

ST Math Online Training Guide

For use with the Self-Guided Online Courses with a Facilitator

Before the training:

- Ensure all teachers and administrators have ST Math accounts. They can be requested by submitting the account request form or contacting support@mindresearch.org or calling 888-491-6603.
- Check that all devices have been activated. You know the device has been activated if you see Jiji (the penguin) standing outside with “Welcome [School Name]” above Jiji’s head.
- Confirm there is an ST Math schedule planned so teachers will know when and how to use the curriculum.

Training Tips:

- The Core Training on the SGOC (Self-Guided Online Courses) home page is conditioned for login types. That means that teachers will see the correct versions of each of the courses. If the presenter has MIND access, their screen may show several different versions of the courses.
- Many pages on ST Math Central, including Getting Started, are conditioned by login and user type. If the presenter has admin or school access, their screen may show tiles/links that teachers will not see. You might want to log in to a teacher account.
- To go to the next course, have teachers click on their name in the upper right corner and choose Go to next course. In some cases, they will need to select the course from the SGOC home page.
- Remember that you can pause any of the videos! It’s very effective to pause the video after an important point and discuss it -- much better than having to remember what was said at the beginning of the video at the end.
- Don’t read the slides!

Ideal logistics:

- Each teacher:
 - knows his/her ST Math username and password
 - is on his/her own internet-connected device logged into web.stmath.com in the Chrome browser
 - has headphones so you can differentiate by grade level
- Teachers sitting in grade-level groups
- Speakers, projector, and internet-connected device for the presenter
- Three hours of initial content; two-hour follow-up about two months later

How to use this Facilitator's Guide:

Course screenshot

Section title (from Table of Contents)



Talking Points

What to do

DIFFERENT PATHS

Comments or notes

REFLECTION QUESTIONS

Image	Section	Talking Points
	SGOC 2 > Objectives, Games, and Levels. Oh My!	<p>Let's take a look at the video so you can get an idea of the structure of ST Math.</p> <p>K-6 ONLY</p> <p>View the video (3:13) about structure then have teachers turn to each other and describe the content structure to each other.</p>
		<p>MSS ONLY</p> <p>The first video (2:33) explains the two paths that are found in the MSS program. The first slideshow explains the structure of ST Math (objectives>modules>games>levels>puzzles). The second slideshow explains the settings that are available in the MSS program. Go ahead and view the video and the two slideshows and then take the quiz.</p> <p><u>WHAT ARE THE DIFFERENCES BETWEEN THE TWO PATHS?</u></p> <p><u>WHAT ARE THE BENEFITS OF HAVING TWO PATHS FOR MIDDLE SCHOOL STUDENTS?</u></p> <p><u>WHY IS THE PRE-TEST VERY IMPORTANT IN THE MSS PROGRAM?</u></p>
<p>Quiz</p>	SGOC 2 > Quiz	Have teachers take quiz independently, asking for help from you or a friend if needed.

Course 2 - page 4

Course 1: Learning w/out Words: An Introduction to ST Math

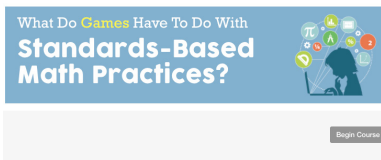


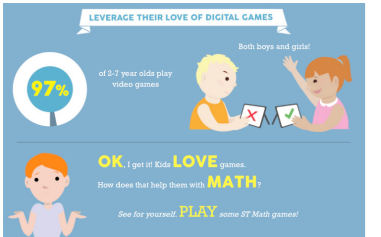
Image	Section	Talking Points
	SGOC 1 > Introduction	<p>Welcome</p> <ul style="list-style-type: none"> • Introductions • Overview of the day • Norms <p><u>THINK FOR A MINUTE ABOUT YOUR EXPERIENCE WITH GAMES ON YOUR PHONE OR COMPUTER. WHAT MAKES THEM SO ENGAGING (OR EVEN ADDICTIVE)?</u></p>
	SGOC 1 > Math or Broccoli?	How many of you, when you were kids, would have chosen the broccoli? But what if we could get students to choose to do math problems? AND what if they got better in math at the same time?
	SGOC 1 > Math or Broccoli?	Let's take a minute to remind ourselves of the ideas presented in the practice standards – they're on the right. They're those ideas that take time to teach and practice and, even if you do find the time, can be really hard for students.
	SGOC 1 > Math or Broccoli?	<p>So what if we could use the power of games to help students with the practice standards – those goals that can be difficult to squeeze in while you're trying to teach everything else?</p> <p>Let's play some math!</p>

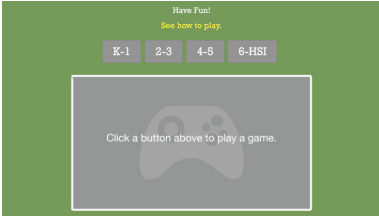
Image	Section	Talking Points
	<p>SGOC 1 > Math or Broccoli?</p>	<p>Play games.</p> <p>Choose your grade level and jump right in. Instructions? Does your favorite phone or computer game come with instructions? Probably not. Give it a try! There is one thing I'll suggest since you're using the teacher view of the games, start with level 1 which will show you how the game works. And don't be afraid to try games from other grade levels.</p> <p><i>Circulate among teachers and ask Reflection Questions.</i></p> <p><u>HOW IS THE GAME TEACHING YOU WHAT TO DO?</u></p> <p><u>WHAT MATHEMATICS IS INVOLVED?</u></p> <p><u>MAKE A MISTAKE AND SEE WHAT HAPPENS.</u></p> <p><u>HOW IS THE PUZZLE HELPING STUDENTS THINK ABOUT THE MATHEMATICS?</u></p> <ul style="list-style-type: none"> • K-1 – Place Value (Alien Capture Mothership) • 2-3 – Regrouping Concepts (Building Blocks) • 4-5 – Which Parentheses • 6-HSI – Wall Factory <p>Finish up the game you're working on but don't start another one. Stopping is the hardest part, isn't it?</p> <p>So let's talk for a minute about the experience you've just had in the light of a concept called Productive Struggle.</p>


