

# 2020-21 Khan Academy Math Learning Plans

👋 Hello! 👋

Each school year, math teachers must make challenging decisions to balance depth and breadth of content and standards. This is *especially* challenging in the 2020-21 school year due to unfinished learning caused by school closures in the spring of 2020.

The purpose of these learning plans is to explain how educators and school districts can use Khan Academy's various math courses to cover both unfinished learning from previous grade levels as well as grade-level standards throughout a single school year.

## **New: Khan Academy's Get ready for grade level courses**

A new set of math courses are now available on Khan Academy. Their goal is to provide an efficient way for students to learn or refresh their mastery of the prerequisite content they need to be successful in math this school year.

Key things to know about these courses:

- They're shorter than a full Khan Academy math course (about one third to one half of the size).
- All the content is from math courses *prior* to the course listed in the title. For example, the Get ready for seventh grade course will contain content from grade levels prior to 7th grade.
- Built using Student Achievement Partners' Common Core Coherence Map.
- The entire course can be assigned by teachers using Khan Academy's Course mastery placement report.
- Available for students in English and Spanish.

### MATH: GET READY COURSES

NEW

[Get ready for 3rd grade](#)

[Get ready for 4th grade](#)

[Get ready for 5th grade](#)

[Get ready for 6th grade](#)

[Get ready for 7th grade](#)

[Get ready for 8th grade](#)

[Get ready for Algebra 1](#)

[Get ready for Geometry](#)

[Get ready for Algebra 2](#)

[Get ready for Precalculus](#)

Choose from two different learning plans:

### At the start

- With this plan, students start off the year working toward mastery of the Get ready for grade level courses. This approach is the simplest and is useful if you want to address summer learning loss at the beginning of the year. One possible downside is that students may not retain the prerequisite skills from the beginning of the year until the time you teach the related grade-level content later in the year.

### As you go

- With this plan, students master prerequisite content on the Get ready for grade level courses throughout the entire school year as you're teaching grade-level content. Students focus on units that correspond to whatever unit they are learning in their current math course. This model is powerful. Research indicates that students learn better if they review content close to the time they have a chance to apply the knowledge to a new skill. However, it is more complex to implement than the At the start plan.

## Information about Khan Academy's mastery learning system

Khan Academy's mastery learning system is the foundation of the student learning experience.

### Key components

- Instructional resources
- Practice opportunities
- Instant feedback

### Types of practice

- Single-skill practice
- Mixed-skill practice
- Personalized spiral review

### Levels of skill mastery

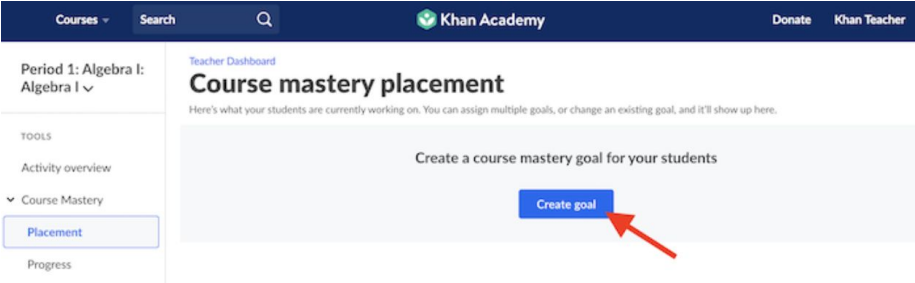
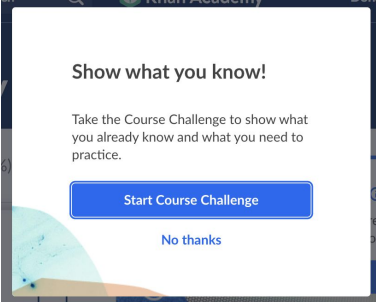
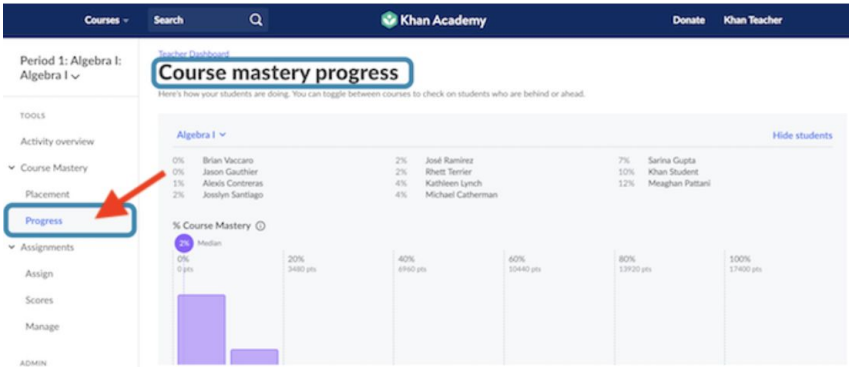
- Not started (0 points)
- Attempted (0 points)
- Familiar (50 points)
- Proficient (80 points)
- Mastered (100 points)

