

MATHia X

Getting Started for Students

Contents

Launch the Software as a Student	4
System Requirements Tool Instructions	5
Key Features of the Student Software	
Pre-Launch Protocol	6
Lesson Page	7
Student Help Tools	9
Step by Step	11
Skillometer	12
Glossary	13
Check for Understanding	14
Instructional Tools	15
Motivational/Engagement Features	18
Customer Support	20

LAUNCH THE SOFTWARE AS A STUDENT

Username: _____

Password: _____

To launch the software:

1. Visit <http://online.carnegielearning.com>
2. Enter your school ID (given to you by your teacher).
3. Enter your Username (given to you by your teacher).
4. If this is your first time logging in, click **I need a new password**. You will be prompted to enter and confirm a password of your choice and then return to the login page.
5. Enter your password.
6. Click **Log In**.
7. Click to launch the software.

BY LAUNCHING OR USING THE TEACHER'S TOOLKIT, COGNITIVE TUTOR® SOFTWARE, MATHia® SOFTWARE, REVIEW MODE OR ADMIN REPORTS IN THE CARNEGIE LEARNING® RESOURCE CENTER, YOU ACKNOWLEDGE THAT YOU HAVE READ AND AGREED TO THE TERMS OF THE [LICENSE AGREEMENT](#).

⚠ Please see this important announcement regarding Google Chrome: <http://www.carnegielearning.com/chrome>

1. [Bookmark this login page.](#)
2. [Test your computer using our System Requirements Tool.](#)
3. [Disable popup blockers.](#)
4. [Log in](#)

SCHOOL ID:

USERNAME:

PASSWORD:

[I need a new password](#)

SYSTEM REQUIREMENTS TOOL INSTRUCTIONS



Access the System Requirements Tool from the Software Login page.

The System Requirements Tool will run an analysis to identify any issues with your browser or system settings.

Testing your browser, please wait
Please wait while we test your browser... 



If the page does not finish loading, please review our [Popup Blocker Help Page](#) and make sure your popups are allowed, and go to the [Java website](#) and click "Do I have Java?" to check that Java is installed on your computer.

Your Browser Test Results

The following is an analysis of your browser and system settings as performed by BrowserHawk.

Description	Status	Details
Browser and platform	Caution	You are using Chrome 50 on OS X 10.10.5. Starting in September 2015, Google has disabled support for several web plugins, including Java, for their Chrome browser. Please visit Google Chrome Updates for more information.
Java plug-in	Please Fix	Your Java plug-in is disabled or not installed. As of September, 2015, Google has disabled several plug-ins for their Chrome browser, including Java. We recommend using a supported browser (Safari or Firefox). Please visit this link for more information.
Flash plug-in	Good	You have the Flash 21.0 r0 plugin, which is supported.
Popups enabled	Please Fix	Your popups are currently blocked. For assistance, please view our Popups Help Page . If you do not see your browser listed, please check the "Browser and Platform" section above to confirm that you're using a compatible web browser and operating system.
Internet connection	Good	You are using a broadband connection, and your connection speed of 19.16 Mbps is ideal.
Screen size	Good	Your screen size of 1440x900 is ideal.
LMS connection	Good	Your computer can successfully connect to the LMS servers.
RAM requirements	Info	The Carnegie Learning software requires a minimum of 2 GB of RAM for Macs. To check the RAM on your computer: 1. Click the Apple in the top left-hand corner of your screen 2. Click About This Mac 3. Look for the Memory section

The Status column on the Your Browser Test Results page indicates if any issues were identified with your browser or system settings.

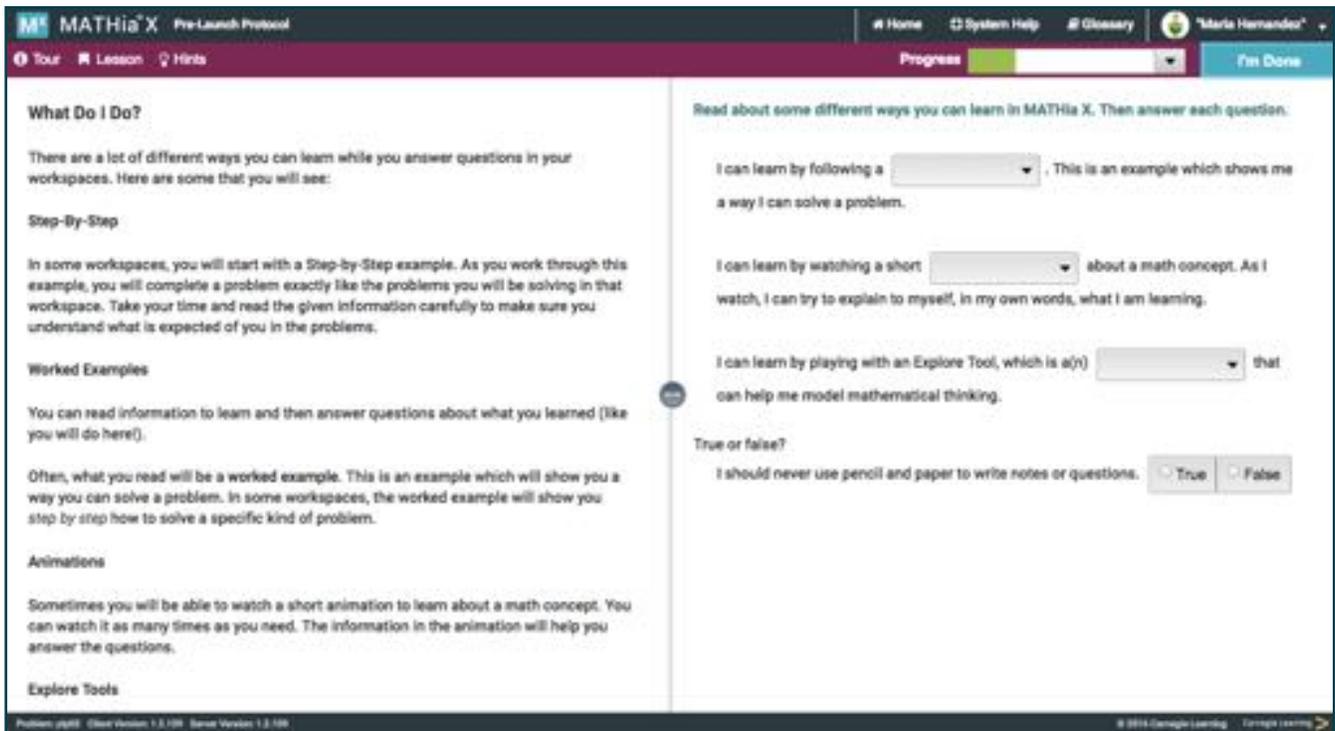
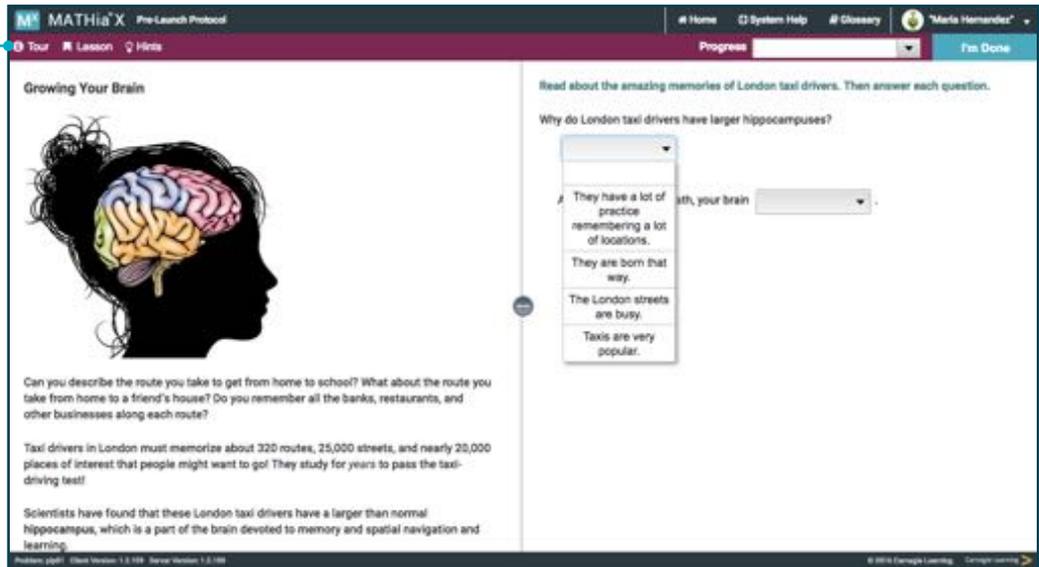
Refer to the Details column for additional information on issues identified.

