



Program Overview  
Grades K–5



Minnesota Reveal  
**MATH**<sup>®</sup>

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Reveal the Full Potential  
in Every Student



# Reveal the Mathematician in Every Student

*Minnesota Reveal Math*®, a balanced elementary math program fully aligned to the **Minnesota K–12 Academic Standards in Mathematics**, develops the problem solvers of tomorrow by incorporating both inquiry-focused and teacher-guided instructional strategies within each lesson. In order to uncover the full potential in every student, *Minnesota Reveal Math*:

**Champions a positive classroom environment** centered on curiosity, connection, and social-emotional development.

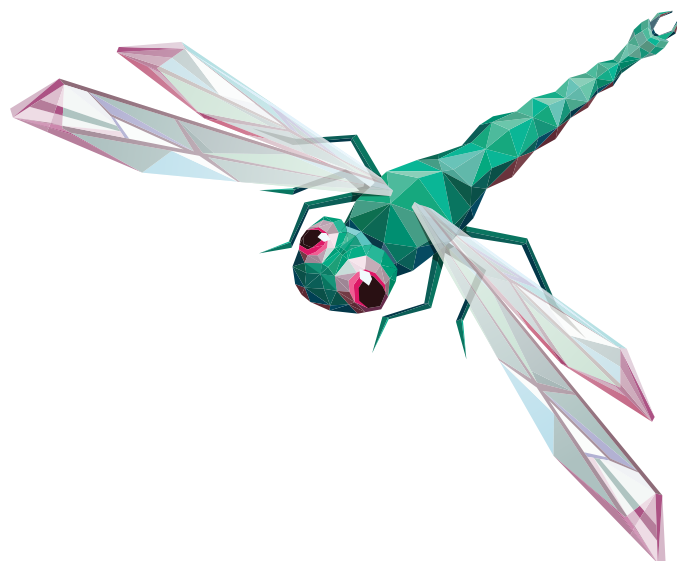
- Math Is... Unit
- Ignite! Activities
- STEM-Focused Units

**Explores mathematics through a flexible lesson design** providing access to rigorous instruction with embedded teacher supports and scaffolds.

- Lesson Model and Routines
- Social Emotional Learning
- Language and English Learner Supports
- Fluency

**Tailors classroom activities to student need** through insightful assessment and purposeful, multimodal differentiation.

- Formative Assessment
- Differentiation
- Course Assessments
- Targeted Intervention



# Program Design Influenced by Teachers, Research, and Industry Experts

*Minnesota Reveal Math*® is a K–12 program informed by extensive educator feedback throughout its development. Educator perspectives were intentionally aligned with an instructional model rooted in validated research and designed by McGraw Hill learning scientists in partnership with the *Minnesota Reveal Math* expert authorship team.

## Major Focus Areas

- **Equitable Classrooms:** Learner-focused practices to develop a classroom designed for all students
- **Social and Emotional Learning:** Competencies to support academically and socially engaged classroom members
- **Metacognition:** Promotion of student reflection on their learning
- **Sense-Making:** Support for the development of problem-solving skills
- **Classroom Discourse:** Use of the appropriate math vocabulary and constructive critique of classmates' math thinking
- **Productive Struggle:** Productive engagement with mathematical ideas and relationships
- **Fluency:** Use of flexible strategies to practice math content and achieve automaticity
- **Instructional Routines:** Structures and expectations that create productive classroom interactions with students

# The Minnesota Reveal Math Authorship



McGraw Hill learning scientists teamed up with expert authors to create a program guided by validated academic research and classroom best practices.

## **Ralph Connelly, Ph.D.**

Authority on the development of early mathematical understanding.

## **Annie Fetter**

Advocate for student ideas and thinking that fosters strong problem solvers. **Contributing Author of Sense-Making Routines**

## **Sharon Griffin, Ph.D.**

Champion for number sense and the achievement of all students.

## **Linda Gojak, M.Ed.**

Expert in both theory and practice of strong mathematics instruction.

## **Susie Katt, Ph.D.**

Advocate for the unique needs of our youngest mathematicians.

## **Ruth Harbin Miles, Ed.S.**

Leader in developing teachers' math content and strategy knowledge.

## **Nicki Newton, Ed.D.**

Expert in bringing student-focused strategies and workshops into the classroom. **Contributing Author of the Game Station**

## **Georgina Rivera, M.Ed.**

Expert in building student agency through culturally responsive teaching.

## **John SanGiovanni, M.Ed.**

Leader in understanding the mathematics needs of students and teachers. **Contributing Author of Number Routines**

## **Jeff Shih, Ph.D.**

Advocate for the importance of student knowledge.

## **Raj Shah, Ph.D.**

Expert in both theory and practice of strong mathematics instruction. **Contributing Author of the Ignite! Activities**

## **Cheryl Tobey, M.Ed.**

Facilitator of strategies that drive informed instructional decisions. **Contributing Author of Math Probes**

## **Dinah Zike, M.Ed.**

Creator of learning tools that make connections through visual and hands-on techniques. **Contributing Author of Foldables**

# Champion a Positive Classroom Environment



## Math Is...Unit: Establish a Community of Learners

The first unit in every grade is the **Math Is... Unit**, which aims to help students and teachers begin to understand math as a set of problem-solving strategies instead of an end result. The unit helps define a productive and positive classroom environment where all students can:

- Share ideas and collaborate freely.
- Find success in math and become doers of mathematics.
- Apply the mathematical thinking and practices to problem solving.
- Take ownership of their personal learning journey.
- Become the creative problem solvers of tomorrow.

# Support Ownership of Learning

## Lesson 1: Understand Your Math Story Is Ongoing

Lesson 1 aims to help all students see themselves as doers of mathematics and take **ownership of their learning** within the math classroom. Students:

- Learn about the teacher’s personal math story, describe their math superpowers, and craft their personal math story.

## Lessons 2–5: Create Mathematical Thinking Habits

Lessons 2 through 5 focus on **Mathematical Practices**. Each lesson unpacks the thinking habits of one or two standards. Students:

- Develop their mathematical thinking and reasoning.
- Apply thinking and reasoning skills while problem-solving and communicate effectively about math.