- ★ Students earn mastery by demonstrating understanding of skills. Watching videos and reading articles on Khan Academy helps students learn but does not contribute directly to mastery status.
- ★ Mastery can go both up or down as students practice and their performance fluctuates.
- ★ To get to mastered status, the highest level of mastery, students must demonstrate understanding of a skill multiple times, and the last time must be on a unit test, course challenge or mastery challenge.

Type of practice	Content	# of Questions	Availability	Results
Exercise	All questions about the same skill	Typically 4-7 questions	Anytime (can be paused and resumed)	Students can advance up to proficient status through these types of practice.
Quiz	Randomly selected problems from one part of a unit	Typically 5-10 questions		
Unit Test	Randomly selected problems from an entire unit	Typically 10-20 questions		Students can advance to mastered status through these types of practice.
Course Challenge	Random sampling of problems from the entire course	30 questions		
Mastery Challenge	Personalized spiral review of concepts that are at familiar status or higher	6 questions	Appears when sufficient skills are available to review (12 hours to complete once started)	

To learn more about the mastery learning system, [visit Khan for Educators](#).

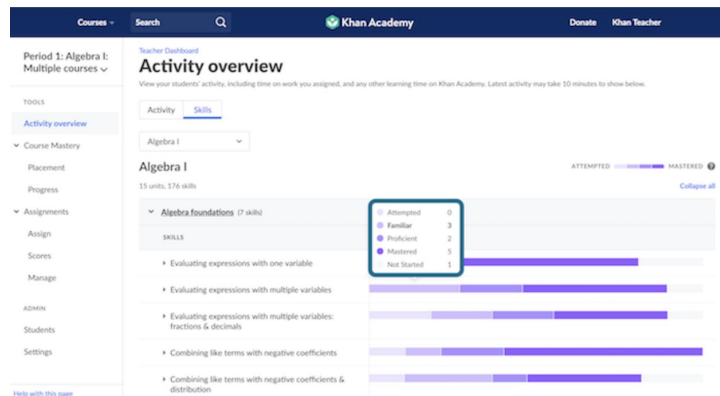
# Classroom implementation recommendations

	Step	At the start	As you go
Starting process	Teacher sets Course Mastery placement.	<p>Use Course mastery placement to place students in Get ready for grade level courses <i>only</i> at the start of the year.</p> <p>When student(s) reach 90% mastery in their Get ready for grade level course, use Course mastery placement to place them in their enrolled math course.</p> 	<p>Use Course mastery placement to place students in <i>both</i> the Get ready for grade level course and their enrolled math course at the start of the year.</p> <p>Students will make progress on both courses throughout the school year.</p>
	Students complete Course Challenge.	<p>Encourage all students to complete the Course Challenge in their Get ready for grade level course during the first one to two days of practice.</p> <p>Completion of this Course Challenge will help reveal what students already know.</p>	
Ongoing instructional cycle	Teacher checks Khan Academy's Course mastery progress report.	<p>This report shows the overall mastery percentage for individual students for a course as well as mastery of each of its units. Median class mastery is displayed. Teachers can choose to show or hide student names.</p>  <p><a href="#">Learn more about Khan Academy's Course mastery progress report here.</a></p>	

# Ongoing instructional cycle

Teacher checks Khan Academy's Skills report.

This report shows the mastery skill level for every student on every skill within a course. Drill down to see additional details. By clicking on the name of an individual student in this report, teachers can access each student's Activity log.