KEY FEATURES OF THE STUDENT SOFTWARE

Pre-Launch Protocol

The Pre-Launch Protocol module is presented at the beginning of each course in the software. It provides an overview on how to use the various tools in MATHia X, as well as introduces key learning science topics.

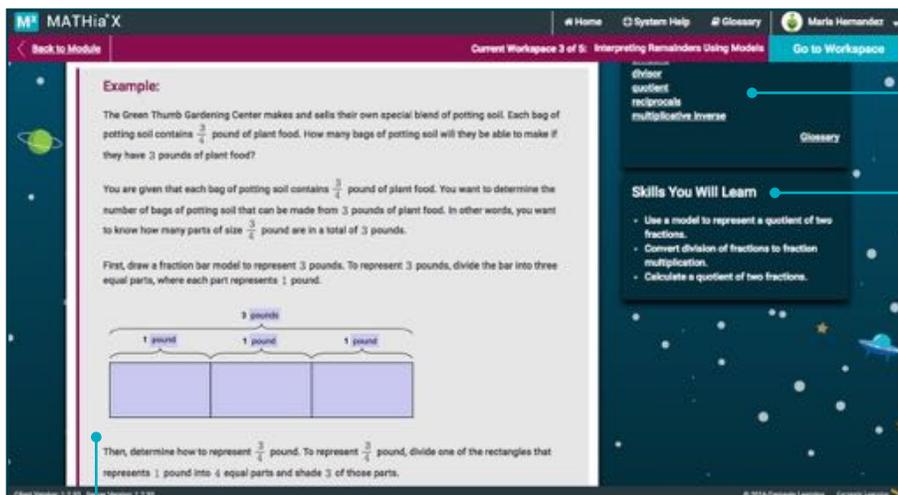
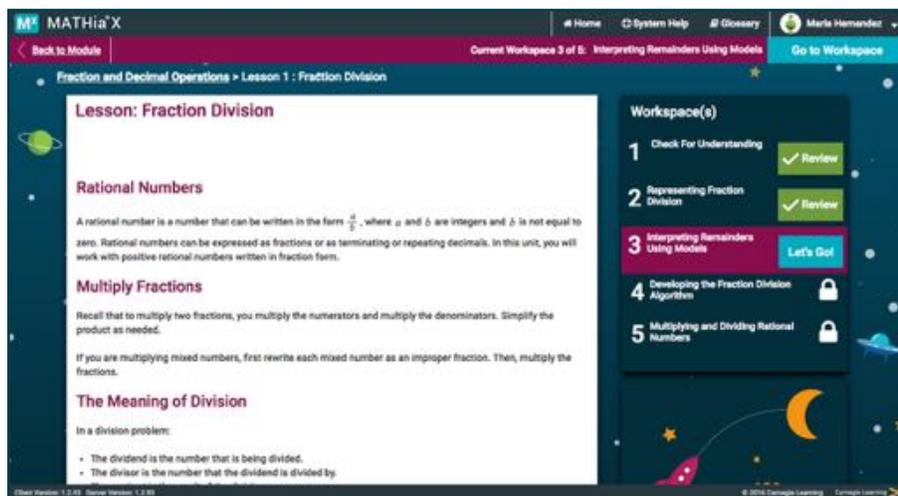
Click [Tour](#) to view descriptions for the various features of MATHia X.



KEY FEATURES OF THE STUDENT SOFTWARE

Lesson Page

The Lesson Page provides a math lesson on specific topics for each unit.

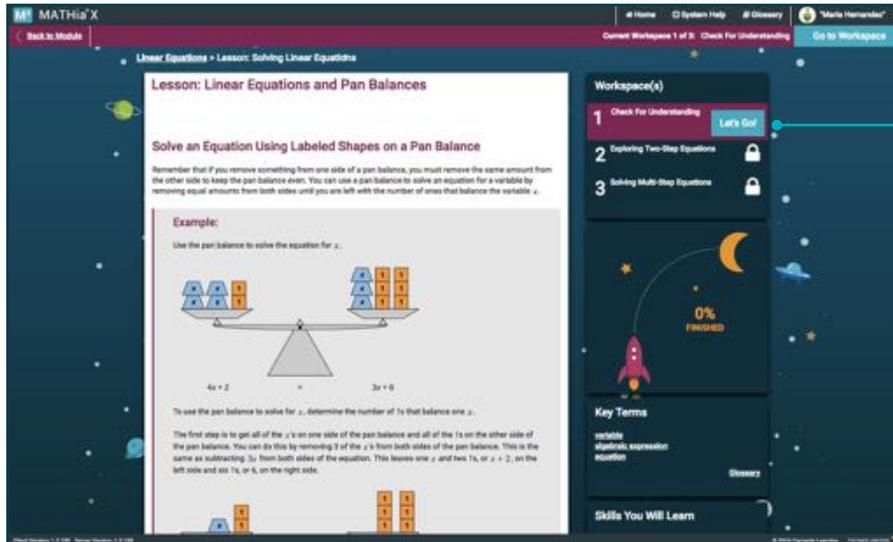


The Key Terms that are introduced in the unit are available here. The Key Terms are hyperlinked to the Glossary.