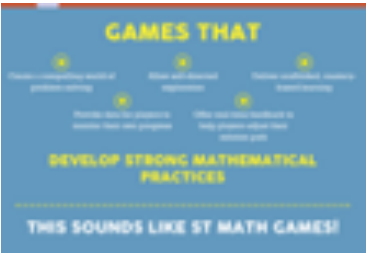
Image	Section	Talking Points
	<p>SGOC 1 > Why Games?</p>	<p>In math class, students are told they're wrong with a red mark or a bad grade long after they did the work. They probably don't remember and don't really care about what they were thinking about at the time.</p> <p>In a game, however, making mistakes and getting feedback are part of the fun. You use that information to get better.</p> <p><u>DID ANY OF YOU MAKE MISTAKES?</u></p> <p><u>DID IT MAKE YOU WANT TO STOP OR TRY AGAIN?</u></p> <p><u>HOW WAS YOUR REACTION TO MAKING A MISTAKE IN THE GAME DIFFERENT FROM GETTING AN ASSIGNMENT BACK WITH ERRORS MARKED (SEVERAL DAYS AFTER YOU DID THE ASSIGNMENT)?</u></p> <p>Your struggle was productive. You made progress. You learned things and you kept going. Failing sometimes is part of it and it makes students stronger learners.</p> <p><i>Point out the quote by Greg Toppo: "... Giving our kids ample opportunity to fail will turn them not into abject failures but into gritty, impassioned, self-reliant learners."</i></p> <p><i>Greg Toppo (a former teacher who is now USA Today's national K-12 education writer) is the author of the book <u>The Game Believes in You: How Digital Play Can Make Our Kids Smarter</u>.</i></p>
	<p>SGOC 1 > Why Games?</p>	<p>The trick is finding something that combines math, productive struggle, and the power of games.</p> <p>Give participants time to read the 5 points.</p> <ul style="list-style-type: none"> • Create a compelling world of problem-solving • Allow self-directed exploration • Deliver scaffolded, mastery-based learning • Provide data for players to monitor their own progress • Offer real-time feedback to help players adjust their solution path





Image	Section	Talking Points
	SGOC 1 > What's ST?	<p>Watch video on No Words.</p> <p><u>WHAT IS THE DIFFERENCE BETWEEN PRACTICE SOFTWARE AND INSTRUCTIONAL SOFTWARE?</u></p>
	SGOC 1 > What's ST?	<p>The basis of ST Math is spatial-temporal reasoning.</p> <p>Watch the video on spatial-temporal thinking.</p> <p><u>HOW IS THE THINKING SHOWN IN THE VIDEO DIFFERENT FROM THAT OF A STUDENT SOLVING NUMERICAL PROBLEM?</u></p> <p><i>Spatial-temporal reasoning: the ability to mentally move objects over space and time to solve multi-step problems.</i></p>
	SGOC 1 > What's Next?	<p>Walk through Future Training Slideshow.</p>

Image	Section	Talking Points
	SGOC 1 > What's Next?	<p><i>Share: Before 1997 Jiji was a kangaroo named Kiki; however, students didn't believe they needed to help Kiki because they thought she should be able to jump over obstacles</i></p> <p><i>Jiji is gender neutral (although children may decide it's a girl or boy).</i></p> <p><i>One of Dr. Peterson's degrees is in Chinese Literature, thus the Chinese name (he also has degrees in Neuroscience and Engineering).</i></p>
Quiz	SGOC 1 > Quiz	Have teachers take quiz independently, asking for help from you or a friend if needed.

Course 2: Ready, Set, Know: Examining Content and Structure




Image	Section	Talking Points
	SGOC 2 > Think Before You Click	<p>Take a minute to read the top paragraph and take a look at the pop-up that explains the perception-action cycle.</p> <p><u><i>HOW IS THE PERCEPTION-ACTION CYCLE SUPPORTED BY THE IMMEDIATE FEEDBACK GIVEN IN ST MATH GAMES?</i></u></p> <p><i>The three activities on this page provide opportunities to discuss the big picture of ST Math including Think Before You Click:</i></p> <ul style="list-style-type: none"> • <i>Experience – Play the game</i> • <i>Process - How to help students with that game (includes making choices and short videos)</i> • <i>Analyze – Examine the math progression in that game (video)</i> • <i>After everyone has completed the Experience and Process sections, consider sharing one or both of the following video clips with the group to foster a discussion of participants' experiences.</i> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Do I add or subtract?</p>  </div> <div> <p><i>The K-2 Analyze video presents the importance of students developing a conceptual understanding instead of memorizing steps and some interesting statistics (begins at 0:29).</i></p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  </div> <div> <p><i>The 3-6 Analyze video presents the difference between solving a fraction problem visually vs. with an algorithm (begins at 1:23).</i></p> </div> </div> <div style="margin-top: 10px;"> $\begin{array}{r} 4\frac{1}{2} - 4 = \frac{1}{2} \\ 2\frac{1}{2} - \frac{1}{4} = ? \\ \frac{1}{2} - \frac{1}{4} = ? \\ \frac{3}{2} \times (\frac{2}{2}) - \frac{1}{4} = ? \\ \frac{3}{2} - \frac{1}{4} = ? \\ \frac{3}{2} - \frac{1}{4} = \frac{6}{4} - \frac{1}{4} \\ \frac{6}{4} - \frac{1}{4} = \frac{5}{4} \\ \frac{5}{4} - \frac{1}{4} = \frac{4}{4} = 1 \\ \frac{5}{4} - \frac{1}{4} = 1\frac{1}{2} \end{array}$ </div>


