

REVIEWER GUIDE  
ELEMENTARY

## Dear Hillsborough County Reviewer:

Thank you for reviewing *Vmath* for students in the **Grades 2–5 Mathematics Courses**. Included within this submission package, we have provided everything needed for a comprehensive review of our research-based, supplementary intervention program.

**When you're ready to begin, please go here:**

<https://www.voyagersopris.com/florida/hillsborough/vmath>

## The Digital Review

The website above has been designed for Hillsborough County Public School District's review of *Vmath* which is a blended solution of both printed materials and web-based technology (all print materials available in eBook format). On this website, you will find:

1. The Reviewer Guide with step-by-step instructions on how to review *Vmath*
2. Introductory *Vmath* information and resources, including video overview, MAFS alignments, efficacy reports, testimonials, and a digital copy of the brochure
3. Links to both the student and teacher login pages to review the full curriculum and digital-only resources (assessment books, extension lessons, and resource guide), the *VmathLive* student technology and eBooks

	Level	User Name	Password
<b>Teacher</b>	<b>C (Gr. 2)</b>	Vmath1T14	LoudBook4
	<b>D (Gr. 3)</b>	Vmath11T14	SolidCoat3
	<b>E (Gr. 4)</b>	Vmath13T14	HighRiver9
	<b>F (Gr. 5)</b>	Vmath2T14	EarlyShell8
<b>Student</b>	<b>C (Gr. 2)</b>	daniels086	naturalbank4
	<b>D (Gr. 3)</b>	Demo1s16	naturaldock4
	<b>E (Gr. 4)</b>	a7s00010	prettysell6
	<b>F (Gr. 5)</b>	abele020	coolplan2

## Print Review and Additional Resources

The "Instruction and Pedagogy" section of the reviewer guide (pages 9–23) walks you through a sample *Vmath* unit using the eBooks, but you can also use the printed materials provided for this adoption. As requested by Hillsborough Public School District, we have included three (3) full sets of the student and teacher print materials, which include:

- Teacher Edition for Levels C–F (12 Total Teacher Editions)
- Student Workbooks for Levels C–F, One (1) Student Box with Seven (7) Modules for Each Level (84 Total Student Workbooks)
- Standards Alignment (Teacher Editions are tabbed/labeled in conjunction with alignment)
- Printed Reviewer Guide

Enjoy our fun, purposeful, and best-in-class curriculum! Please contact me with any questions or concerns.

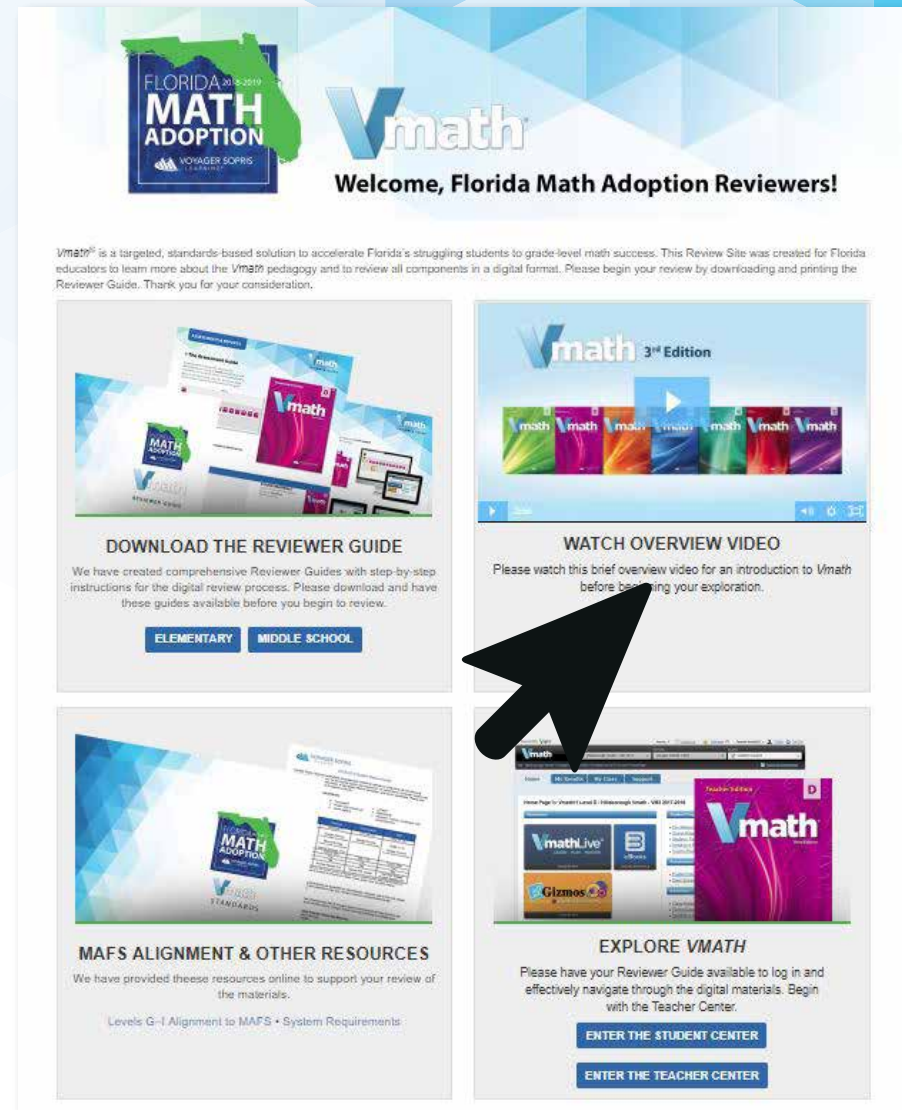
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## ▶ Watch the *Vmath* Overview Video

1. **Go to the *Vmath* Adoption Review site:**  
<https://www.voyagersopris.com/florida/hillsborough/vmath>
2. **View the video** on the *Vmath* Adoption Review site for an overview of the *Vmath* program and purpose.



The screenshot shows the Vmath Adoption Review site interface. At the top, there is a logo for 'FLORIDA MATH ADOPTION' with a map of Florida and the text 'VOYAGER SOPRIS'. To the right is the 'Vmath' logo and the text 'Welcome, Florida Math Adoption Reviewers!'. Below this, there is a paragraph of introductory text: '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.'

The main content area is divided into four sections:

- DOWNLOAD THE REVIEWER GUIDE:** This section features an image of the reviewer guide materials. Below the image, it states: '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.' There are two buttons: 'ELEMENTARY' and 'MIDDLE SCHOOL'.
- WATCH OVERVIEW VIDEO:** This section features a video player interface for 'Vmath 3rd Edition'. Below the player, it says: 'Please watch this brief overview video for an introduction to Vmath before beginning your exploration.' A large black mouse cursor arrow is pointing at the video player.
- MAFS ALIGNMENT & OTHER RESOURCES:** This section features an image of a document titled 'MAFS STANDARDS'. Below the image, it states: 'We have provided these resources online to support your review of the materials.' At the bottom, it says: 'Levels G-I Alignment to MAFS • System Requirements:'.
- EXPLORE VMATH:** This section features an image of the Vmath software interface. Below the image, it says: 'Please have your Reviewer Guide available to log in and effectively navigate through the digital materials. Begin with the Teacher Center.' There are two buttons: 'ENTER THE STUDENT CENTER' and 'ENTER THE TEACHER CENTER'.

## ► Review the Standards Alignment Document

*Vmath*® aligns to the following Courses:

- 5012040
- 5012050
- 5012060
- 5012070

*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.