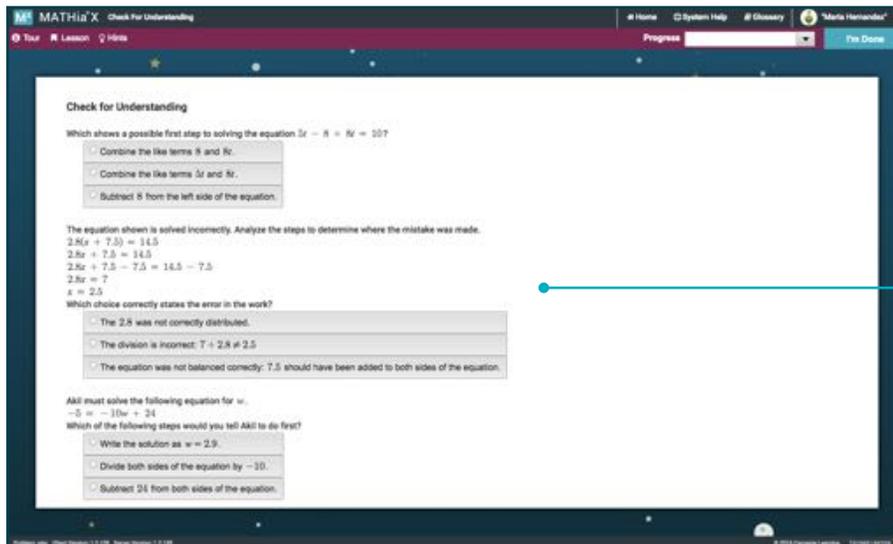
Skills that you will learn in the unit are listed here. You will see these in the Skillometer™ as you work.

Modeled problems of the math concepts in this unit are displayed on the Lesson Page.

After reading the Lesson Page, you will launch into the Check for Understanding questions. Check for Understanding questions can be used to gauge your understanding of material covered in the Lesson Page.



Click Let's Go! to jump to the Check for Understanding if you feel confident in the lesson material.



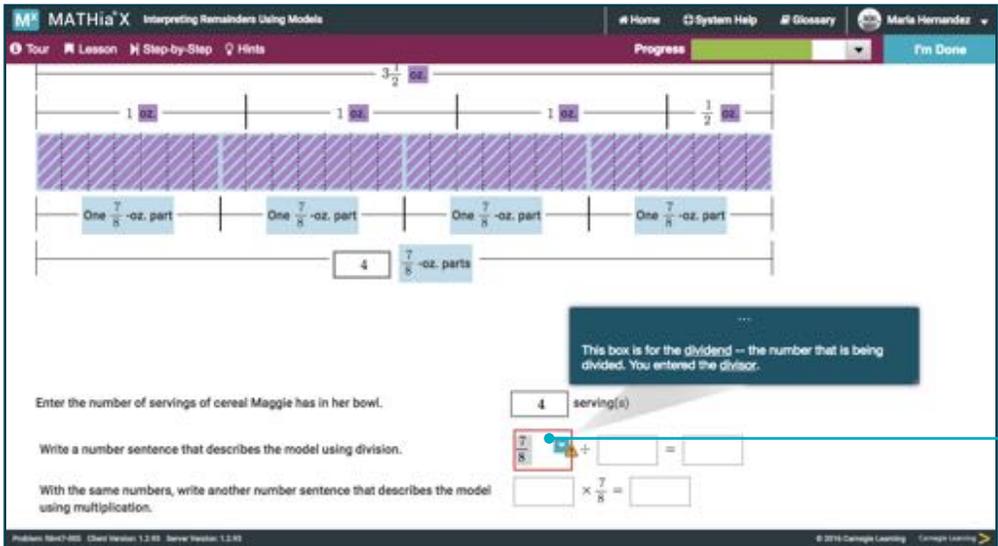
You will receive immediate feedback as you answer questions in the Check for Understanding. When you answer a question, a note is provided re-enforcing the concept, coloring it as red or green, indicating a correct/incorrect answer. You can try again if your original answer was incorrect.

KEY FEATURES OF THE STUDENT SOFTWARE

Student Help Tools

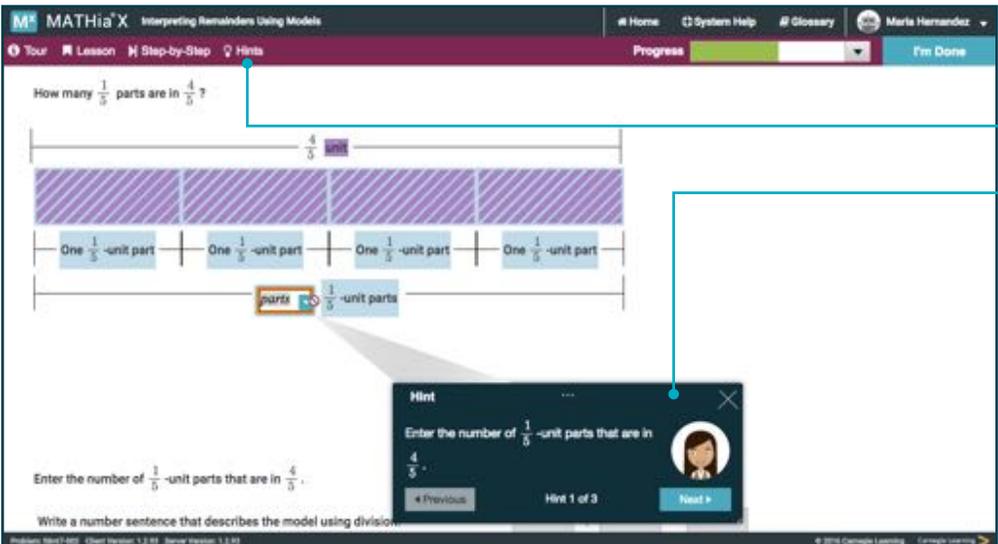
Four forms of help are available throughout the software to help solve the problem you are working on.

