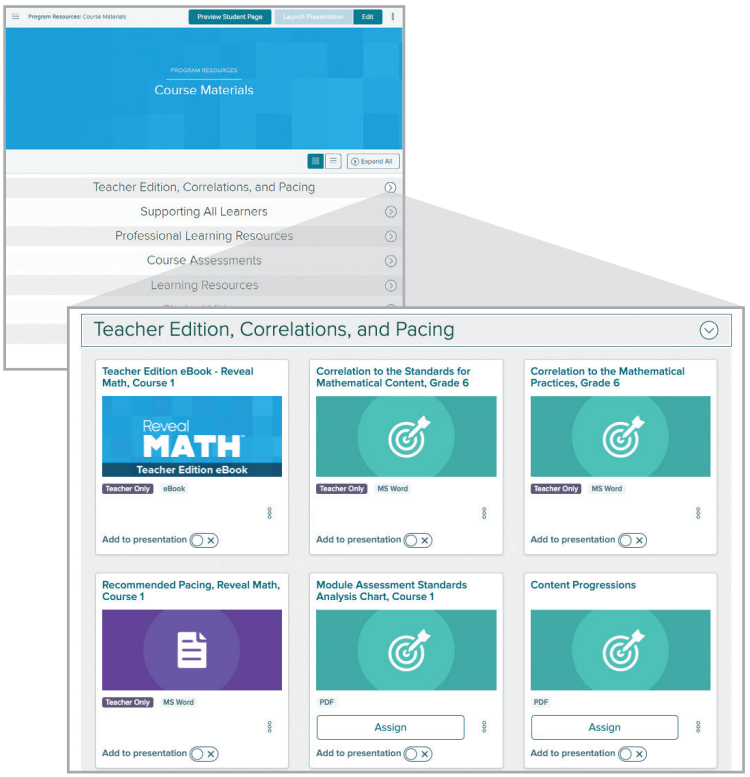
- Access to complete Teacher Edition
- Content Progressions
- Correlation to the Content Standards
- Correlation to the Practice Standards
- Recommended Pacing

Supporting All Learners

- Access to complete Language Development Handbook, Student Edition, and Teacher Edition