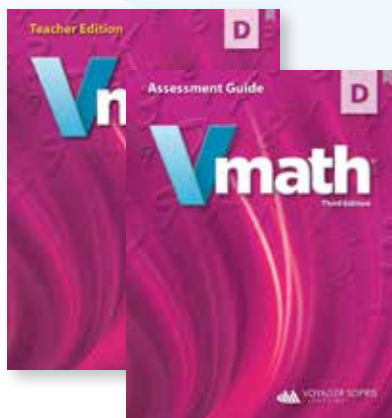


## ► Introduction to *Vmath*

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

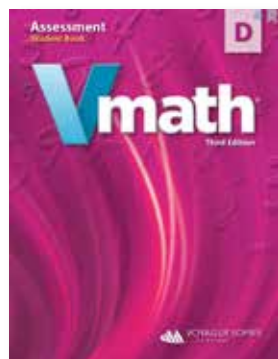
### TEACHER MATERIALS

*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 D Teacher Center website.

Username: **Vmath11T14**

Password: **SolidCoat3**

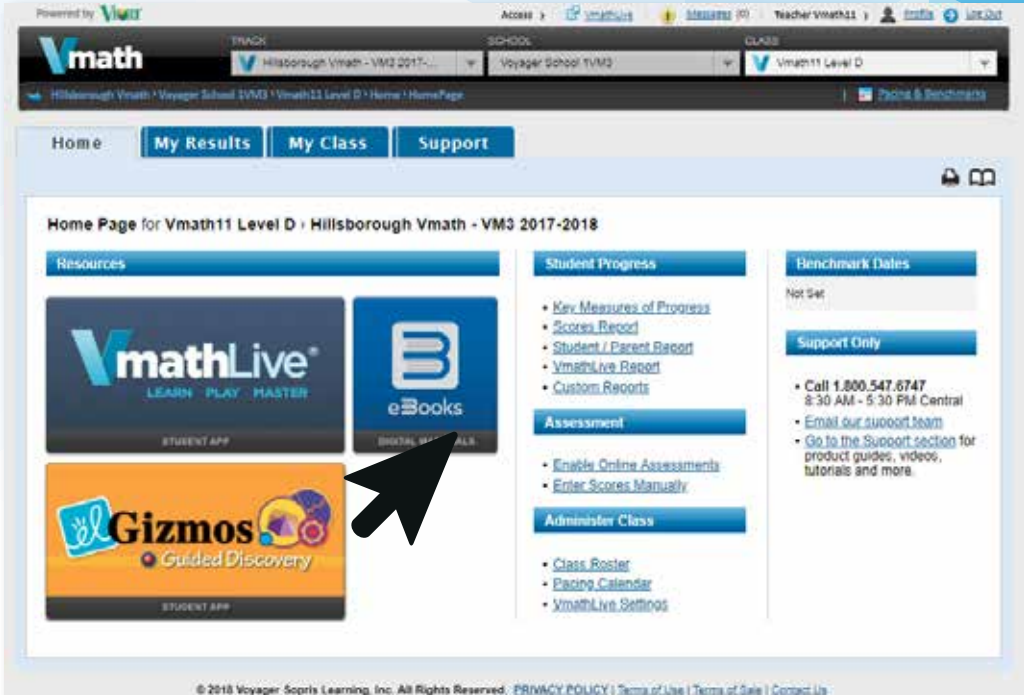


## ► Teacher Center Overview

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

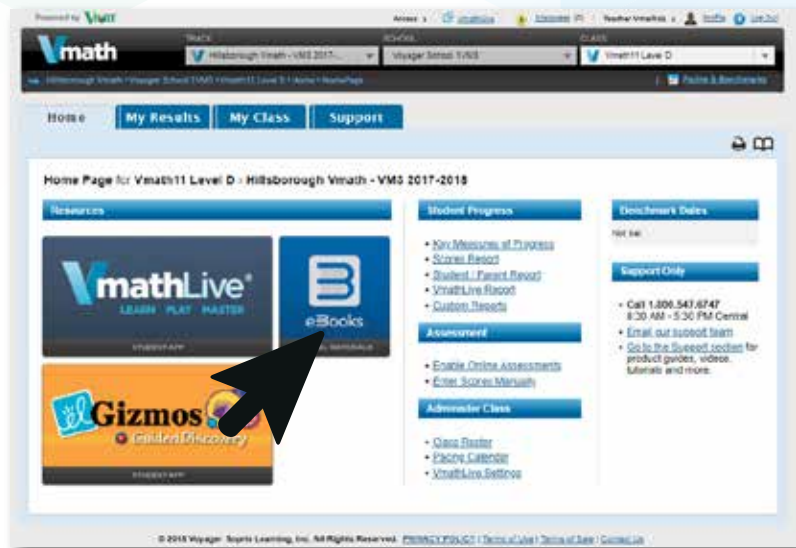
To continue your review of *Vmath* instructional components, click the eBook icon from the Teacher Center to enter the bookshelf.



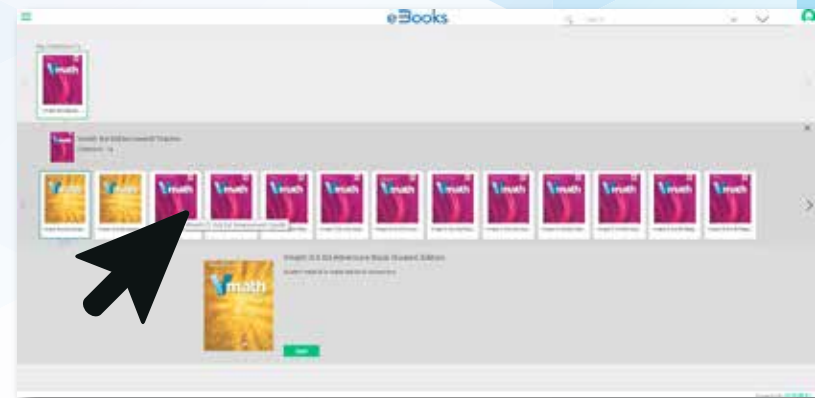
**NOTE:** More detailed information for each section will be covered throughout of the Review Guide.



## ► 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 D 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, Whole Number Multiplication** in the Table of Contents and click the page number of the first lessons. (Page 163.) As you explore the lesson types notice the variety of ways *Vmath* supports students as they learn to fluently multiply and divide within 100. .

**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.

You can also 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**.

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## ► Explore the features of PreSkill Lesson

Turn to page 164.

**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.

**Note:** 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.

**Lesson PL1**

**Objective**  
To write an addition sentence for a rectangular array

**Materials**  
• counters

**Academic Vocabulary**  
Before the lesson, introduce and discuss the Academic Vocabulary. Refer to the Academic Vocabulary as needed during the lesson.  
• **rectangular array**  
a group of numbers or objects arranged into equal rows and equal columns  
• **row**  
a horizontal arrangement of numbers or objects  
• **column**  
a vertical arrangement of numbers or objects

**GET STARTED**  
Model the following skills for students.

**REVIEW PRESKILLS**  
**Problem 1**  
What numbers are we adding in problem 1? (4, 4, 4) Can we use skip counting to add? (yes) Why? (The addends are the same.)  
Skip count by 4 to find the sum. Skip count together starting at 4: 4, 8, 12. What is 4 plus 4 plus 4? (12)

**MODEL NEW SKILLS**  
**Problem 2**  
Look at the picture of the flowers. They are arranged into a rectangular shape called a rectangular array. A rectangular array is a group of numbers or objects arranged into equal rows and equal columns. Put your finger on the flower at the top left corner. Then move your finger straight across to the right. These flowers form a row in the array. How many rows do you see? (3) Put your finger on the flower at the top left corner. Then move your finger straight down. These flowers form a column in the array. How many columns do you see? (4)