1. Just-in-Time Hints automatically appear when you make a common error. Just-in-Time Hints are indicated by the arrow in a red text box.



Position your mouse over the red box to view the hint.

2. On-Demand Hints are hints that you can ask for at any time while working on a problem.



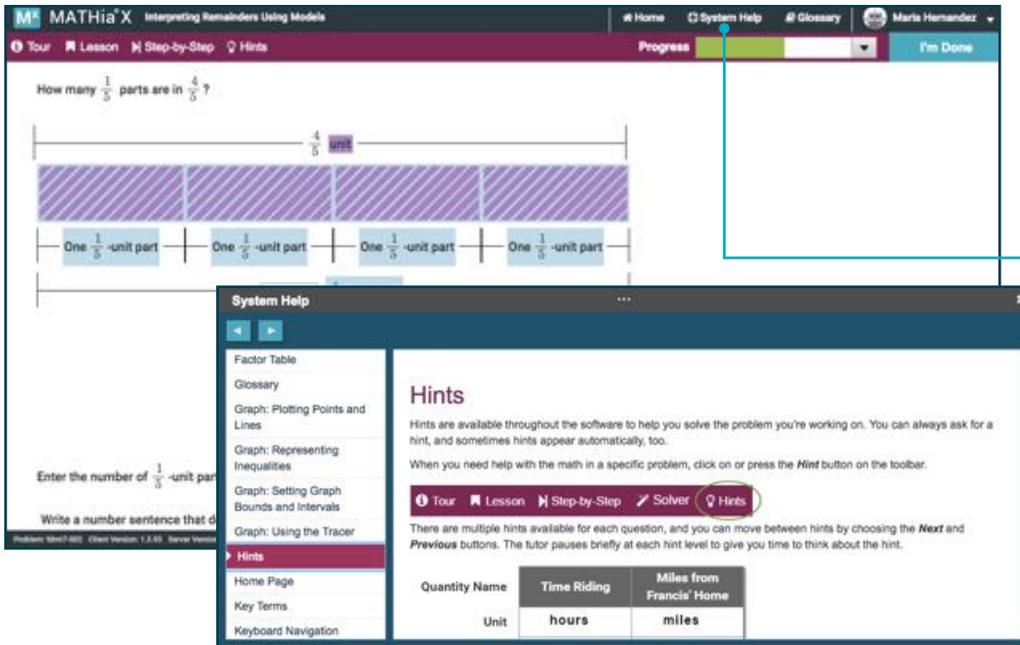
There are multiple hints available for each question. The level of detail of On-Demand Hints increases as you ask for more help.

Key Features of the Student Software

Student Help Tools

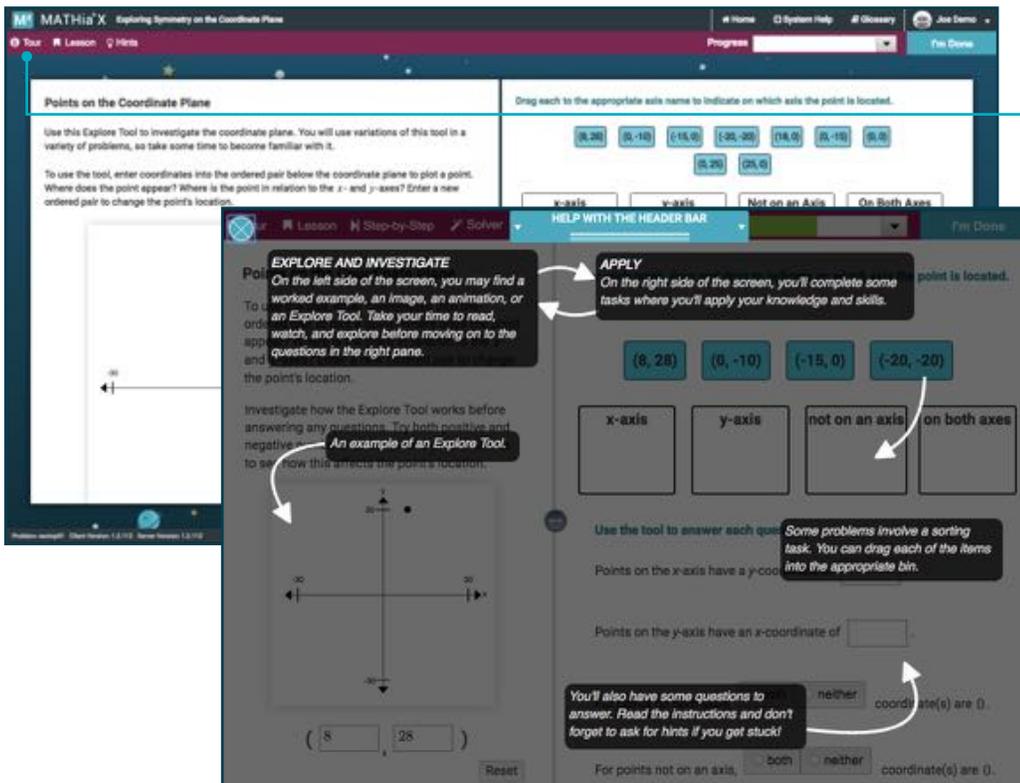
cont'd

3. Click **Help** for detailed assistance with the software tools and interface.



The Help tool provides you with helpful information on getting started and working with the software tools.

4. Click **Tour** to view descriptions for the various features of MATHia X.



The Tour will display an overlay that defines each of the tools on the screen.

KEY FEATURES OF THE STUDENT SOFTWARE

Step by Step

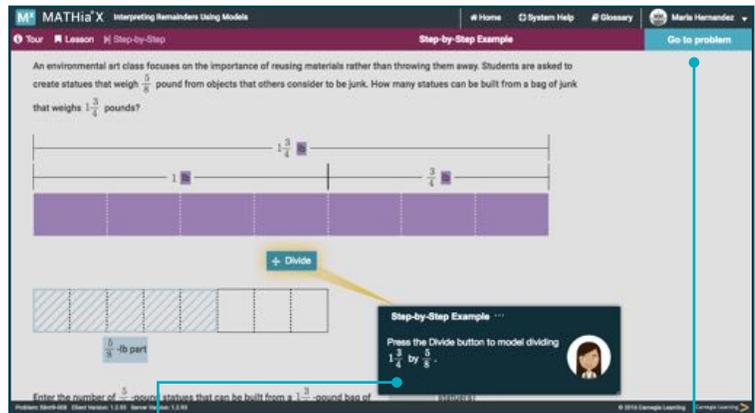
The Step by Step demonstrates how to use the tools in a lesson by guiding you step-by-step through a sample math problem.