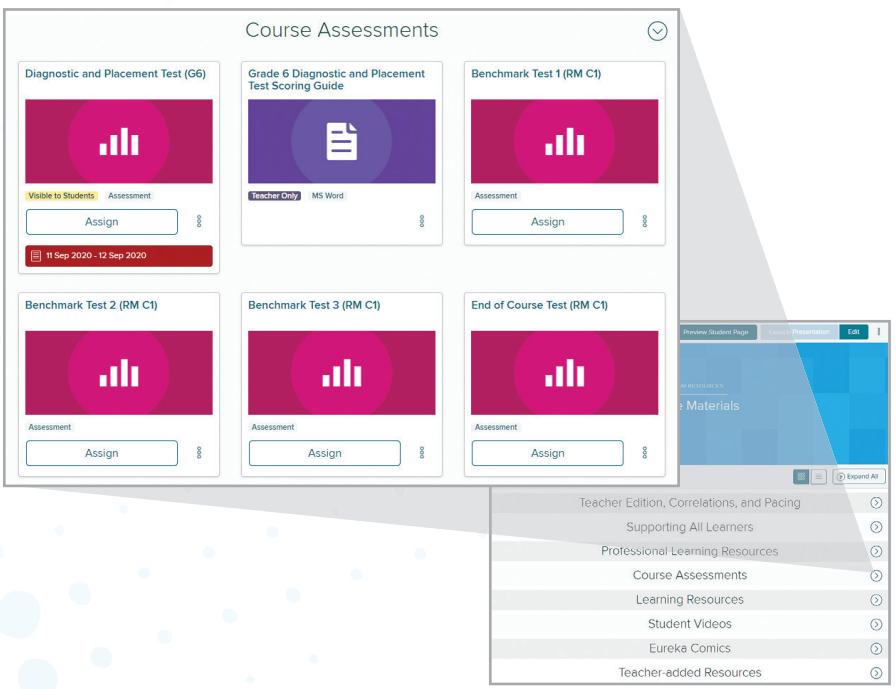
Professional Learning Resources

- Professional Development Videos



Course Assessments

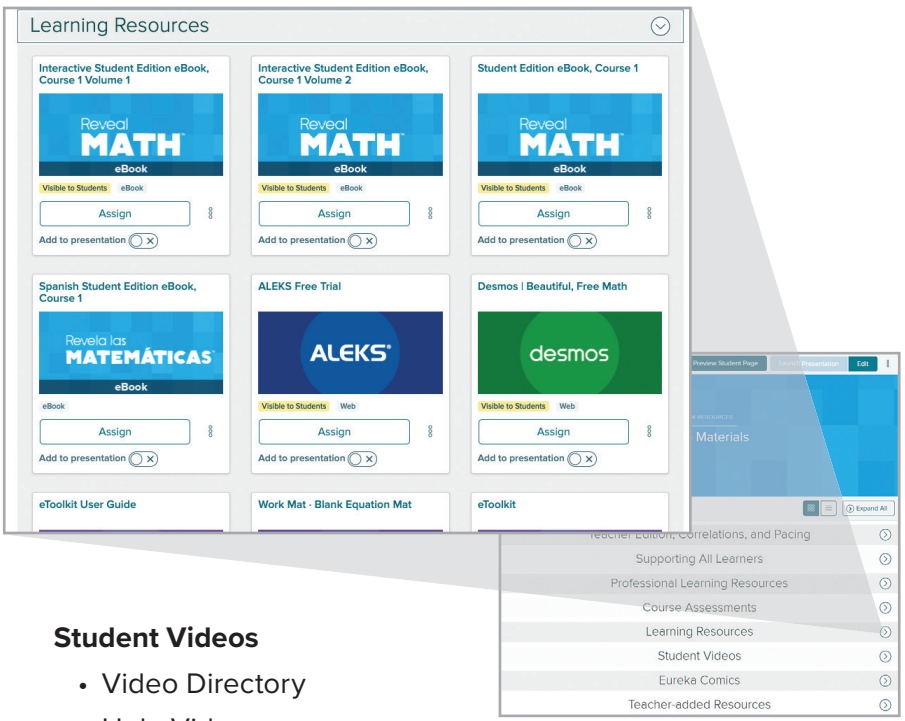
- Diagnostic and Placement Test, with Scoring Guide
- Benchmark Tests
- End-of-Course Test

