

REVIEWER GUIDE

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## ▶ Watch the *Vmath* Overview Video

1. **Go to the *Vmath* Adoption Review site**
2. **View the video** on the *Vmath* Adoption Review site for an overview of the *Vmath* program and purpose.

**FLORIDA MATH ADOPTION**  
2015-2019  
VOYAGER SOPHIC  
LEARNING

**Vmath**  
Welcome, Florida Math Adoption Reviewers!

*Vmath*® is a targeted, standards-based solution to accelerate Florida's struggling students to grade-level math success. This Review Site was created for Florida educators to learn more about the *Vmath*® pedagogy and to review all components in a digital format. Please begin your review by downloading and printing the Reviewer Guide. Thank you for your consideration.

**DOWNLOAD THE REVIEWER GUIDE**  
We have created comprehensive Reviewer Guides with step-by-step instructions for the digital review process. Please download and have these guides available before you begin to review.

**ELEMENTARY** **MIDDLE SCHOOL**

**WATCH OVERVIEW VIDEO**  
Please watch this brief overview video for an introduction to *Vmath* before beginning your exploration.

**MAFS ALIGNMENT & OTHER RESOURCES**  
We have provided these resources online to support your review of the materials.  
Levels: G-1 Alignment to MAFS • System Requirements

**EXPLORE VMATH**  
Please have your Reviewer Guide available to log in and effectively navigate through the digital materials. Begin with the Teacher Center.

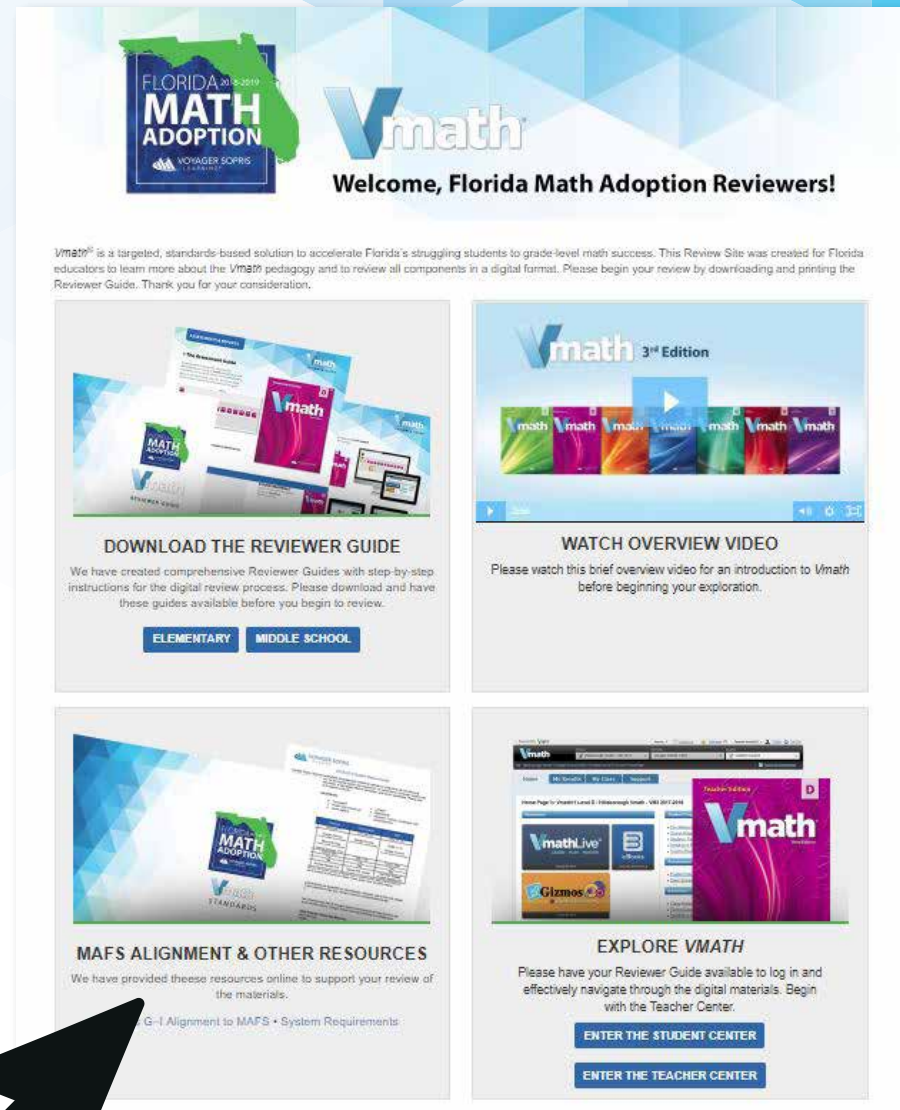
**ENTER THE STUDENT CENTER**  
**ENTER THE TEACHER CENTER**

## ► Review the Standards Alignment Document

*Vmath*® aligns to the MAFS and course standards.

*Vmath's* balanced, systematic approach creates successful learning experiences for students and develops confident, independent learners of mathematics. As an intervention system it includes explicit instruction and a range of targeted assessments to inform teachers and support data-driven decision making.

1. **Download this document** to view a complete list of MAFS and course standards covered in *Vmath*.
2. During the Instructional Design section of this Reviewer Guide, **you will be directed to several examples of standards coverage** using our Interactive Standards Alignment tool located in the eBooks.



**FLORIDA MATH ADOPTION**  
MAY 2014-2019  
MAYOR ROBERT R. BIVENS

**Vmath**  
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ELEMENTARY MIDDLE SCHOOL

**Vmath 3<sup>rd</sup> Edition**  
WATCH OVERVIEW VIDEO  
Please watch this brief overview video for an introduction to *Vmath* before beginning your exploration.

**MAFS ALIGNMENT & OTHER RESOURCES**  
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G-1 Alignment to MAFS - System Requirements

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ENTER THE STUDENT CENTER  
ENTER THE TEACHER CENTER

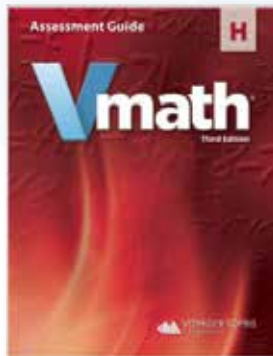


## ► Introduction to *Vmath*

This Reviewer Guide was created as a resource to be used when exploring *Vmath* **Level H**. *Vmath* is available as a blend of print materials and engaging technology.

### TEACHER MATERIALS

- Vmath* Teacher Edition (print and digital)
- Additional assessment and reteach material (digital only)
- VPORT Online Data Management
- Access to *VmathLive*
- Access to Gizmos



### STUDENT MATERIALS

- Student Books (print and digital)
- Access to *VmathLive*
- Access to Gizmos



## ► Log in to the *Vmath* Teacher Center

1. To begin your review, **login to the Teacher Center**. Enter the username and password provided to enter the *Vmath* Teacher Center site.

Please note Voyager Sopris Learning® offers single sign-on integrations to simplify accessibility and interoperate with pre-existing district technologies.

2. **Enter the username and password below**, to enter the *Vmath* Level H Teacher Center website.

Username: **Vmath6T14**

Password: **HeavyFloor3**



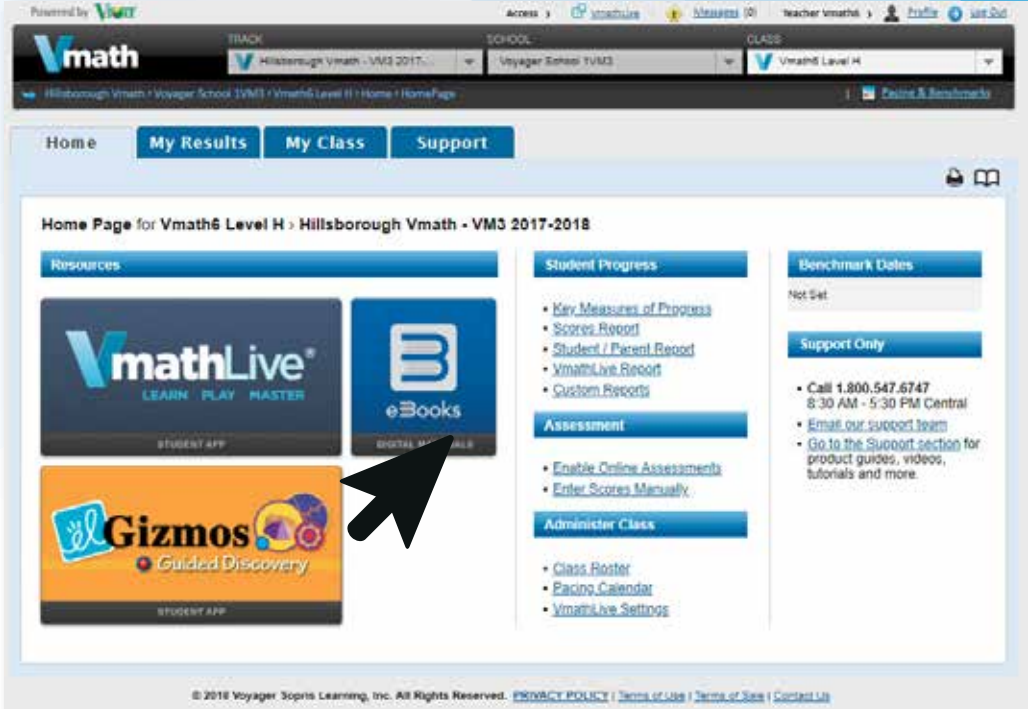
The screenshot shows the VPORT login interface. At the top, it says "Enter scores • Track results • Generate reports • Get support". The main logo is "VPORT" with a colorful circle in the 'O', and the tagline "Managing student achievement" below it. There are two input fields: one for the username "vmath6t14" and one for the password "\*\*\*\*\*". A "Login" button is to the right of the password field. Below the password field is a link "Forgot User ID or Password?". The footer contains the Voyager Sopris Learning logo and text: "Voyager Sopris Learning is the leading educational company focused exclusively on at-risk and special student populations. Learn more." It also includes "System Requirements" (High speed Internet connection, System Check button with a red X), "Customer Support" (Call 1 800 547 6747, Email our support team), and "Share VPORT on Facebook" (Facebook icon, "Do the best of your friends to like this site.", Like button). At the bottom, it says "© 2018 Voyager Sopris Learning, Inc. All Rights Reserved. | PRIVACY POLICY | Terms of Use | Terms of Sale".