Image	Section	Talking Points
 <p>Experience Let's get started by playing a game, just the way your students will. Go ahead and play the game below.</p> <p>Process As you figured out the game above, did you click around randomly until something worked? Or were you more systematic in your approach, trying one thing and watching to see what happened, and then using that new information to guide your next attempt? You were probably already using a version of the Think Before You Click strategy. Sharing Think Before You Click with your students can help them develop a systematic approach to the games too, and in turn they'll become better problem solvers.</p> <p>Analyze As you become more comfortable with the games, you should start to notice opportunities to build upon your students' experiences. Let's take a deeper look at the mathematical possibilities in the game you've already explored. Imagine where a class discussion or lesson based on the game might take you.</p>	<p>SGOC 2 > Think Before You Click</p>	<p>First, go ahead and choose a grade band.</p> <p>In Experience, you're going to play a game and then, once you have the idea of the game, go to the Process section.</p> <p>You can watch the video on the first slide by clicking on the play icon in the bottom left of the first slide.</p> <p>Go ahead and watch the Analyze video if you have time.</p> <ul style="list-style-type: none"> • <i>K-2 Grade 2 Pie Monster (addition), 4 levels</i> • <i>3-6 Grade 4 Pie Monster (fractions), 3 levels</i> • <i>MSS 6th-MSS Wall Factory (parentheses), 5 levels</i> <p><i>When everyone has finished the Process section, share one or both of the Analyze video clips (see above) with the group.</i></p> <p><u>HOW DOES THIS APPROACH SUPPORT STUDENTS IN DEVELOPING A DEEP UNDERSTANDING OF A MATH CONCEPT?</u></p> <p><u>HOW DOES THE ST MATH APPROACH COMPARE TO MEMORIZING A SERIES OF STEPS?</u></p>





Image	Section	Talking Points
<p>Objectives, Games, and Levels. Oh My! Experience</p> <p>So far, we've given you Open Access to all of the games that you've played. This means we've turned on every level and you've been able to skip around as you like. But the student experience is much more controlled.</p> <p>This activity will help you see ST Math the way your students will. As you play, pay attention to how the structure supports student learning, starting with a pre-quiz, through gently scaffolded games and levels, and finishing a post-quiz. Quizzes only appear at grades 2 and above.</p> <p>Note: After completing the quiz, click Jili in the lower-left to continue with the activity.</p> 	<p>SGOC 2 > Objectives, Games, and Levels. Oh My!</p>	<p>Up to now, you've been playing games as a teacher. For example, you were given the choice of which level to play first. That isn't true for the student experience. In the student view, there's only one place to click. Rather than being presented with many different choices which could be overwhelming, there is just one new or not completed game or level.</p> <p>When you play as a student, you'll need to "Play the Gray." On the screen with "Student Experience Sampler," what is gray? (The truncated cone.) That tells you where to click.</p> <p>What's gray in the next screen? (the paper and pencil) The paper and pencil icon means a pre-quiz which are only found in grades 2 and up. Now you're going to take the quiz and then play a few games. If you finish the last level you'll get a chance to take the post-quiz as well. As you play, notice that you're not given many choices.</p> <p>And remember the note that's above the screen for when you finish the quiz.</p> <p><i>Additional elements that you can share:</i></p> <ul style="list-style-type: none"> • <i>These are shortened games so you can move more quickly through the levels and see the progression from concrete to abstract.</i> • <i>On the quizzes you'll chose your answer and confidence level (which encourages metacognition or thinking about thinking).</i> • <i>Some games have tutorials which are indicated by a large hand icon that tells you where to click. To skip a tutorial, click the curved circle icon.</i> <p><i>After everyone has had time to play several games, continue:</i></p> <p><u>WHY DO YOU THINK WE ASK STUDENTS TO REFLECT ON THEIR QUIZ ANSWERS?</u></p> <p><u>WHAT IS THE VALUE OF MAKING STUDENTS GET ALL THE PUZZLES RIGHT BEFORE MOVING ON?</u></p> <p>I hope you noticed that eliminating choices allows students to systematically move through the content which has been intentionally built to support conceptual understanding. If you got far enough, you saw that in the first objective, the first level was entirely visual. The third level presented just numerals and then provided a visual proof of the answer.</p>

Image	Section	Talking Points
<p>Objectives, Games, and Levels. Oh My! Structure of ST Math</p> <p>K-6 MSS</p> <p>In this video, we'll review the content structure of ST Math and look at the difference between what you'll see logged in as a teacher and what your students will see.</p>  <p>To download the ST Math Content Structure sheet, click the Attachments icon above and navigate to the Course 2 Resource page.</p>	<p>SGOC 2 > Objectives, Games, and Levels. Oh My!</p>	<p>Let's take a look at the video so you can get an idea of the structure of ST Math.</p> <p>K-6 ONLY</p> <p>View the video (3:13) about structure then have teachers turn to each other and describe the content structure to each other.</p>
<p>Objectives, Games, and Levels. Oh My! Student Experience</p> <p>The first video explains the two paths that are found in the MSS program. The first slideshow explains the structure of ST Math (objectives>modules>games>levels>puzzles). The second slideshow explains the settings that are available in the MSS program. Go ahead and view the video and the two slideshows and then take the quiz.</p> <p>Objectives, Games, and Levels. Oh My! Structure of ST Math</p> <p>K-6 MSS</p> <p>Content Structure</p>  <p>Customizing Curriculum</p> 		<p>MSS ONLY</p> <p><i>The first video (2:33) explains the two paths that are found in the MSS program.</i></p> <p><i>The first slideshow explains the structure of ST Math (objectives>modules>games>levels>puzzles).</i></p> <p><i>The second slideshow explains the settings that are available in the MSS program.</i></p> <p>Go ahead and view the video and the two slideshows and then take the quiz.</p> <p><u>WHAT ARE THE DIFFERENCES BETWEEN THE TWO PATHS?</u></p> <p><u>WHAT ARE THE BENEFITS OF HAVING TWO PATHS FOR MIDDLE SCHOOL STUDENTS?</u></p> <p><u>WHY IS THE PRE-TEST VERY IMPORTANT IN THE MSS PROGRAM?</u></p>
<p>Quiz</p>	<p>SGOC 2 > Quiz</p>	<p>Have teachers take quiz independently, asking for help from you or a friend if needed.</p>

