

**Section j.**

**Examples of Implementation:** Provide data (including case studies) about program use, implementation, and impact. Highlight data in and with large urban school districts, English language learners, students with disabilities, students experiencing poverty, and black, latino, and other historically marginalized populations.

## Examples of Implementation

### Usage in New York City

In May 2023, Amplify began partnering with seven elementary schools in District 22 to pilot the Amplify Desmos Math K-5 curriculum. A program specialist visited each of the seven pilot schools in May/June to model an Amplify Desmos Math K-5 lesson for school leaders and teachers selected to participate in the pilot. The purpose of the initial model lesson experience was to introduce leadership and teachers to the program's problem-based approach to math instruction, which leadership intends to adopt district-wide in grades K-8 over the next several years. At the same time, a number of schools in District 22 were already participating in the NYC Math Equity initiative in grades 6-8, ensuring a district-wide program experience across grades K-8 that could lead to seamless implementation.

The Amplify Desmos Math K-5 partnership and pilot resumed at the start of the 2023-2024 school year. Each of the seven pilot schools selected three classrooms to participate in the year-long pilot. A total of 28 teachers and 635 students are part of the District 22 Amplify Desmos Math K-5 pilot for the current school year.

The goals of the partnership and pilot are:

- To provide print and digital curriculum materials to support teachers and school leaders in transitioning to problem-based learning, and to guide schools in the sustainable implementation of a problem-based mathematics learning instructional approach.
- To ensure teachers become comfortable with the structure of an Amplify Desmos Math K-5 lesson and can seamlessly teach these lessons in their classrooms.
- To receive feedback from pilot schools on how Amplify can further improve the Amplify Desmos Math K-5 curriculum. It is essential for Amplify, a Brooklyn-based company, to see the Amplify Desmos Math K-5 lessons live in New York City classrooms to ensure the program meets the needs of administrators, teachers, and students across the city.

This past fall, teachers chosen to participate in the pilot were provided with three Amplify Desmos Math lessons from Unit 1 of the curriculum for their specific grade level. Kindergarten received lessons for Unit 2. The focus for these lessons is listed below for each grade level. At District 22's request, lessons were selected to fit logically into the scope and sequence of the current core math instructional program.

Amplify Desmos Math New York starting unit:

- Kindergarten - Numbers 1-10
- Grade 1 - Adding, Subtracting, and Working with Data
- Grade 2 - Working with Data and Solving Comparison Problems
- Grade 3 - Introducing Multiplication
- Grade 4 - Factors and Multiples
- Grade 5 - Volume

Before teaching the Unit 1 lessons, participating teachers and school leaders participated in a 1-hour professional development session to gain familiarity with the materials and instructional foundation of Amplify Desmos Math. During this session, the Amplify professional learning specialist discussed the Unit 1 lessons for the teacher's grade level and guided teachers through a planning protocol to prepare them for teaching the first lesson in their classrooms. All school leaders and teachers participating in the pilot attended their school-specific professional development session from late September through early October 2023. Amplify received positive feedback from participants about the initial PD and teachers finished the PD session feeling overwhelmingly excited about teaching the first couple of Amplify Desmos Math New York lessons to their students.

Throughout the fall of 2023, the Amplify team visited each participating school one to two times to observe Amplify Desmos Math lessons live in classrooms and provide side-by-side support. After the lesson observations, the team met with school administrators and teachers to debrief and receive feedback. Some schools also met with the Amplify team prior to the visits to plan the lesson that would be observed, fostering teacher readiness and high-quality instruction.

At the end of the fall semester, Amplify surveyed school administrators and teachers about their experience with the program and the lessons provided. The data from the survey is captured here. Overall, all seven schools reported a positive experience, and some testimonials from school leaders and teachers are highlighted below:

- "Students and teachers love starting lessons and activities with instructional and math language routines."
- "Partner work allows students to interact with the math and discuss it among each other."
- "Kids enjoyed exploring, and teachers reported that students felt very free to show what they knew - it didn't feel like a pressure-filled math lesson."

Pilot Data from Fall 2023 Semester:

- 65 lessons were launched across our K-5 pilot schools. Each teacher had three Amplify Desmos Math Unit 1 lessons (Grade K - Unit 2) to teach over the fall.
- All pilot schools and participating teachers that were part of the Fall Semester pilot, opted to continue with the pilot during the Spring semester.

Amplify has continued the Amplify Desmos Math K-5 pilot with the same seven District 22 schools during the spring semester. From January to March 2024, Amplify provided participating schools and teachers with 2-4 lessons per month per grade level from a range of K-5 units, which are listed below. As requested by the district, the content from these units and lessons aligned with what students were currently learning in math class in their core math curriculum and/or served as a review of topics from earlier in the school year. Schools received full-color teacher editions and student editions as well as digital presentation slides for each unit and lesson.