**TRY IT TOGETHER**  
Work with students to complete these skills.  
**SCAFFOLD INSTRUCTION**  
Before starting this section, read aloud and discuss the instruction line with students.  
**Problem 3**  
Look at the marbles. Is there the same number of marbles in each row? (yes) Because there is the same number of marbles in each row, we can skip count to find the total number of marbles. How many marbles are in each row? (4) So skip count by 4. Have students put their finger on each row as they count. Skip count together starting at 4: 4, 8, 12, 16. How many marbles are there in all? (16)  
Now write the addition sentence for the total number of marbles. How many times did we skip count by 4? (4) So we added by 4 four times. So write 4 plus 4 plus 4 plus 4. What is the sum? (16) Write 16 to the right of the equal sign. What is the addition sentence? (4 + 4 + 4 + 4 = 16)

**Problem 4**  
Look at the soap cans. Is there the same number of cans in each row? (yes) Because there is the same number of cans in each row, we can skip count to find the total number of cans. How many cans are in each row? (3) So skip count by 3. What numbers do we count? (3, 6) How many cans are there in all? (18)  
Now write the addition sentence for the total number of cans. How many times did we skip count by 3? (6) What is the sum? (18) What is the addition sentence? (3 + 3 + 3 + 3 + 3 + 3 = 18)

Level 11 Module 4 • Whole Number Multiplication



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

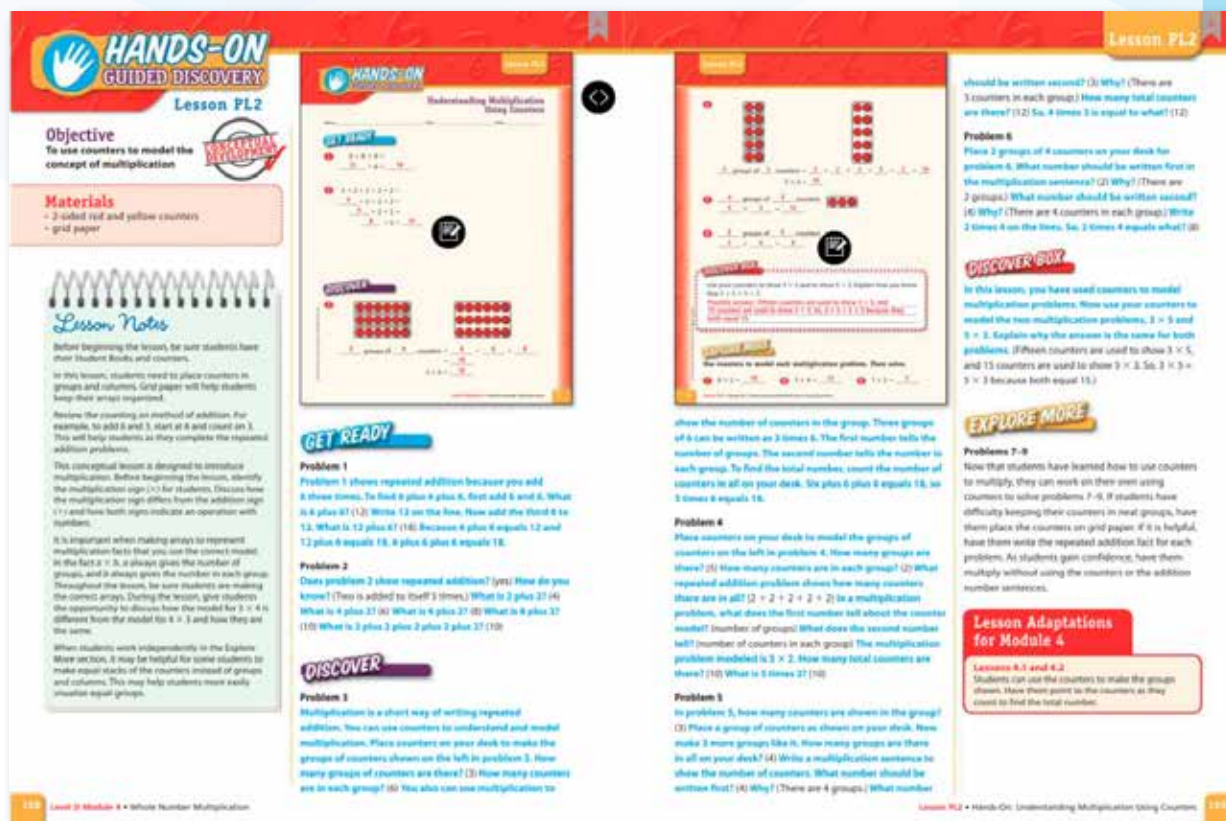
Turn to page 168.

**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.



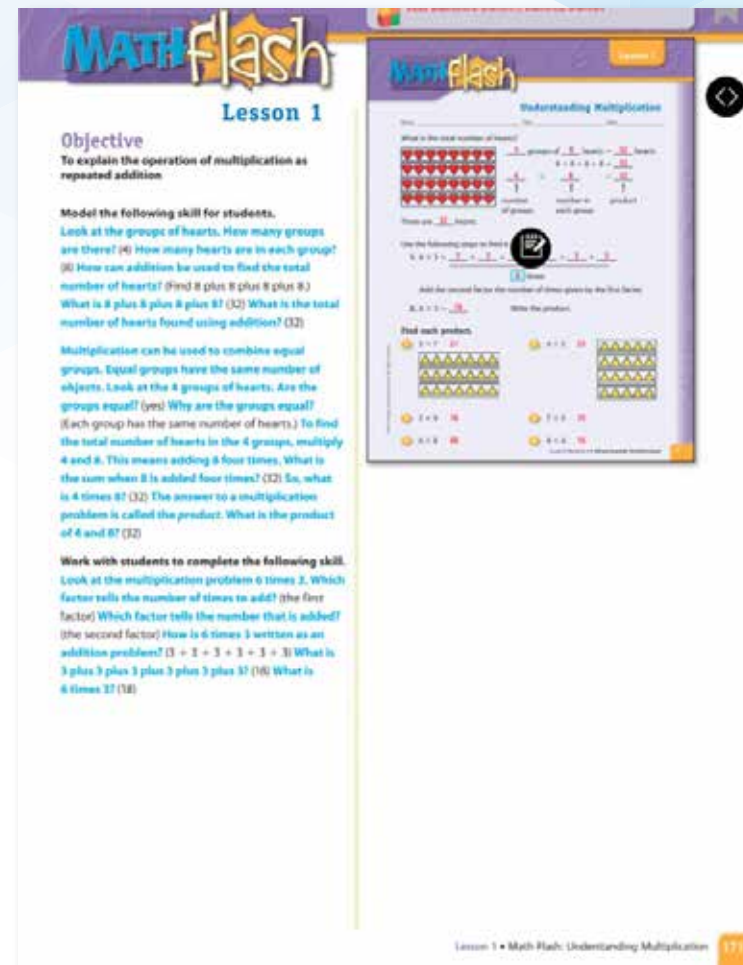
MAFS.3.OA.3.7

## ► Explore the features of Math Flash Lessons

Turn to page 168.