[Learn more about the Skills report here.](#)

Teacher makes Assignments [optional] and intervenes to support.

Teachers use Khan Academy's instructional reports to determine skills to reteach with the whole class, skills to reteach in small groups, or students who may benefit from an individual check-in.

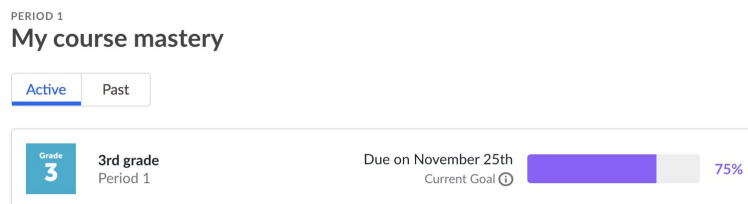
Use the Skills report to make assignments to students. Assignments help students prioritize specific parts of a course and provide teachers with additional item response data. When students complete Assignments, mastery progress from the assignment will also contribute to Course mastery in the associated course(s).

Student performance on Assignments will show up on the Scores section of the Assignment tab for each class.

[Learn more about Assignments here.](#)

Students complete Assignments and work on self-paced practice.

The end goal is for students to achieve 90% or higher mastery in their course(s) by the end of the academic year, but students can also accelerate and move on to new levels of math with their teacher's support.



Teachers can decide how often to make Assignments. Some teachers place the emphasis on self-paced practice and guide students to navigate through Course mastery. Other teachers make two to three Assignments per week and, once students complete their Assignments, they are allowed to continue working on Course mastery.

## At the start: Guidance for using the Get ready for grade level courses

### Big idea

The expectation for students is to achieve 90% mastery of an entire Get ready for grade level course at the beginning of the school year. The amount of time this takes students will vary based on their incoming skill levels, but we recommend allotting a minimum of 10 to 15 instructional hours for students.

[Planning worksheet](#)

[Student-progress tracker](#)

[Student learning tips one-pager](#)

### Example

A fifth-grade teacher plans to spend a portion of instructional time throughout the first eight weeks of school supporting student mastery of the Get ready for fifth grade math course. As students meet the mastery target of 90% on the Get ready for fifth grade course, the teacher sets a Course mastery placement for the standard fifth-grade math course on Khan Academy.

The teacher sets biweekly milestones for both courses to check on student progress. Here's what the biweekly milestones are for the year:

Get ready for fifth grade math		
Milestone	Date	Mastery target
1	September 10	22%
2	September 24	45%
3	October 9	67%

Fifth-grade math		
Milestone	Date	Mastery target
1	November 6	7%
2	November 20	15%
3	December 4	22%
4	December 18	30%
5	January 15	37%
6	January 29	45%
7	February 12	52%
8	February 26	60%
9	March 12	67%
10	March 26	75%
11	April 9	82%
12	April 23	90%

## As you go: Guidance for using the Get ready for grade level courses

### Big idea

The teacher embeds the Get ready for grade level courses one unit at a time as they move through grade-level content. Before beginning each unit, students work through the Get ready for grade level content that relates to the topics that will be covered during the year.

[Planning worksheet](#)

[Student-progress tracker](#)

[Student learning tips one-pager](#)

### Example

A school district's fifth-grade math classrooms have a single, 60-minute math period each day. For their fifth-grade math classes, the district makes a plan to take a few days at the beginning of each unit to work on the Get ready for fifth grade content that ties to that unit. As a calendar, it may look something like this:

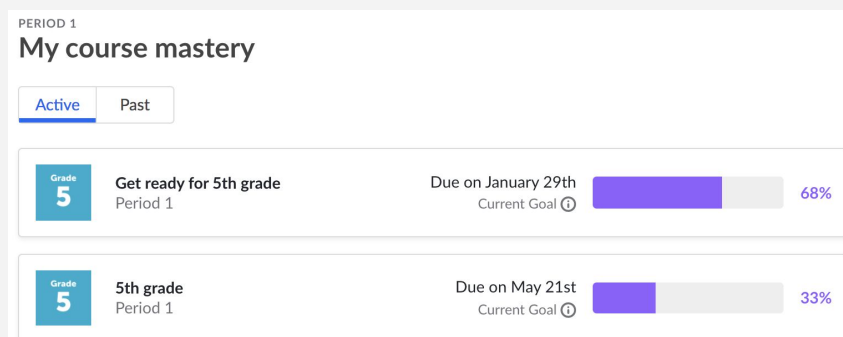
September		October		November		December	
Get Ready Unit 1	Unit 1	Get Ready Unit 2	Unit 2	Get Ready Unit 3	Unit 3	Get Ready Unit 4	Unit 4