## Lesson 6: Collaborate and Respect Your Classmates

In Lesson 6, students discuss what a **positive and productive classroom environment** looks like. Students:

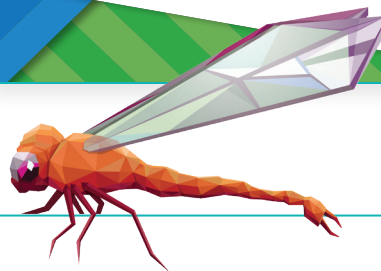
- Develop a voice and choice in their classroom environment.
- Establish norms of interaction within the math classroom.

Lesson 1-1  
**Math Is Mine**

**Be Curious**  
**What do you notice?**  
**What do you wonder?**



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### Learn

Math gives us power to solve problems. Everyone has math superpowers.

Find out about your teacher’s special math skills.

What are your math superpowers?

**Math is... Mindset**  
What makes me special in math?

How do your math superpowers help you?

**Math is... Mindset**  
How can I use my skills in math?

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# Build Student Engagement

Each unit opens with an Ignite! activity, an interesting problem or puzzle that:

- Sparks students' interest and curiosity.
- Provides only enough information to open up students' thinking.
- Motivates them to persevere through challenges involved in problem solving.

*“Let’s bring curiosity, wonder, and joy back into the classroom and make math irresistible for kids.”*

**- Raj Shah,  
Contributing Author**

**Ignite!** activities engage students in productive struggle as they provide only the information necessary to motivate and challenge the student.



## IGNITE!

Name \_\_\_\_\_

### Broken Calculators

**Part A: Your calculator can only add 2s and 5s.**

How can you make numbers less than 100 with this calculator?



**Part B: Your calculator can only add 3s and 7s.**

What whole numbers less than 12 *cannot* be made with this calculator?

How can you make each of the whole numbers 12 through 16 with this calculator?

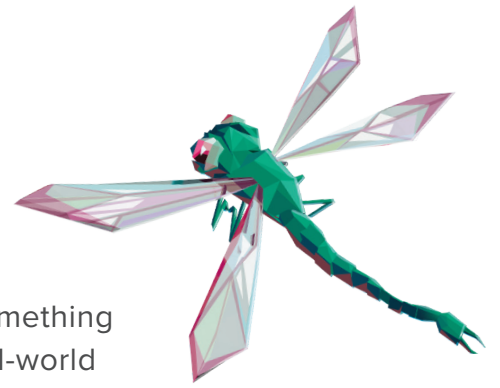


What is the quickest way to make 30 with this calculator? Explain.

Is there a number greater than 11 that *cannot* be made with this calculator? Explain.

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# Put Math in Action With STEM-Focused Units



Math is everywhere, and students should relate to math as something everyone does. STEM-focused units highlight careers and real-world application of math to help students see the application of math as a tool to explore the world around them.



The **STEM Career Kid video** introduce a STEM career and provides an overview of the job responsibilities.



The **Math in Action** videos apply the unit math content with the STEM career focus to bring the content to the real world.

**Mountain Science**

Glaciers are mountain features that are made up of fallen snow that, over many years, compacts into large, thickened ice masses. Ecosystem scientists study glaciers and their melting ice, called runoff, to help us understand how our climate changes, which can hurt the environment. Based on what they learn, scientists then make suggestions for how to be kinder to the environment.

Glacial Runoff May to September (kiloliters)		
Water Source	Current Average	Historical Average
Shehulin River	600,000	523,000
Ross Lake	1,370,000	1,520,000
Baler River	1,700,000	1,752,000

Imagine you are an ecosystem scientist.

- Make a graph that displays the information in the table. Analyze the information.
  - Make comparisons between the current and historical glacial runoff data.
  - What conclusions can you draw about the current and historical glacial runoff based on your comparisons? What similarities and differences do you notice?
  - Use rounded numbers to write word problems that ask, "How much more?" and "How much less?"
- Consider what you have learned. Make a poster that will tell others about the data you analyzed and your conclusions. Be prepared to present your findings to the class.

Unit 2 • Unit Title Goes Here

**STEM Project Cards** allow students to dig deeper creatively and apply their skills to learn more about the STEM focus within the unit.

Unit 3

## Multiplication and Division

**Focus Question**  
What does it mean to multiply and divide?

**Hi, I'm Finn.**  
I want to be a construction manager. Let's say I run 3 different construction sites. I have 12 workers. It is really important that I have an equal number of workers at each construction site. To help me do my job, I need to know how to multiply and divide.

STEM video GO ONLINE

I am back at home, and I still wonder how wind strength affects the size of a hill. So I came up with an experiment!

What do you want to do?

learn about the experiment    form a hypothesis

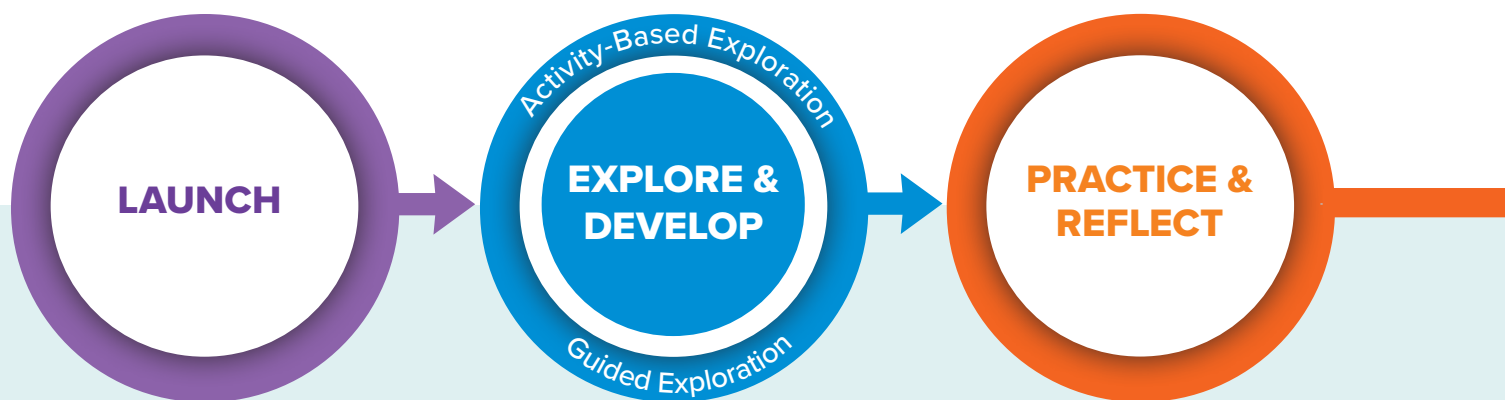
Back    Done

Within **STEM Adventures**, students engage in experiments with the STEM Career Kids, make hypotheses, and apply mathematical knowledge to analyze the data.

