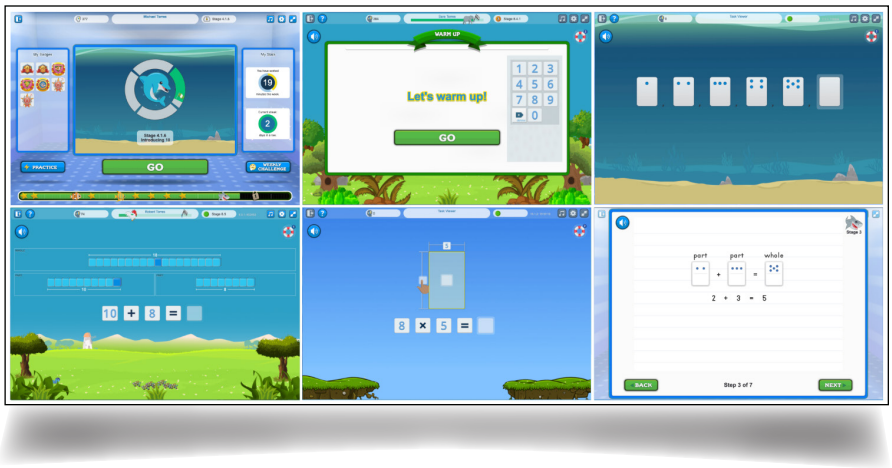
symphony math

TEACHER TRAINING GUIDE

2021-22

Welcome to Symphony Math®



Training Goals:

- Understand how the Symphony Math Screener & Benchmarker instantly identifies at-risk students and provides data to track growth
- Experience how Symphony Math's adaptive program uses best practices to ensure that students fully grasp BIG Ideas fundamental to mathematics
- Learn how to use Symphony Reports to help differentiate instruction and monitor progress
- Explore different ways to use offline paper resources for individual and small group targeted instruction

Instructional Curriculum

Kindergarten

The Number Sequence
More / Less / Same
Add & Subtract to 5
Ten as a Unit
Fact Fluency (+-) to 5

Grade 1

Comparing Numbers
Add & Subtract to 20
Tens
Place Value & Operations with 10s
Fact Fluency (+-) to 20

Grade 2

Hundreds
Add & Subtract with 100s
Foundations for Multiplication
Regrouping to 3-digits
Fact Fluency (+-) with Tens

Grade 3

Multiplication & Division
Introduction to Fractions
Multiply & Divide to 100
Multiply & Divide with 1/10/100
Fact Fluency: X÷ to 100

Grade 4

Add & Subtract Unit Fractions
Non-Unit Fractions
Introduction to Decimals
Improper Fractions
Standard Algorithm Addition/Subtraction
Expanded Form Multiplication/Division
Fact Fluency: X÷ with Tens

Grade 5

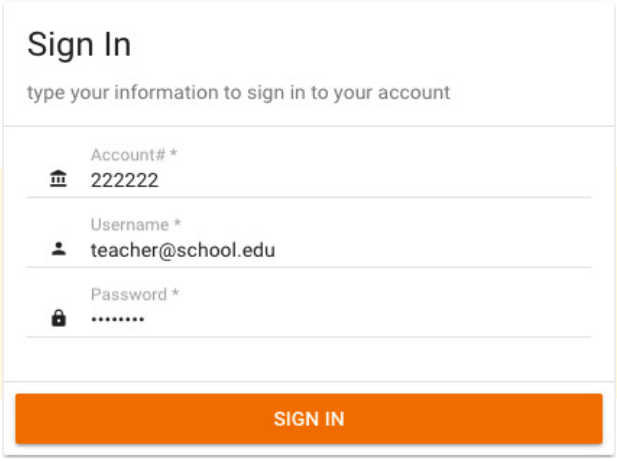
Multiplying Fractions and Whole Numbers
Magnitude and Place Value
Decimals to Thousandths
Decimal Operations
Fact Fluency: X÷ with Tens
Operations with Fractions

support@symphonylearning.com

Getting Started

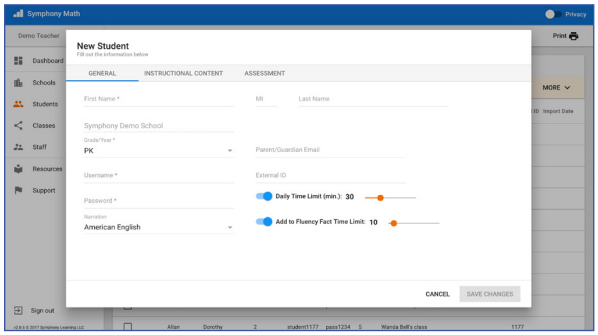
Open the Online Administration Panel

- Go to **adminpanel.symphonylearning.com**.
- Type your Account #, Username, and Password.
- Press Login.