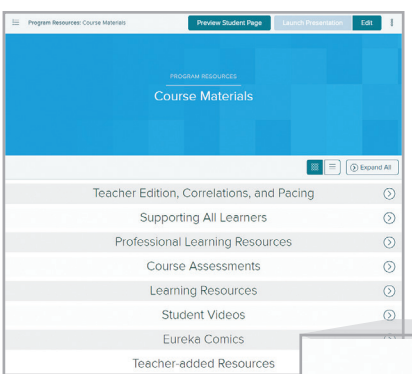


Course Materials, *cont'd.*

Learning Resources

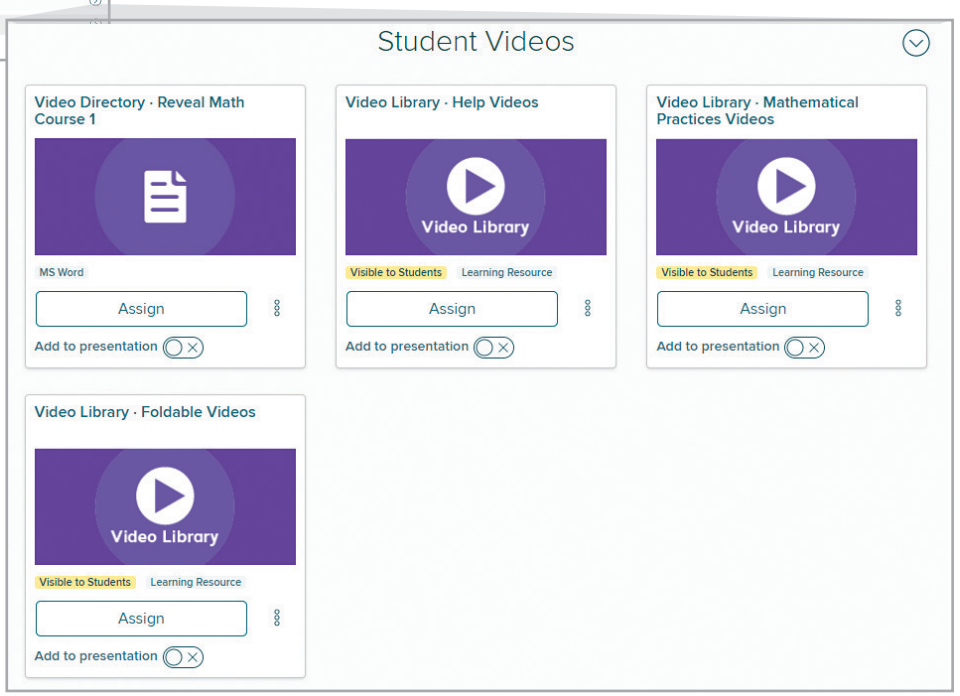
- Access to complete Interactive Student Edition *(2 volumes)* and Spanish Interactive Student Edition
- *ALEKS* Free Trial access (in demo account only)
- *Desmos*
- eToolkit
- Work Mats





Student Videos

- Video Directory
- Help Videos
- Standards for Mathematical Practices Videos
- Foldable Videos

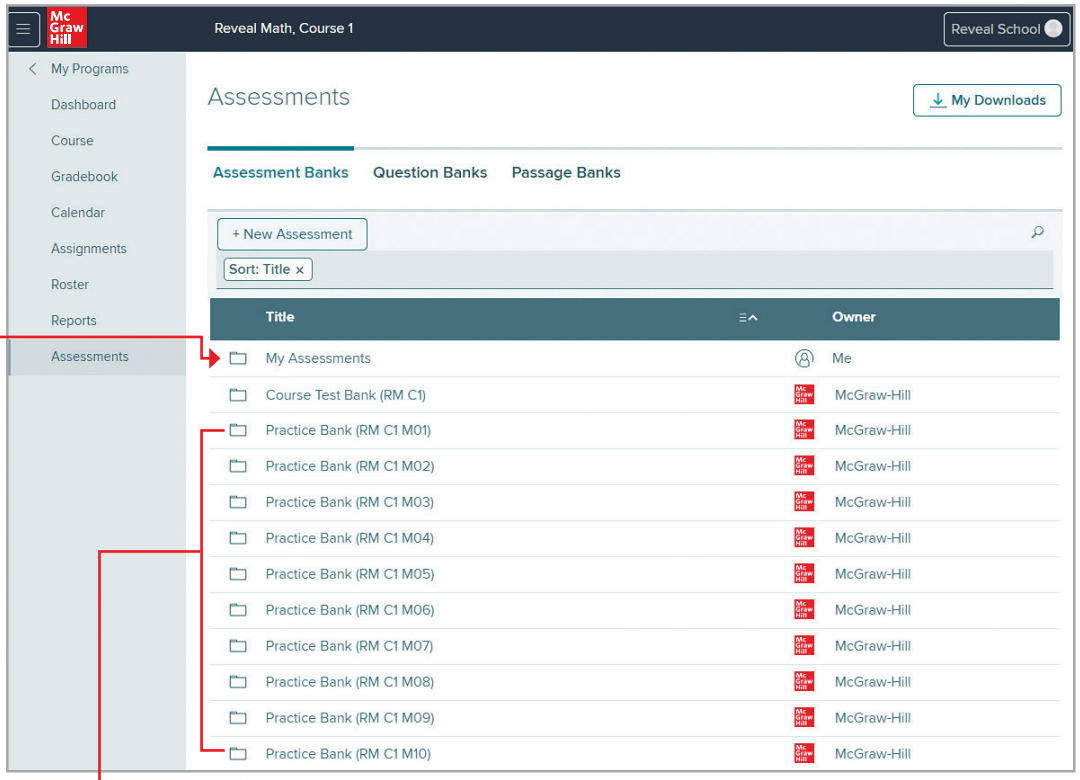


Practice

From the **Main Menu** in the left-hand sidebar, click **Assessments**.