Course 3: Day 1 on the Games (Text to Picture Password)


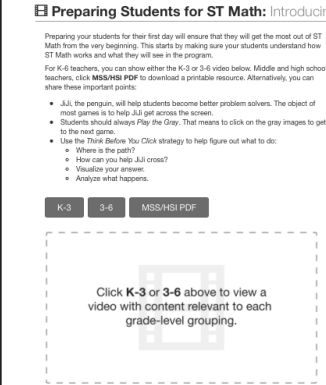
Image	Section	Talking Points
	SGOC 3 > Preparing Students for ST Math	<p>Now that you have an idea of the structure of ST Math and a little background, we're ready to dive in to actually getting your students on the games. Putting in a little thought about how you're going to use the program will make life much easier.</p> <p>Play video and answer questions about scheduling – ideally, share the school's plan for using ST Math.</p>
	SGOC 3 > Preparing Students for ST Math	<p>As you've discovered, ST Math is a little different from most math programs. Preparing your students before they start playing will help them get the most out of ST Math.</p> <p>We have several resources that you can use with your students. All of them present the points you see in the course.</p> <p>K-3 OR 3-6</p> <p>Play the video (4:15 or 3:52), asking teachers to take notes on the most important aspects of ST Math to share with students before they get on the games (see box).</p> <p><i>Explain that third grade teachers can choose from either video depending on the maturity of their students.</i></p> <p><i>Explain that these videos are available in the Getting Started section of ST Math Central.</i></p> <p>MSS</p> <p><i>Have teachers open the MSS/HSI PDF and review the important points. Older students may appreciate that the focus is on helping them understand math concepts that they might struggle with while skipping over those they already know.</i></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> • JiJi, the penguin, will help students become better problem solvers. The object of most games is to help JiJi get across the screen. • Students should always <i>Play the Gray</i>. That means to click on the gray images to get to the next game. • Use the <i>Think Before You Click</i> strategy to help figure out what to do: <ul style="list-style-type: none"> ◦ Where is the path? ◦ How can you help JiJi cross? ◦ Visualize your answer. ◦ Analyze what happens. </div>

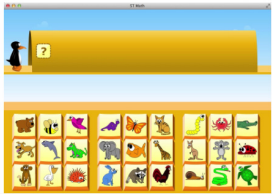
Image	Section	Talking Points
<p>Preparing Students for ST Math: Introducing Passwords</p> <p>One of the coolest features of ST Math is the unique picture password that students use to log in. Watching a class full of second graders zip through the 13 pictures that make up each individual password is almost like magic. How do they do it? The answer lies in the neuroscience behind visual recognition—no memorization needed!</p> <p>The picture password provides many benefits over a typical text-based login:</p> <ul style="list-style-type: none"> • No memorization required! Students learn to recognize a unique series of pictures rather than memorize a string of seemingly random letters and numbers that are notoriously hard to remember. • Pictures means anyone can have a password. Even kindergarten students still struggling with the alphabet can learn pictures. Spelling doesn't count! • The password stays with the student. Schools have different standards for ID numbers and computer logins, but the ST Math picture password stays the same no matter where the student logs in. Even if the student moves halfway around the world, they'll keep the same picture password! • It never changes. Students keep the same picture password every year as long as they use ST Math. • It's fun! <p>The following resources are intended to help you introduce the picture password to your students. Key points to remember:</p> <ul style="list-style-type: none"> • The program assigns the password. • They will play special games to help them learn the pictures. • They won't have to memorize the pictures, just be able to recognize them. <p>K-3 3-6 MSS/HSI PDF</p> <p>Click K-3 or 3-6 above to view a video with content relevant to each grade-level grouping.</p> 	<p>SGOC 3 > Preparing Students for ST Math</p>	<p>You'll also want to familiarize students with the idea of a 13-character picture password. These students will enter their text password the first time they log in but every time after that, they'll use their picture password.</p> <p>Go over the information about the picture password.</p> <ul style="list-style-type: none"> • No memorization required! Students learn to recognize a unique series of pictures rather than memorize a string of seemingly random letters and numbers that are notoriously hard to remember. • Pictures means anyone can have a password. Even kindergarten students still struggling with the alphabet can learn pictures. Spelling doesn't count! • The password stays with the student. Schools have different standards for ID numbers and computer logins, but the ST Math picture password stays the same no matter where the student logs in. Even if the student moves halfway around the world, they'll keep the same picture password! • It never changes. Students keep the same picture password every year as long as they use ST Math. • It's fun! <p>K-6 ONLY - CLICK EITHER THE K-3 OR 3-6 PATH AND PLAY VIDEO (2:10 OR 2:09)</p> <p>Ask teachers to take notes on the most important aspects of the picture password to share with students before they get on the games.</p> <p><i>Explain that third grade teachers can choose from either video depending on the maturity of their students.</i></p> <p><i>Explain that these videos are available in the Getting Started section of ST Math Central.</i></p> <p>MSS</p> <p><i>Have teachers open the MSS/HSI PDF and review the important points. Since older students are often skeptical of attempts to help them understand math, explaining that learning the password (which seems like a very difficult task but actually isn't) is the first clue that using neuroscience can help them do amazing things.</i></p>