**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.



**MATH flash**  
Lesson 1

**Objective**  
To explain the operation of multiplication as repeated addition.

**Model the following skill for students.**  
Look at the groups of hearts. How many groups are there? (4) How many hearts are in each group? (8) How can addition be used to find the total number of hearts? (Find 8 plus 8 plus 8 plus 8.) What is 8 plus 8 plus 8 plus 8? (32) What is the total number of hearts found using addition? (32)

Multiplication can be used to combine equal groups. Equal groups have the same number of objects. Look at the 4 groups of hearts. Are the groups equal? (yes) Why are the groups equal? (Each group has the same number of hearts.) To find the total number of hearts in the 4 groups, multiply 4 and 8. This means adding 8 four times. What is the sum when 8 is added four times? (32) So, what is 4 times 8? (32) The answer to a multiplication problem is called the **product**. What is the product of 4 and 8? (32)

**Work with students to complete the following skill.**  
Look at the multiplication problem 6 times 2. Which factor tells the number of times to add? (the first factor) Which factor tells the number that is added? (the second factor) How is 6 times 3 written as an addition problem? (3 + 3 + 3 + 3 + 3) What is 3 plus 3 plus 3 plus 3 plus 3 plus 3? (18) What is 6 times 2? (12)

**Understanding Multiplication**

What is the total number of hearts?

4 groups of 8 hearts = 32 hearts  
 $4 \times 8 = 32$   
 $8 + 8 + 8 + 8 = 32$

Use the following steps to find 4 times 8.

Step 1: Write the multiplication problem.  
 $4 \times 8 = ?$

Step 2: Add the second factor the number of times given by the first factor.  
 $4 \times 8 = 8 + 8 + 8 + 8 = 32$

Write the product.  
 $4 \times 8 = 32$

Find each product.

$2 \times 7 = 14$     $4 \times 5 = 20$   
 $3 \times 6 = 18$     $7 \times 2 = 14$   
 $5 \times 4 = 20$     $6 \times 3 = 18$

Lesson 1 • Math Flash: Understanding Multiplication 171

MAFS.3.OA.3.7

## ► Explore the features of *Vmath* Lessons

Turn to page 172.

**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.



MAFS.3.OA.3.7 and MAFS.3.OA.4.5



## ► Explore the features of Gizmo Guided Discovery Lessons

Turn to page 204.

**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.

Continue to learn more about the instruction of *Vmath* by exploring how *Vmath* helps students build problem solving skills. Turn to page 212 for an example.

MAFS.3.OA.3.7

## ► *Vmath* promotes Problem Solving

Turn to page 201.

*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 228 to begin your exploration.

The collage displays several pages from the *Vmath* curriculum. The central focus is a 'PROBLEM SOLVING' box titled 'Using a Table'. It presents a word problem about Kenya buying supplies for a party. The problem asks for the total cost and whether the answer is reasonable. A table is provided for students to calculate the costs of plates, cups, and forks. The table is as follows:

Supply	Packs to Buy	Price of Each	Total
Plates	8	\$5	\$
Cups	9	\$6	\$
Forks	7	\$3	\$
<b>Total</b>			\$

Below the table, the problem asks: 'Kenya will spend \$\_\_\_\_\_ in all.' and 'Is the answer reasonable? Explain.' The surrounding pages show lesson objectives, academic vocabulary, and various problem-solving strategies like 'Using a Table' and 'Using a Graph'. There are also sections for 'English Language Learners' and 'Students with Special Needs'.

MAFS.3.NBT.1.3

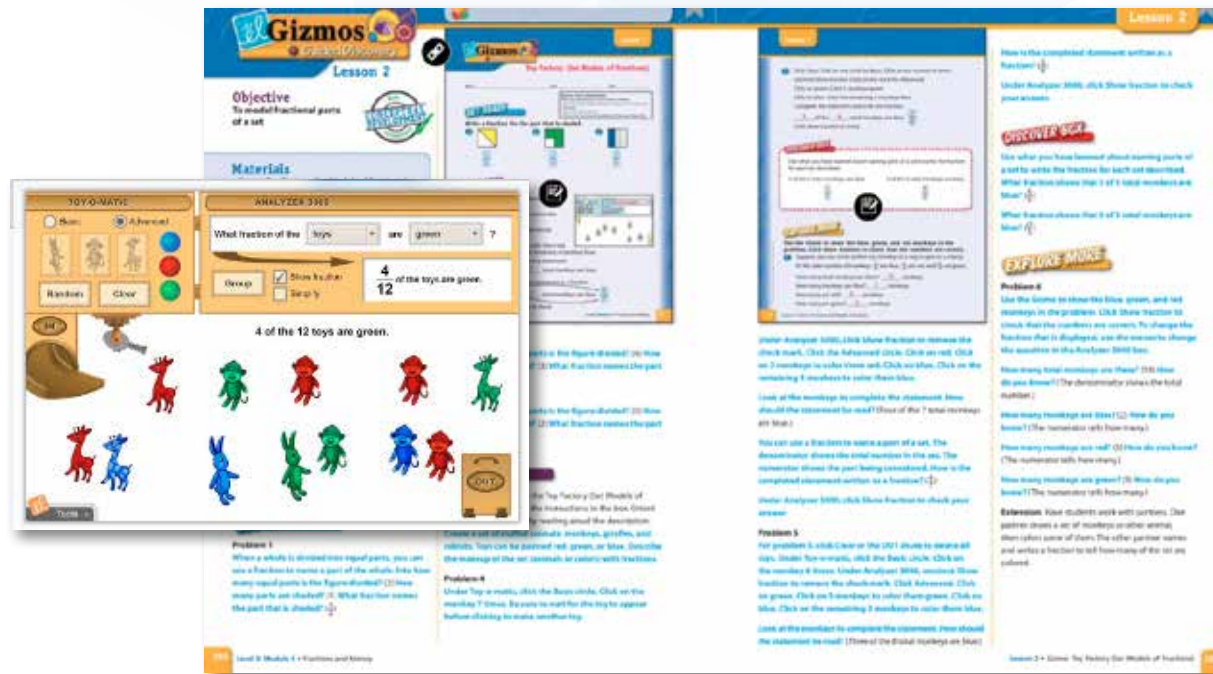


## ► *Vmath* builds Conceptual Understanding

Turn to page 228.

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.



MAFS.3.NBT.1.3

## ► *Vmath* builds Conceptual Understanding

Turn to page 236.

*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.