Starting a Step by Step

When you click **Let's Go!**, the Step by Step will automatically begin.

Basic Instructions

1. Read the scenario.
2. Read the hint in the little window and try to answer the question. If you don't know the answer, you can guess. This will not affect your skill level.
3. If you enter the wrong answer twice, the system will correctly complete the step for you. Take some time to think about why the suggested answer is the correct one.
4. Continue answering the questions until you complete the problem.
5. Click **Go to Problem** to go to the required math problems.

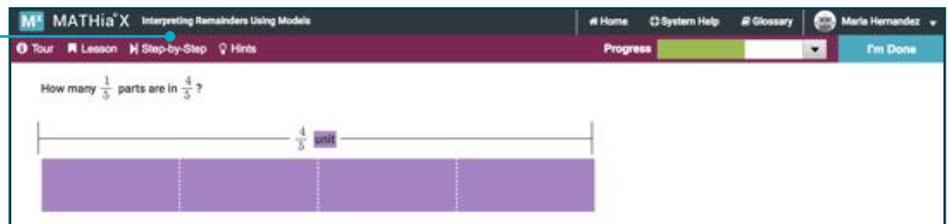


A student Crew Member will walk you through each step of the problem.

You can Go to Problem at any time and toggle between the example and your problem as needed.

Step by Step is located here.

When working on a problem, you can refer back to the Step by Step for assistance.



KEY FEATURES OF THE STUDENT SOFTWARE

Skillometer

The Skillometer shows a summary of the major skills that are being covered in a given workspace as well as your progress on those skills.

The name of each skill, such as “Calculate quotient,” is displayed along with a level of mastery. The level of mastery is not a percent of your correct and incorrect responses. Rather, it is a predictor of the probability that you will be able to demonstrate that skill again in the future. An orange bar indicates skills that have not been completely mastered. A green bar indicates skills that have been completely mastered in the current workspace. As you work, you will notice the elongated progress meter progressing from orange to green.

The screenshot shows the MATHia X interface for the problem "Interpreting Remainders Using Models". The main workspace contains a number line model for $3\frac{1}{2}$ oz. divided into two 1 oz. segments, each further divided into four $\frac{7}{8}$ oz. parts. Below the model, the user has entered "4" in a box for the number of servings. The problem asks for a division sentence and a multiplication sentence. The Skillometer table shows the following skills and their mastery levels:

Skills	Progress to Mastery
Model division with a whole number quotient.	Orange bar
Model division with a mixed number quotient.	Orange bar
Model division by a larger number.	Orange bar
Calculate fractional part of quotient.	Orange bar
Calculate quotient.	Orange bar
Write division sentence.	Orange bar
Write multiplication sentence.	Green bar with checkmark

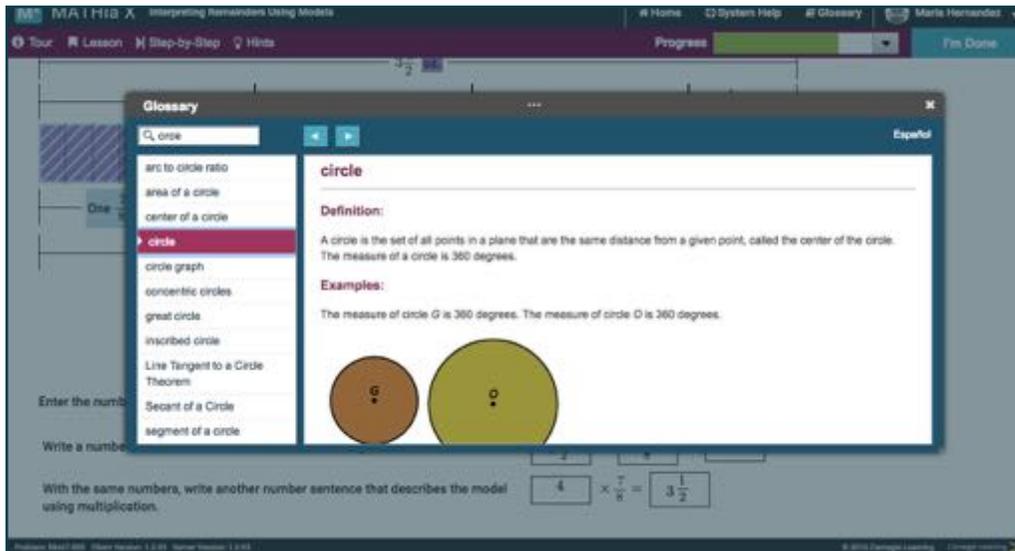
Skill Tracking Behavior

When beginning a given unit, the initial skill levels are not zero because there is some likelihood that you are already familiar with a concept or will be able to learn the skill unassisted. When you answer something correctly, the level of mastery increases because there is a greater probability that you understand the skill and will be able to complete a similar task in the future. Answering incorrectly or asking for a hint usually indicates that you do not understand a given skill, so the level of mastery may decrease. For some skills, it is likely that reading a hint will increase understanding, so the level of mastery may increase. Similarly, for some skills, it is likely that by answering incorrectly, you will “learn from your mistake,” so the level of mastery may increase. Note that the level of mastery will stop increasing after a given percent, even if you continually request hints. So, it is not possible for you to “hint” your way through to complete a unit.