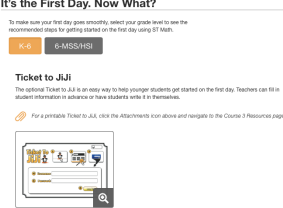

Image	Section	Talking Points
	SGOC 3 > Preparing Students for ST Math	<p>Have teachers play the password simulator.</p> <p><u>WERE YOU ALL ABLE TO LEARN THE PASSWORD?</u></p> <p><u>WHAT ASPECTS OF THE TRAINING GAMES HELPED YOU RECOGNIZE THE PICTURES THAT JIJI PICKED JUST FOR YOU?</u></p>
	SGOC 3 > It's the First Day. Now What?	<p>You'll need to get every student the one-time password that was provided to you by your school. After that, they'll go right into the password training games. Be sure that everyone has at least 15 minutes to work through the password training games.</p> <p>K-6 ONLY</p> <p>Now click on K-6.</p> <p>The Ticket to Jiji can help your students get started. It shows them where to click, and then gives them the information they'll need to log in. You can find a PDF with four on a page on the STMC Printables page.</p> <p>If you print and fill them out before the first time your students use ST Math, the procedure will go more smoothly. It's a particularly good idea to do this for younger students.</p>
	SGOC 3 > It's the First Day. Now What?	<p>Students new to ST Math will enter their user name and password from the class roster. Students returning to ST Math will just enter their password.</p> <p>Review the steps in the slideshow.</p> <p>MSS ONLY - The Ticket to Jiji link is not in the MSS version but can be found on the 3 Easy steps page in Getting Started and in Printables.</p>

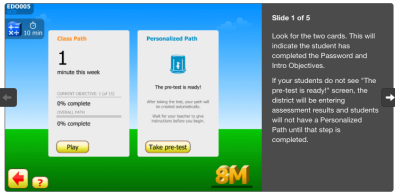




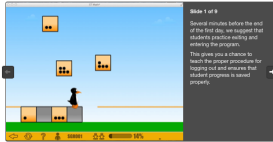
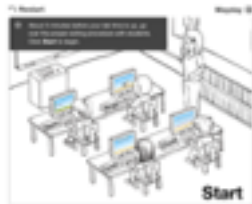
Image	Section	Talking Points
<p>Starting the Pre-Test Early on, you'll want your students to take the 40-question Pre-Test, which will determine their Personalized Path curriculum. This can happen on the first day as soon as your students have completed the Password and Intro objectives.</p> 	<p>SGOC 3 > It's the First Day. Now What?</p>	<p>MSS ONLY</p> <p>Use the Starting the Pre-Test slideshow to introduce the Pre-Test which will determine the objectives assigned to a student in their Personalized Path.</p>
<p>Pre-Test Then when the time comes to assess student performance on the Pre-Test, the district administrator can view the Pre-Test report and the Student Detail report. See a link at each report below.</p> <p>When using the Pre-Test report, you can view the results of the Pre-Test report, which will show the results of the Pre-Test report.</p>  <p>Print out the results to help make about the Pre-Test report.</p>  <p>Print out the results to help make about the Topic Cluster Overview.</p>  <p>E3 Teach exiting and practice logging in.</p> 	<p>SGOC 3 > It's the First Day. Now What?</p>	<p>MSS ONLY</p> <p>The rest of the page shows some of the features of the MSS/HSI program. The first image with the clipboard shows what a student sees after they take the Pre-Test. It shows which Topic Clusters were passed and that the student can skip in their Personalized Path and which were not passed.</p> <p>Even though an entire Topic Cluster wasn't completely skipped by doing well on the Pre-Test, they are still able to skip individual objectives when they take the pre-quiz. Students sometimes don't try very hard on the pre-quizzes, but as soon as one student does well and Jiji flies over the objective cone in a helicopter, the word spreads and suddenly everyone does better on pre-quizzes.</p> <p>There is a special report for the Personalized Path that provides the results of the Pre-Test. It lets you know which objectives were skipped and how students did on the ones they didn't test out of.</p> <p>The final screen shows a student's progress on the Topic Cluster. You'll find it on the Student Detail report.</p> <p>To see all the reports and what they contain, you can go to the Screens page in ST Math Central.</p>

Image	Section	Talking Points
<p>End of First Day Procedures</p> <p>After students have completed several games, there's only one more thing to do - log out.</p> <p>Logging out procedures for the end of every ST Math session will help ensure that students are reflecting on their accomplishments and updating their goals.</p> 	<p>SGOC 3 > It's the First Day. Now What?</p>	<p>It's very important that students exit the program correctly. If students don't see the Today's Accomplishments screen AND click the big red X, their progress won't be recorded.</p> <p><i>Review the slideshow which shows what to do at the end of the first day.</i></p>
<p>Check for Understanding: Exiting Simulation</p> <p>Exiting ST Math is a simple process, but it's important that you understand the steps to ensure that students can exit the program correctly.</p> <p>When you click the red X, you will see the 'Exiting Simulation' screen. This screen will show you the steps to exit the program.</p> 	<p>SGOC 3 > It's the First Day. Now What?</p>	<p><i>Have teachers quickly go through the Exiting Simulation so they experience clicking on the red arrows and then the red X.</i></p> <p>MSS ONLY</p> <p><i>Review the Check for Understanding questions and clarify any misconceptions.</i></p>
<p>Teacher Tips & Best Practices</p> <p>When using the ST Math program, all the teacher needs to do is get started on the first day. The first day is the most important day of the program. It's the day that students learn the basics of the program and get used to the interface.</p> <p>The first day is the most important day of the program. It's the day that students learn the basics of the program and get used to the interface.</p> <p>The first day is the most important day of the program. It's the day that students learn the basics of the program and get used to the interface.</p> <p>Exiting ST Math and First Day Procedures Checklist</p> <p>Remember to log out at the end of every ST Math session. In Chapter 1, you learned the steps to log out your students from the ST Math program. The steps are: click the red X, click the 'Log Out' button, and click the 'Log Out' button again.</p> <p>The steps are: click the red X, click the 'Log Out' button, and click the 'Log Out' button again.</p>		<p><i>If there's time, review the Teacher Tips. There are some great ideas.</i></p> <p><i>Share that there is a checklist and additional information in the 3 Easy Steps page in the Getting Started section of ST Math Central.</i></p>
<p>Quiz</p>	<p>SGOC 3 > Quiz</p>	<p><i>Have teachers take quiz independently, asking for help from you or a friend if needed.</i></p>