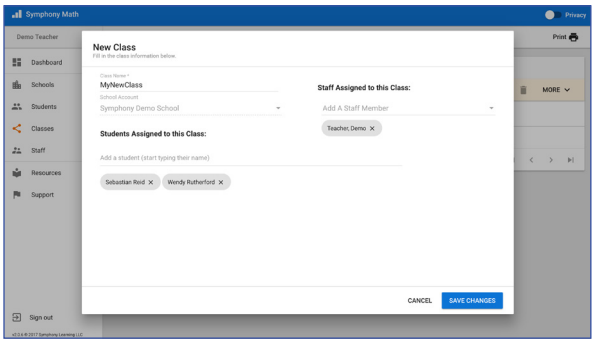
Add Students

- Press the **Students** tab.
- Press **ADD STUDENT**.
- Type the student information.
- Press **SAVE CHANGES**.



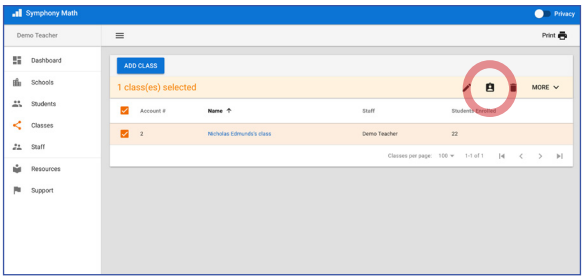
Create Classes

- Press the **Classes** tab.
- Press **ADD CLASS**.
- Type a Class name.
- Select staff members to assign to the class.
- Start typing student names and then select them to add them.
- Press **SAVE CHANGES**.



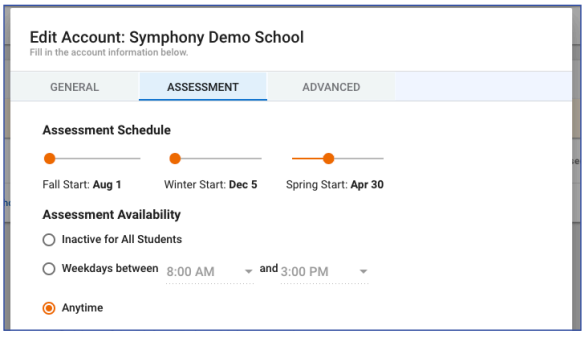
Print Student Sign In Cards

- Press the **Classes** tab.
- Select the checkbox next to your class name.
- Press the icon to print student cards.



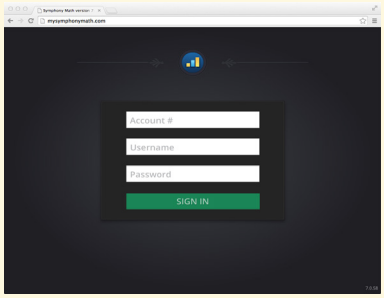
Administrators: Set At-Risk Threshold

- Press the **Schools** tab.
- Press the school name, and adjust the settings as needed in the Assessment section.
- Press **SAVE CHANGES**.



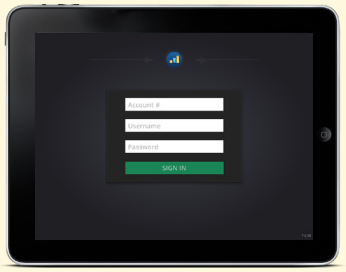
Student Use of Symphony Math

mysymphonymath.com



OR

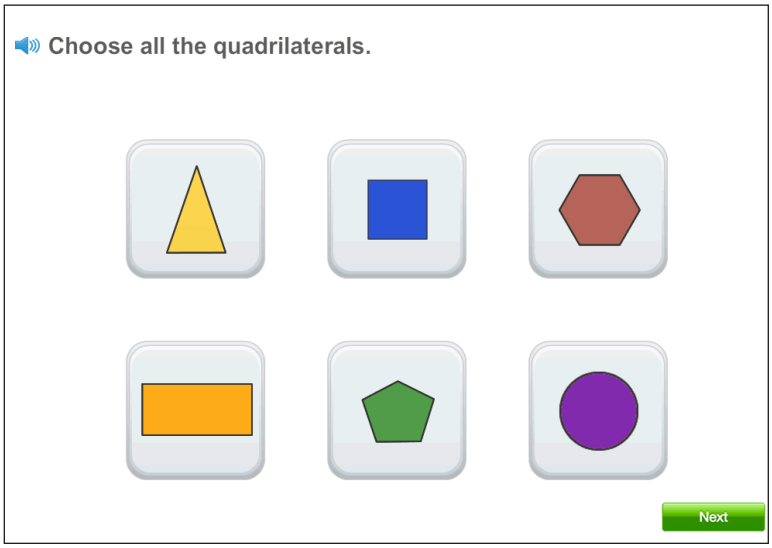
Free iPad® App



Screener/Benchmarker

3 times per year: Fall, Winter, Spring

- Can be given to many students at one time with little or no orientation (encourage pencil/paper for grades 3 and up)
- Students can skip an item by pressing 'Next' button without completing the item
- Computer Adaptive Test - items are chosen based on student's grade, performance on previous items
- Test time is about 20 minutes - students see 'checkered flag' when they are done



Students take the assessment during their first session.

