Mathseeds

Case study: Mathseeds and remote learning during the 2020 COVID-19 shutdown

Mathseeds and remote learning during the 2020 COVID-19 shutdown

The 2019-20 school year was unprecedented: education was thrust into uncertainty when schools across the country closed in mid-March 2020 to minimize the spread of COVID-19. Districts, schools, teachers, and students were suddenly faced with the prospect of remote learning for the final months of the school year.

Remote learning was especially challenging for younger students. The importance of high-quality, engaging, and motivating online learning programs, such as Mathseeds, was immediately apparent. Students who had been using Mathseeds during class quickly adapted to using it as a remote learning tool. This case study examines how students at one elementary school used Mathseeds to make significant grade progress at school and at home.

Case study

This case study focuses on a public school for Kindergarten–Fourth Grade in Pennsylvania. In 2019–20, students in Kindergarten and First Grade were the main users of Mathseeds.
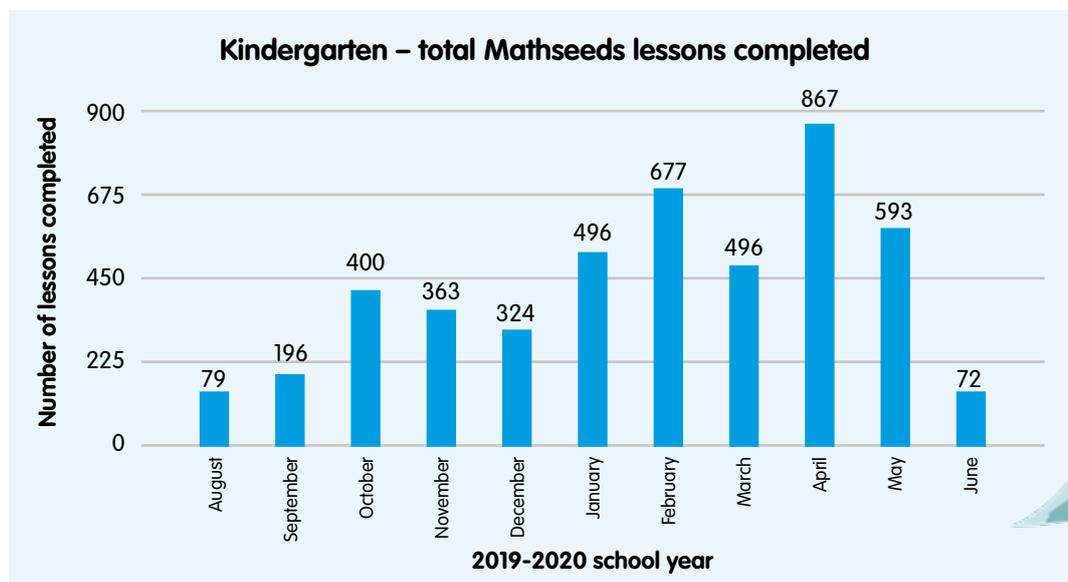
The school closed on March 16, 2020 to help minimize the spread of COVID-19, and students officially started online learning on March 30.

The school district provided students with an iPad to encourage them to continue their modified learning program at home. A free Wi-Fi zone was established in the school car park to help students complete their learning tasks.

Kindergarten

Lessons completed

From August 2019–April 2020, 85* Kindergarten students completed 4931 Mathseeds lessons. Impressively, these students completed 867 lessons—their highest number—in April 2020 during remote learning.

Kindergarten – total Mathseeds lessons completed

Number of lessons completed / 2019-2020 school year

Month	Lessons
August	79
September	196
October	400
November	363
December	324
January	496
February	677
March	496
April	867
May	593
June	72