Course 4: Day 2 on the Games: Trouble Free in Three Steps (Text to Picture Password)


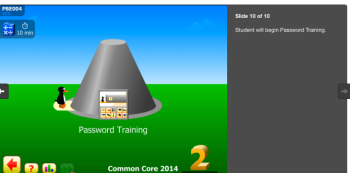


Image	Section	Talking Points
<p>Three Steps: Review Your Roster</p> <p>Before your second day using ST Math®, it's a good idea to make sure all students in your class appear on your class roster. This slide show explains the simple process of reviewing your roster.</p> 	SGOC 4 > Three Steps	<p>Before students log in using their picture passwords, it's important that you make sure your roster is correct. This slideshow explains how to do it.</p> <p>Go through slideshow.</p> <p><i>Debrief questions:</i></p> <p><i>When is a good time for you to review your roster after the first day? (E.g., during recess, during planning period, etc.)</i></p> <p><i>What things are you going to be looking for? (E.g., duplicate or missing students, misspelled names.)</i></p> <p><i>Who do you need to contact at your school to get the problem fixed?</i></p> <p><i>NOTE: If teachers ask about co-teachers and students appearing in more than one class, you might want to review the tutorial found ST Math Help > Using the Program > Using Co-teachers and Multiple Groups.</i></p>
<p>Three Steps: Retrain on Passwords (if needed)</p> <p>It may seem daunting to remember a 13 picture password and we agree! That's why students don't have to remember their pictures, just recognize them.</p> <p>The most important factor in their success is your positive attitude. In the rare case where a student is really stuck, they may need to be retrained on their password. This short slideshow reviews that process just in case you need it.</p> 	SGOC 4 > Three Steps	<p>Students should be encouraged to try their hardest to recognize the pictures in their password. The program will work through their password if they remember some of them. If there's absolutely no hope, this slideshow shows what to do to retrain a student on their password.</p> <p>Optional: review slideshow</p>

Image	Section	Talking Points
	SGOC 4 > Three Steps	<p>A few minutes before the end of the session, review the exiting procedures (red arrows and then the red x) and have students exit the program. You may want to have them log back in using their picture password and exit again just to make sure everyone knows what to do.</p> <p>This video shows what it might look like. And be sure to notice the Today's Accomplishment screen. ST Math Central has several different resources you can use to help students record that information as both assessment and reflection.</p> <p><i>Share the video (1:36).</i></p>
	SGOC 4 > Teacher Tips & Optional Resources	<p><i>Allow a few minutes for teachers to read and discuss the Teacher Tips. Be sure teachers understand that they can look at the Screens and Reports page to find out more about anything they see in the program.</i></p>
Quiz	SGOC 4 > Quiz	<p><i>Have teachers take quiz independently, asking for help from you or a friend if needed.</i></p>

Course 5: It's All About the Toolbar: What Teachers & Students Need to Know

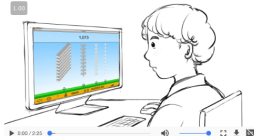

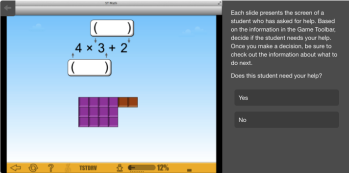



Image	Section	Talking Points
<p>What Every Student Needs to Know</p> <p>Now that you have had some time to observe students playing ST Math, you may have noticed the Game Toolbar at the bottom of student screens. There's a lot going on down in that gold strip, so to keep it simple, let's start by focusing on some functions that your students really need to know.</p> 	<p>SGOC 5 > Content: What Every Student Needs to Know</p>	<p>Now we're going to get into the actual games and how you'll be able to get sorts of information just by glancing at their screen.</p> <p>The first video covers the things that students need to know.</p> <p>While you're watching, listen for "level canceling," "refresh button," and how students can raise their hand and keep playing.</p> <p>Play the video (2:25).</p> <p><u><i>HOW CAN YOU TELL YOUR STUDENTS ABOUT THE BACK ARROW WITHOUT ENCOURAGING THEM TO "LEVEL CANCEL" (WHICH MEANS AVOIDING LOSING BOTH Jiji TRIES BY EXITING THE LEVEL)?</i></u></p>
<p>What Every Teacher Needs to Know</p> <p>The best way to spot student problems during an ST Math session is to keep an eye on the Progress Bar, the part of the Game Toolbar that displays the student's current progress, high score, and number of attempts. This video will show you how to find that information at a glance and use it to help students while they play.</p> <p>Access more information about the Game Toolbar on ST Math Central (ST Math Central Page)</p> 	<p>SGOC 5 > Content: What Every Teacher Needs to Know</p>	<p>The second video shows a few things that teachers need to know. Watch for the Progress Bar and how much information is packed into that little gauge.</p> <p>Play the video (2:33).</p> <p><u><i>HOW DOES THE PROGRESS BAR GIVE YOU INFORMATION ABOUT WHAT THE STUDENT HAS DONE ON THIS GAME?</i></u></p> <p><u><i>WHAT DOES AN ORANGE FRAME MEAN? WHAT SHOULD YOU DO?</i></u></p>
<p>Putting it All Together</p> <p>When your class is playing ST Math, you want to be able to interpret what's happening on each student's screen at a glance, and understanding the different elements of the Game Toolbar will help you do that.</p> 	<p>SGOC 5 > Content: Putting it All Together</p>	<p><i>This activity allows teachers to practice interpreting the toolbar with immediate, informative feedback. You can have teachers work in pairs to answer the questions or you can go through the activity as a group.</i></p> <p><i>Tip: Teachers sometimes walk out with the misconception they can only help students with lots of dots – reinforce they should be talking to all their students, but the onscreen indicators help them know what kind of conversation to have.</i></p>