Symphony Game Board

A visual history of student progress

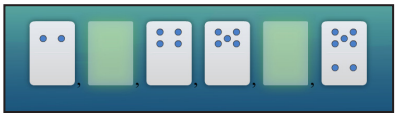
- Displays student progress through available content in Symphony Math
- Students see different content as a result initial assessment (auto placement)
- Practice allowed after mastery
- Weekly Challenges allow extra journaling, class-wide math talks

The Game Board shows the student's progress and current Stage.

Task Groups

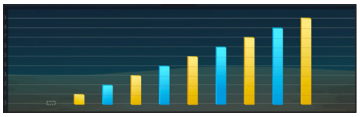
During a session of use, students see groups of 8 tasks, called Task Groups. The main goal of task groups is to help the student visualize the Big Ideas in mathematics using different types of models:

Dot Cards



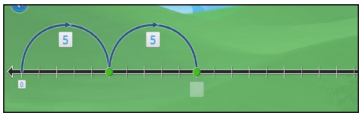
- Groups of discrete objects
- Excellent for concepts such as 'one more than', or 'take away two'

Number Bars



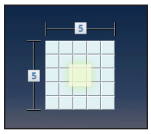
- Represent magnitude
- Use length and volume to build number sense

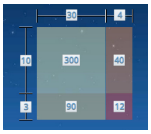
Number Lines



- Visual model for mathematical structure
- Prevalent in classroom mathematics instruction

Grids / Area Models



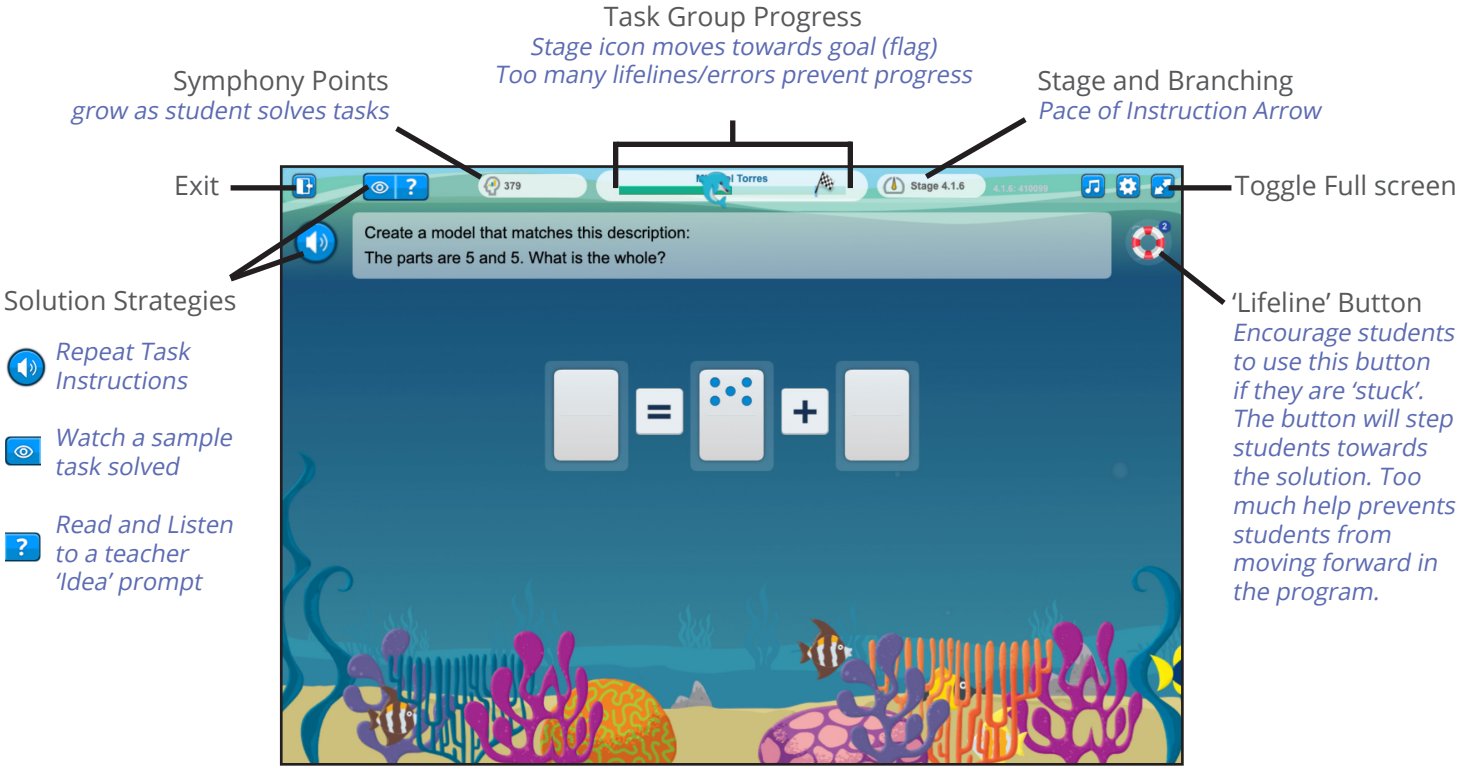


- Visual equal groupings
- Open area models support expanded mode operations

Fraction Bars

- Expands area model to idea of equal partitions of wholes
- Can be combined with number line for wholes greater than 1

The Task Area



Students click on each 'flashing' area to create their solution.