Because reviewing and mastering the Get ready for fifth grade content takes time, each grade-level unit has to be slightly shortened. However, since students will invest the time to make sure they've mastered the prerequisite content first, the school district anticipates students will understand and retain more of the grade-level content covered than if they had skipped this time spent on review.

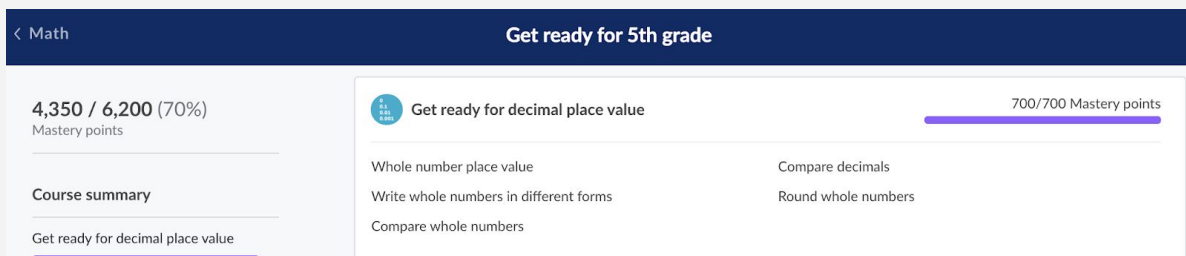
### 💡 Reflecting on the As you go model 💡

The As you go model is powerful. Research indicates that students learn better if they review content close to the time they have a chance to apply the knowledge to a new skill. There are three main reasons why this model is more complex to implement:

- Students will have two Course mastery placements on their Khan Academy homepage. Students will need extra clarity from their teacher on which goal is most important during a given week.



- Teachers may need to do a crosswalk between their district pacing guide and the order of the units within Khan Academy's math courses. In some places, districts may need to combine Khan Academy units or advise students to work on the Khan Academy units in a different order than displayed on the website to match their district pacing guide. A sample of this crosswalk is displayed below.
- Teachers will need to check unit mastery instead of overall course mastery on the Course mastery progress report to verify that students are on track. [Learn more about Khan Academy's Course mastery progress report here](#). Similarly, students will need to check unit mastery by clicking on their course mastery goal and looking at their mastery status for individual units. For example, in this example, a student has 70% mastery in the overall course, but has 100% mastery in the displayed unit.



## Sample first-semester pacing guide for fifth-grade math

Milestone	Length of time	Fifth-grade math unit	Khan Academy units to complete (90%+ unit mastery)
1a	1 week	Decimal place value and powers of 10	Get ready for fifth grade math: <ul style="list-style-type: none"> <li>Get ready for decimal place value</li> <li>Get ready for powers of 10</li> </ul>
1b	3 weeks		Fifth-grade math: <ul style="list-style-type: none"> <li>Decimal place value</li> <li>Powers of ten</li> </ul>
2a	2 weeks	Operations with decimals	Get ready for fifth grade: <ul style="list-style-type: none"> <li>Get ready for adding and subtracting decimals</li> <li>Get ready for multiplication and division with whole numbers and decimals</li> </ul>
2b	8 weeks		Khan Academy fifth-grade math: <ul style="list-style-type: none"> <li>Add decimals</li> <li>Subtract decimals</li> <li>Multi-digit multiplication and division</li> <li>Multiply decimals</li> <li>Divide decimals</li> <li>Converting units of measure</li> </ul>
3a	1 week	Geometry	Get ready for fifth grade: <ul style="list-style-type: none"> <li>Get ready for properties of shapes</li> </ul>
3b	2 weeks		Fifth-grade math: <ul style="list-style-type: none"> <li>Coordinate plane</li> <li>Properties of shapes</li> </ul>