**Lesson 2**

**Objective**  
To understand division

**Standards**  
Math Understanding Multiplication (3.OA.2)

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

**Frank has 12 pieces of candy. He gives 4 pieces of candy to each friend. How many friends receive candy?**

**BUILD THE CONCEPT**

How many pieces of candy does Frank have? \_\_\_\_\_

How many pieces of candy does Frank give each friend? \_\_\_\_\_

$12 \div 4 =$  \_\_\_\_\_

How many friends receive candy? \_\_\_\_\_

**Model how to use equal groups to understand division.**

**Frank has candy to give to his friends.**

**How many pieces of candy does Frank have? (12)**

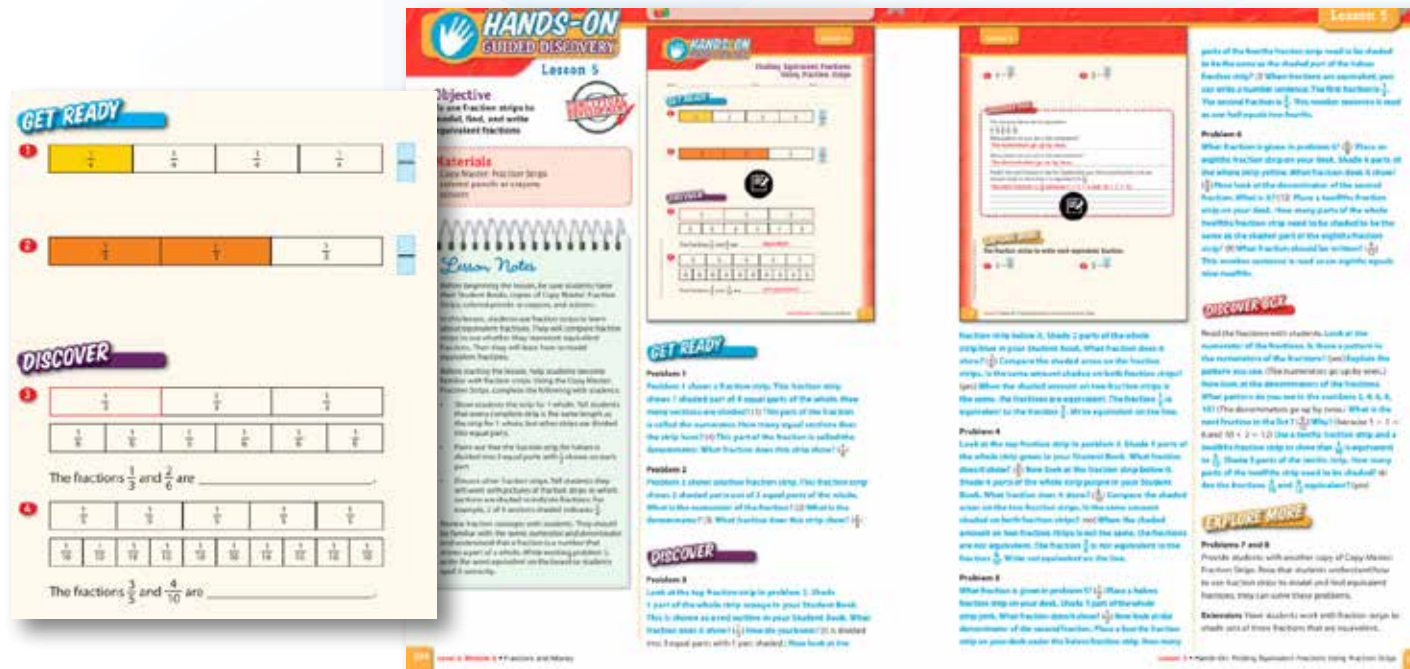
**How many pieces of candy does Frank give to each friend? (4)** Division can be used to find the number of friends Frank gives candy to because Frank gives the same number of pieces of candy to each friend. Divide 12 into equal groups of 4. The picture shows 12 pieces of candy. To divide 12 into equal groups of 4, draw a ring around each group of 4. How many groups of 4 are there? (3) What is 12 divided by 4? (3) Three is the number of friends. Frank will give 4 pieces of candy to each of 3 friends.

MAFS.3.OA.1.2

## ► *Vmath* builds Conceptual Understanding

Turn to page 298.

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



MAFS.3.NF.1.3

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 338.

*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.

**Lesson 2**

**Objective**  
To interpret a pictograph

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

**pictograph**  
a graph that uses pictures to show and compare data

**KEY TAKEAWAYS**

**Model the following skills for students.**

**READ BY PROGRESS**

**Problem 1**  
What is 3 times 100? 300

**Problem 2**  
What is 5 times 3? 15

**MODEL NEW SKILLS**

**Problem 3**  
This pictograph shows a pictograph. Pictographs use pictures to represent data. The key under the pictograph tells how many each picture represents. Look at the key. How many oranges does each picture represent? 100

To solve this problem, find the key. What does the key tell you? How many oranges does each picture represent? 100. Look at the key. How many oranges does each picture represent? 100. What should be multiplied by to find the number of oranges? 100

**Problem 4**  
Look at the pictograph labeled Number line. The number line has tick marks every 100 units. Which number has the most tick marks? Circle the number that has the most tick marks.

**Problem 5**  
This question asks for the difference between the number of oranges of each fruit and the number of apples of each fruit. How many oranges are there? 100. How many apples are there? 50. What should be multiplied by to find the number of oranges? 100

**Problem 6**  
This question asks for the difference between the number of oranges of each fruit and the number of apples of each fruit. How many oranges are there? 100. How many apples are there? 50. What should be multiplied by to find the number of oranges? 100

**Problem 7**  
How many oranges did the pictograph get? 100. How many apples did the pictograph get? 50. How many more oranges did the pictograph get than apples? 50

MAFS.3.MD.2.3

pictograph  
a graph that uses pictures to show and compare data

Favorite Musical Instrument	
Instrument	Number of Votes
Guitar	🎸🎸🎸🎸🎸
Drums	🥁🥁🥁
Piano	
Bass	

See related terms: bar graph, data

Animated Glossary in *VmathLive*

## ► *Vmath* helps students Apply Skills

Turn to page 342.

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.

The screenshot displays a digital lesson page with several interactive components:

- Write Math:** A section with a question: "Why is it important to read the categories on a bar graph?" followed by a writing area.
- Explain It:** A section asking: "Explain how the answer to Check Up problem 2 was found." with a writing area.
- Check Up:** A section with a question: "Compare the graph at the right with the graph above. How are the two graphs alike? How are they different?" and a small bar graph titled "Where Students Went on Saturday".
- Critical Thinking:** A section with a question: "Compare the graph at the right with the graph above. How are the two graphs alike? How are they different?" and a small bar graph titled "Where Students Went on Saturday".
- Additional Resources:** A section with a question: "Compare the graph at the right with the graph above. How are the two graphs alike? How are they different?" and a small bar graph titled "Where Students Went on Saturday".
- English Language Learners:** A section with a question: "Compare the graph at the right with the graph above. How are the two graphs alike? How are they different?" and a small bar graph titled "Where Students Went on Saturday".
- Students with Special Needs:** A section with a question: "Compare the graph at the right with the graph above. How are the two graphs alike? How are they different?" and a small bar graph titled "Where Students Went on Saturday".
- Technology:** A section with a question: "Compare the graph at the right with the graph above. How are the two graphs alike? How are they different?" and a small bar graph titled "Where Students Went on Saturday".

MAFS.3.MD.2.3

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



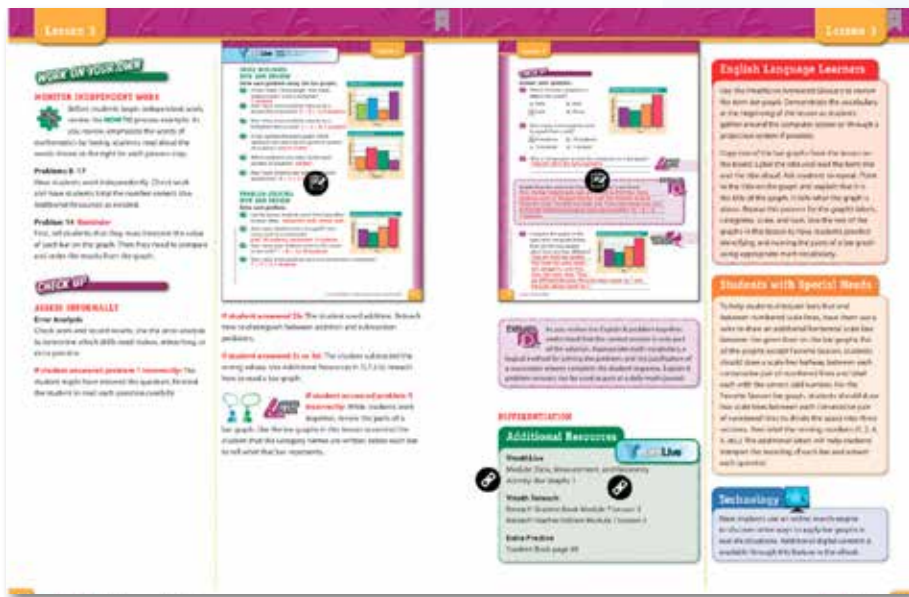
## ► *Vmath* helps differentiate instruction for students

*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



### English Language Learners

Use the *VmathLive* Animated Glossary to review the term *bar graph*. Demonstrate the vocabulary at the beginning of the lesson as students gather around the computer screen or through a projection system if possible.