Dynamic Branching

Symphony Math uses a dynamic branching algorithm that allows students to learn at their own pace. As students work in the program, they complete tasks that are judged as a 'best fit' for their ability. In this way, the program is constantly adjusting to the needs of each learner, and ensures that students work on material until they achieve full mastery.

Placement Groups of challenging tasks that assess student mastery of all concepts within a Stage that is below the student's grade level. Students who score better than 90% on these tasks move directly to the next Stage.

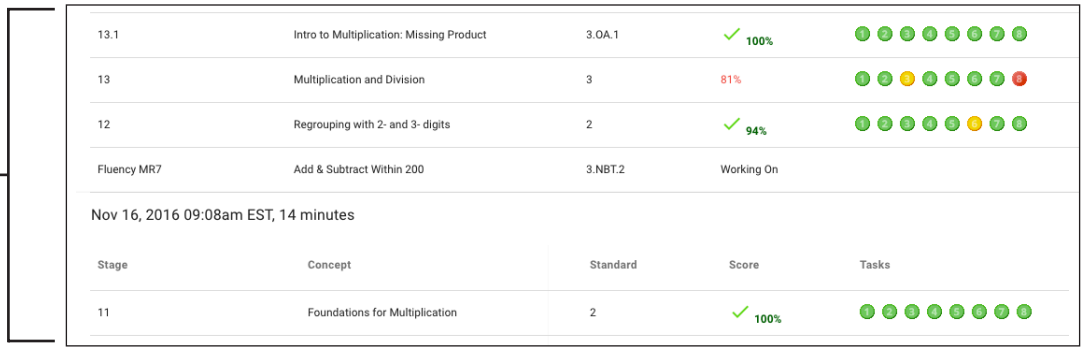
Skill Groups of tasks that focus on one skill within a Stage. Stages contain 4-8 skills.

Focus Groups of tasks that provide extended practice within a skill. Focus tasks gradually increase in difficulty, moving from models-only (concrete) to numbers-only (abstract) to application (auditory recall and word problems).

! Symphony Math automatically places students after they complete their first assessment of each school year. As they use the program, the branching engine adjusts the pace of instruction. This approach allows students to fill in gaps in their understanding of foundational number sense concepts.

Student 1: The 'Fast Mover'

Moves through Stages 11 and 12 quickly, slows down in Stage 13



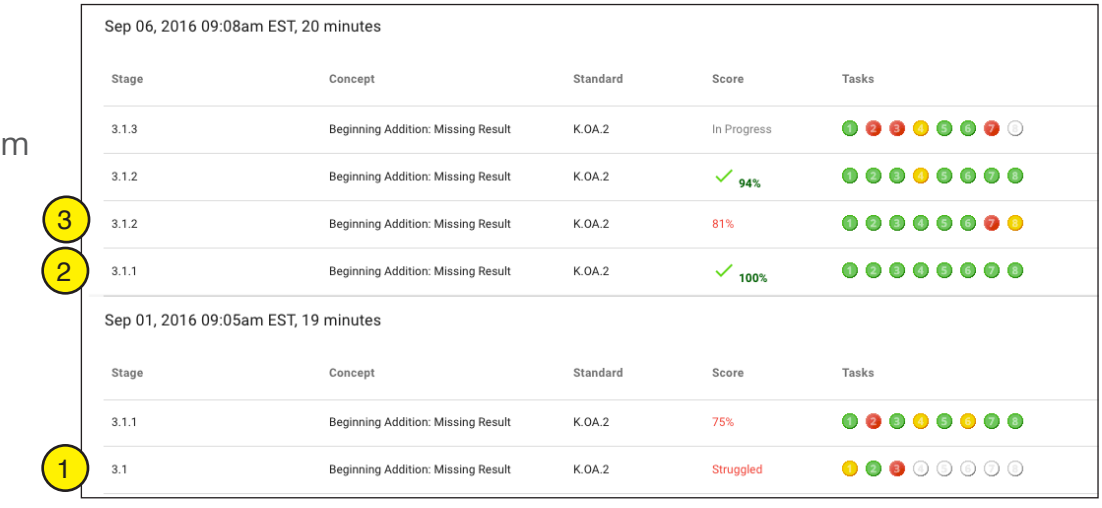
13.1	Intro to Multiplication: Missing Product	3.OA.1	✓ 100%	
13	Multiplication and Division	3	81%	
12	Regrouping with 2- and 3- digits	2	✓ 94%	
Fluency MR7	Add & Subtract Within 200	3.NBT.2	Working On	

Nov 16, 2016 09:08am EST, 14 minutes

Stage	Concept	Standard	Score	Tasks
11	Foundations for Multiplication	2	✓ 100%	

Student 2: 'Slow and Steady'

1. Initial Struggle in Skill Mode Stage 3.1. (Program Exits the task group to adjust level)
2. Works in Focus Mode in 3.1.1 until 80% mastery
3. Moves to next Focus task block (3.1.2).