## ► Teacher Center Overview

The *Vmath* Teacher Center provides access to all of the resources to support a successful implementation of *Vmath* instruction including:

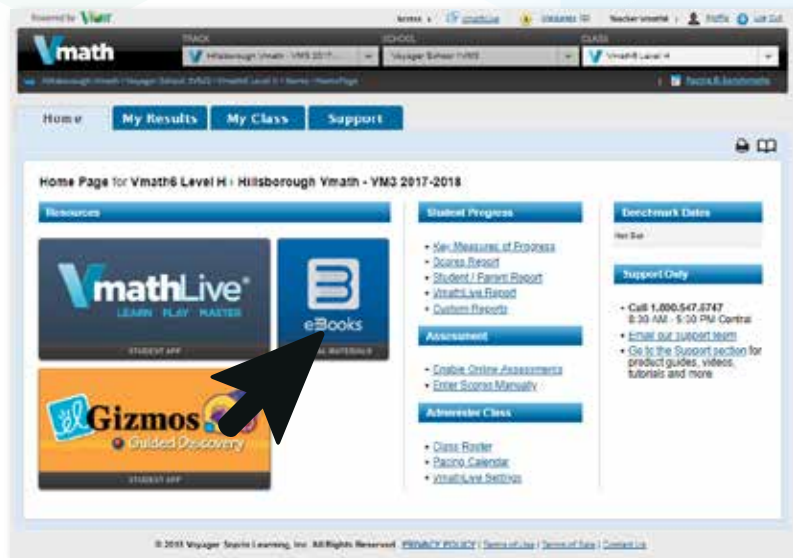
1. **eBooks:** digital versions of the print and digital-only Vmath resources
2. **VmathLive:** provides a teacher view of the student technology
3. **Gizmos:** interactive simulations to reinforce conceptual knowledge

To continue your review of *Vmath* instructional components, click the eBook icon from the Teacher Center to enter the bookshelf.

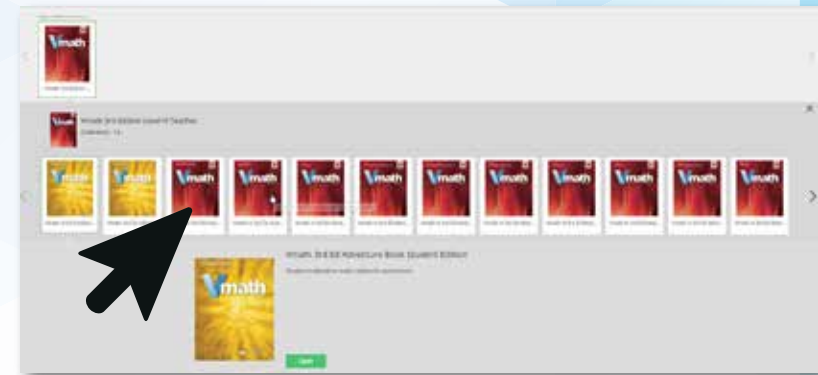


**NOTE:** More detailed information for each section will be covered throughout of the Review Guide.

## ► Access the Teacher Material eBooks



1. **Click the eBooks icon** from the Teacher Center to enter the bookshelf.



2. Use your cursor to scroll over each book to see the full title. Select the **Vmath Level H Teacher Edition**.

**Click the green Open button** to enter. The eBook has fully loaded once the toolbar appears across the top.

### Teacher Materials:

The **Vmath Teacher Edition**, available in both print and digital format

**Reteach Book**, available in digital only format

The **Assessment Guide**, available in digital edition only

**Vmath Adventure Resource**, available in digital only format.

**NOTE:** Use the arrow on the right side of the screen to view all books on this shelf.



# Instruction & Pedagogy

*Vmath* provides targeted math intervention and is specifically designed to reinforce grade level expectations. As a blended print and digital program—*Vmath* delivers essential content using strategies proven to accelerate and motivate at-risk students.

**Let's take a look at *Vmath's* unique instruction, pedagogy, and the supportive tools and resources** that make it easy for teachers to implement and effective for students to reach grade level expectations.

## ► Review the Teacher Edition Table of Contents

To explore the *Vmath* experience, turn to **Module 4, Expressions and Equations** in the Table of Contents and click the page number of the first lessons. (Page 129.) As you explore the lesson types notice the variety of ways *Vmath* addresses the standards associated with using variables to represent equalities.

**eBook navigation:** eBook tools that help you quickly navigate the book are found in the top left corner of the screen, in the bottom center of the screen, or the search bar in the upper right hand corner can be used.

**Print navigation:** You can choose to explore *Vmath* by using the Teacher Edition provided.

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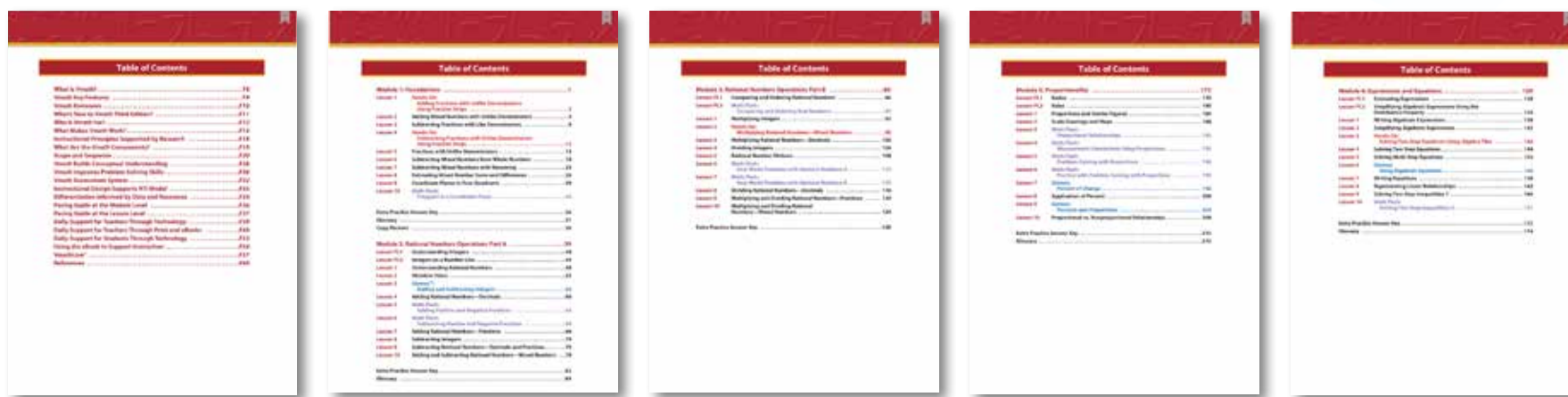
## ► Learn about the Four Types of Lessons in *Vmath*

To understand the instructional design of *Vmath*, first become familiar with the **Table of Contents**. There are seven modules in each *Vmath* level. Module 1 is a foundation module acting as a review of concepts and skills from previously taught grades. Modules 2–7 focus on concepts and skills specific to the major work of the grade the level represents.

The **Table of Contents** includes several important features to highlight the instructional components.

Each module focuses on a specific topic or skills. Within in each module are a variety of different types of lessons.

- Lessons indicated by **black font** in the TOC refer to *Vmath* lessons.
- Lessons indicated by **red font** refer to **Hands-On Guided Discovery Lessons**.
- Lessons indicated by **blue font** refer to **Gizmo Guided Discovery Lessons**.
- Lessons indicated by **purple font** refer to **Math Flash Lessons**.



## ► Explore the features of PreSkill Lesson

Turn to page 130.

**Preskill lessons** are lessons to help students revisit previously learned skills, or prerequisite skills, to the content to be taught in the module.