Copy one of the bar graphs from the lesson on the board. Label the title and read the term *title* and the title aloud. Ask students to repeat. Point to the title on the graph and explain that it is the title of the graph. It tells what the graph is about. Repeat this process for the graph's labels, categories, scale, and bars. Use the rest of the graphs in this lesson to have students practice identifying and naming the parts of a bar graph using appropriate math vocabulary.

### Students with Special Needs

To help students interpret bars that end between numbered scale lines, have them use a ruler to draw an additional horizontal scale line between the given lines on the bar graphs. For all the graphs except Favorite Season, students should draw a scale line halfway between each consecutive pair of numbered lines and label each with the correct odd number. For the Favorite Season bar graph, students should draw two scale lines between each consecutive pair of numbered lines to divide the space into three sections, then label the missing numbers (1, 2, 4, 5, etc.). The additional labels will help students interpret the meaning of each bar and answer each question.

### Technology

Have students use an online search engine to discover other ways to apply bar graphs in real-life situations. Additional digital content is available through this feature in the eBook.

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.

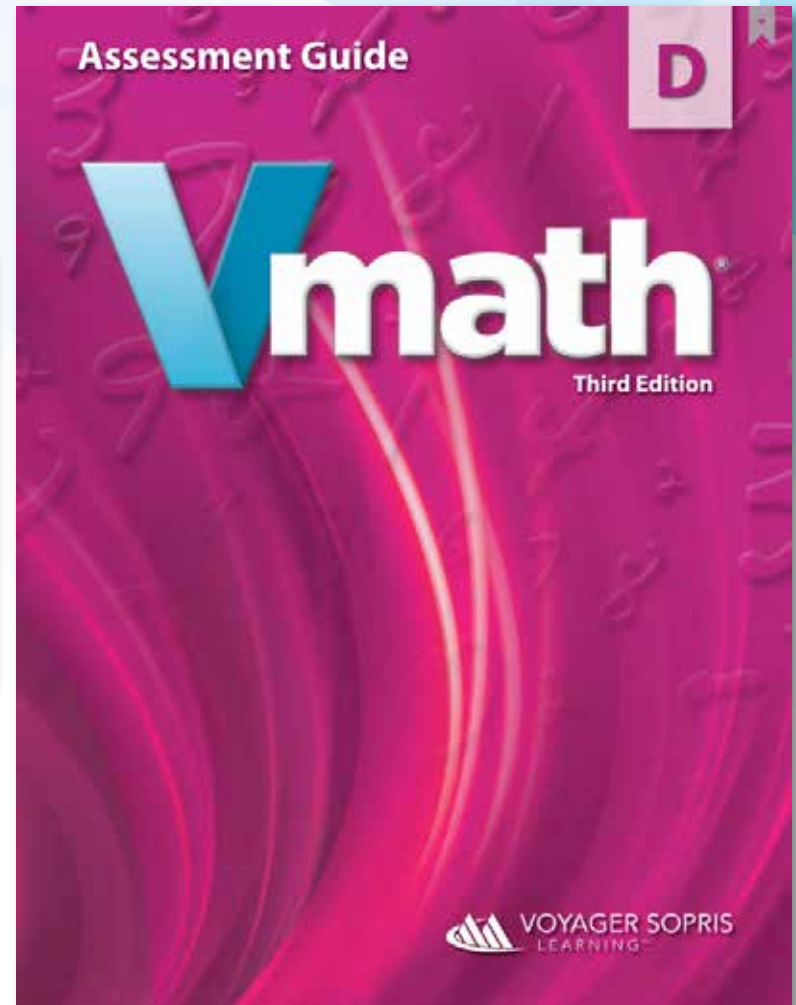
Take a look at each assessment, reports teachers can generate, and overall purpose of monitoring learning that occurs in *Vmath*.

## ► The Assessment Guide

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.



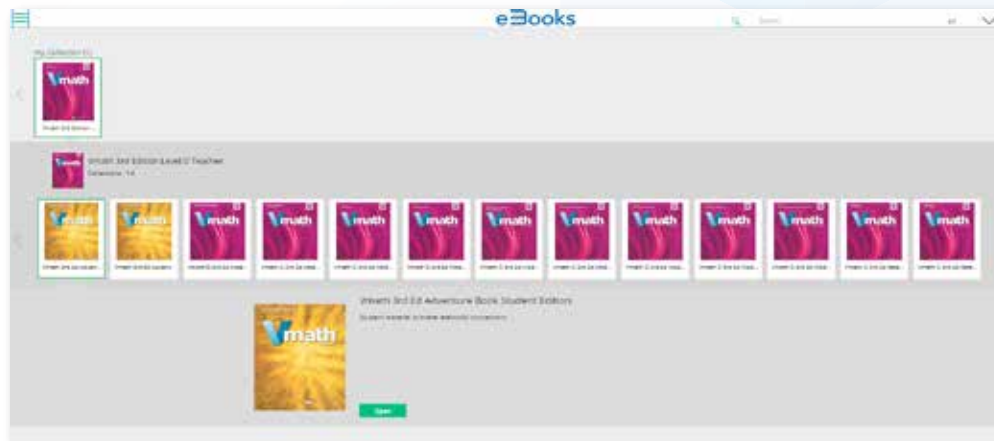
**Note:** The Assessment Guide is only available in eBook format.



## ► The Assessment Guide Student Edition

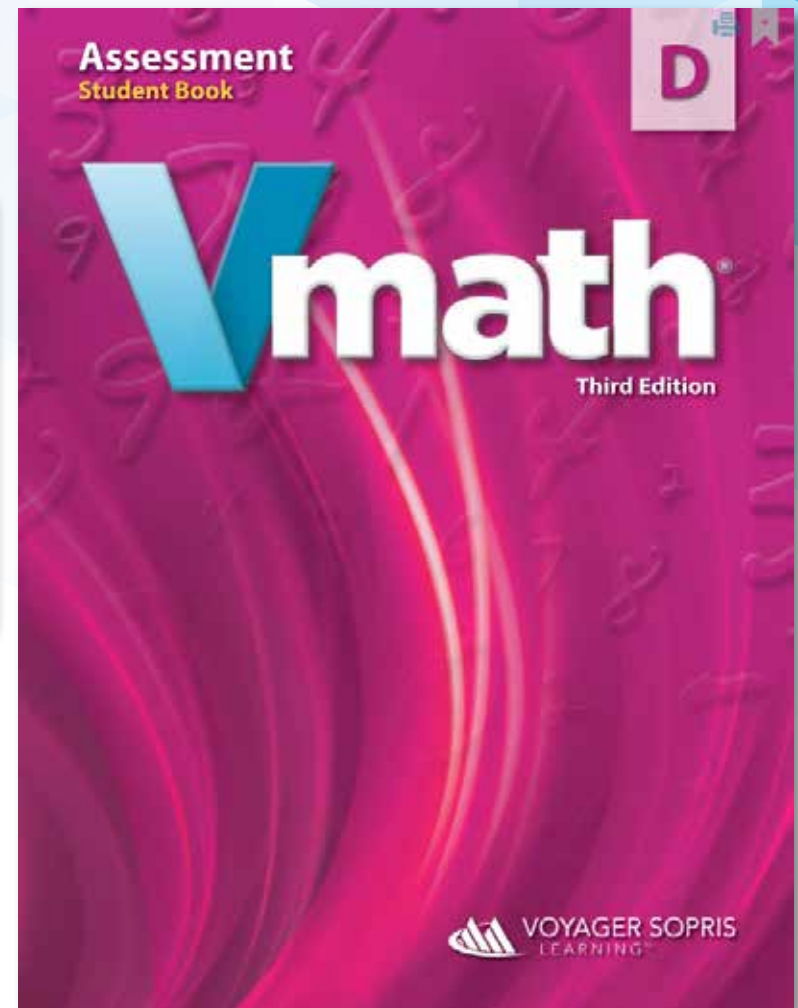
The Assessment Guide student edition provides the blackline masters which can be printed directly from the eBook. These assessments are also available to be administered and scored online.