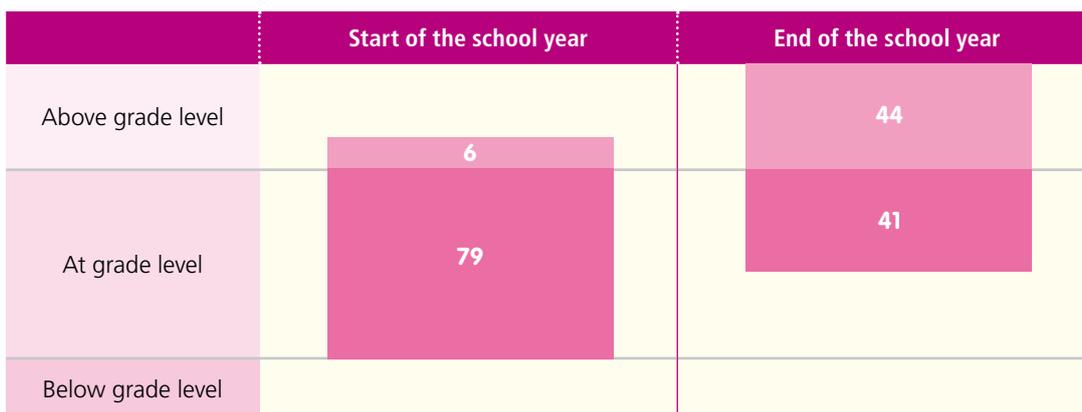* Only students who completed two or more lessons were included in this study.
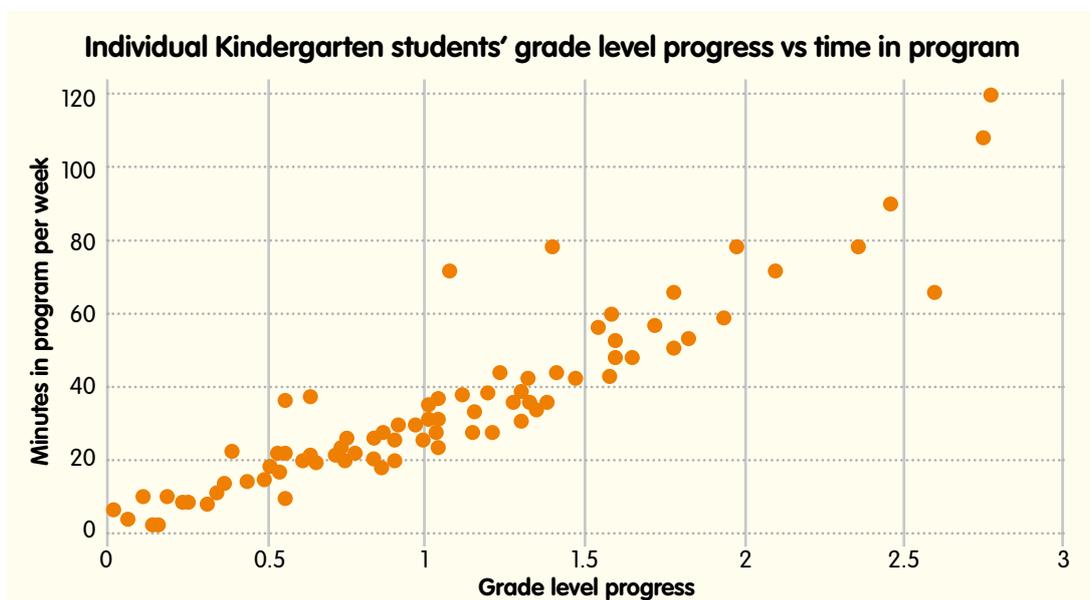
Grade level progress

In the 2019–20 school year, Kindergarten students made substantial progress. The table below shows students' grade level progress as they spent time using Mathseeds.