The **Preskill lessons** may be from previous modules or previous levels of *Vmath*. Teachers may choose to skip the Preskill lessons if data show that students have mastered the prerequisite skills needed.

Preskill lessons may take the form of any of the lesson types you will explore in your review.

As you begin to explore the eBook, notice the black circle icons. These are additional links to resources to help the teacher present the lesson.





## ► Explore the features of *Vmath* Lessons

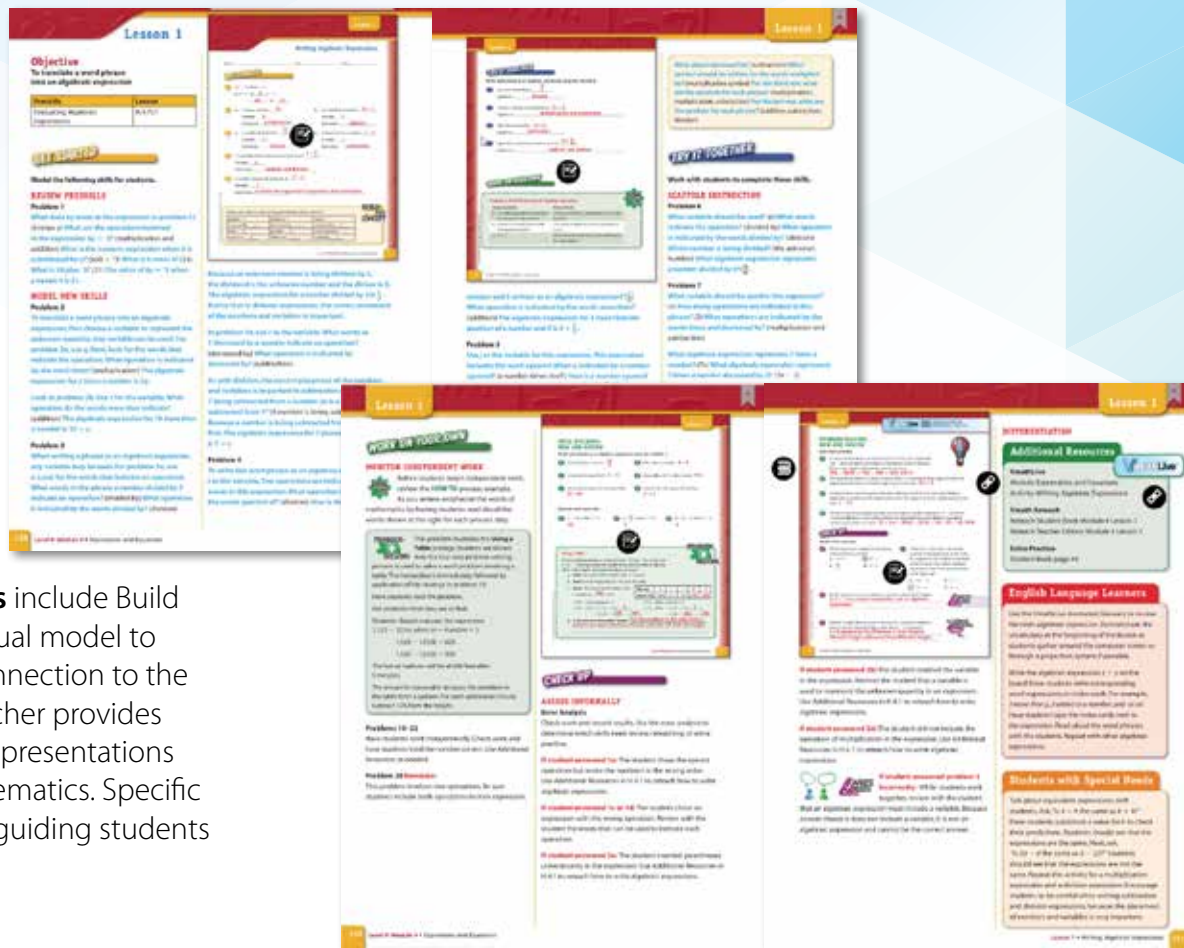
Turn to page 138.

*Vmath* Lessons contain four-step scaffolded instruction specific to concepts and skills related to grade-level expectations for both problem-solving and concept development.

*Vmath* Lessons follow an instructional routine that includes four steps:

1. **Get Started**—teacher modeling to introduce new skills
2. **Try it Together**—Transition students from initial learning to independent practice
3. **Work on Your Own**—Apply new learning independently
4. **Check Up**—information assessments to check understanding analyze errors, and provide corrective feedback.

To promote conceptual understanding, *Vmath* Lessons include Build the Concept and How to boxes on the page using a visual model to help students develop a deeper understanding and connection to the mathematical concepts. Along with the model, the teacher provides explicit language to help students connect the visual representations to the standard symbolic representations used in mathematics. Specific *Vmath* Lessons also include problem-solving practice guiding students through the use of problem-solving strategies.



MAFS.7.EE.2.4

## ► Explore the features of Hands On Guided Discovery Lessons

Turn to page 146.

**Hands On Guided Discovery Lessons** include activities that are specific to the use and application of manipulatives to help students develop deeper conceptual understanding.

**Hands On Guided Discovery Lessons** provide a systematic approach to using manipulatives for problem solving and conceptual understanding. Each Hands-On lesson follows a four-step instructional routine:

1. **Get Reading**—teacher modeling of new concepts.
2. **Discover**—teacher guides student learning
3. **Discover Box**—students use manipulatives to discover key concepts
4. Students engage in further exploration independently

Hands On Lessons use concrete manipulatives such as base-10 pieces and fraction strips to reinforce conceptual understanding.

The screenshot displays the 'HANDS-ON GUIDED DISCOVERY Lesson 3' interface. It is divided into several sections:

- Objective:** To use algebra tiles to solve a two-step equation.
- Materials:** Algebra tiles.
- Lesson Notes:** A section with a spiral notebook icon providing background information for the teacher.
- GET READY:** A section with a blue banner containing 'Problem 1' and 'Problem 2' with their respective instructions.
- DISCOVER:** A central section with a purple banner containing 'Problem 3' and 'Problem 4' with their respective instructions.
- DISCOVER BOX:** A section on the right with a red banner containing a 'Discover Box' and 'EXPLORE MORE' section.
- Lesson Adaptations for Module 4:** A red-bordered box at the bottom right with 'Lesson A.3' instructions.

MAFS.7.EE.2.3 and MAFS.7.EE.2.4



## ► Explore the features of Gizmo Guided Discovery Lessons

Turn to page 156.

**Gizmo Guided Discovery Lessons** incorporate online digital manipulatives to help student develop deeper conceptual understanding.

**Gizmo Guided Discovery Lessons** are modular, interactive online math simulations for students. Gizmos provide explicit and systematic instruction to help teachers guide students as they use online manipulatives to understand abstract concepts.

There Gizmo lessons follows a four step instructional routine:

1. **Get Ready**—teacher and students review prerequisite skills needed
2. **Discover**—teacher guides students to discover important math concepts.
3. **Discover Box**—students use online manipulatives to discover key concepts
4. **Explore More**—students engage in further exploration independently.

Gizmos integrate conceptual understanding using fun, easy to use simulations. Students can access Gizmos through their student center.

MAFS.7.EE.2.3 and MAFS.7.EE.2.4


## ► Explore the features of Math Flash Lessons

Turn to page 171.

**Math Flash Lessons** are brief 20-minute lessons that help students reinforce the skills needed to close gaps in instruction.

**Math Flash Lessons** reinforce the concepts and skills that are frequently tested providing students with proficiency practice.

Continue to learn more about the instruction of *Vmath* by exploring how *Vmath* helps students build problem solving skills. Turn to page 184 for an example.



**MATH flash**  
Lesson 10

**Objective**  
To solve a two-step inequality

**Model the following skill for students.**

Look at the inequality  $x - 9 > 3$ . To solve, first subtract 9 from each side of the inequality. What is 3 plus 9 minus 9? (3) What is 3 minus 9? (10) By what number should each side be multiplied? (5) Does the direction of the inequality symbol change? (no) Why not? (Each side is multiplied by a positive number.) What is 5 times 3? (15) What is 10 times 5? (50) What is the solution of the inequality? ( $x > 50$ )

**Work with students to complete the following skill.**

Look at the inequality  $-4y - 6 > 6$ . To solve, first add 6 to each side of the inequality. What is  $-4y$  minus 6 plus 6? ( $-4y$ ) What 6 plus 6? (12) By what number should each side be divided? (4) Does the direction of the inequality symbol change? (yes) Why? (Each side is divided by a negative number.) What is  $-4y$  divided by  $-4$ ? (y) What is 12 divided by  $-4$ ? (3) What is the solution of the inequality? ( $y < 3$ )

Lesson 10 • Math Flash: Solving Two-Step Inequalities 2 171

MAFS.7.EE.2.4



## ► Vmath promotes Problem Solving

Turn to page 184–187.

Vmath provides specific lessons entirely devoted to teaching problem-solving strategies. These lessons, which integrate the instruction and practice in problem solving emphasize the four step process most often used in core math programs: Understand, Plan, Solve, and Look Back.