This menu contains all **Practice** items which can be edited, created, and digitally assigned to individual students, groups, or across multiple classes. All exercises have been created for automatic scoring when teachers choose to assign or create digital assignments. Essay-style questions are available for use in the Question Banks when practice assignments are edited or created from scratch.

My Assessments folder will store your customized and newly created Practice forms.

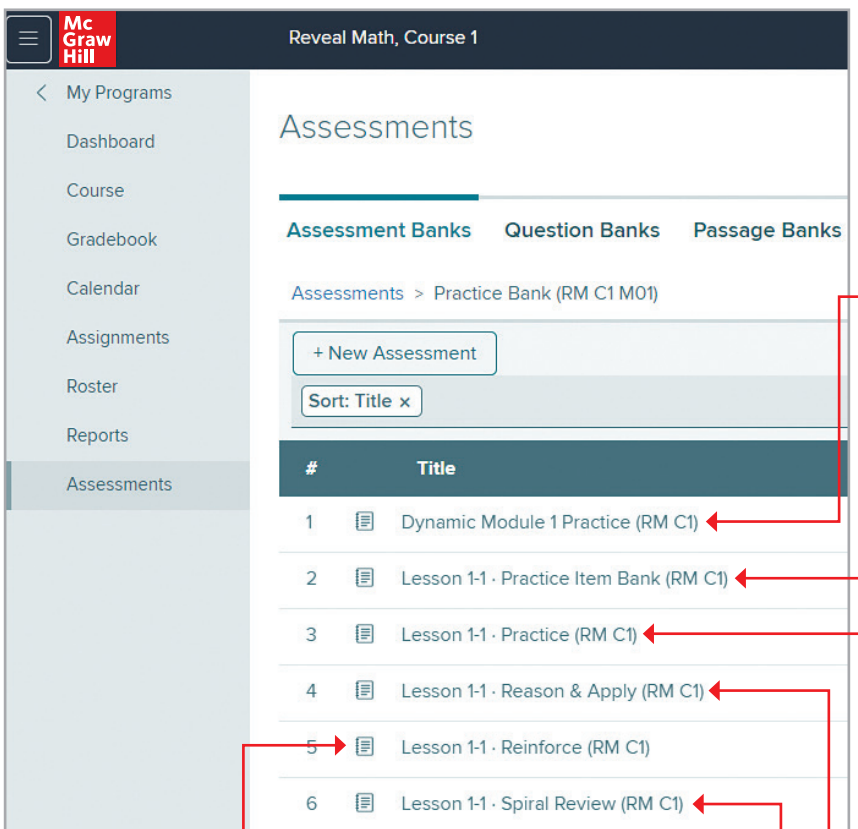


Practice Banks contain the practice exercises broken down by lesson for each module.

Practice, *cont'd.*

Next, click on a **Practice Bank**.

The **Practice Banks** contain all the module and lesson practice questions for the course. The banks are organized by lesson and are named to indicate the practice purpose. A majority of the pre-built banks contain questions which provide students with immediate feedback and access to a variety of learning aids such as hints, explanations, show solution, and video support. Most sets are designed to auto-score and provide teachers access to each individual scorecard.



Dynamic Module Practice contains questions that change value upon each attempt. These questions cannot be customized due to the automatic change in value upon access.

Practice Item Banks contain every practice question from the lesson in one location and can be used as a source to create your own practice forms.

Practice includes pre-built digital practice sets that match the Interactive Student Edition.

Reason and Apply are practice sets with a mixture of new questions and those from the Interactive Student Edition to encourage students to apply and use higher-order thinking skills.