# Explore Mathematics Through a Flexible Lesson Design

## The Lesson Model

*Minnesota Reveal Math*®'s lesson model keeps sense-making and exploration at the heart of learning. Lessons provide two instructional strategies to develop the math content and tailor the lesson to the needs and structure of the classroom.



### Launch

**Be Curious** starts every lesson with the opportunity to be curious about math.

- Students focus on exploration and sense-making.
- Teachers foster students' ideas through meaningful discussion.

### Explore & Develop

**Explore and Develop** unpacks the lesson content through activity-based or guided exploration.

- Students explore the lesson concepts and engage in meaningful discourse.
- Teachers utilize effective teaching practices to make meaningful connections.

### Practice & Reflect

**On My Own** offers students opportunities to engage with math and reflect on their learning.

- Students practice lesson concepts, completing the On My Own exercise.
- Teachers monitor progress and have students reflect on the lesson's learning targets.

**Two ways to Teach Every Lesson!**

# Routines

Instructional routines are embedded within *Minnesota Reveal Math* lessons to support a productive classroom.

## Build Fluency

### Number Routines

Support the development of fluency with targeted concepts, prerequisite skills, and mental math strategies.

## MLR

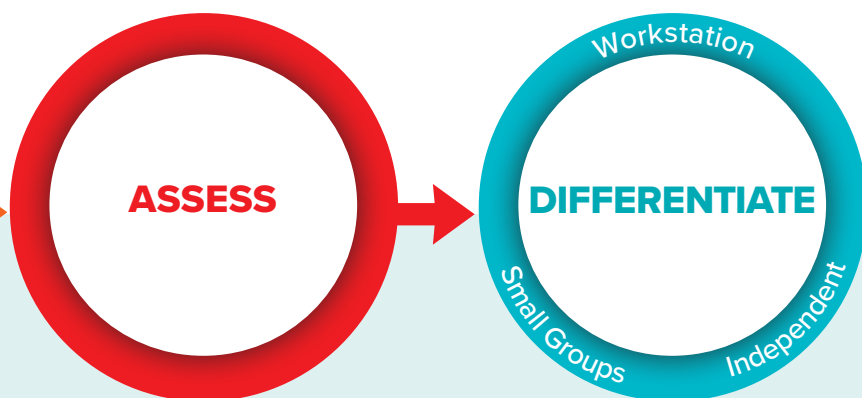
### Math Language Routines

Adjust the way students organize and communicate their own ideas and clarify the ideas of others throughout the lesson.



### Sense-Making Routines

Build conceptual understanding by making sense of mathematical concepts.



## Assess

The **Exit Ticket** includes a daily formative assessment to check for understanding.

- Students complete a short exit ticket and reflect on their learning.
- Teachers use data to inform their daily differentiation.

## Differentiate

**Daily differentiation** helps support every student in their path to understanding.

- Students work on differentiated tasks to reinforce their understanding, build their proficiency, and/or extend their thinking.
- Teachers work with small groups as needed.



## Lesson Model: Launch

# Derive Understanding by Sparking Curiosity


**Sense-Making Routines** create an equitable classroom culture where all ideas are welcome and respected. Student curiosity and ideas started in Be Curious become the base for the day's lesson.

*"All students have ideas about math that are valid and worth talking about."*


**-Annie Fetter,  
Contributing Author**

Lesson 3-1

### Understand Equal Groups

 **Be Curious**

**What do you notice?  
What do you wonder?**



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**Be Curious** provides a low-floor, high-ceiling activity that invites every student to explore, share ideas, and solve problems in their own way.





## Support the Whole Child With Social and Emotional Learning (SEL) Integration

**SEL Objectives** are integrated along with the math and language objectives of the lesson, addressing the CASEL Social and Emotional Learning competencies throughout each grade level.

### Math is... Mindset

What can you do to be an active listener?

#### **SEL** Relationship Skills: Effective Communication

Effective communication includes active listening. Remind students that an active listener gives full attention to the speaker by looking at the speaker and providing thoughtful feedback to the speaker. As students discuss what they noticed and wondered, remind classmates to listen actively and as appropriate, provide thoughtful feedback.

**Math Is... Mindset** prompts, along with teacher supports, keep social and emotional learning at the top of students' minds as they interact and discuss throughout the lesson.

# Lesson Model: Explore & Develop

## Develop Understanding Through Exploration

In Explore and Develop, the teacher has two ways to facilitate student understanding: Activity Based and Guided Exploration. Integrated **Effective Teaching Practices** guide instruction and discourse, keeping the student at the center of the learning.

### Put the Math Practices in Action

#### Math is... Precision


To think like mathematicians, students must employ the **math practices** and develop a problem-solving frame of mind.

*Minnesota Reveal Math*<sup>®</sup> helps students build proficiency with these important thinking habits and problem-solving skills through the **Math is... prompts** found in the Learn phase of every lesson. These prompts model the kinds of questions students can ask themselves to become proficient problem solvers and doers of math.


First introduced in the **Math Is... Unit**, the **Math Is... Prompt** in each Learn focuses on a different mathematical practice.

### Explore & Develop 20 min

**Learn**  
How can you represent the number of peaches in the three baskets?



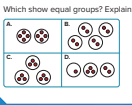
Each basket is one group. Each peach is one object.



Each basket has the same number of peaches.  
There are 3 equal groups with 5 objects in each group.  
3 equal groups of 5  
 $3 \times 5 = 15$

You can use **multiplication** to represent equal groups. **Math is... Precision**  
Why is it important to say "equal groups"?

**Work Together**  
Which show equal groups? Explain how you know.



Sample answer: A, B, and C show equal groups because there is the same number of objects in each group.

**M3P Collect and Display**  
As you discuss the questions with the students, listen and write key words on the board that students use, such as *groups*, *objects*, *number of*, and *multiplication*. Display the words and phrases for student reference. Use the student-generated expressions to help them make connections between student language and the math vocabulary. Update the collection with new understandings as the lesson progresses.