The problem solving lessons use the four step process as used in all Vmath lessons but also includes a problem solving box highlighting steps to reinforce the strategy and can be referred to as students apply the strategy on their own.

Vmath also builds conceptual understanding, turn to page 196 to begin your exploration.

MAFS.7.G.1.1

► **Vmath builds Conceptual Understanding**

Turn to page 196.

Gizmo lessons present important math concepts using several different tools to build conceptual understanding of important concepts.

**Gizmos** integrate conceptual understanding using fun, easy to use simulations. Students can access Gizmos through their student center.

**Objective**  
To use a model to explore markup and discount as percents of change

**Materials**  
Gizmo: Percent of Change

**Lesson Notes**  
Before beginning the lesson, have students have their Student Notes and are ready to work at the computer.  
Complete problem 1 before starting to work on the Percent of Change Gizmo.  
If students have additional time, have them answer Assessment Questions 1-3 in the Gizmo. They can click on the Check Your Answers button to see how well they did on the assessment.

**GET READY**  
**Problem 1**  
In problem 1, 40 (percent) is 40% of the change in business of a business' discount. The first step in finding a percent increase is to find the amount of increase. How is the amount of increase found? Subtract the original amount from the amount after the increase. What is the original amount? (40) What is the amount after the increase? (48) What is 48 minus 40? (8) So, the amount of increase is 8. The next step is to divide the amount of increase by the original amount. What is the division problem? (8 ÷ 40) What is 8 divided by 40? (0.2) What is

**Problem 2**  
Have students log in to the Percent of Change Gizmo using the instructions at the top. Look at problem 2. It asks a change from an amount that the store paid for it. This is how a store makes money. It asks what a percent for 48. The exercise cost the store \$36. To model this situation, drag the selling price handle to 48 in the Markup portion of the Gizmo. Then drag the Original cost handle to \$36. Look at the model. The selling price is the sum of what has amount (the original cost and the markup). The amount of increase from the original cost to the selling price is the markup. The increments on the ruler are labeled every 10. According to the model, what is the amount of the markup? (12) Compare the length of the Markup bar with the length of the Original cost bar. The length of the Markup bar is  $\frac{1}{3}$  the length of the Original cost bar. One-half bar is written as what percent? (50%) So, the length of the Markup bar is 50% of the length of the Original cost bar.

**Problem 3**  
Look at problem 3. A store costs a store \$20. The store wants to mark up the price by 25%. To model this situation, drag the Original cost handle to 20 in the Markup portion of the Gizmo. What is the percent increase? (25%) So, the length of the Markup bar should be 25% of the length of the Original cost bar. What is 25% written as a fraction? ( $\frac{1}{4}$ ) So, the length of the Markup bar should be  $\frac{1}{4}$  of the length of the Original cost bar. Look at the length of the Original cost bar. What length is  $\frac{1}{4}$  the length of the Original cost bar? (5) Drag the Markup bar handle so that the selling price is 55 more than the original cost. The percent below the model is 25%. According to the model, what is the selling price? (25)

**Problem 4**  
Look at problem 4. There are some sales in which they reduce their prices. The difference between the original price and the sale price is the discount. Look at the original price for \$40 is a sale for \$30. To model this situation, drag the Original price handle to 40 in the Discount portion of the Gizmo. Then drag the Sale price handle to \$30. Look at the model. The sale price is the difference of what two amounts? (the original price and the discount). The amount of decrease from the original price to the sale price is the discount. According to the model, what is the amount of the discount? (10) Compare the length of the Discount bar with the length of the Original price bar. The length of the Discount bar is  $\frac{1}{4}$  the length of the Original price bar. One-fourth can be written as what percent? (25%) So, the length of the Discount bar is 25% of the length of the Original price bar. The amount is a percent of the original price. The sale price can be written as what percent of the original price? (75%) The sale price is 75% of the original price.

MAFS.7.R.1.3



## ► Vmath builds Conceptual Understanding

Turn to page 224.

Vmath lessons include Build the Concept and How to boxes on the page using a visual model to help students develop a deeper understanding and connection to the mathematical concepts. Along with the model, the teacher provides explicit language to help students connect the visual representations to the standard symbolic representations used in mathematics.

**BUILD THE CONCEPT**

Noah has a bike with tires that have a diameter of 26 inches. How far will the bike travel with one full rotation of the tires?

$$C = \pi d$$

$$= 3.14 \times 26$$

$$C = 81.64 \text{ in.}$$

Noah's bike travels about 81.64 in. with one full rotation of the tires.

**BUILD THE CONCEPT** Model how to find the circumference of a circle. Noah has a bike with tires that have a diameter of 26 inches. He wants to know how far his bike will travel when the tires complete one full rotation. To do this, he places a piece of tape on one tire and a piece on the tire reaches the ground again and marks the spot. The distance his bike travels is the same as what measure of the tire? (the circumference) So, the distance his bike travels with one rotation of the tires can be found by finding the circumference of a tire.

**Lesson 2**

**Objective**  
To find the circumference of a circle

Prerequisite	Lesson
Multiplying Rational Numbers—Operations	15.2.2
Dividing Rational Numbers—Operations	15.2.3

**Academic Vocabulary**  
Before the lesson, introduce and discuss the Academic Vocabulary. Refer to the Academic Vocabulary as needed during the lesson.

- circle**  
The set of points in a plane that are the same distance from a point called the center.
- center**  
The point in the same plane such that every point on the circle is the same distance from it.
- radius**  
The distance from the center of a circle to any point on the circle.
- diameter**  
The distance across a circle through the center of the circle.
- circumference**  
The distance around a circle.

**GET STARTED**

Model the following skills for students.

**REVIEW PREVIOUS**

**Problem 1**  
Simplify:  $2 \times \frac{1}{3}$ ;  $3 \times \frac{1}{2}$ ;  $\frac{1}{4} \times 5$ ;  $\frac{2}{3} \times \frac{3}{4}$ ;  $\frac{1}{2} \times \frac{3}{5}$ ;  $\frac{2}{3} \times \frac{4}{5}$

**MEET NEW SKILLS**

**Problem 2**  
Look at Figure 1. A circle is the set of points in a plane that are the same distance from a point called the center of the circle. How is the center of the circle marked? Label the center.

**Problem 3**  
The circumference of a circle is the distance around the circle. The formula for the circumference of a circle is  $C = \pi d$ , where  $C$  represents the circumference and  $d$  represents the diameter. Use 3.14 as an approximation for  $\pi$  to solve for  $d$ . The circumference of a circle is 100 inches. What is the diameter of the circle? (2 in.)

**Problem 4**  
The diameter of the circle in Figure 1 was found by dividing the circumference of the circle by  $\pi$ . What is the diameter of the circle? (2 in.)

**Problem 5**  
The circumference of a circle is 100 inches. What is the diameter of the circle? (2 in.)

**Problem 6**  
The circumference of a circle is 100 inches. What is the diameter of the circle? (2 in.)

**Problem 7**  
The circumference of a circle is 100 inches. What is the diameter of the circle? (2 in.)

**Problem 8**  
The circumference of a circle is 100 inches. What is the diameter of the circle? (2 in.)

MAFS.7.G.2.4

## ► *Vmath* builds Conceptual Understanding

Turn to page 228.

**Hands-On** Lessons use concrete manipulatives such as base-10 pieces and fraction strips to reinforce conceptual understanding.

The screenshot displays a digital lesson page for Lesson 1. It features a 'HANDS-ON GUIDED DISCOVERY' header with a hand icon. Below this, the 'Objective' states: 'To informally describe  $\pi$  as the ratio of the circumference of a circle to the diameter of a circle.' The 'Materials' list includes 'colored pencils', 'straightedge', 'string', and 'scissors'. A 'Lesson Notes' section is present, followed by a 'GET READY' section with 'Problem 1'. The 'DISCOVER' section contains 'Problem 2', which includes a diagram of a circle with a string wrapped around it. The 'Problem 3' section contains a diagram of a circle with a string wrapped around it, and a 'Problem 4' section with a diagram of a circle with a string wrapped around it. The page is numbered 228 in the bottom left and 229 in the bottom right.

MAFS.7.G.2.4

With its explicit and systematic approach, *Vmath* also provides students the opportunity to master the language of mathematics, receive scaffolded instruction, and apply their skills. Continue to explore these features now.



► **Vmath builds Vocabulary**

Turn to page 48.

Students are provided with multiple exposures and the opportunity to acquire the language of mathematics as part of their skill development. Emphasis on learning the language of math enables English Language Learners and students struggling to succeed.