Reinforce are practice sets with a mixture of new questions and those from the Interactive Student Edition to reinforce important skills and concepts.

Spiral Reviews contain questions from several prior lessons and include questions that change value and provide student learning support.

Assessments

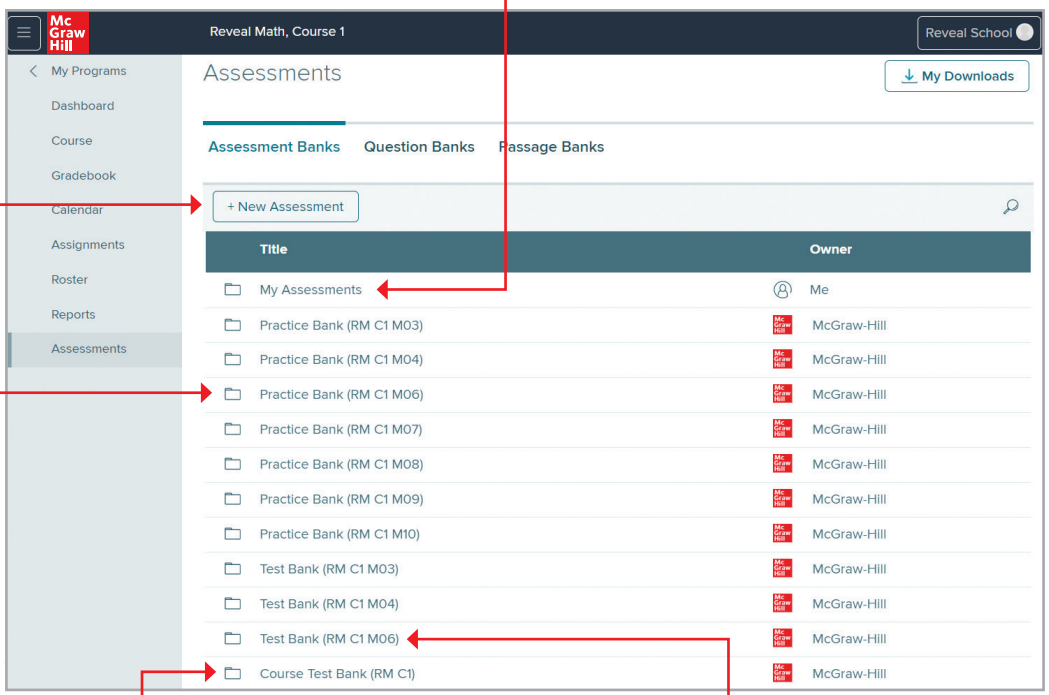
From the **Main Menu** in the left-hand sidebar, click **Assessments.**

Leveled practice and assessments can be created and assigned to any grouping of students. Additionally, the majority of homework questions, when completed online, are auto-scored. Essay-style questions include a sample answer for the teacher, to provide guidance for grading. When going to **Assessments,** you're initially taken to the **Assessment Bank.**

After customizing a test, your new version of the test will be saved in the **My Assessments** folder.

Create a **New Assessment.**

Practice Banks contain the homework for the module.



The **Course Test Bank** contains the Diagnostic and Placement Test, Benchmark Tests, and End-of-Course Test.

Test Banks contain the module level tests.