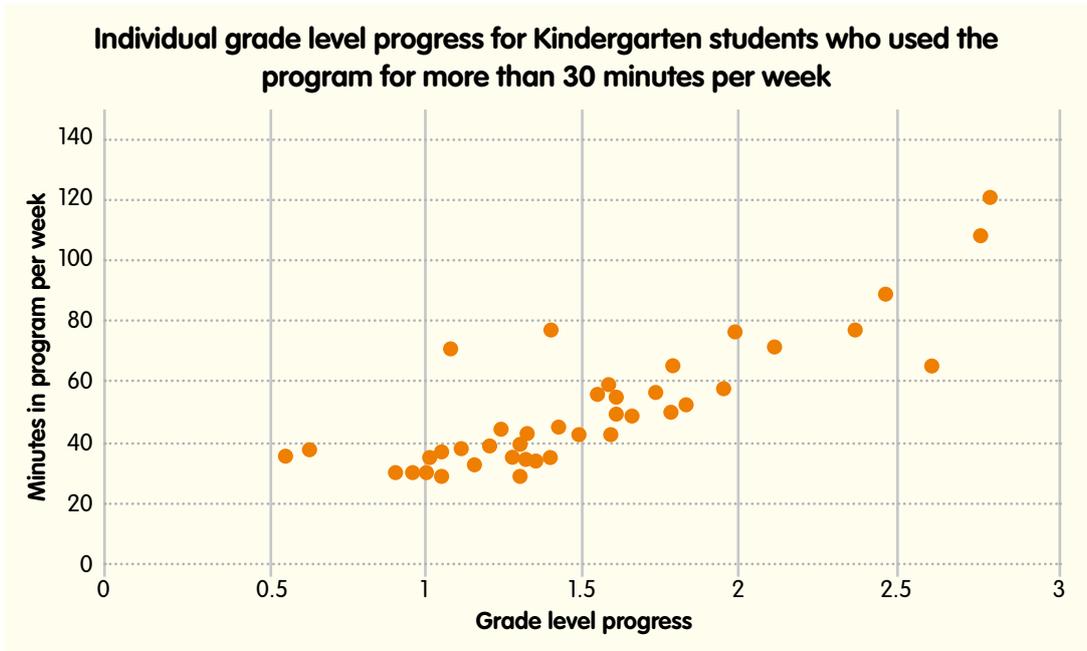| Grade level progress range	Number of students	Average minutes per week using Mathseeds
2.51–3.0	3	98
2.01–2.5	3	80
1.51–2.0	13	56
1.01–1.5	23	39
0.51–1.0	27	24
0–0.5	16	10

More than 90% of Kindergarten students started the year at grade level. By the end of the year, more than half of the students were working above grade level.
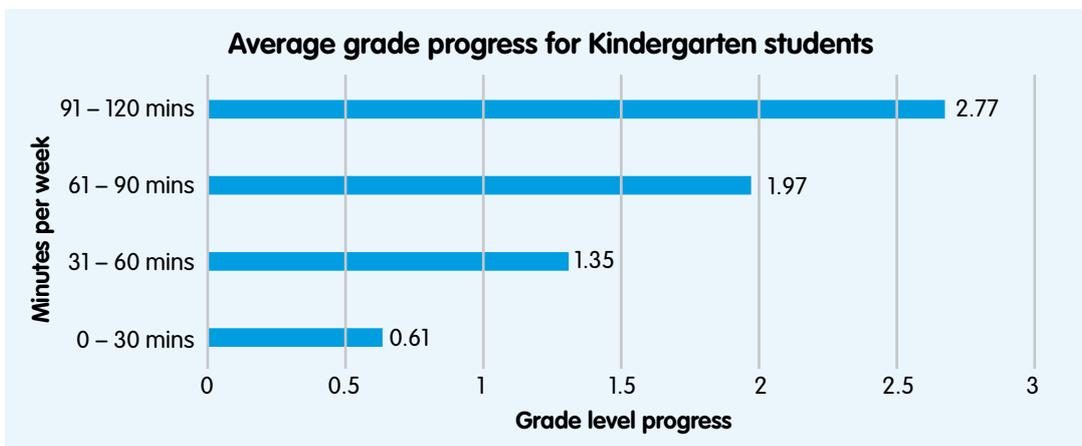
	Start of the school year	End of the school year
Above grade level		44
At grade level	6	41
	79	
Below grade level		

On average, Kindergarten students spent **35 minutes per week** using Mathseeds and **progressed 1.1 grade levels** during the 2019–20 school year.

Individual Kindergarten students' grade level progress vs time in program

About half of the school's Kindergarten students spent longer in the program—and progressed significantly further. Forty-three students spent more than 30 minutes using Mathseeds each week (average 52 minutes) and **progressed 1.5 grade levels** during the school year.
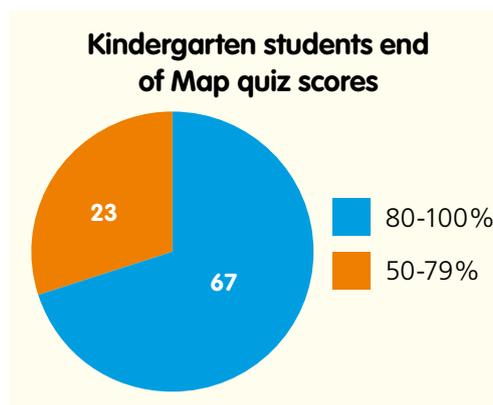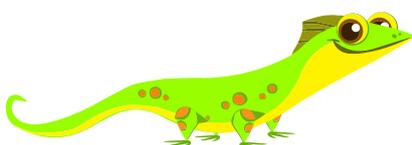
Individual grade level progress for Kindergarten students who used the program for more than 30 minutes per week

Grade level progress increased with time spent using Mathseeds.