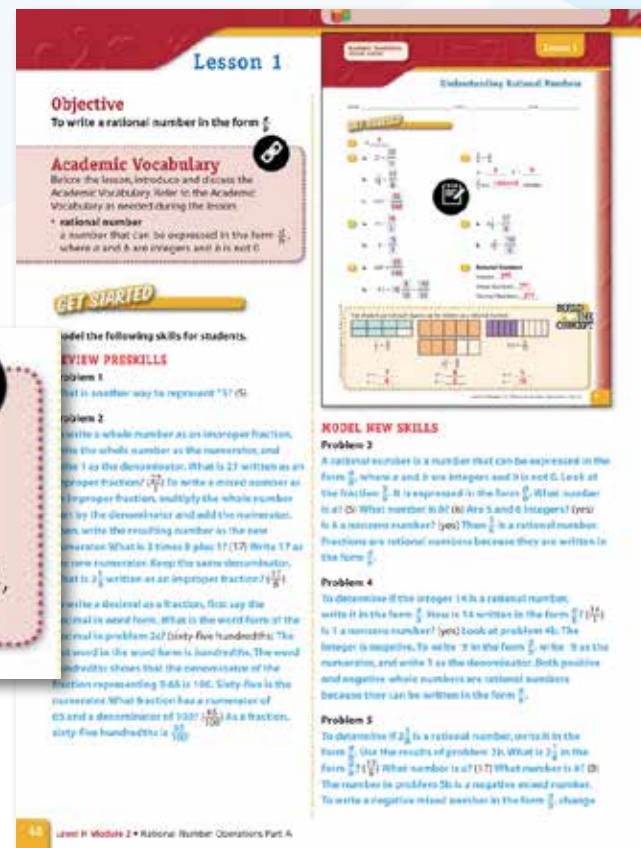
Vmath lessons reinforce the recursive academic vocabulary critical for student understanding. Teachers introduce the words at the start of each Vmath lesson and reinforce the specific language as they follow the explicit language in the lessons.

Click the “link” in the Academic vocabulary box on the TE page. This link is to the VmathLive glossary.

**Academic Vocabulary**

Before the lesson, introduce and discuss the Academic Vocabulary. Refer to the Academic Vocabulary as needed during the lesson.

- rational number**  
 a number that can be expressed in the form  $\frac{a}{b}$ , where  $a$  and  $b$  are integers and  $b$  is not 0



MAFS.7.NS.1.1

## ► *Vmath* helps students Apply Skills

Several components of *Vmath* are geared to help students apply their learning. *Vmath* lessons include Critical Thinking, Explain It, Write Math or Algebraic Thinking. Hands On and Gizmo lessons also include Discover Boxes for writing about observations as concepts develop.

This screenshot shows the interface for Lesson 1. It features several interactive components:
 

- English Language Learners:** A section with text and icons for students with language barriers.
- Write Math:** A section with a question: "How does knowing the sign of a rational number help eliminate answer choices?" and a text input area.
- Explain It:** A section with a question: "A student writes the decimal number 0.7 as  $\frac{7}{10}$  in the first the student made and writes 0.7 in the form  $\frac{7}{10}$  correctly." and a text input area.
- Algebraic Thinking:** A section with a question: "Extend the pattern in the table to show four decimal numbers equal to the rational number  $\frac{1}{4}$ ." and a table.

Decimal Number	0.25	0.250	0.2500	
Rational Number	$\frac{25}{100} = \frac{1}{4}$	$\frac{250}{1000} = \frac{1}{4}$	$\frac{2500}{10000} = \frac{1}{4}$	$\frac{1}{4}$

Page 50  
MAFS.7.NS.1.1

This screenshot shows the interface for Lesson 9. It features:
 

- Problem 2:** A word problem about a 65% discount on a \$100 item.
- Discover Box:** A section with a question: "65% of 80 is what number?" and a number line from 0 to 100. Below the number line, the calculation is shown:  $\frac{65}{100} \times 80 = \frac{5200}{100} = 52$ . The final answer is "65% of 80 is 52."

Page 204  
MAFS.7.RP.1.1

This screenshot shows the interface for Lesson 10. It features:
 

- Problem 6:** A word problem about the volume of a rectangular prism.
- Discover Box:** A section with a question: "Use the formula for the volume of a rectangular prism,  $V = l \times w \times h$ , to write a formula for the volume of a rectangular pyramid. Explain how you got your formula." and a text input area.

Page 258  
MAFS.7.G.2.6

Each of these features are designed to promote reasoning and decision making in mathematics.

## ► *Vmath* helps differentiate instruction for students

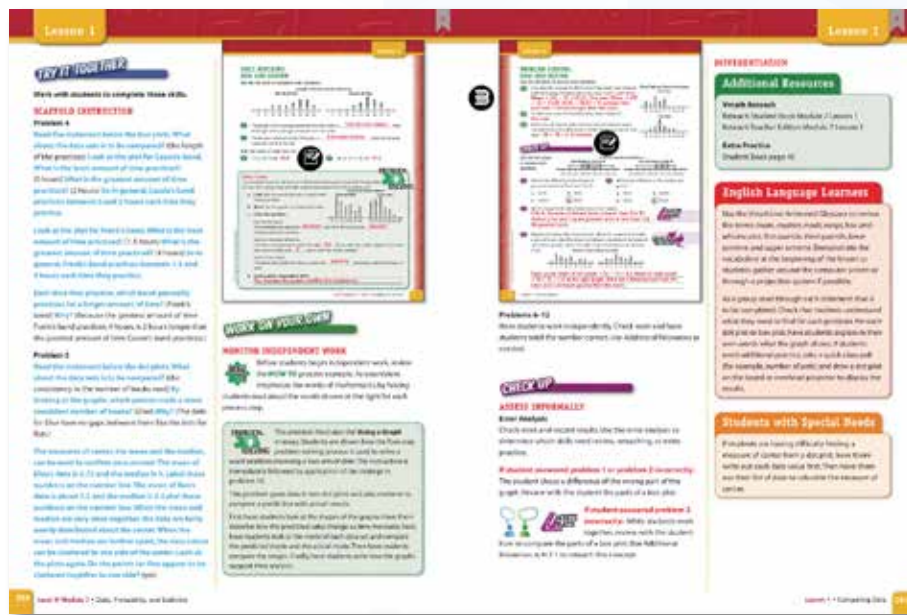
Turn to page 288.

*Vmath* provides three additional components to support teachers as they differentiate instruction.

**Additional resources**—lessons which can be used for practice, reteaching, or review

**ELL Teaching Tips**—lesson tips that provide specific activities that focus on increasing students' understanding of the language of math

**Adaptations for students with Special Needs**—teaching strategies in the lessons provide adaptations that support students requiring additional support



MAFS.7.SP.2.4

**DIFFERENTIATION**

**Additional Resources**

**Vmath Reteach**  
Reteach Student Book Module 7 Lesson 1  
Reteach Teacher Edition Module 7 Lesson 1

**Extra Practice**  
Student Book page 45

**English Language Learners**

Use the Vmath Live Animated Glossary to review the terms *mean*, *median*, *mode*, *range*, *box and whisker plot*, *first quartile*, *third quartile*, *lower extreme*, and *upper extreme*. Demonstrate the vocabulary at the beginning of the lesson as students gather around the computer screen or through a projection system if possible.

As a group, read through each statement that is to be completed. Check that students understand what they need to find for each problem. For each dot plot or box plot, have students explain in their own words what the graph shows. If students need additional practice, take a quick class poll (for example, number of pets) and draw a dot plot on the board or overhead projector to display the results.

**Students with Special Needs**

If students are having difficulty finding a measure of center from a dot plot, have them write out each data value first. Then have them use their list of data to calculate the measure of center.

The differentiation activities provided in the *Vmath* lessons help actively engage students in the learning process as well as provide suggestions to the teacher regarding the use of additional concepts to help connect students to the skill being taught.



# Assessments & Reports

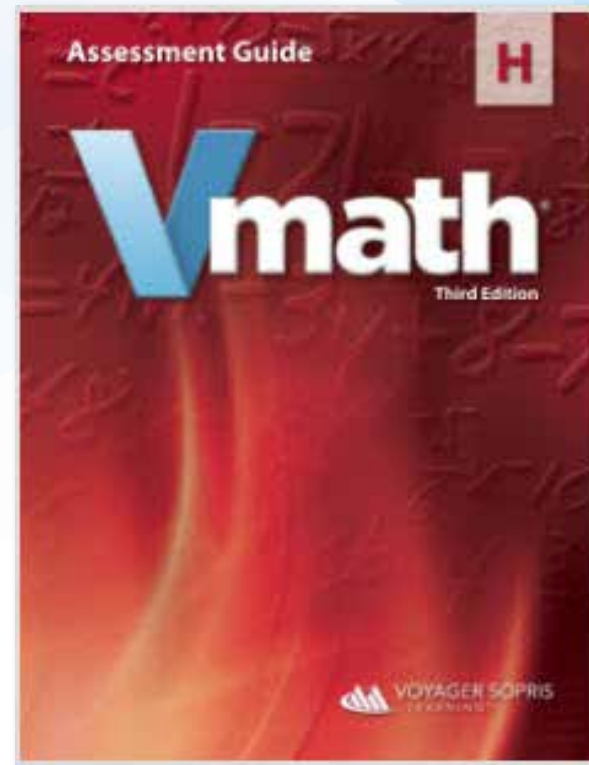
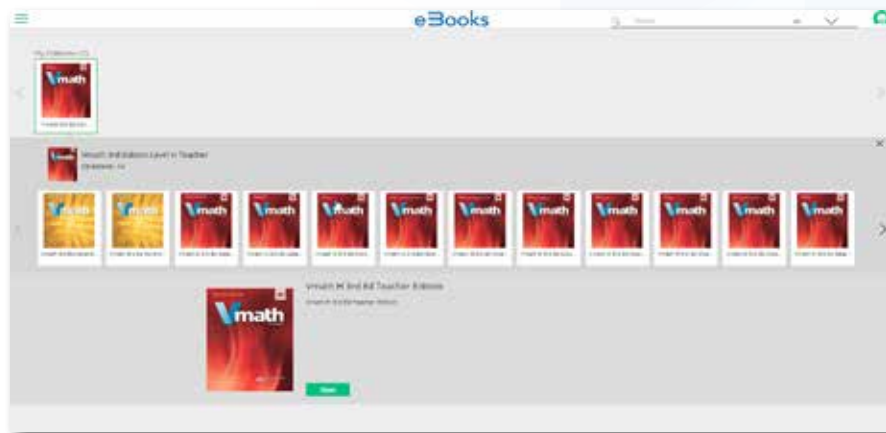
The *Vmath* assessment system allows teacher to accurately measure student progress and proficiency at every stage of instruction. With a variety of reports available, teachers and administrators have actionable data that can be used to drive instructional decisions, communicate to parents and ensure students meet their goals.