Return to the ebook shelf. Select the Assessment Guide Student Edition.



Turn to the Table of Contents to begin exploring the assessments.

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





## ► Initial and Final Assessments

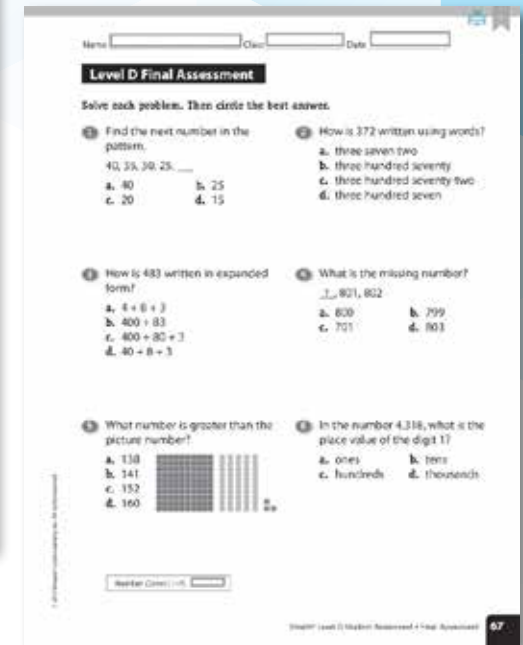
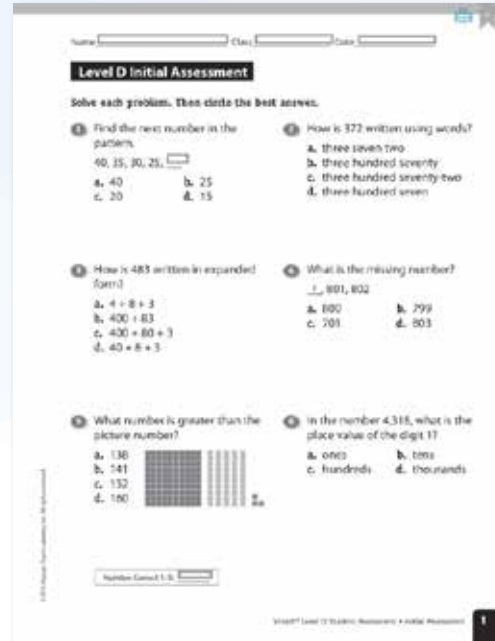
Turn to page 1 to review the Initial Assessment.

Turn to page 67 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 measure intervention results.

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





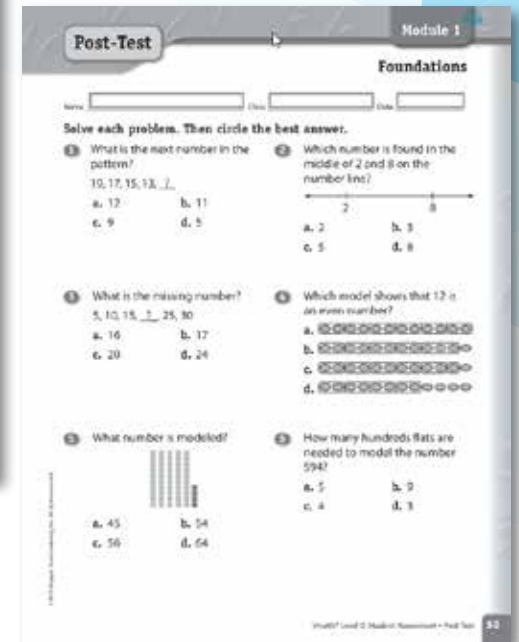
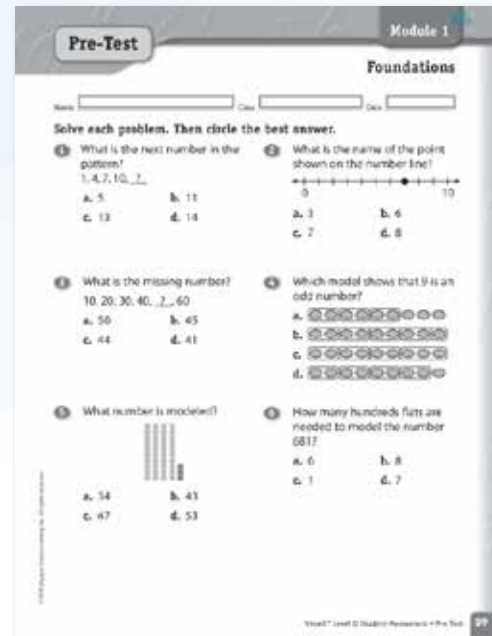
## ► Module Pre/Post Tests

Turn to page 39 to see the Module 1 Pre-Test.

Turn to page 53 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.



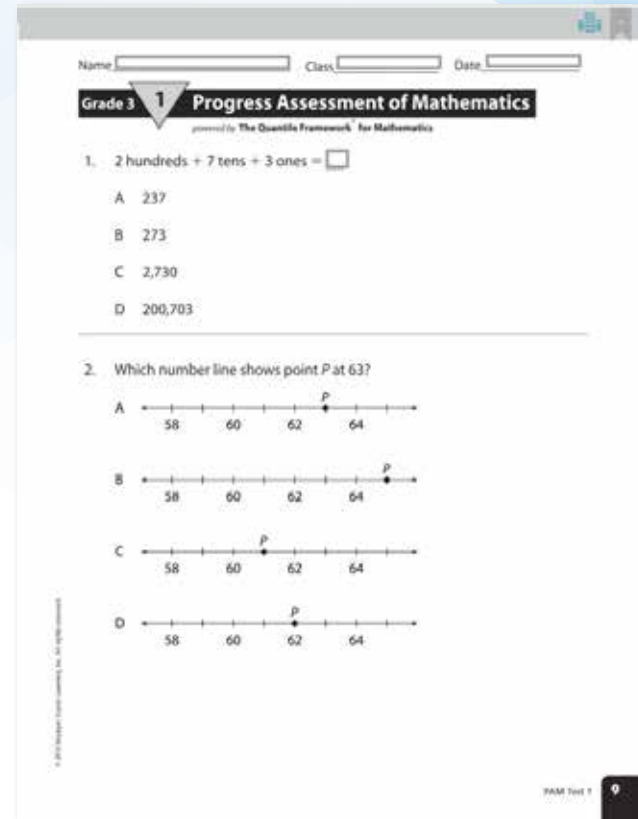
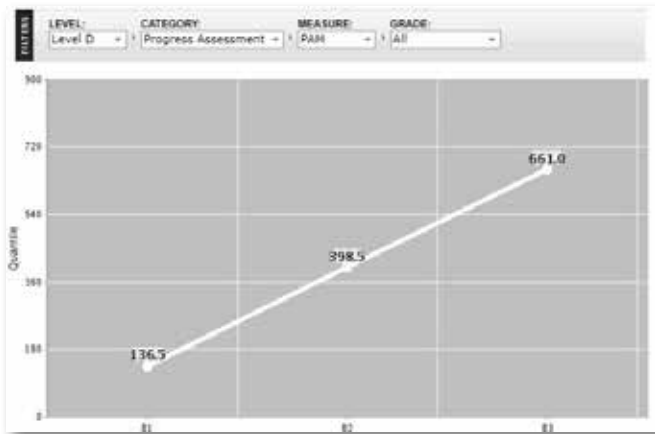
## ► Progress Assessments

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.