**1 Pose the Problem**  
**ETP Pose Purposeful Questions**

- What might you need to know before finding the total number of peaches?
- How could you find the total number of peaches in all 3 baskets?

**2 Develop the Math**  
Choose the option that best meets your instructional goals.

**M3P Critique, Correct, and Clarify**  
On the board write, *There are 5 groups with 3 objects in each group*. Pair students to discuss whether this statement about the baskets of peaches is correct. Ask them to identify any mistakes and to make changes. Have students write a new, correct version of the sentence.

**3 Bring It Together**  
**ETP Elicit and Use Evidence of Student Thinking**

- If each basket had 6 peaches, how would the drawing be different?
- If there were 4 baskets that each had 4 peaches, what would the drawing look like?

**Key Takeaway**

- One meaning of multiplication is equal groups.

**Work Together**  
The Work Together activity can be used as a formative assessment opportunity to check students' understanding of equal groups. Have students work on the activity in pairs before asking them to identify whether the options show equal groups.

**EB Common Misconception:** Students may think that D shows equal groups because the total number of objects in the first and last group is the same total as the middle group. Remind students that equal groups means that each group has the same number of objects.

**LCM Language of Math**  
Students need multiple opportunities to describe the *number of groups*, the *number of objects in each group*, and the *total number of objects*. Ask students questions that require them to use these terms when describing both representations and equations.

## CHOOSE YOUR OPTION

### Activity-Based Exploration

Students explore and use equal groups to find the total number of objects.

**Materials:** counters or other countable manipulatives, yarn or string

**Directions:** Students will explore ways to find the total number of peaches in 5 baskets.

- Let's imagine there are five baskets and the baskets have peaches in them. How can you determine the total number of peaches in the baskets?

Students will use yarn or string to represent the baskets and counters to represent the peaches. Students may choose to place the same number of counters in each group or a different number. Have them find the total number of peaches and record their work.

#### ETP Support Productive Struggle

- How many counters are in each group?
- How can you find the total number of counters when there is a different number of in each group? How can you find the

### Guided Exploration

Students build a understanding of one meaning of multiplication as equal groups.

#### ETP Use and Connect Mathematical Representations

- Think About It:** What does each object represent?
- What could be another way to show the number of baskets and the number of peaches in each basket?

Discuss with students the meaning of equal groups. Ensure that students understand that equal groups have the same number of objects in each group.

- How could you explain to a friend that the peaches are in equal groups?

Identify the multiplication symbol in the equation and explain that it means *groups of* and can be read as *multiplied by*. Explain that you can use multiplication to find the total number of objects when the number of objects in each group is the same.

## CHOOSE YOUR OPTION

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#### ETP Support Productive Struggle

- How many counters are in each group?
- How can you find the total number of counters when there is a different number of in each group? How can you find the total when there are the same number in each group?
- Do you always have to add to find the total? Explain

Have students share and compare their strategies for finding the number of counters when there was the same and different number in each group.

- Which was easier: finding the total when the groups had the same number of objects or when they had different numbers?

Introduce the concept of multiplication.

- One way to find the total number of objects in equal groups is multiplication. You can multiply the number of groups by the number of objects in each group.

Model 5 groups of 3 counters and present the equation  $5 \times 3 = 15$ . Note the multiplication symbol and as needed discuss operation symbols they already know. Have students repeat the activity with groups in each basket and represent with a multiplication equation.

- What strategies can you use to find the total?

**Activity Debrief:** Have pairs explain how they found the total number of counters. Ask them to think about why using multiplication might be a more efficient strategy for determining the total.

#### Math is... Precision

- Why is it important to say "equal groups"?

Students reflect on the importance of precise language when exploring multiplication.

#### English Learner Scaffolds

**Entering/Emerging** Support students in understanding the meaning of "equal groups" by pointing out the pictures of the peach baskets. Have students chorally count to determine that each group has the same number of objects. Then have students explain how they know that the peaches are in equal groups.

**Developing/Expanding** Provide following sentence starter to help students explain multiplication to equal groups: *I know the peach baskets represent multiplication because \_\_\_\_\_.*

### Guided Exploration

Students build a understanding of one meaning of multiplication as equal groups.

#### ETP Use and Connect Mathematical Representations

- Think About It:** What does each object represent?
- What could be another way to show the number of baskets and the number of peaches in each basket?

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#### Math is... Precision

- Why is it important to say "equal groups"?

Students reflect on the importance of precise language when exploring multiplication.

Have students work with a partner to model 4 groups with 4 objects in each group. Ask students to write the total number of counters in the groups.

### Activity-Based Exploration

Students work together to explore concepts, develop and test hypotheses, and—most importantly—engage in productive struggle as they problem solve and generalize learning.

### Guided Exploration

Teachers facilitate exploration through thoughtful discourse and collaboration using an interactive, digital presentation.

# Tailor Classroom Activities to Student Needs

## Lesson Model: Practice & Reflect

### Engage in Concepts Independently to Further Understanding


Practice and Reflect provides students with the ability to practice with questions that address all elements of rigor.


**On My Own** activities can be completed in the print Student Edition or eBook.

**On My Own** MATH REPLAY GO ONLINE

Name \_\_\_\_\_

**How many? Fill in the blanks.**

1.  \_\_\_\_\_ equal groups of \_\_\_\_\_

2.  \_\_\_\_\_ equal groups of \_\_\_\_\_

**How can you represent the equal groups?**


3. 2 equal groups of 7      4. 4 equal groups of 5


**How many objects?**


5. 4 equal groups of 4 pencils  
 $4 \times 4 =$  \_\_\_\_\_ pencils

6. 3 equal groups of 2 mittens  
 $3 \times 2 =$  \_\_\_\_\_ mittens

**What equation represents the equal groups?**

7.  \_\_\_\_\_

8.  \_\_\_\_\_

9. **STEM Connection** Finn has 3 construction sites. He assigns 8 workers to each site. How many workers does he assign? Explain how you know. 




**Math Replay Video**  
 A one to two-minute video explanation of the lesson concept is provided for students to reference as they complete independent work.

**Additional Practice** contains additional practice pages for the lesson to be completed in print or digital, which embeds learning aids.

Question 4 of 7

**Question 4**  
 Choose the correct answer.  
 Look at the equal groups.



Which multiplication equation represents the equal groups?

A)  $2 \times 7 = 14$   
 B)  $3 \times 6 = 18$   
 C)  $3 \times 7 = 21$   
 D)  $3 \times 7 = 21$

Need help with this question?