KEY FEATURES OF THE STUDENT SOFTWARE

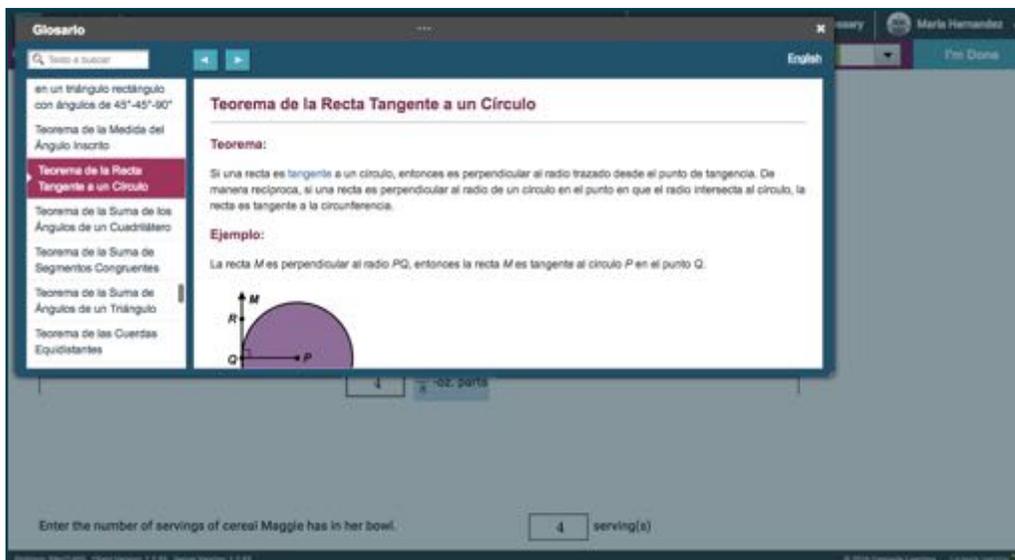
Glossary

The Glossary is available throughout the software. It contains a list of definitions and examples for key mathematical terms used throughout the curriculum. You can open the Glossary by choosing the icon at the top of the screen.



The Glossary is automatically opened when you click on any of the key terms links in the lesson page. For example choosing the link **circle** in the right column of the lesson opens the Glossary entry for circle as shown above.

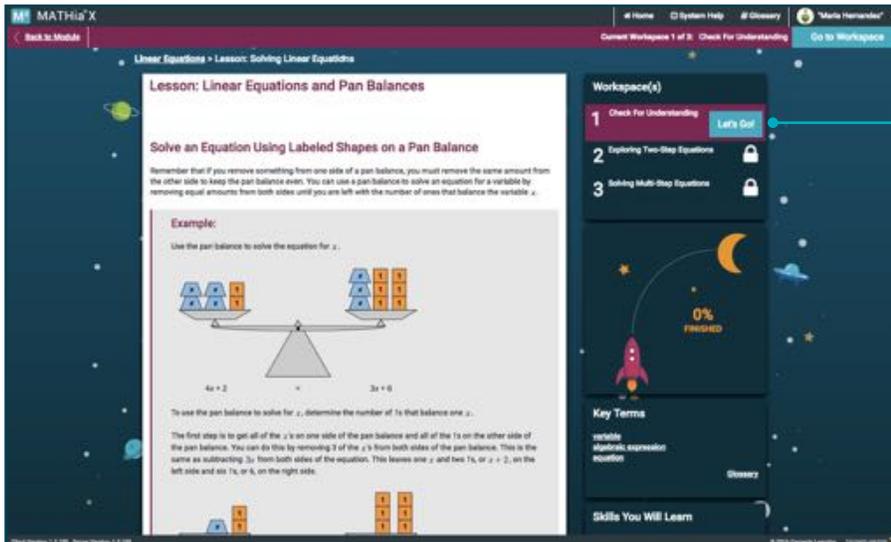
On the search tab of the Glossary, use the find box on the top left to search for a topic or term. You should enter complete words, but do not be too detailed, as the search is based on exact matching of the words entered. Any topic or term in the Glossary that has text matching your search will be displayed in the left window, in alphabetical order. Click on the term in the left window that you wish to view. A definition and example for the term will appear in the right window. The Glossary is also available in Spanish and can be accessed by clicking the Español button at the top.



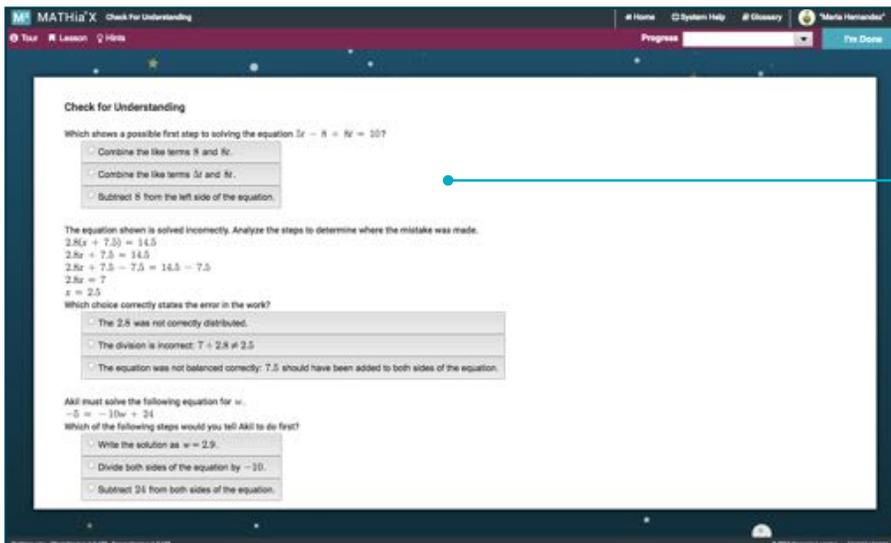
KEY FEATURES OF THE STUDENT SOFTWARE

Check for Understanding

The Check for Understanding gauges your understanding of material to be covered in the upcoming lesson.



Access the Check for Understanding from the Lesson Page.



You will receive immediate feedback as you answer questions in the Check for Understanding. When you answer a question, a note is provided re-enforcing the concept and coloring as red or green, indicating a correct/incorrect answer. You can try again if your original answer was incorrect.

KEY FEATURES OF THE STUDENT SOFTWARE

Instructional Tools

Explore Tools

Explore Tools allow you the opportunity to investigate different mathematical concepts, search for patterns, and look for structure in ways that make sense to you. These tools also provide optional supports for you as you answer questions and solve problems.

The screenshot shows the MATHia X interface for the lesson "Introducing a Balance to Solve One-Step Equations". The left panel features a balance scale with two pans. The left pan contains two blocks labeled '1', and the right pan contains four blocks labeled '1'. Below the scale, the equation $2 + 1 = 6$ is displayed. The right panel contains text instructions and interactive questions. The first question asks the user to enter a value for g in the equation $g + 1 = 6$. The second question asks what happens to the balance if $g = 6$, with a dropdown menu for the answer and a corresponding equation $6 + 1 = 6$. The third question asks what happens if $g = 0$, with a dropdown menu and the equation $0 + 1 = 6$. The interface includes navigation buttons like "Home", "System Help", "Glossary", and "I'm Done".