Once you've viewed the **Assessment Banks,** then click **Question Banks.**

Assessments, *cont'd.*

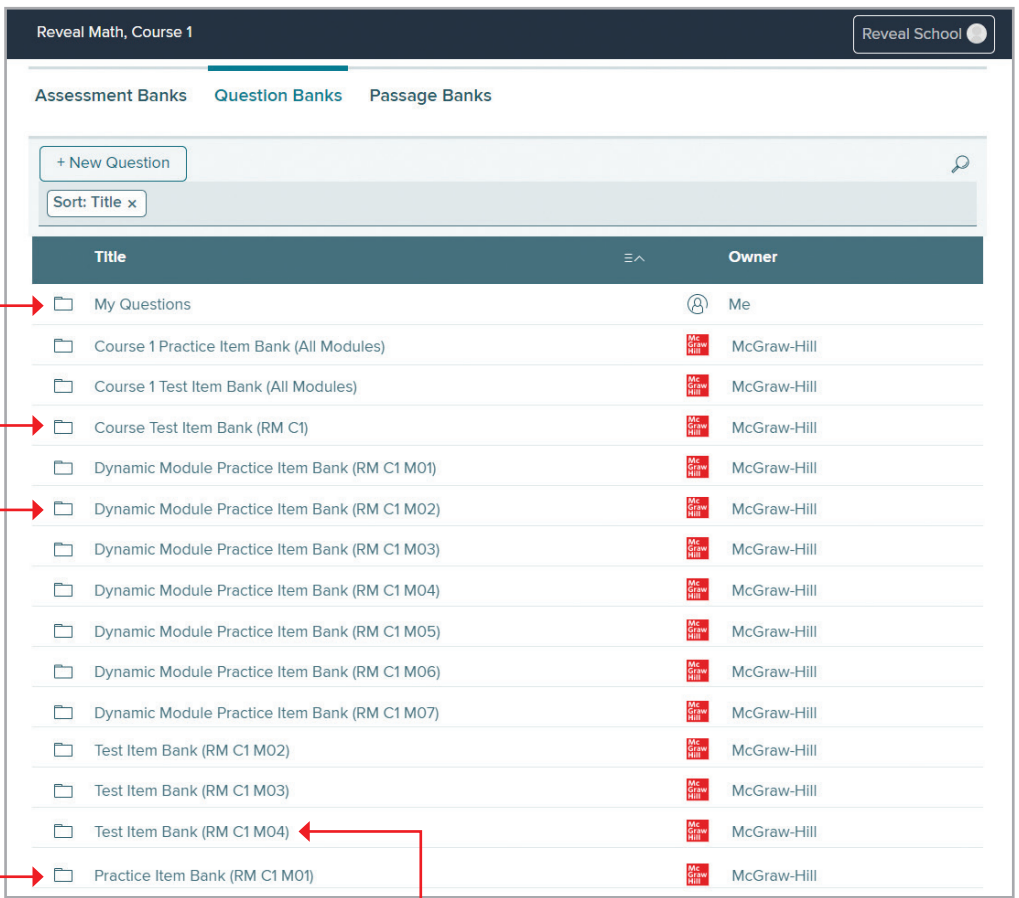
The **Questions Banks** contains all of the questions found throughout assessments. Most question banks are organized by module. You can create your own questions or customize the preexisting questions to better meet your needs from this bank.

When you create a new question or customize an existing question, it will be saved in the **My Questions** folder.

Course Test Item Banks contain questions from every module.

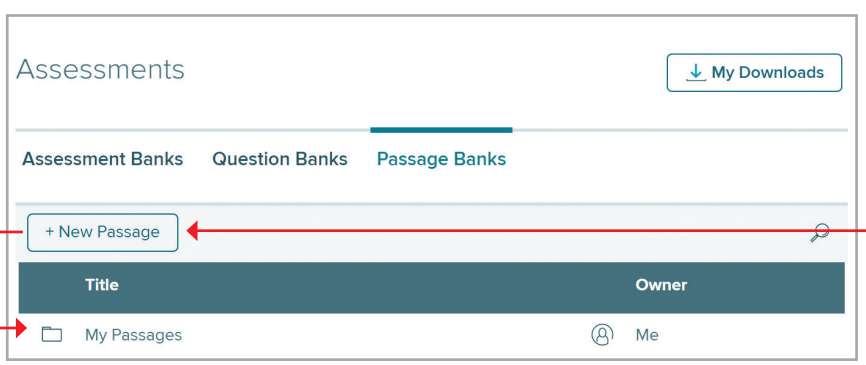
Dynamic Module Practice Banks contain the questions from dynamic practice, but these questions cannot be edited since they automatically change values on each attempt.

Practice Item Banks contain the homework for their module.



Test Item Banks contain the questions for module level tests.