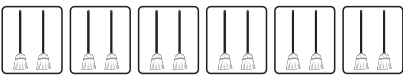
## Exit Ticket: Use Data to Inform Differentiation

Lessons close with an Exit Ticket to check for student understanding and **provide recommendations to the teacher for further differentiation.**

Lesson 3-1  
**Exit Ticket**

Name \_\_\_\_\_


1. How many? Fill in the blanks.



\_\_\_\_\_ equal groups of \_\_\_\_\_

2. Connor makes 5 small fruit bowls. Each fruit bowl has 4 cherries. How many cherries does Connor use to make the 5 fruit bowls?  
Write a multiplication equation.  
\_\_\_\_\_


3. Randy arranges some beetles into equal groups. Which can be used to show how many beetles Randy has? Choose all that apply.



A. 2 equal groups of 2    B.  $4 \times 2 = 8$   
C. 4 equal groups of 2    D.  $2 \times 2 = 4$

**Reflect On Your Learning**

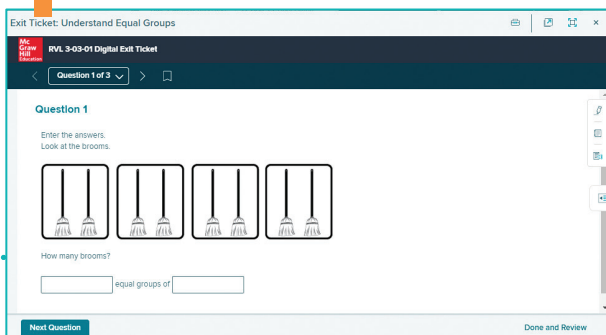
I'm confused.    I'm starting to understand.    I understand.    I can teach someone else.



**Reflect On Your Learning** allows students to reflect on their learning daily and communicate their confidence level with the teacher.



**Exit Tickets** can be taken digitally, which provides immediate data reporting options.



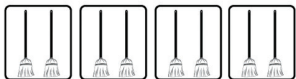
Exit Ticket: Understand Equal Groups

RVL 3-03-01 Digital Exit Ticket

Question 1 of 3

**Question 1**

Enter the answers.  
Look at the brooms.



How many brooms?  
\_\_\_\_\_ equal groups of \_\_\_\_\_

Next Question    Done and Review

**Exit Ticket Recommendations**

If students score	Then have students do
3 of 3	Additional Practice or any of the <b>B</b> or <b>E</b> activities
2 of 3	<i>Take Another Look</i> or any of the <b>B</b> activities

**Key for Differentiation**

- R** Reinforce Understanding
- B** Build Proficiency
- E** Extend Thinking

# Lesson Model: Differentiate

## Create Purposeful Learning Moments Driven by Data

Differentiation within *Minnesota Reveal Math*<sup>®</sup> provides a variety of engaging, multimodal activities in different delivery options that any student can access based on the area they need to focus on most for that lesson.

**Reinforce Understanding** through small-group instructional tasks, assignable digital lessons, and independent work.

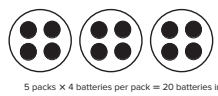
**Build Proficiency** through digital games or interactives, the student practice book, and spiral review activities.

**Extend Your Thinking** through thoughtful application cards, simulations, web sketches, and extension worksheets.



**Differentiate**
🕒 10 min
📄 Select resources based on your classroom set up, or your students' needs.

<p style="text-align: center;"><b>R</b> Reinforce Understanding</p> <p style="font-size: 8px; text-align: center;">SMALL GROUP</p>	<p><b>How Many Xs?</b></p> <p>Work with students in pairs. Have one student roll a number cube and then draw that number of circles. Then have the other student roll a number cube to determine the number of Xs to draw in each circle. Students should record a multiplication equation to find the total number of Xs. Help students recognize that they can skip count instead of counting all of the circles. Repeat the process. Have the students compare their totals over several rounds to determine the greatest number.</p>	<p style="text-align: center;"><b>B</b> Build Proficiency</p> <p style="font-size: 8px; text-align: center;">WORKSTATIONS</p>
<p style="text-align: center;"><b>GO ONLINE</b></p>	<p><b>Take Another Look Lesson</b></p> <p>Assign the interactive lesson to reinforce targeted skills.</p> <ul style="list-style-type: none"> <li>Model Multiplication (Objects)</li> </ul> <div style="text-align: right; border: 1px solid #00728f; padding: 2px; width: fit-content; margin: 0 auto;">  Assign         </div>	<p style="text-align: center;"><b>GO ONLINE</b></p>
<p style="text-align: center;"><b>INDEPENDENT WORK</b></p>	<p style="text-align: center;"><b>Online Worksheet</b></p> <p>Lesson 3-1 • Reinforce Understanding</p> <p style="text-align: center;"><b>Understand Equal Groups</b></p> <p>Name _____</p> <p>When objects are in equal groups, multiplication helps you determine the total.</p> <p>There are 4 pots with 2 flowers in each pot. Each pot is one group. Each flower is one object.</p> <p>4 equal groups of 2 <math>4 \times 2 = 8</math></p> <p>Draw equal groups to represent the equation.</p> <p>1. <math>3 \times 6 = 18</math>  Check student's drawings.</p> <p>What multiplication equation matches the representations?</p> <p>2.  <math>5 \times 4 = 20</math>      3.  <math>3 \times 4 = 12</math></p> <p>What representation matches the equation?</p> <p>4. <math>2 \times 4 =</math>  Check student's drawings.</p>	<p style="text-align: center;"><b>INDEPENDENT WORK</b></p>
<p style="text-align: center;"><b>GO ONLINE</b></p>	<p style="text-align: center;"><b>Interactive Additional Practice</b></p> <p>Assign the digital version of the Student Practice Book.</p> <div style="text-align: right; border: 1px solid #00728f; padding: 2px; width: fit-content; margin: 0 auto;">  Assign         </div>	<p style="text-align: center;"><b>GO ONLINE</b></p>
<p style="text-align: center;"><b>GO ONLINE</b></p>	<p style="text-align: center;"><b>Student Practice Book</b></p> <p>Lesson 3-1</p> <p style="text-align: center;"><b>Additional Practice</b></p> <p>Name _____</p> <p><b>Review</b></p> <p>You can multiply the number of equal groups by the number of objects in each group to find the total number of objects.</p> <p>If Jay buys five 4-packs of batteries, he buys a total of 20 batteries. <math>5 \times 4 = 20</math>.</p> <p></p> <p>5 packs <math>\times</math> 4 batteries per pack = 20 batteries in all</p> <p>How can you use a drawing to represent the equal groups?</p> <p>1. 4 equal groups of 6 <b>Sample answer: Draw 4 groups of 6 circles.</b></p> <p>2. 5 equal groups of 2 <b>Sample answer: Draw 5 groups of 2 circles.</b></p> <p>3. 2 equal groups of 8 <b>Sample answer: Draw 2 groups of 8 circles.</b></p>	<p style="text-align: center;"><b>GO ONLINE</b></p>



# Workstation Kit

The Workstation Kit provides resources to support differentiated workstations or centers.