Sep 06, 2016 09:08am EST, 20 minutes

Stage	Concept	Standard	Score	Tasks
3.1.3	Beginning Addition: Missing Result	K.OA.2	In Progress	
3.1.2	Beginning Addition: Missing Result	K.OA.2	✓ 94%	
3 3.1.2	Beginning Addition: Missing Result	K.OA.2	81%	
2 3.1.1	Beginning Addition: Missing Result	K.OA.2	✓ 100%	

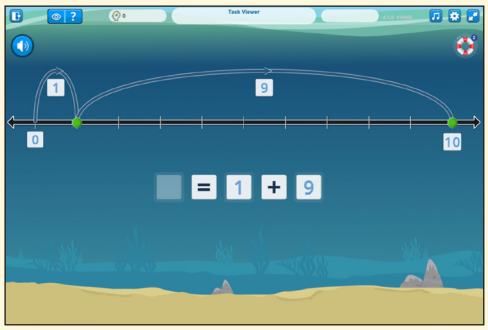
Sep 01, 2016 09:05am EST, 19 minutes

Stage	Concept	Standard	Score	Tasks
3.1.1	Beginning Addition: Missing Result	K.OA.2	75%	
1 3.1	Beginning Addition: Missing Result	K.OA.2	Struggled	

Ways of Knowing

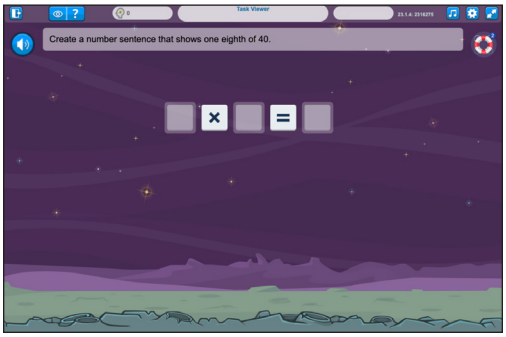
As students demonstrate mastery using the different visual models, they begin to experience the transition from the concrete (models only) to the abstract (numbers and symbols). During this process, the student always sees the visual model during the checking sequence.

An example of an abstract task: basic addition with a missing result.



The hint after an incorrect solution shows the number fact viewed in a number line.

Concrete to Abstract to Application



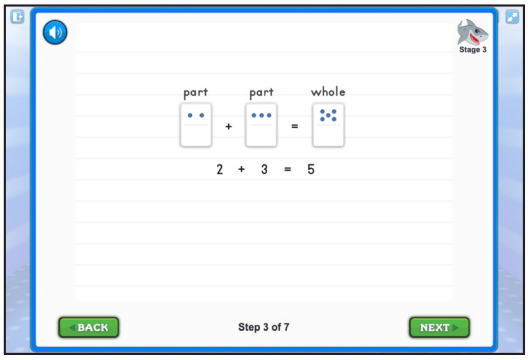
When students show that they have a solid understanding of a concept, Symphony Math encourages mastery by introducing a variety of applications, including:

- Word Problems
- Auditory recall
- Automaticity 'Mastery Rounds'

Checkpoints (Math Journals)

When students complete a Stage of Symphony Math, they are guided through Checkpoints. Each checkpoint has a variety of tasks that students draw and create in their offline journals.

Students can make journals themselves, or use provided blackline masters to structure journals.



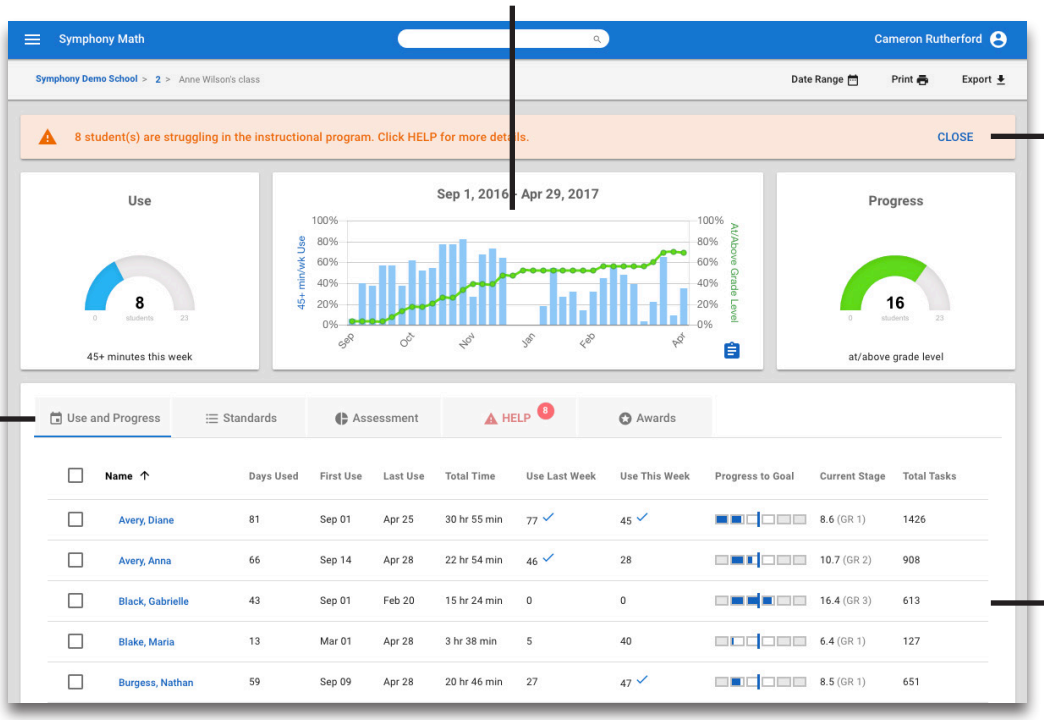
! YOU MUST ENTER A CODE in order for students to continue past Checkpoints. This process allows you an opportunity to see how students think about important math concepts. Codes for each Stage are found in your Administration Panel Dashboard in the Support area.