Next, click the **Passage Banks** tab.



From the **Passage Banks**, you can create your own word problems. When you create a new word problem, it is saved in the **My Passages** folder.

Reports

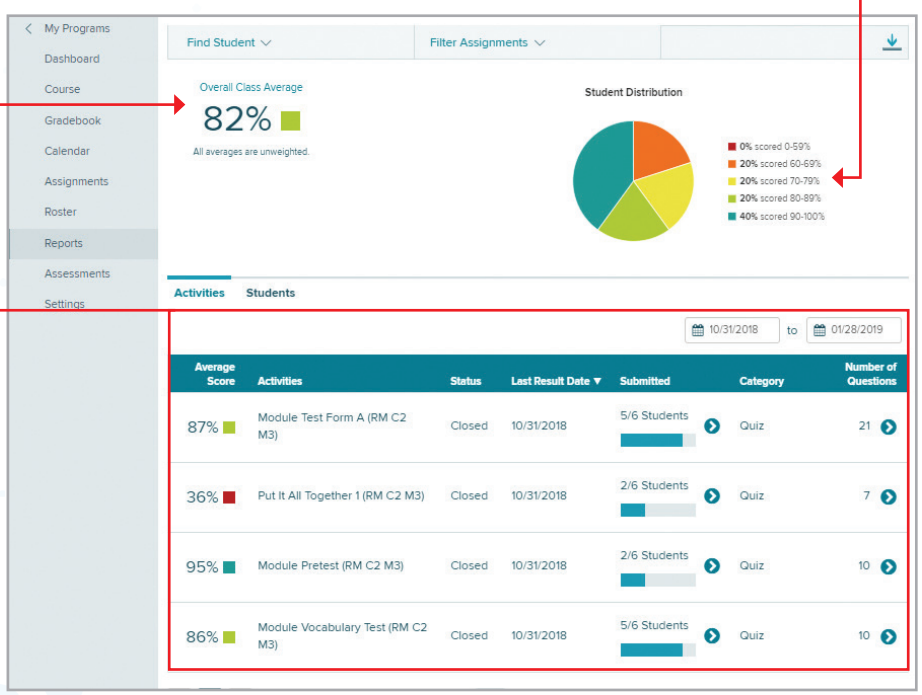
From the **Main Menu** in the left-hand sidebar, click **Reports.** These interactive performance reports provide immediate feedback that allows teachers to make data-driven instructional decisions.

The **Activity Performance Report** provides a number of useful data points for class activities, like tests and homework.

The pie chart breaks down the distribution of students' scores.

Overall class average is displayed for activities students have completed.

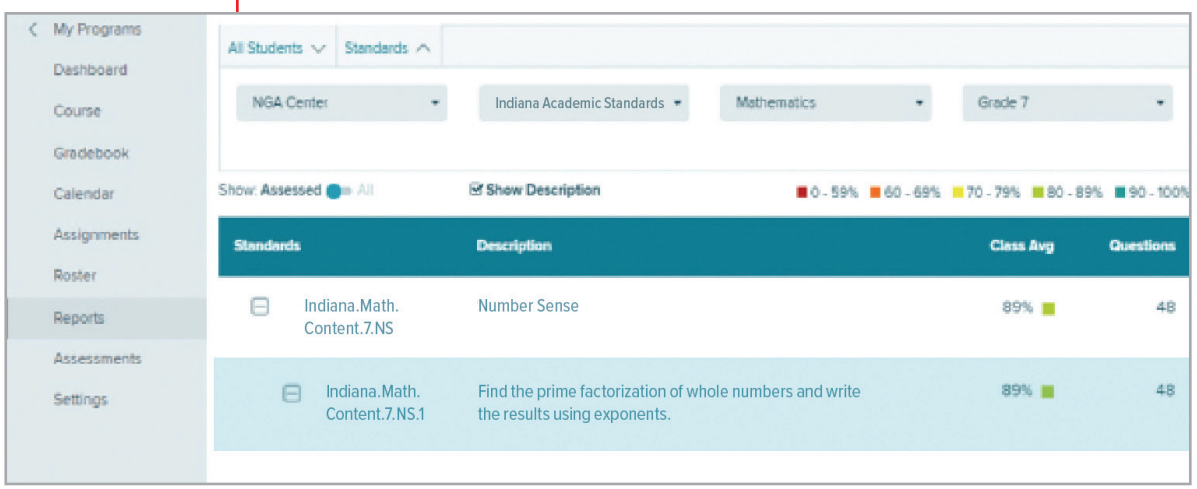
At the bottom of this report, students' average scores across all activities within a date range are provided. By clicking on an activity in this table, you can then view individual scores for that digitally scored activity.