## Game Station

A fun way to engage with the lesson content and collaborate with classmates

## Application Station

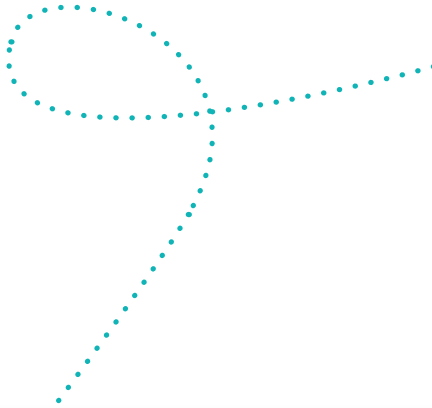
Opportunity to apply unit content to real-world problems and projects. Application Station Cards include:

- STEM-Focused Projects
- Cross-Curricular Connections
- Real-World Problem Solving

## Digital Station

Digital opportunities to interact and practice include:

- Digital Games
- STEM Adventures
- Interactive Practice
- Spiral Review
- Take Another Look Mini-Lessons



### Extend Thinking

**Use it!** Application Station

**How Many Beats in a Song?** Students analyze sheet music to determine the number of beats in each measure of a song. The content of this card has concepts covered later in Lesson 3-4. You may want to assign this card to students ready to explore content covered later in this unit.



WORKSTATIONS

**Own it!** Digital Station

**Build Fluency Games.**

Assign the digital game to develop fluency with addition and subtraction.



**Spiral Review**

Assign the digital Spiral Review Practice to students or download and print PDFs of the Spiral Review from the Digital Teacher Center.




GO ONLINE

**Websketch Exploration**

Assign a Websketch Exploration to apply skills and extend thinking.



**Student Practice Book**

- What multiplication equation represents the equal groups?  
  
 $3 \times 7 = 21$
- Haley buys markers in packages of 4. How many markers are in 3 packages?  
 a. How can you draw a picture to represent the problem?  
**Students should draw 3 groups of 4 objects.**  
 b. What equation represents the problem?  
 $3 \times 4 = 12$   
 c. What is the solution? Fill in the blank.  
 There are 12 markers in 3 packages.
- Randy earns money from walking dogs. He earns \$5 for walking each of 6 dogs. How much does Randy earn? Explain how you know.  
**Sample answer: 6 equal groups of \$5 or  $6 \times 5 = 30$ . He earns \$30 walking dogs.**
- Finn fills an order for boxes of nails at 4 construction sites. He orders the same number of boxes for each site. How many boxes of nails might he order? Explain how you know.  
**Sample answer: If Finn orders 6 boxes of nails for each site, he needs 24 boxes of nails.  $4 \times 6 = 24$ .**



Find things around your home that come in packages, such as grocery items or batteries. Have your child write multiplication equations to trace the total number of objects in a certain number of packages.

**Online Resource**

Lesson 3-4 • Extend Thinking  
**Understand Equal Groups**

- Name \_\_\_\_\_
- What are some different ways to show 12 objects in equal groups? Show at least two different ways. Write a multiplication equation for each way.  

Check students' answers.

Check students' answers.
  - Mr. Lopez is buying socks for 4 grandchildren. There are 12 pairs of socks in a package. He will give each grandchild the same number of pairs of socks.  
 a. How many pairs of socks can Mr. Lopez give to each grandchild?  
**Mr. Lopez can give each grandchild 3 pairs of socks.**  
 b. How many pairs of socks could Mr. Lopez give to each grandchild if each package had 16 pairs of socks?  
**Mr. Lopez could give each grandchild 4 pairs of socks.**

INDEPENDENT WORK

# Flexible Assessments for Growth

*Minnesota Reveal Math*® assessments allow students to demonstrate understanding through multimodal responses—verbal, written, visual, and hands-on. Assessments were designed with **Universal Design for Learning (UDL)** principles to support flexible, inclusive, and meaningful assessment.

## Diagnostic Insights

Measure student understanding of prerequisite skills at the start of the year and before each unit with:

- The *ALEKS* Initial Knowledge Check—administered digitally at the beginning of the year.
- Unit Readiness Diagnostics—available digitally.

## Summative Assessments and Performance Tasks

Evaluate student understanding, application, and progress aligned with the Minnesota K–12 Academic Standards in Mathematics through:

- Unit Assessments
- Unit Secure Performance Tasks

## Targeted Intervention

Access ready-made intervention resources aligned to diagnostic and summative assessment results:

- **Guided Support:** Teacher-facilitated, small-group mini-lessons
- **Skills Support:** Skill-based practice for targeted review
- **Take Another Look:** Digital mini lessons with gradual release activities

Name \_\_\_\_\_

**Unit 3**  
**How Ready Am I?**

1. Which number makes the equation true?  
 $5 + 4 = 4 + ?$

A. 3      B. 4      C. 5      D. 6

2. Cara bought a package of toy cars for each of her 5 friends. Each package has 4 cars. Which equation can be used to find the total number of cars Cara bought?

A.  $5 + 4 = ?$       C.  $4 + 4 + 4 + 4 = ?$   
B.  $5 + 5 + 5 + 5 + 5 = ?$       D.  $4 + 4 + 4 + 4 + 4 = ?$

3. Marco has 3 shelves in his room. There are 3 trophies on each shelf. How many trophies does Marco have?

A. 3      B. 6      C. 9      D. 12

4. Maria's dog buried 15 bones. Maria found 6 bones. Maria wrote the subtraction equation  $15 - 6 = ?$  to find out how many bones are still buried. Which equation could Maria use to help solve her equation?