Your Symphony Math Dashboard

adminpanel.symphonylearning.com

Each time you visit the online Administration Panel, your **Dashboard** will provide real-time data that can help inform your instructional decisions.

Use and Progress Over Time
Blue Bars: How many students are using 45 minutes per week?
Green Line: How many students are at or above grade-level instruction?



Students are struggling. Use the HELP tab to get details and resources.

Press a student name to see their personal Dashboard.

The Class Dashboard

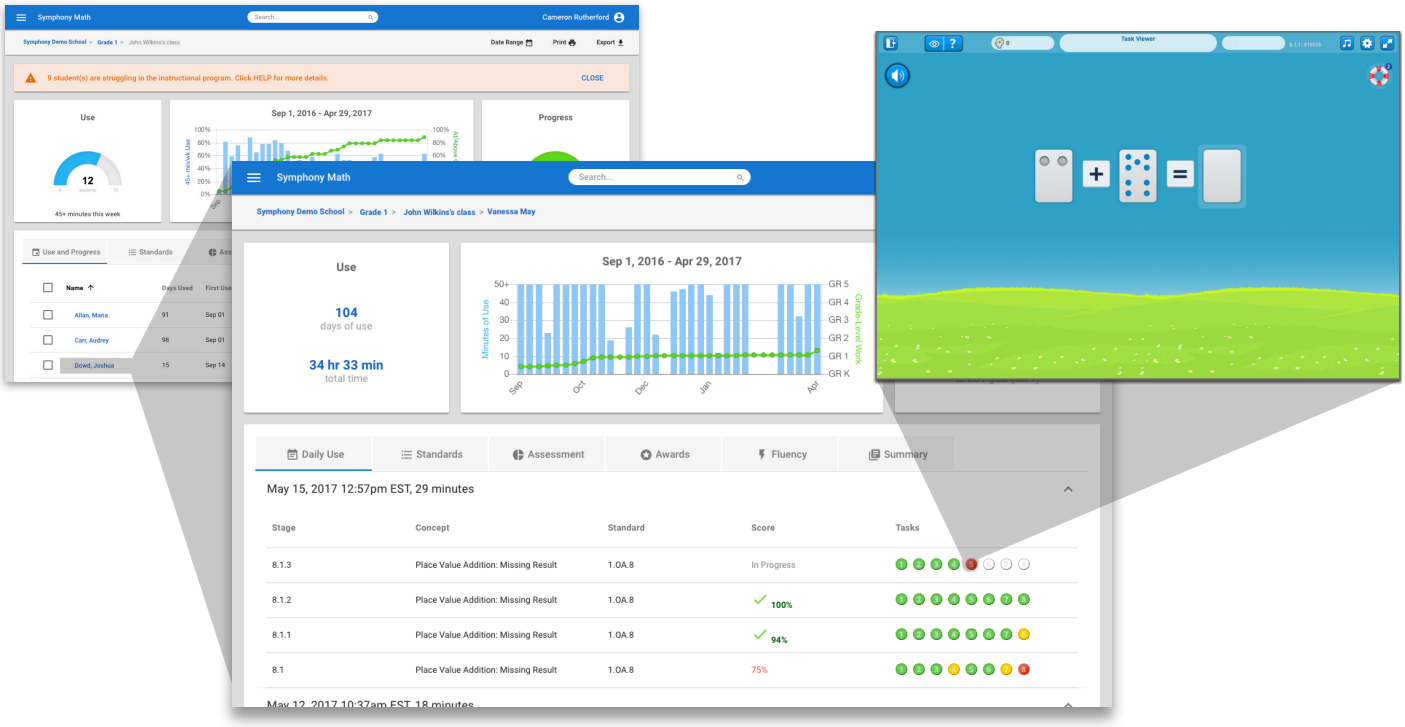
Use and Progress — A summary of student use, and progress towards grade-level goals.
Standards — Proficiency in math standards covered in the Symphony Math curriculum.
Assessment — Data from the independent Symphony Math assessments.
HELP — Details and recommendations for offline practice for struggling students.
Awards — A summary of latest certificates and Goal Sheets for each student.

The Dashboard looks different for each type of Staff member:

- Teachers see Dashboard data for their classes ONLY.
- School Administrators see data for all grades and students in their school.
- District Administrators see information across the entire district.