Take a look at each assessment, reports teachers can generate, and overall purpose of monitoring learning that occurs in *Vmath*.



## ► The Assessment TE eBook

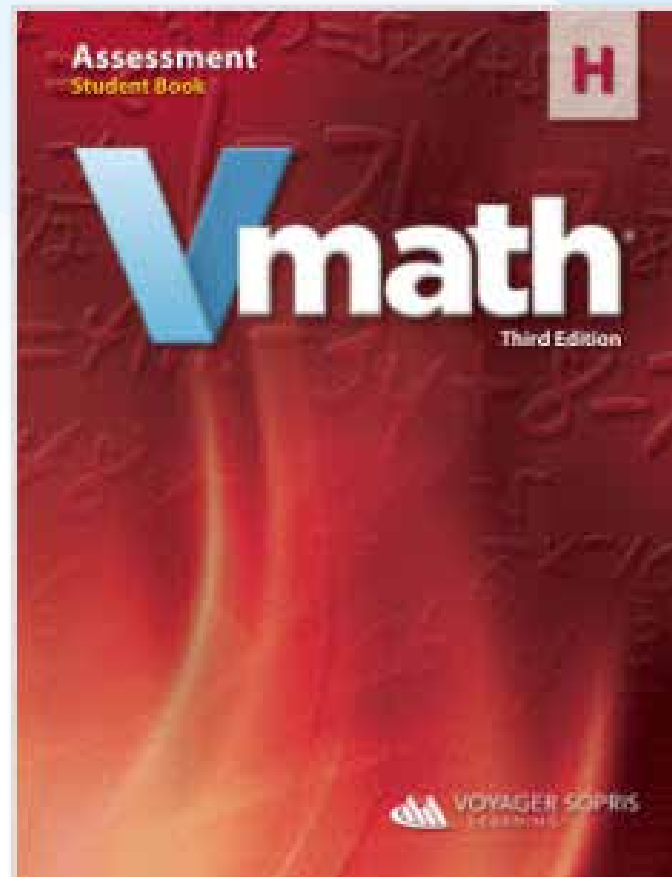
The Assessment Guide provides directions for administering and scoring all *Vmath* assessments as well as guidelines for using the data for instructional planning. Return to the eBook Shelf. Select the Assessment Guide Teacher Edition. Explore the components of this guide.



**Note:** The Assessment Guide is only available in eBook format.

## ► The Assessment Guide Student Edition

The Assessment Guide student edition provides the blackline masters which can be printed directly from the eBook. These assessments are also available to be administered and scored online.



**Note:** The Assessment Guide student edition is only available in eBook format.

## ► Initial and Final Assessments

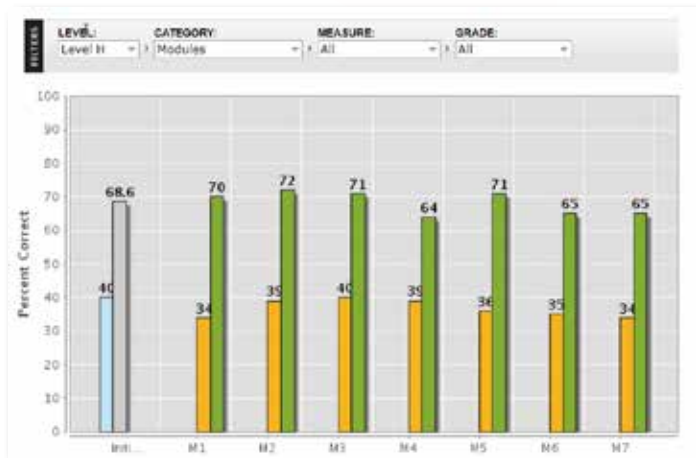
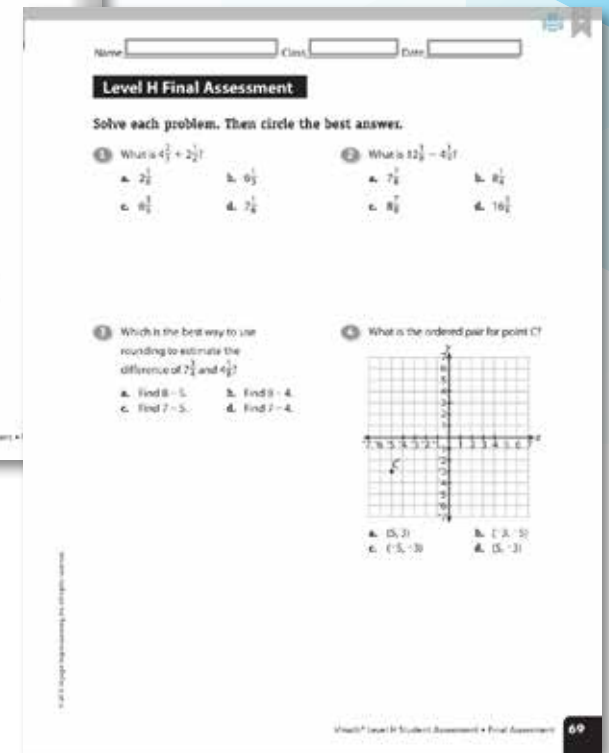
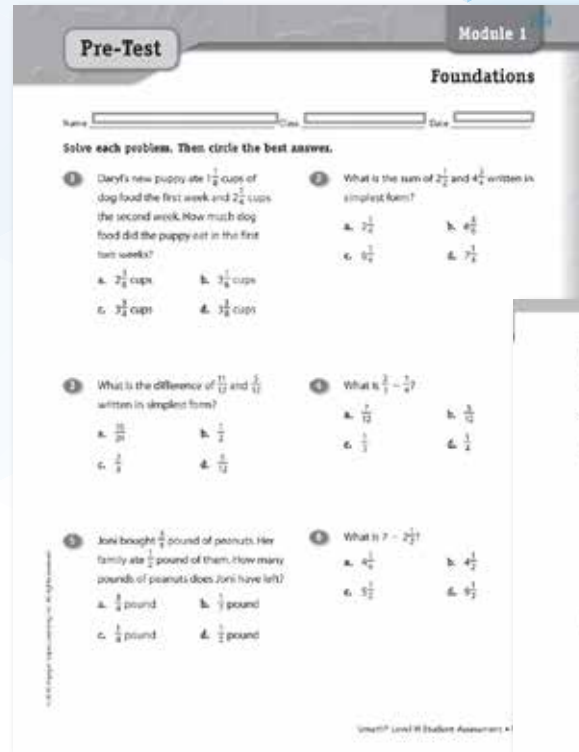
Turn to page 1 to review the Initial Assessment.

Turn to page 69 to review the Final Assessment.

Administered to the entire class at the beginning of *Vmath* instruction, the initial assessment highlights student instructional strengths and weaknesses.

Administered at the completion of a *Vmath* level, the final assessment can be used to document student growth and measures intervention results.

Pre-Tests measure students prior knowledge, Post-Test measures student growth of module specific content.