A.  $15 + 6 = 9$       C.  $6 - 15 = 9$   
B.  $6 + 9 = 15$



## Dynamic Digital Practice

Every lesson includes a range of practice sets with interactive question types, helpful tools, hints, examples, and multiple attempts allowed to support student success.

- ✓ **Administrator Reports:** Access key insights and assessment results with ease.

# Actionable Insights to Track Progress

The *Minnesota Reveal Math* data system, powered by the **Standards and Skills Graph**, serves as the hub for real-time class and student performance insights, tracking progress over time and highlighting past achievements across grade levels.

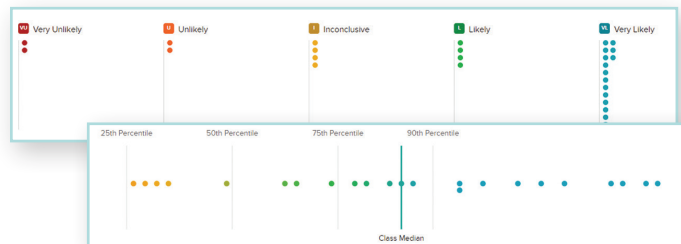


## Data Sources:

The **Standards and Skills Graph** is populated with student interim assessment data as well as data from McGraw Hill's core, supplemental, and intervention programs.



**Distribution Charts** provide real-time insights into student readiness, displaying performance data by grade, domain, and standards at a glance. Each dot represents a student's progress, simplifying lesson planning and guiding instruction.



## Five Levels of Tailored Recommendations at Your Fingertips

All data captured in the Standards and Skills Graph automatically groups students and generates up to five levels of tailored recommendations, including personalized practice and small-group mini-lessons. Built-in support for intervention and acceleration is all assignable with a single click.



## Explore More Reports

Unlock additional insights to support student growth and instruction with:

✓ **Actionable Insights to Track Progress:** Review real-time data for *Minnesota Reveal Math* practice and assessments, including item analysis by student and class.

✓ **Standards Performance Report:** See class and student performance by standard, with cumulative scores to support instructional decisions.

# Personalize Student Learning Like Never Before

*Minnesota Reveal Math*® is more than just a curriculum—it's a complete learning ecosystem personalized to meet each student's needs.



## **Minnesota Reveal Math Generates Rich Data in Real Time**

As students answer questions, data from **Interim Assessments, Daily Core Practice & Assessment, Advanced Adaptive Learning, and Dynamic Personalized Practice** flows into the program's data system, generating powerful insights.



## **Real-Time Data Powers Personalized Learning Paths**

Rich data automatically generates individualized learning paths for each student, grouping them by what they need and saving teachers valuable planning time.

As students' needs evolve, the program updates its personalized recommendations accordingly—new data generates new insights each and every day.

## **Dynamic Personalized Practice** A B

Using real-time insights, *Minnesota Reveal Math* automatically groups students and generates up to five levels of personalized recommendations to meet each student's needs. Teachers can easily assign mini-lesson, tools, and scaffolds with one click, ensuring all learners access grade-level content.

## **Advanced Adaptive Learning with ALEKS**® C

*ALEKS*® *Adventure*™ and *ALEKS*, embedded within *Minnesota Reveal Math*, use AI to assess and adjust in real time, providing practice tailored to each student's skill level. This targeted intervention or acceleration helps students focus on what they're ready to learn instead of standard grade-level content.

## **Collaborative and Independent Learning** D

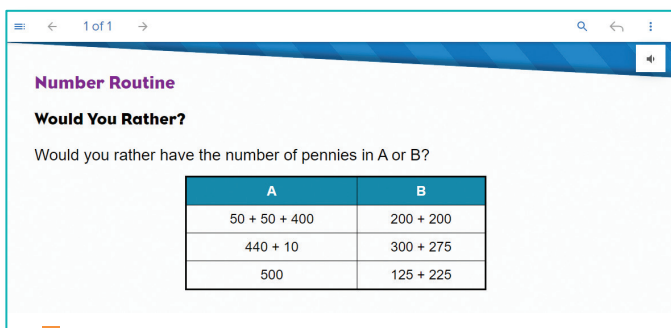
Students apply their understanding through both digital and hands-on small-group activities and independent practice, including ready-made games and tasks with STEM connections.



# Fluency Supports Throughout the Unit

Fluency is not just about memorization; it is about having a working understanding and mastery of operations, relationships, and concepts. *Minnesota Reveal Math*® speaks to all the elements of fluency throughout each unit.

## Daily Fluency Activities



**Number Routine**  
**Would You Rather?**  
Would you rather have the number of pennies in A or B?

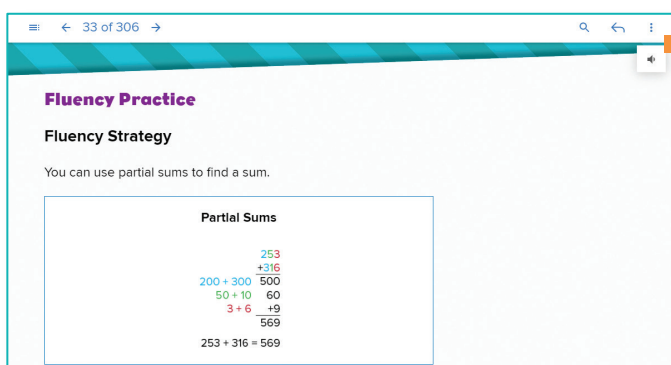
A	B
$50 + 50 + 400$	$200 + 200$
$440 + 10$	$300 + 275$
500	$125 + 225$

**Number routines** develop a strong number sense and promote an efficient and flexible application of strategy to solve unknown problems. Students use discussion and reasoning to help make the most of the previously learned strategy.



**Spiral Review and Digital Games** provide ample practice of previously learned content to develop proficiency and fluency throughout the year.