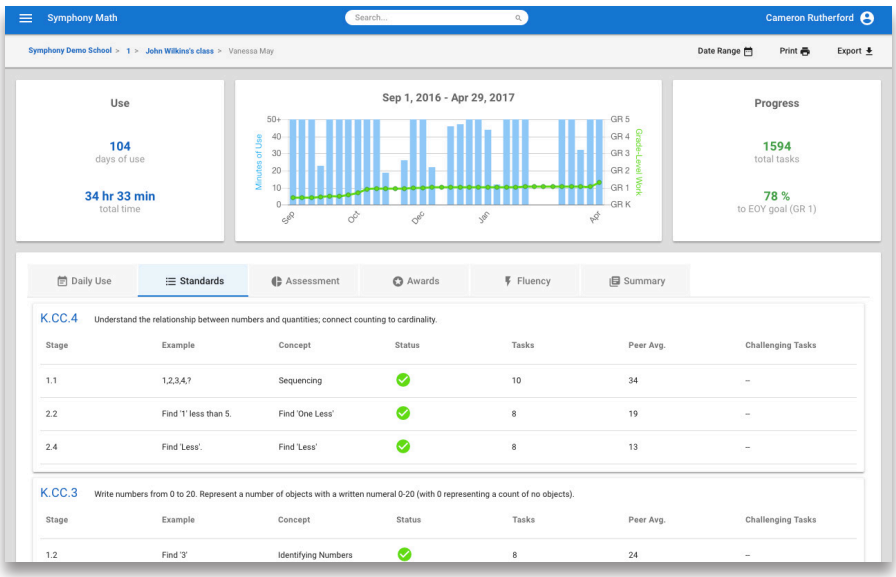
Data-Driven Accountability

Your **Dashboard** provides a tremendous amount of information, but you may want more detail. Press a student name to access the student's Dashboard, starting with a full history of their Use and Progress. Press any task score icon to see a task preview.



Student Dashboard - Use and Progress

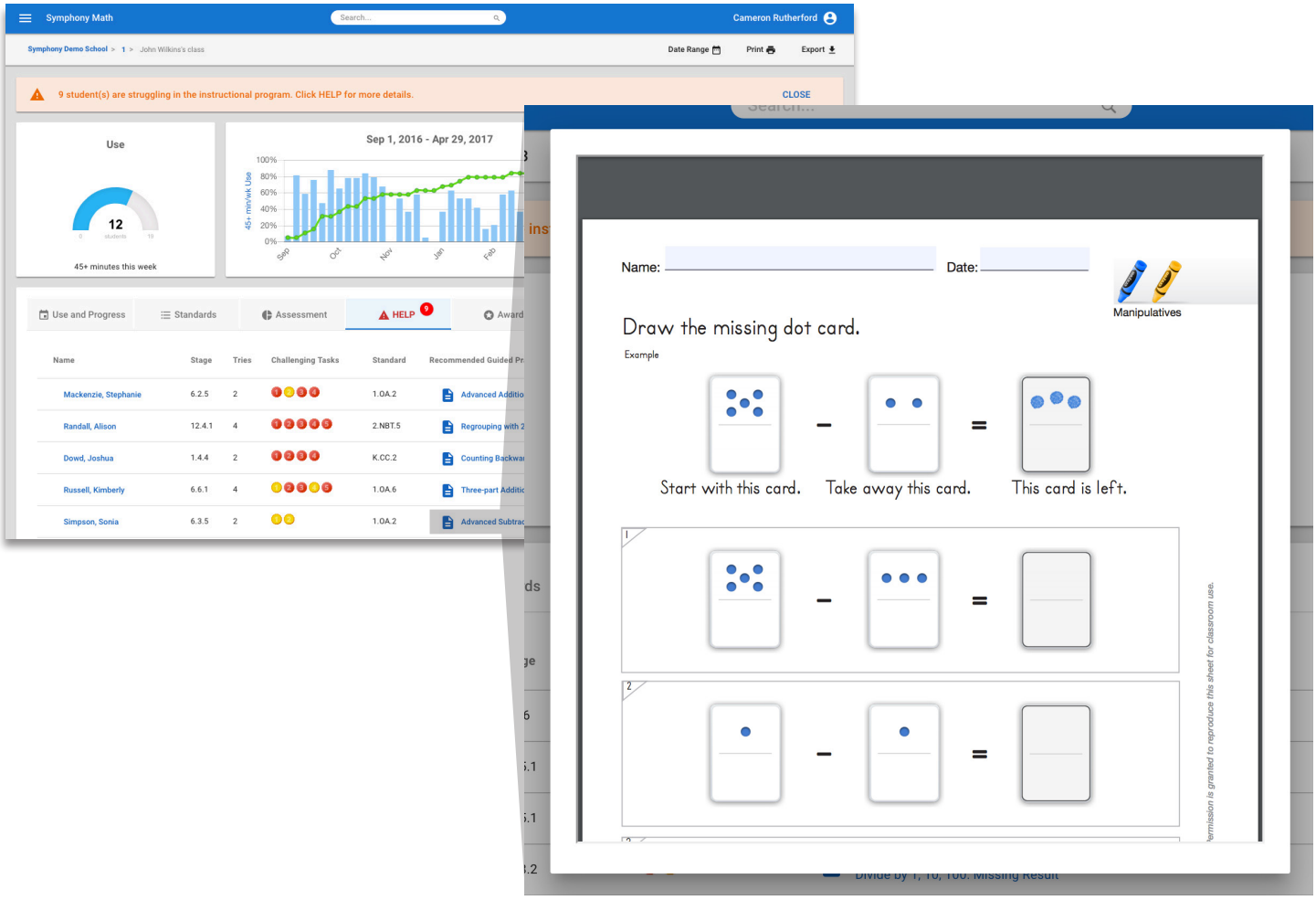
Multiple data views are available for every student, and available instantly for each student chosen from your **Dashboard**.