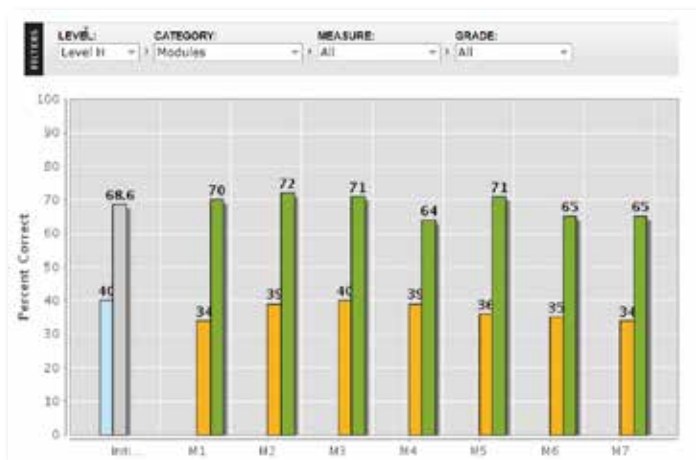
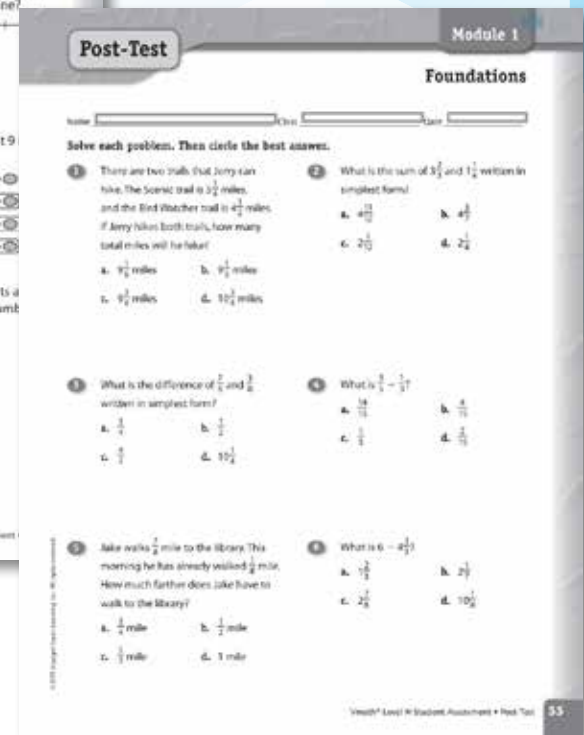
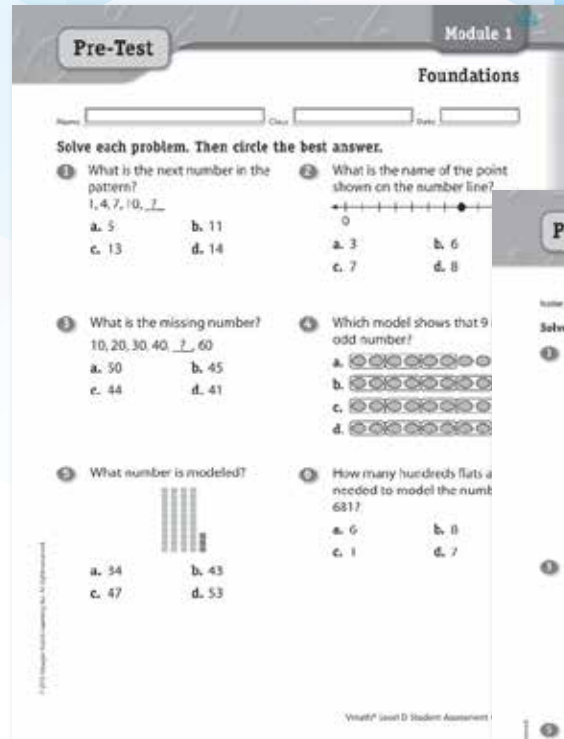
## ► Module Pre/Post Tests

Turn to page 43 to see the Module 1 Pre-Test.

Turn to page 55 to review the Module 1 Post-Test.

Pre Tests and Post Tests are module specific assessments used to monitor student growth and mastery of the concepts, skills and strategies taught in each module.

Results can be used to determine instructional needs of students. If a student scores <70% on a pre-test, the PL Lessons are taught. If a student scores >70% teaching would begin with Lesson 3. Similarly post-test results can be used to determine reteaching and practice needed.





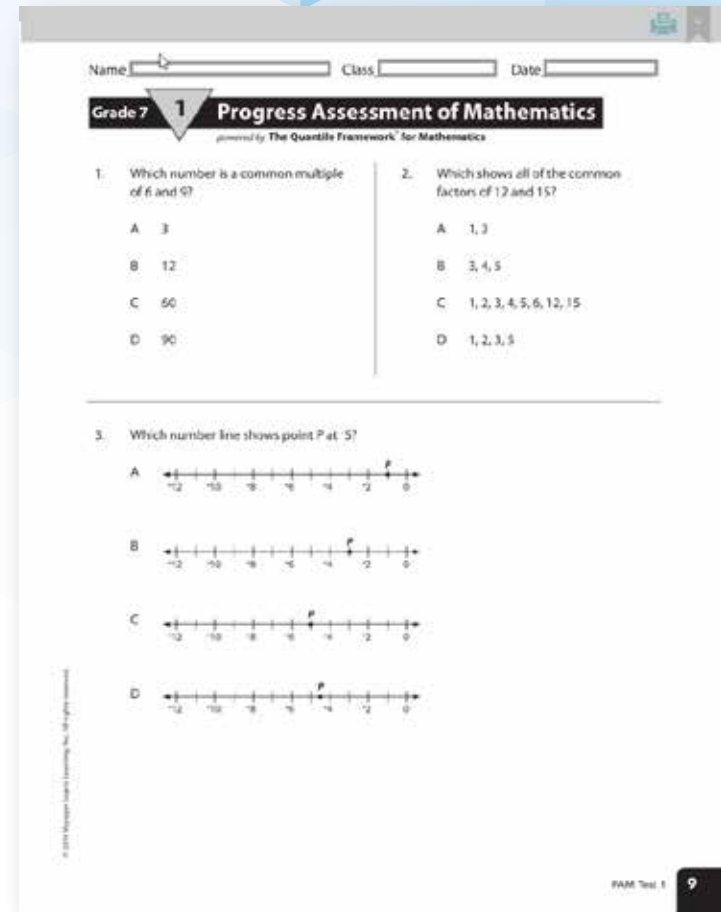
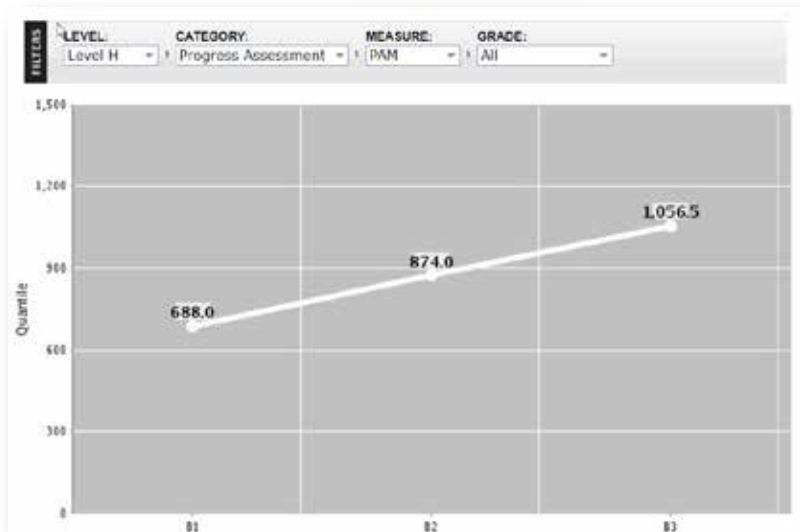
## ► Progress Assessments

Turn to page 9 to review the Progress Assessment.

Progress Assessments powered by the Quantile Framework for Mathematics are curriculum-based measures administered 3 times per year.

When teachers know a student's math achievement level and the level of difficulty of mathematical task, they are able to adjust instruction to meet a student's readiness to learn. The Quantile provided for each student after completing the Progress Assessment provides information regarding:

- Skills a student has mastered
- Skills on which a student needs further instruction
- Skills a student is ready to learn



# Student Technology

Technology plays an integral role in teaching, but it must be used with purpose to be effective. Students in *Vmath* have access to robust digital resources designed to enrich instruction, extend learning, and engage students in and out of the classroom.

**Take a look at how technology enhances the *Vmath* experience wherever and whenever students need it.**

## ► Log in to the *Vmath* Student Center

Username and password: Level D Student

Username: **danielss105**

Password: **chiefstreet0**



The screenshot shows the Vmath login interface. On the left, there is a login form with the Vmath logo at the top. Below the logo are two input fields: the first contains the username 'danielss105' and the second contains a masked password represented by ten dots. Below the password field is a link that says 'Forgot Username or Password?'. At the bottom of the form is a blue button labeled 'LOGIN'. On the right side of the login panel, there is a 'System Requirements' section with the text 'If you do not have a green check, click to review requirements.' Below this is a 'System Check' button with a red 'X' icon. Further down is a 'Customer Support' section with two options: 'Call (800)-547-6747 between 8:30 am - 5:30 pm (CST)' and 'Email our support team'.

## ► Student Center Overview

The Student Center is the landing page from which students can access all digital materials and resources used in *Vmath* including:

1. Student Assignments
2. eBooks
3. *VmathLive*
4. Gizmos





## ► *VmathLive* Technology

### What is *VmathLive*?

*VmathLive* is an online, independent-learning component that helps students apply math skills in a fun, interactive environment available anytime and anywhere on any device.

### Accessing *VmathLive*:

From the Student Center:

**Click on** the *VmathLive* section.

**Click on** Course Map in the toolbar to review units. Students will gain access to the Go Learn and Go Play components from the homepage.



## ► *VmathLive* GO LEARN

In *VmathLive's* Go Learn component, students complete module activities in computational practice and problem solving.