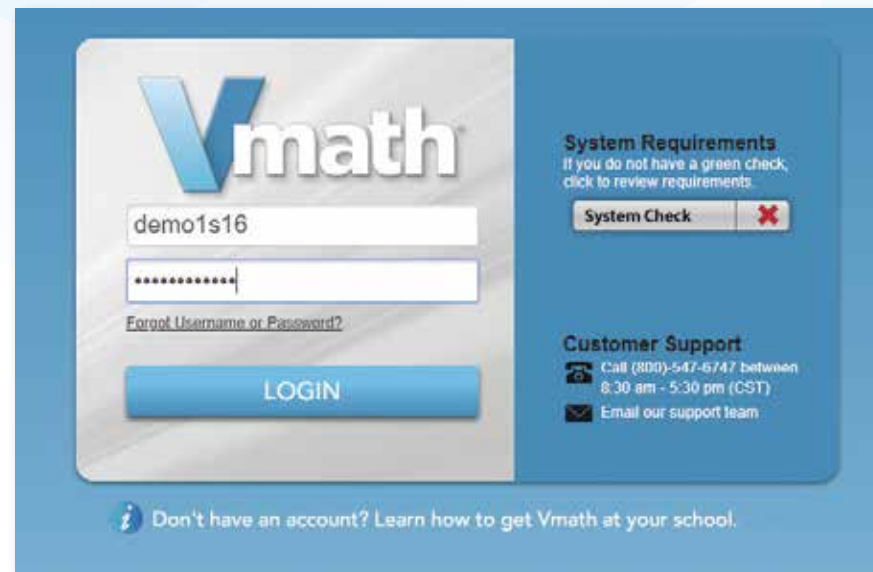
**Take a look at how technology enhances the *Vmath* experience wherever and whenever students need it.**

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

Level D Student

Username: **Demo1s16**

Password: **naturaldock4**





## ► 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*



## ► *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. The problem-solving activities are presented as a word problem and allow students to apply what they have learned.

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



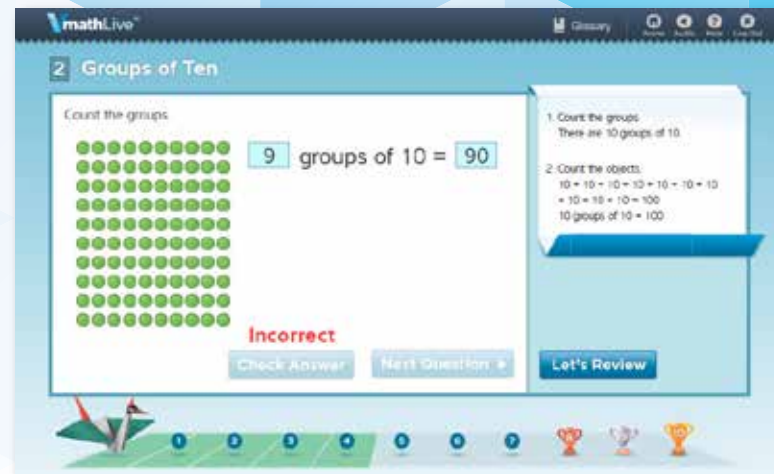
## ► *VmathLive* SCAFFOLDED INSTRUCTION

*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* 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.*

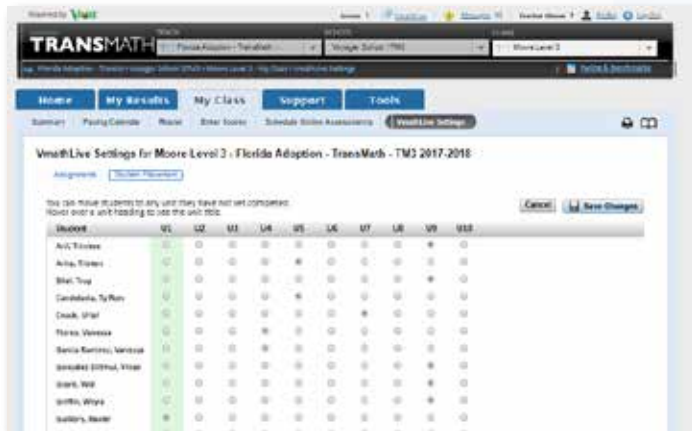


*All avatars can be customized by students.*

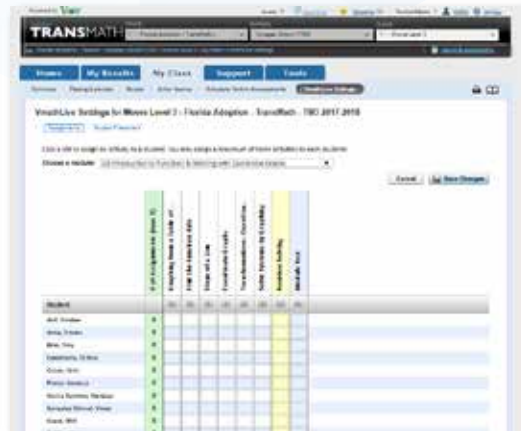
## ► **VmathLive Support Tools:** **DIFFERENTIATION CAPABILITIES**

### **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.

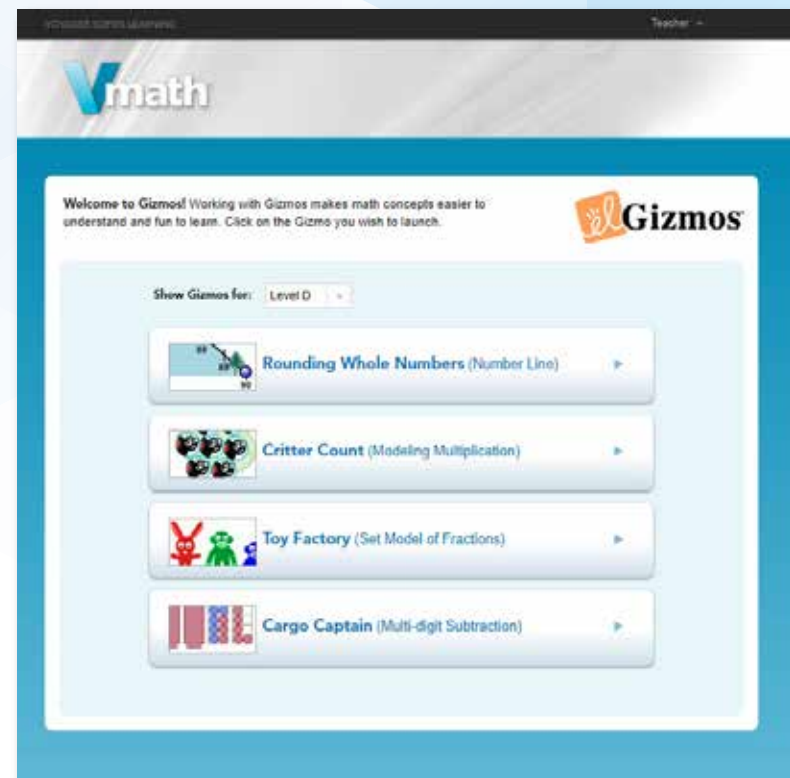
Return to the student center, select the Gizmo box, and then choose a Gizmo from the menu.

### 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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