Student Dashboard - Standards

Supporting Struggling Students

Your **Dashboard** provides personalized recommendations to help struggling students. Every student that is identified as needing **HELP** has a link to **Guided Practice** print materials that focus on the area in which they are struggling.



A Guided Practice document focusing on subtraction

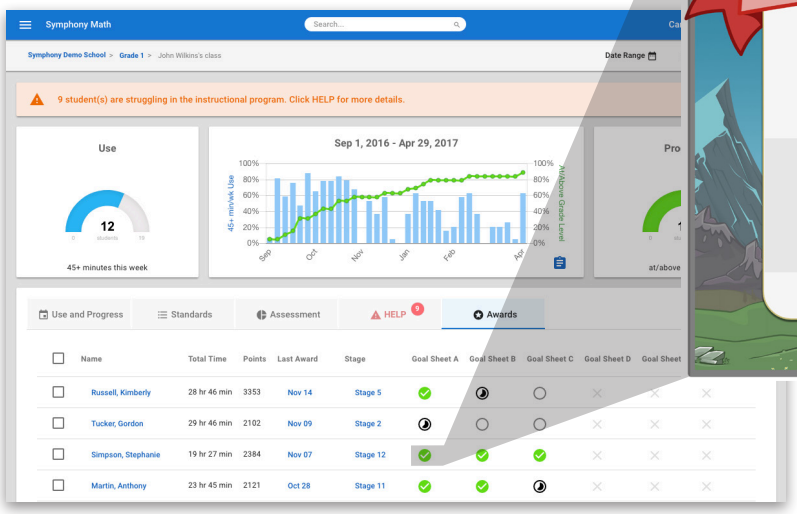
An Opportunity for Intervention

Symphony Math Guided Practice materials are designed to promote a conversation about the **Big Ideas** in math. One-on-one or small group instruction with the materials is recommended for students who need more time to make connections between the mathematical concepts in the Stage and the application of those concepts in their math curriculum.

Celebrating Achievement

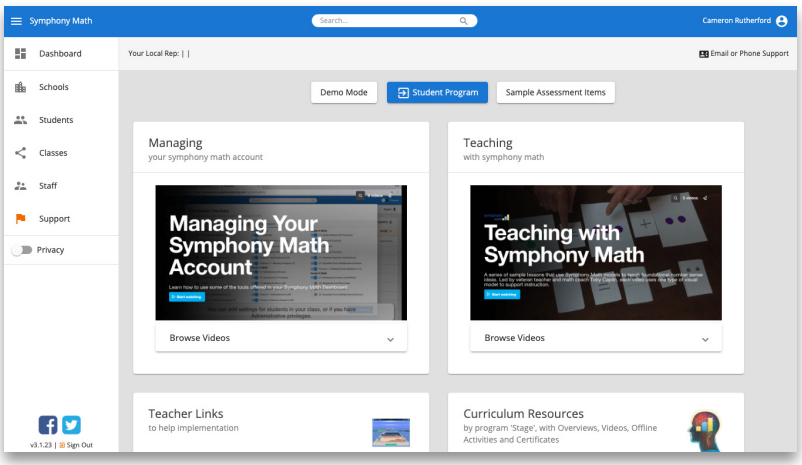
Links to the most recent **Award Certificate** and student Goal Sheets for each student are available on your **Dashboard**.

Success is a great motivator. Students work very hard during their use of Symphony Math, and the rewards structure that you put in place can help students celebrate the gains that they make.



A student certificate for Stage 12

Resources and Help



Your **Support** tab provides key resources for supporting your implementation of Symphony Math:

- learn best practices, watch videos demonstrating program features
- download offline materials
- get email support, or search the support knowledge base

Ensuring an Effective Implementation

Symphony Math is extremely effective in promoting mastery of foundational number sense, especially for students who have gaps or have fallen behind. The greatest gains are achieved by following the below recommendations for fidelity of implementation.

Which students should use Symphony Math?

- All students in grades K through 5
- Students identified as At-Risk or Borderline in grades 6-8
- Older students with moderate to severe learning difficulties

How often should students use Symphony Math?

- At least 45 minutes per week for at least 5 months of the school year
- Students who are Tier II or III may need 60 minutes or more per week
- Daily sessions should be 15-20 minutes - multiple sessions works better than single, long sessions

What can I do to ensure success?

- Sign in to your Symphony Dashboard once every week to analyze data
- Identify and Intervene with struggling students
- Review student journals at Checkpoints to confirm mastery
- Celebrate student achievement, and make Symphony Math part of your class culture