Moving from conceptual understanding to application is difficult for students. *VmathLive* provides an opportunity for students to practice and master problem-solving skills.



The screenshot displays the VmathLive user interface. At the top, navigation links include 'My Progress', 'Achievements', 'Course Map', 'Leader Board', 'VmathLive', and 'Logout'. The main content area is titled 'MODULE 4: Whole Number Multiplication' and features a progress bar with numbers 2 through 13. A 'GAMES' section on the right shows '1 Play Tokens' and '0 Weekly Points'. The 'Current Activity' is '1. Groups of Five', with a 'Start Here' callout and a 'Go Learn' button highlighted by a black mouse cursor. Below this, there is a 'RECENT ACHIEVEMENT' section with a '1st Place' badge and a 'Student' profile. A 'TIME' graph on the right shows 'Learn' and 'Play' activity over time, with a 'Goal' line at 100 minutes.

## ► *VmathLive* SCAFFOLDED INSTRUCTION

*VmathLive* offers several levels of scaffolded support for students as they work in Go Learn.

*VmathLive* promotes accuracy and fluency by encouraging students to think about their answer choices. If students get stuck, they can access a hint to see the problem unfold. If students continue to struggle, they have access to “Let’s Review,” a short video providing guided instruction on a related problem.

### **Note for Spanish-Speaking Students:**

Let’s Review videos are available in Spanish and English.



***Students get immediate corrective feedback.***



***Let’s Review video provides additional instruction.***

## ► *VmathLive* Design: GO PLAY COMPETITION COMPONENT

Go Play provides students an opportunity to practice their fluency and mental math skills in one-minute competition games.

Fluency and accuracy of mathematical skills are critical for student success in math. Using a fun, interactive, and safe platform, students can practice these skills and engage in competitive play. Games range in topics from operations of whole numbers to order of operations. Students can play against the computer, a friend also enrolled in *VmathLive*, or in a game with others as assigned by *VmathLive*.





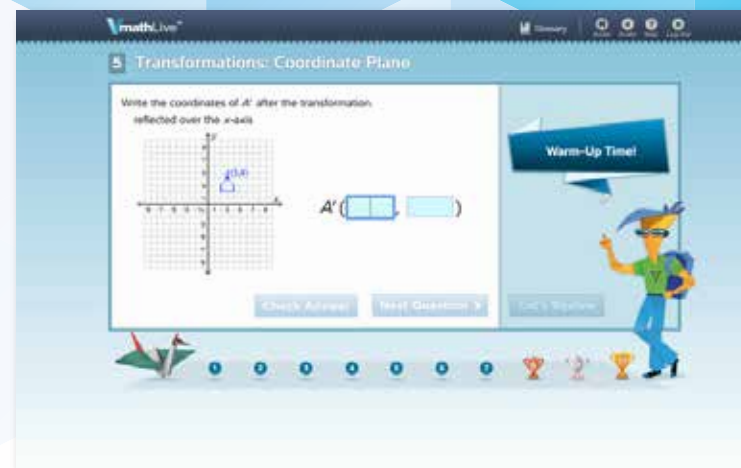
## ► *VmathLive* Design: ANIMATED GLOSSARY

The Animated Glossary is embedded in the Go Learn components and contains approximately 400 common math vocabulary terms and definitions. Students can select a term from the alphabetical list or type it into the search function.

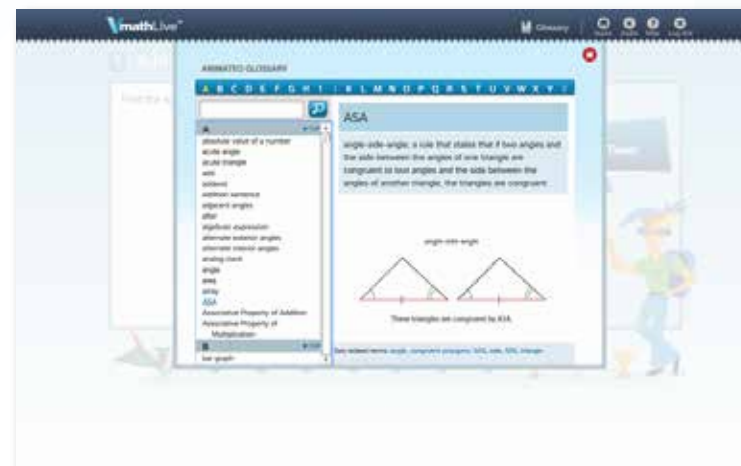
The language of math is often challenging and confusing. *VmathLive's* Animated Glossary allows students to hear the pronunciation and definition of a term while watching an animated representation of the term.

### Note for Spanish-Speaking Students:

Animated Glossary allows students to view written and hear audio definitions of terms in Spanish.



**Link to the Animated Glossary in the toolbar of the Go Play component.**



**Search by name of term or from the alphabetized list of terms.**

## ► *VmathLive* Support Tools: ENGAGEMENT FEATURES

### What are the Student Engagement features?

From the *VmathLive* homepage, students have a variety of ways to stay motivated and engaged.

**Avatars:** Students earn an avatar when they achieve mastery in a module. *VmathLive* avatars are origami creatures students can decorate and personalize using tokens they have earned. Each avatar includes instructions about building the avatar on their own with paper.

**My Progress:** This page details how the student is doing in the program for both the Go Learn and Go Play components.

**Achievements:** This page contains every accomplishment a student has achieved—trophies and badges earned, certificates awarded, and avatars collected.

**Leaderboard:** This board allows students to see their rank in their school, districts, and nationally.



*My Progress page shows current and past activity.*



*See all trophies and awards in Achievements.*

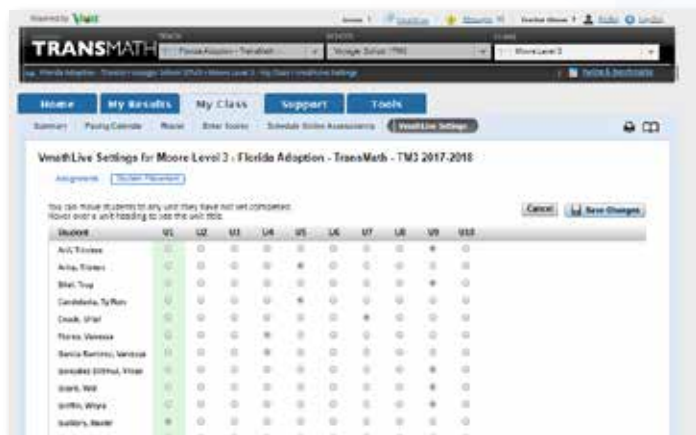


*All avatars can be customized by students.*

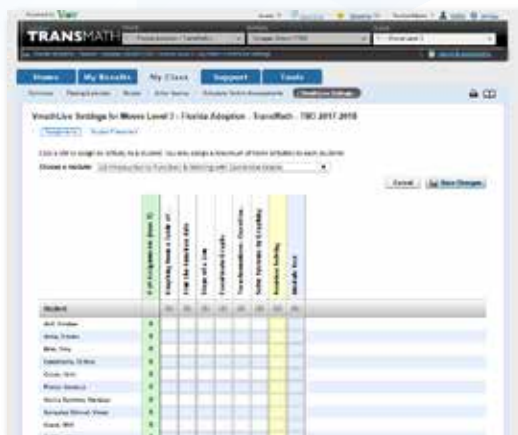
## ► *VmathLive* Support Tools: DIFFERENTIATION CAPABILITIES

### How can *VmathLive* be used as a differentiation tool?

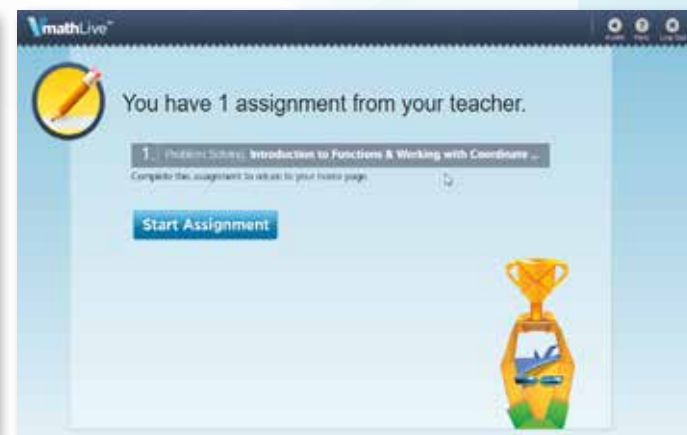
Teachers can place students in specific modules of instruction to reinforce or extend learning. Teachers also can assign specific activities within a unit.



**Choosing which module a student needs.**



**Assigning specific activities is easy.**



**Students must complete assignments before having full access.**

## ► Gizmos

Gizmos are a series of online manipulatives that correspond to the Gizmo lessons.

Return to the student center, select the Gizmo box, and then choose a Gizmo from the menu.

### Accessing Gizmos:

From the Student Center:

*Click on* the Gizmo section.

*Click on any Gizmo to explore the interaction and mathematical simulations.*







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