Average grade progress for Kindergarten students

Minutes per week	Grade level progress
91 – 120 mins	2.77
61 – 90 mins	1.97
31 – 60 mins	1.35
0 – 30 mins	0.61

Quizzes

Mathseeds quizzes consolidate student knowledge. On average, the school's Kindergarten students scored 83% on their End of Map quizzes, with three-quarters scoring 80% or more.

Kindergarten students end of Map quiz scores
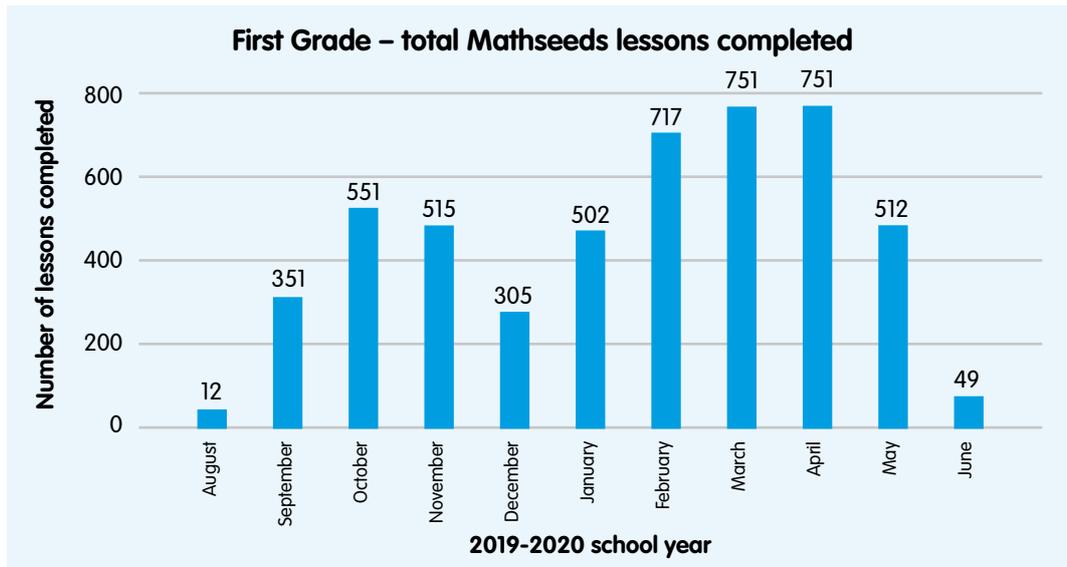

- 80-100%: 67
- 50-79%: 23

First Grade

Lessons completed

During the 2019–20 school year, First Grade students completed 5017 Mathseeds lessons. They took the highest number of lessons (751) in both March and April 2020 during remote learning.

First Grade – total Mathseeds lessons completed

Month	Number of lessons completed
August	12
September	351
October	551
November	515
December	305
January	502
February	717
March	751
April	751
May	512
June	49

Number of lessons completed (y-axis)
2019-2020 school year (x-axis)