Image	Section	Talking Points
	SGOC 5 > Content: Teacher Tips & Best Practices	<i>Assign each of the Tips to a group of teachers and have them share the information with the group.</i>
		<i>Have teachers complete the check for understanding on their own.</i>
		<i>Have teachers take quiz independently, asking for help from you or a friend if needed.</i>

Course 6 – Power of the Card: Managing Students, Reports, and Content (K-6)

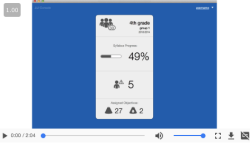
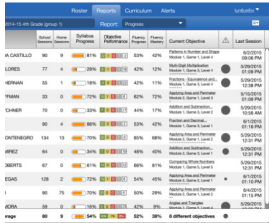
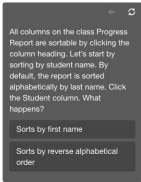


Image	Section	Talking Points
<p>Introduction to Reports</p> <p>While the Game Toolbar helps you identify problems as they occur during an ST Math session, reports can help you predict which students need your help before they even click on Jiki. Open up the Reports tab before each session so you can start with a plan already in place.</p> 	SGOC 6 > Analyzing Data	<p>There is a lot of information contained on the Jiki Console. You'll access that through your Class Card. This first video gives a great overview of some of the information that's available. I want to remind you that you can check out what everything means on the Screens and Reports page on ST Math Central.</p> <p>Share video (2:04).</p>
<p>Scavenger Hunt</p> <p>As you become familiar with your Class Progress Report, we've designed an scavenger hunt using a report from a fake class. Follow the prompts to see how easy it is to find which of your students are struggling, check out if alerts, and know what topics your students are working on.</p>  	SGOC 6 > Analyzing Data	<p>I hope you were paying attention! Below the video is a scavenger hunt. Work in pairs or triples to finish the hunt.</p> <p>Complete Scavenger Hunt.</p>
<p>Analyzing Data: Teacher Tips & Best Practices</p> <p>How do teachers use the Class Progress Report? Here are some ideas from some ST Math experts.</p> <p>"I like to sort by Syllabus Progress so I can easily identify my lowest progress kids. They don't always need my help, but I like to see who is struggling so I can monitor how they're doing, so I can lead them close to where I stand. If they know I am checking on them regularly, they stay motivated and do a better job of keeping up with the class."</p> <p>— Linda - 2nd Grade Teacher (California)</p> <p>"Sorting by Current Objective shows which students are working on the same games. If I see a group of students struggling in the same area, I sort them next to each other when we work on ST Math. Sometimes we work together on one computer open to Test Drive. I open teacher mode so we can discuss and problem solve together. Once they begin to get it, I send them back to their computers to practice on their own."</p> <p>— Gina - 7th Grade Teacher (Illinois)</p> <p>"Pay attention to the dots below the Current Objective on the report. They are just like the dots on the Progress Bar: each dot is an unsuccessful attempt. Once knowing which students are stuck before the students even begin, I make the plan out who I will help first."</p> <p>— Carlos - Kindergarten Teacher (Texas)</p>  	SGOC 6 > Analyzing Data	<p><i>As teachers finish the scavenger hunt, have them read over the teacher tips and be ready to share any that they find particularly interesting or helpful. Be sure to point out the magnifying glasses which provide a closer view.</i></p>

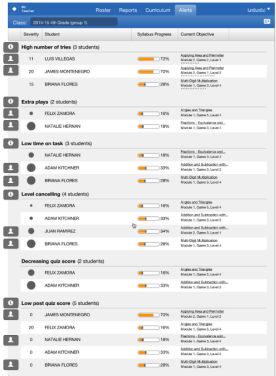


Image	Section	Talking Points
<p>Analyzing Data: Be On Alert</p> <p>Along with your class Progress Report, the Alerts report will help you prioritize the students you need to help during each ST Math session. Through the bubble on the report make this easier—the larger the bubble, the bigger the trouble. It helps to know the most common alerts you're likely to see. In this activity, we've made the Alerts report interactive. Hover over the gray buttons on the left hand side of the report to see what students and teachers have to say about what each alert means and how it might be addressed.</p> 	<p>SGOC 6 > Analyzing Data</p>	<p>One really interesting report is the Alerts Report. Do you remember the rhyme that the video had about those alert circles? (The bigger the bubble, the bigger the trouble.)</p> <p>Spend a few minutes exploring the report and clicking on the little rectangles. When you're done, be ready to share what student or students you would go to first at the next ST Math lab session.</p> <p>Provide time for examining the Alerts Report.</p> <p><i>Have teachers share what they see as the best to address first. Some might choose to do the “easy” ones first (e.g., Ask the Low post quiz score students to tell you when they're ready to do a post quiz so you can see what's going on.). Others might want to work with a small group (e.g., on Applying Area and Perimeter). There is no right answer.</i></p>
<p>Analyzing Data: Find the Data You Need</p> <p>Take just 2-3 minutes before each session to look over your Class Progress Report and the Alerts report to make your ST Math time more efficient, effective, and enjoyable for you and your students. Watch the video to learn how.</p> <p>Click the attachments icon above for more information about Alerts.</p> 	<p>SGOC 6 > Analyzing Data</p>	<p>Now that you've seen what's available in the Alerts Report (2:38), this video shows how to use that information in planning for your next ST Math session.</p>
<p>Analyzing Data: Create an Action Plan</p> <p>Use the information in the Alerts Report to create an Action Plan for your next ST Math session. This plan will help you focus on the students who need the most help and the concepts they are struggling with. It will also help you track their progress and adjust your instruction as needed.</p> 	<p>SGOC 6 > Analyzing Data</p>	<p><i>Explain that the Action Plan mentioned in the video is available on the Printables page in ST Math Central.</i></p> <p><i>Have pairs of teachers look at the example and discuss if they would have the same priorities.</i></p>