Reports, *cont'd.*

The **Standards Performance Report** provides information on class performance by standard.

Use this drop-down menu to filter this report for specific students.



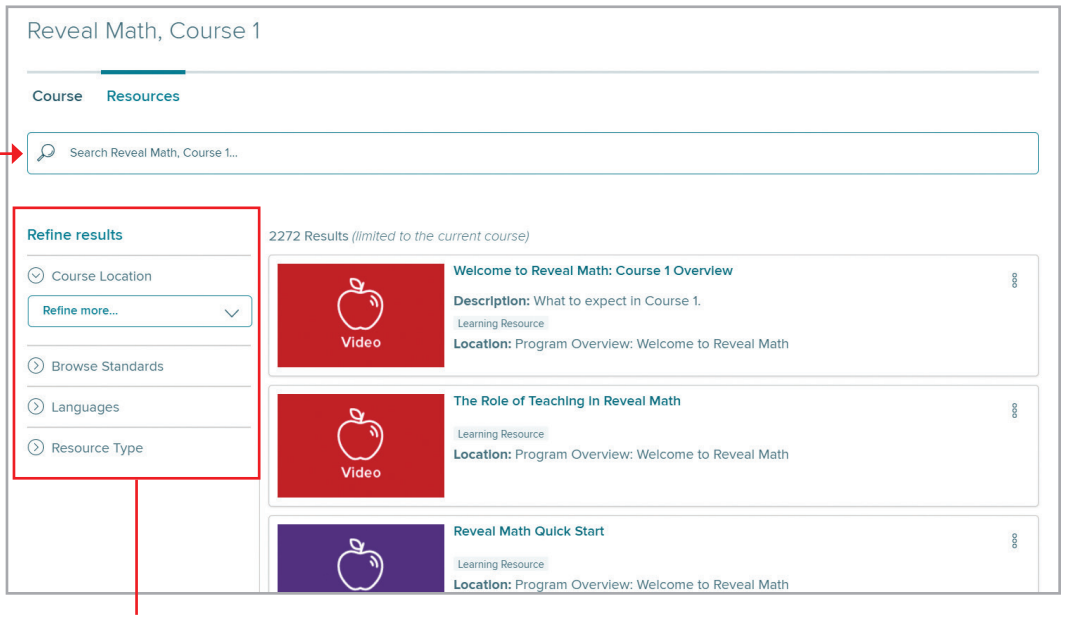
The plus and minus sign next to the standard allows you to show or hide the specific segments of the standard and their descriptions.

This column allows you to see the class average for each specific standard.

Search Resources and Search by Standard

From the left-hand **Main Menu,** select **Course.** Then, click the **Resources** tab.

Type in a term or topic to search by keyword.



Filter resources by:

- **Course Location**—Find resources fast within each module.
- **Browse Standards**—Search for resources that pertain to specific standards.
- **Language**—Filter for English and Spanish materials.
- **Resource Type**—Sort by assessment, video, PDF, and more.

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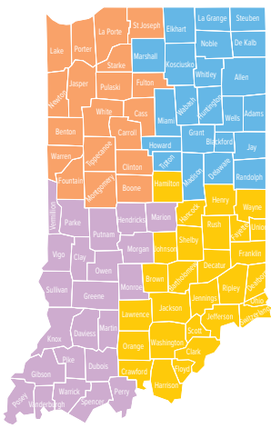

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