Grade level progress

During the 2019–20 school year, 90 First Grade students made significant progress. The table below shows students' grade level progress and time spent using Mathseeds per week.
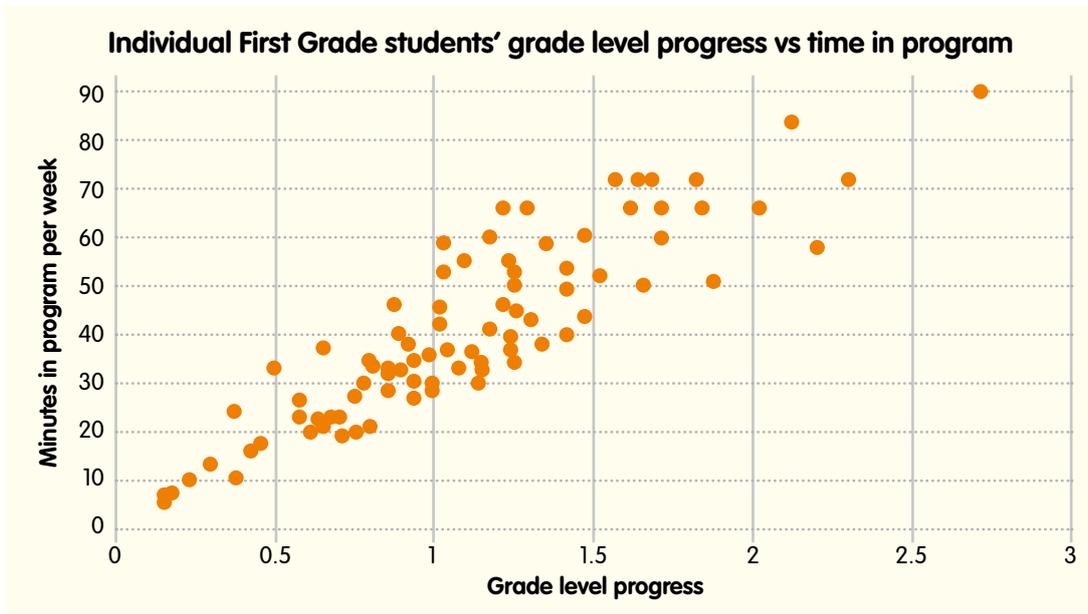
Grade level progress range	Number of students	Average minutes per week using Mathseeds
2.51–3.0	1	90
2.01–2.5	4	70
1.51–2.0	12	64
1.01–1.5	32	46
0.51–1.0	30	29
0–0.5	11	14

Almost 70% of First Grade students started the year below grade level. (Some started working at the very beginning of the Mathseeds program.) However, by the end of the year the situation had reversed: over 75% of students were working **at or above grade level**.
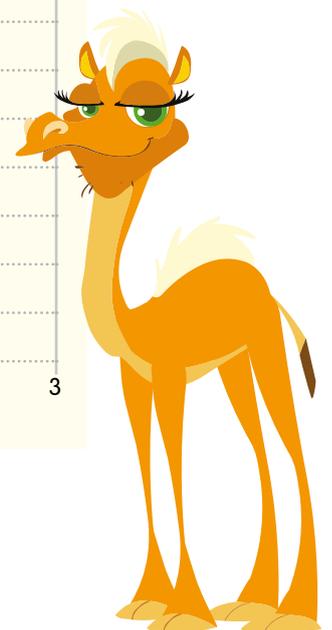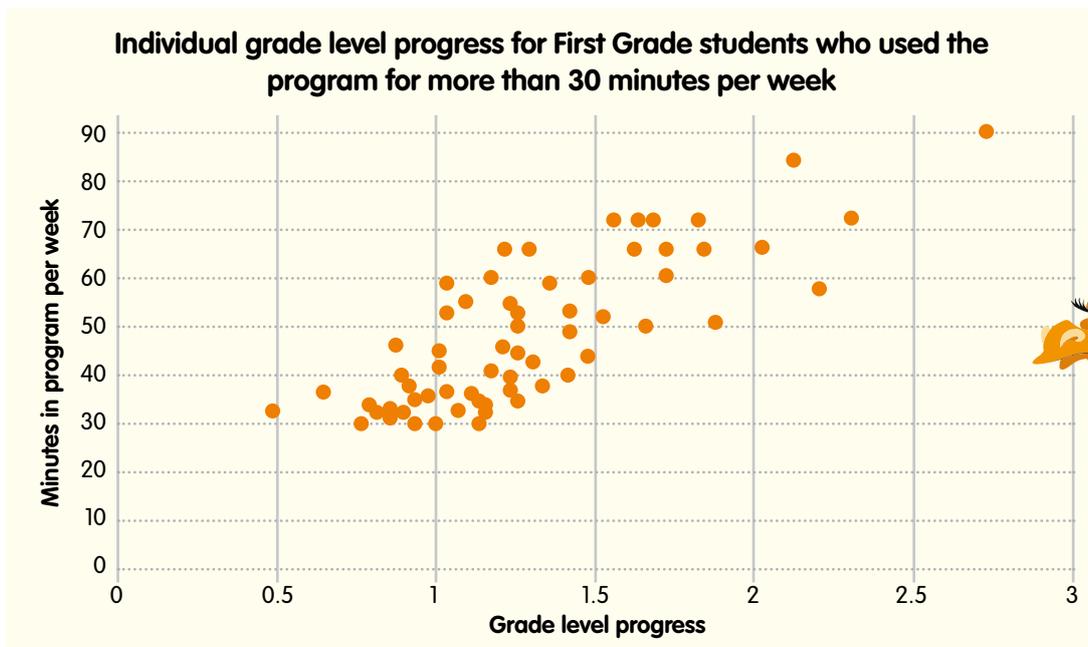
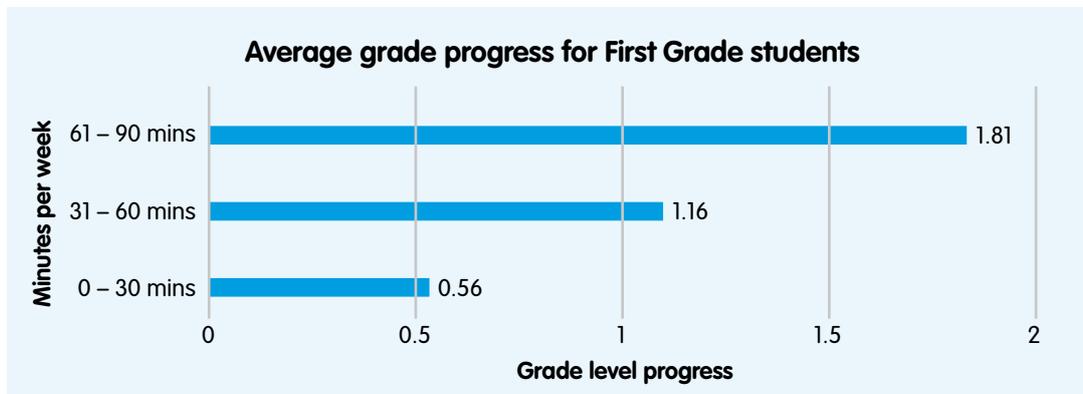|	Start of the school year	End of the school year
Above grade level	2	37
At grade level	26	32
Below grade level	62	21