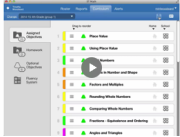


Image	Section	Talking Points
<p>Managing Curriculum: Reordering Content</p> <p>The ST Math objective sequence is highly customizable. You have the ability to reorder content to match your pacing guides and classroom instruction.</p>  <p>For more information about assigning homework, click the Attachments icon above and navigate to the Course 6 Resources page.</p>	SGOC 6 > Managing Curriculum	<p>The curriculum is carefully designed to build conceptual understanding but sometimes it is appropriate to reorder the curriculum (for example, to preteach concepts before they're covered by the textbook).</p> <p><i>Either show the video (2:13) or demonstrate how to reorder the curriculum.</i></p> <p><u>WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF REORDERING THE CURRICULUM?</u></p>
<p>Managing Curriculum: Assigning and Accessing ST Math Homework</p> <p>You can assign a variety of content for homework both as a supplement to ST Math school sessions or as an enrichment activity independent of what is being used at school.</p> <p>K-6 Clever Users</p> <p>Assigning Homework</p>  <p>Accessing Homework</p> <p>Be sure to share with parents the ST Math Parent Math Resources web page. It has many resources that families can access to learn more about ST Math and support their child's work on ST Math. https://www.stmath.com/central/content/st_math_help/using_program/homework.htm</p> <p>Remember: Kindergarten students will only be able to access their account at home after they have learned all 13 characters in their picture passwords. Playing two full objectives at school before playing at home helps make sure they can navigate the system comfortably.</p>  <p>To download the parent letter for K-6 students, click the Attachments icon above and navigate to the Course 6 Resources page.</p>	SGOC 6 > Managing Curriculum	<p>Students can access ST Math at home either by using the app or logging on a computer's browser.</p> <p><i>Depending on the school's set-up, teachers may or may not be able to assign objectives to be done as homework. For clarification, call Support at 888-491-6603. Generally speaking, schools that use a single sign-on (e.g., Clever) are not able to assign objectives as homework. Teachers in schools using picture passwords, text to picture passwords, and text passwords are able to choose which objectives students will have access to at home and the order in which they appear. All students can replay objectives they have completed.</i></p> <p><i>If teachers are interested in learning more about homework, review the STMC Homework in ST Math (K-6) page. https://web.stmath.com/central/content/st_math_help/using_program/homework.htm</i></p> <p><u>WHAT MIGHT BE SOME BENEFITS OR DRAWBACKS OF HAVING STUDENTS USE ST MATH AT HOME?</u></p> <p>ST Math Central has several resources that you can use to help parents access ST Math at home. For computers, students log in at web.stmath.com or through their school's portal. For tablets, the app needs to be downloaded from the device's app store or, once again, accessed through the school's portal.</p> <p>We have an additional resource on ST Math's regular web page. You can find it here:</p> <p>Navigate to https://www.stmath.com/parent-math-resources</p>

Image	Section	Talking Points
<p>Managing Curriculum: Teacher Tips & Best Practices</p> <p>"One of the big advantages of ST Math is that it gives my students who need extra time a chance to explore everything on concepts even after the rest of the class has moved on to other topics. If I move the curriculum this month, some students will miss out on the extra practice they need. The objectives in ST Math don't need to match what I'm doing in the classroom exactly."</p> <p>— Garrett - 3rd Grade Teacher (New York)</p> <p>"I only assign a few homework objectives at a time. If I assign too many, some students get too far ahead because they do it all at home. I like to be able to monitor students as they encounter new ST Math concepts so that I can help if they need it and see where they are struggling. I can't do that if they do everything at home."</p> <p>— Chen-Jen - 5th Grade Teacher (Washington)</p> <p>"Even if nothing is assigned for homework or everything assigned has been completed, students can always play games they've already turned green for homework."</p> <p>— Morgan - Special Education Teacher (Oregon)</p> <p>"I like to assign objectives a week or two before I will cover them in class. I can then use the ST Math game to introduce the classroom lesson and make all needed corrections to how it is presented in the worksheet. Other, this means I can teach a concept faster than usual because students already have an understanding of it."</p> <p>— Brian - 6th Grade Teacher (Colorado)</p> 	<p>SGOC 6 > Managing Curriculum</p>	<p><i>Have teachers spend a few minutes reviewing the Teacher Tips. Allow time for teachers to share their own tips and ask questions.</i></p>
<p>Quiz</p>		<p><i>Have teachers take quiz independently, asking for help from you or a friend if needed</i></p> <p><i>Thank teachers for their time and tell them when you'll be back to complete more training (about two months) and who they should reach out to if they have trouble (you, Support, or their Education Consultant)</i></p>