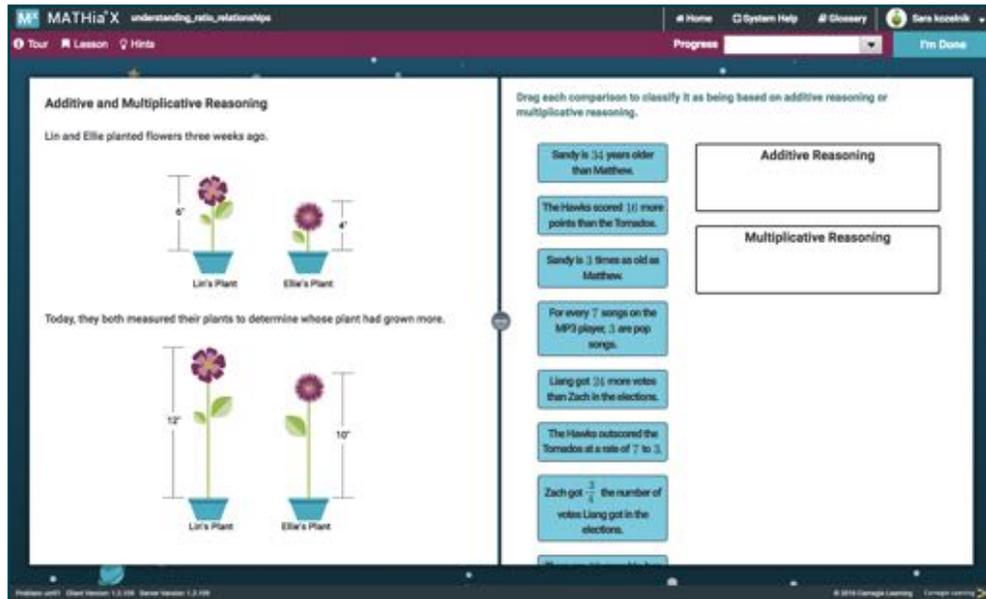
Animations

Animations provide you with an opportunity to watch, pause, and re-watch demonstrations of various mathematical concepts. They are a way to connect the visual representations of different mathematical ideas to their abstract underpinnings through visual representations and audio narrative.

The screenshot shows the MATHia X interface for the lesson "Representing Fraction Division". The left panel is titled "Whole Number Dividends" and includes an animation showing a bar model for $2 \div \frac{3}{4} = 2$. The bar is divided into two whole units, each containing three $\frac{3}{4}$ pieces. The text asks "How many $\frac{3}{4}$'s are in 2?" and "There are _____ pieces of size $\frac{3}{4}$ in 2." The right panel contains questions about the animation, such as "The dividend was divided into $\frac{1}{4}$ -sized pieces because the _____ has a denominator of 4." and "The quotient $2 \div \frac{3}{4}$ is $2\frac{2}{3}$. The remainder is $\frac{2}{3}$ because $\frac{2}{3}$ of a _____ is left over." Below these are three multiple-choice questions asking if the given number sentences describe the model using multiplication: $\frac{3}{4} \times 2\frac{2}{3} = 2$, $2\frac{2}{3} \times \frac{3}{4} = 2$, and $2 \times 2\frac{2}{3} = \frac{3}{4}$. The interface includes navigation buttons like "Home", "System Help", "Glossary", and "I'm Done".

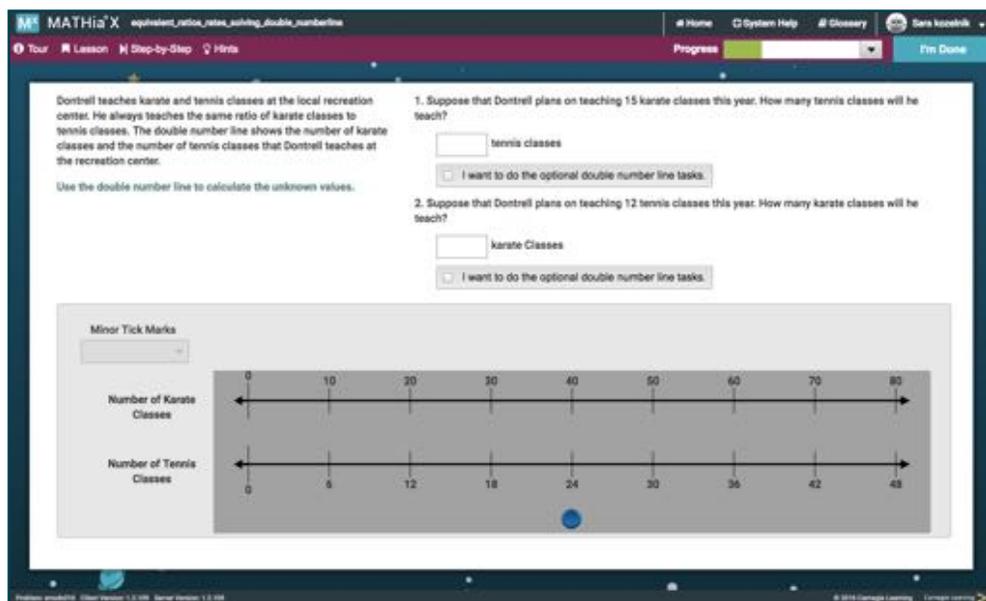
Classification Tools

Classification tools allow you to apply your mathematical understanding into the form of categorizing answers based on similarities. These tools also provide you with the means to demonstrate proficiency in recognizing patterns in problem structure.



Problem Solving

Problem solving tools provide you with highly individualized and self-paced instruction that adapts to your exact needs to deepen your conceptual understanding of the mathematics. Through adaptive learning technologies, you engage in reasoning and sense-making.



Worked Examples

Worked Examples provide you with a tool that allows you to question your understanding, make connections with the steps, and ultimately self-explain. Analyzing Worked Examples also allows you to identify your own misconceptions, make sense of the mathematical concepts, and then ultimately to persevere in problem solving.

The screenshot shows the MATHia X software interface. The title bar reads "MATHia X approximating_square_roots". The main content area is split into two panels. The left panel contains a 15x15 grid with a staircase pattern of squares. The squares are labeled 1 through 15. The text above the grid says: "The picture provides the first 15 whole perfect squares. To find 7^2 in the picture, locate the square that is 7 units long and 7 units wide. The square that is formed contains 49 square units." The right panel contains the following text: "Examine the worked example and then answer each question. List each perfect square. $1^2 =$ [input box] $2^2 =$ [input box] $3^2 =$ [input box] $4^2 =$ [input box] $5^2 =$ [input box] $9^2 =$ [input box] $10^2 =$ [input box]. Because there [is] [is not] an integer that can be multiplied by itself to obtain the product of 90. The number 90 [is] [is not] a perfect square. Determine which numbers are perfect squares and drag them into the appropriate category. [25] [36] [49] [64] [121] [100] [400] [120]. Perfect Squares Not Perfect Squares".