## Unit Fluency Practice



**Fluency Practice**  
**Fluency Strategy**  
You can use partial sums to find a sum.

**Partial Sums**

$$\begin{array}{r} 253 \\ +316 \\ \hline 200+300 \quad 500 \\ 50+10 \quad 60 \\ 3+6 \quad 9 \\ \hline 569 \\ 253 + 316 = 569 \end{array}$$

**Fluency Practice** is available for each unit in both the print and interactive Student Edition. Based on:

- **Fluency Strategy** – focus on practice with the strategy
- **Fluency Flash** – a check for understanding
- **Fluency Check** – students utilize whichever strategies they are most comfortable using
- **Fluency Talk** – students share their responses and communicate their understanding

# Language Supports Throughout the Unit and Lesson

*Minnesota Reveal Math* was developed around the belief that mathematics is not just a series of operations, but a way of communicating—listening, speaking, reading, writing, and most importantly, thinking. All students can benefit from support designed to develop and promote the use of mathematical language.

## MLD

### Math Language Development

The **Math Language Development** feature offers insights into one of the four areas of language competence—reading, writing, listening, and speaking—and strategies to build students’ proficiency with language.

## EL

### English Learner Scaffolds

**English Learner Scaffolds** are based on WIDA levels and provide teachers with scaffolded instruction to help students make meaning of math vocabulary, ideas, and concepts in context.

### Language Objectives

In addition to a content objective, lessons have a **language objective** that identifies a linguistic focus of the lesson for all learners. The language objective also identifies the math language routines of the lesson.

## LOM

### Language of Math

**Language of Math** promotes the development of key vocabulary terms that support how we talk about and think about math in the context of the lesson content.

## MLR

### Math Language Routines

Designed by Stanford Center for Assessment, Learning, and Equity, the following Math Language Routines occur during Explore and Develop to promote the use of mathematical language.

- MLR1: Stronger and Clearer Each Time
- MLR2: Collect and Display
- MLR3: Critique, Correct, and Clarify
- MLR4: Information Gap
- MLR5: Co-Craft Questions and Problems
- MLR6: Three Reads
- MLR7: Compare and Connect

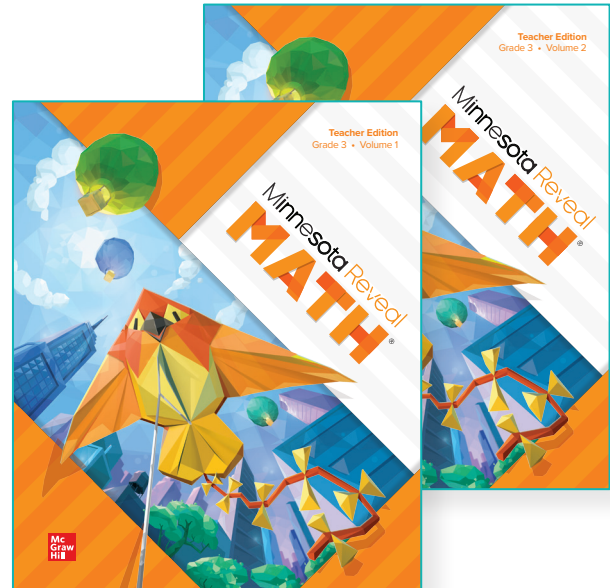
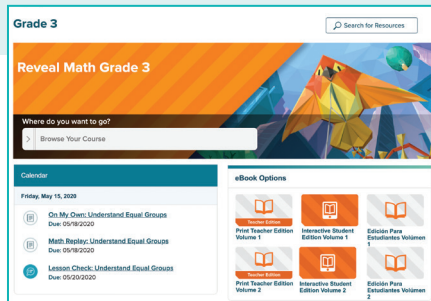


# Program Components: Teacher

## Teacher Digital Experience

Teachers have access to an intuitive and easy-to-use platform from which to plan and implement engaging instruction. The teacher experience includes:

- Daily interactive lesson presentations
- Engaging, rich differentiation resources
- Auto-scored practice and assessment items
- Customizable assessments and item banks
- Teacher and administrator data and reporting
- Professional development workshops and videos
- Unit and lesson files that can be downloaded with one click
- Ability to add resources, including presentations, website links, and more
- Classroom management and grouping tools
- Adaptive Learning with *ALEKS*

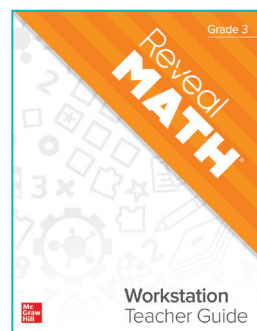


Teacher Edition, 2-volume

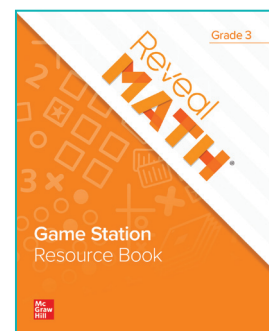
## Workstation Kit



Application Station Cards



Workstation Teacher Guide

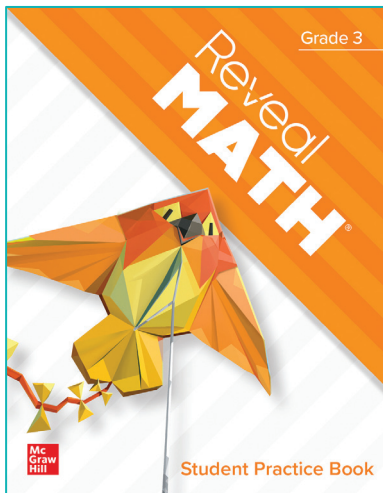


Game Station Resource Book

# Program Components: Student



Student Edition, 2-volume

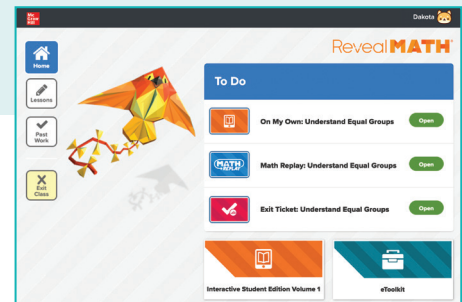


Student Practice Book

## Student Digital Experience

Students have access to a robust set of engaging digital tools and interactive learning aids, including:

- Interface designed for elementary students
- Interactive Student Edition
- Daily interactive practice with embedded learning aids
- Online assessments with interactive item types
- Digital games designed for purposeful practice
- Instructional mini-lessons to reinforce understanding
- Rich exploratory STEM Adventures
- Visual and dynamic WebSketch activities
- Animations, videos, and eTools



# Minnesota Reveal **MATH**<sup>®</sup>

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Learn more at:

[mheducation.com/minnesota](http://mheducation.com/minnesota)