Mathseeds

On average, First Grade students spent **40 minutes per week** using Mathseeds and **progressed 1.1 grade levels** during the 2019–20 school year.

Individual First Grade students' grade level progress vs time in program

Sixty-five First Grade students spent more than 30 minutes using Mathseeds each week. These students spent on average **49 minutes in the program per week** and progressed **1.3 grade levels** during the school year.
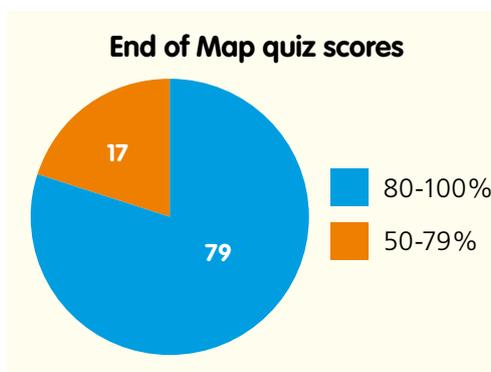
Individual grade level progress for First Grade students who used the program for more than 30 minutes per week

Grade level progress increased with time spent using Mathseeds.

Average grade progress for First Grade students

Minutes per week	Grade level progress
61 – 90 mins	1.81
31 – 60 mins	1.16
0 – 30 mins	0.56

Quizzes

Mathseeds quizzes consolidate student knowledge. On average, First Grade students scored 86% on their End of Map quizzes, with four out of five students scoring 80% or more.

End of Map quiz scores

- 79 — 80-100%
- 17 — 50-79%

Math + Fun = Mathseeds

The final three months of the 2019–20 school year were challenging. Teachers and students made extraordinary efforts to adapt to remote learning. It was inspiring to see children use Mathseeds to maintain and even extend their grade level learning during this difficult time.

Mathseeds can be used in-class and as a remote learning tool to achieve higher-than-average progress. The program's carefully sequenced lessons, along with its highly engaging and motivational elements, scaffold learning and support mastery across math domains and standards for students in Kindergarten–Third Grade.

Mathseeds lessons are designed to build students' math knowledge and skills. Teachers can confidently assign lessons for students to complete independently. Each lesson includes: an animation that explains the concept being taught, interactive activities, and an end-of-lesson quiz to consolidate and assess students' skills. Teachers can monitor student progress and achievement via the reporting dashboard.

Mathseeds engages students in their learning. The program's fun motivational elements, such as Golden Acorns, pets and certificates, encourage children to continue working through the program.

We hope to see students (and teachers) using Mathseeds in class and at home in Fall 2020!

www.mathseeds.com