MOTIVATIONAL/ENGAGEMENT FEATURES

Homepage

You have a clear picture of the work that is ahead of you. You see the modules, units, and number of workspaces assigned to you.

The screenshot displays the MATHia X homepage for a student named Maria Hernandez. The interface is set against a dark blue space-themed background with stars and planets. At the top left, the logo 'M^x MATHia X' is visible. To the right, there are links for 'Glossary' and the user's name 'Maria Hernandez'. The main heading is 'Period 1: Course 1', with a welcome message: 'Welcome to MATHia X! Select a module below to get started, or visit the Resource Center to learn more.' A 'Your Progress' section features a rocket icon and a circular progress indicator showing 25% completion. A table below this section tracks 'Time on Site', 'Units', 'Workspaces', and 'Problems' for 'Today' and 'Total'. The main content area consists of four module cards: 1. 'Fraction and Decimal Operations' (3 Units, 10 Workspaces, 1 of 10 Workspaces Complete) with a 'Let's Go!' button. 2. 'Ratios, Rates and Percents' (3 Units, 6 Workspaces, 6 of 6 Workspaces Complete) with a checkmark icon. 3. 'Numeric and Algebraic Expressions' (1 Unit, 4 Workspaces, 0 of 4 Workspaces Complete) with a lock icon. 4. 'One-Step Equations and Inequalities' (7 Units, 17 Workspaces, 0 of 17 Workspaces Complete) with a lock icon. A navigation bar at the bottom shows a series of colored circles, with the first one highlighted in blue. The 'Carnegie Learning' logo is in the bottom right corner.

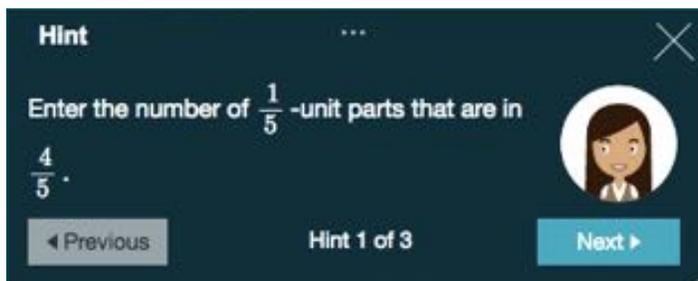
	Today	Total
Time on Site	0:05	1:12:05
Units	1	5
Workspaces	1	6
Problems	8	33

Unlocked units have a *Let's Go!* or a *Review* button. *Review* indicates completed units that you can go back to and review.

Modules can be expanded or collapsed by clicking the empty space.

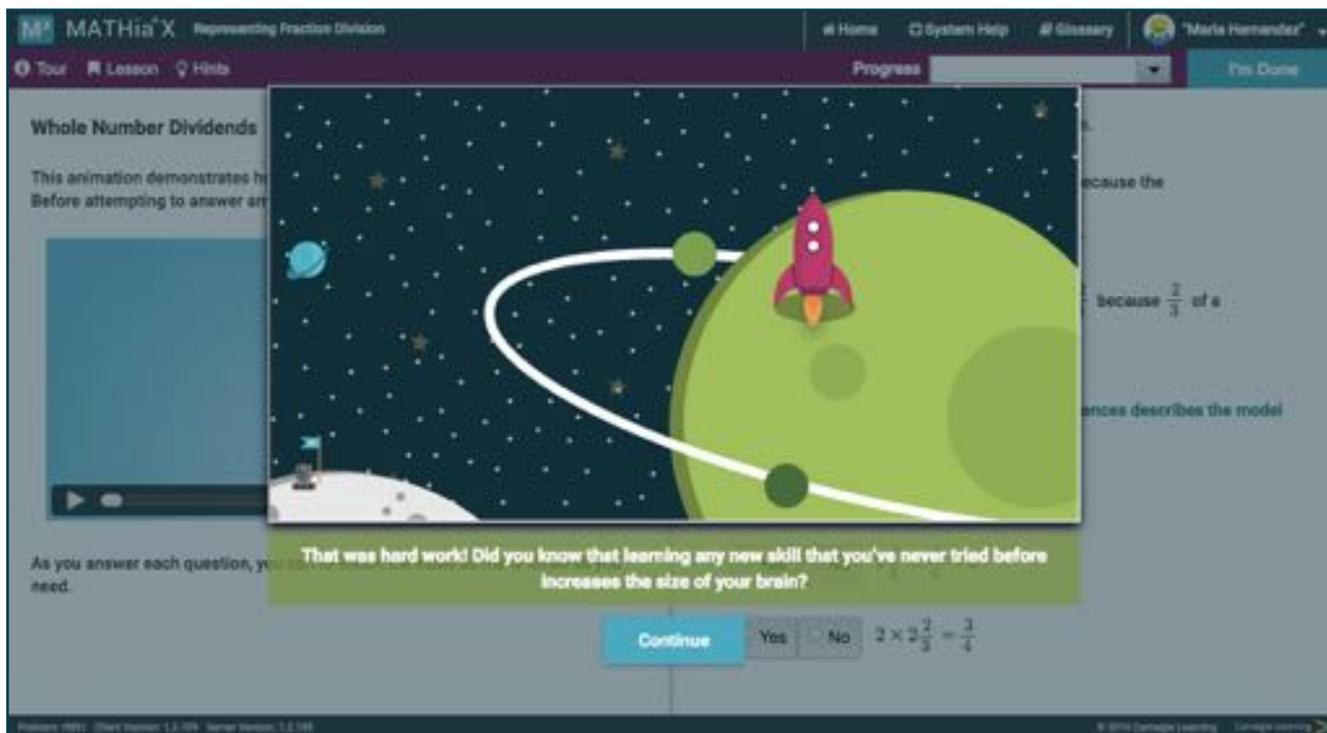
Student Crew

As in the text, the characters in the software will provide information to help you along the way.



Growth Mindset Language in Animation

Research shows students who believe that they can get smarter will work harder. Learning about the way the brain changes as you learn has been shown to encourage you to believe you have the capability to learn. Within MATHia X, we praise effort above innate ability.



CUSTOMER SUPPORT

Customer Support is available to answer your questions about using the software.

Email: help@carnegielearning.com

Phone: 877.401.CLCS (2527) or 888.851.7094 (Select Option 3)

Chat: Visit resources.carnegielearning.com/contact-us to connect with us via chat.

Websites:



Carnegie Learning® Online
<http://online.carnegielearning.com>

Carnegie Learning
Technical Support Website
<http://www.carnegielearning.com/support>