Amplify Desmos Math Units (lessons were provided from these units for for January-March 2024):

<b>Grade Level</b>	<b>January</b>	<b>February</b>	<b>March</b>
K	Unit 4: Understanding Addition and Subtraction	Unit 5: Make and Break Apart Numbers Within 10	Unit 6: Numbers 0–20
1	Unit 2: Addition and Subtraction Story Problems	Unit 4: Numbers to 99	Unit 5: Adding Within 100
2	Unit 5: Numbers to 1,000	Unit 3: Measuring Length	Unit 6: Geometry and Time
3	Unit 1: Introducing Multiplication	Unit 3: Wrapping Up Addition and Subtraction Within 1,000	Unit 4: Relating Multiplication to Division
4	Unit 2: Fraction Equivalence and Comparison	Unit 3: Extending Operations to Fractions	Unit 3: Extending Operations to Fractions (continued from Feb.)
5	Unit 2: Fractions as Quotients and Fraction Multiplication	Unit 3: Multiplying and Dividing Fractions	Unit 3: Multiplying and Dividing Fractions (continued from Feb.)

In February and March 2024, the Amplify team visited pilot schools again to observe lessons, provide support, and collect feedback from school leaders and teachers. Amplify continued to offer lesson planning meetings with teachers prior to onsite visits, which teachers found helpful in preparing for the next Amplify Desmos Math lesson.

Pilot Data from January-March 2024:

- 183 lessons were launched across our K-5 pilot schools from January to March 2024. Teachers had three Amplify Amplify Desmos Math units for their respective grade level and each unit consisted of three lessons. Each month, teachers supplemented the new Amplify Desmos Math unit lessons with lessons from their core math curriculum.

On February 29, 2024, Amplify was invited to participate in District 22's Family Math Night to kick-off "March Mathness." The purpose of our participation was to invite families to experience the kind of math learning their children are engaging in, and to encourage families to have math conversations around situations they encounter in their daily lives. We offered a K-5 session and a 6-8 session, both of which attracted more than a hundred families. The Amplify Desmos Math platform afforded families the opportunity to participate in real-time problem solving targeting a specific New York State standard. The specific activities were selected in collaboration with district leadership, and customized to reflect district-specific needs and interests. Response to this engaging experience was universally positive.

After state testing concludes in early May 2024, Amplify will continue the Amplify Desmos Math K-5 pilot with the seven participating schools in District 22. Amplify will send new unit and lesson materials from the curriculum for May and June. Schools are enthusiastic to resume the pilot after state testing. At the end of the current school year, Amplify will survey school leaders and teachers again to gather their overall feedback on the yearlong pilot and the curriculum. Amplify will share these survey results with the core curriculum team once the data is received at the end of the school year.

## **Survey results from fifth grade students at P.S. 203**

P.S. 203 Floyd Bennett School (22K203) is one of the seven District 22 schools participating in the current Amplify Desmos Math K-5 pilot. Two Grade 5 classrooms at this school are part of the pilot.

*The student demographics for 22K203 are as follows:*

- Asian: 7%
- Black: 76%
- Hispanic: 10%
- White: 4%
- English language learners: 9%
- Students with special needs: 24%

Amplify surveyed 5th grade students in these classes to better understand if students enjoyed the Amplify Desmos Math Grade 5 pilot lessons and found the content engaging, interesting, and collaborative. The results are below.

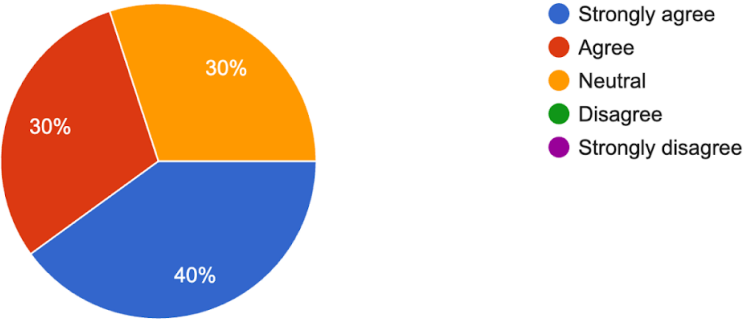
To what extent do you agree or disagree with this statement: I enjoyed and found value in what I learned in the Amplify Desmos Math lessons?

11 responses



I was excited about learning and engaged when Amplify Desmos Math lessons were taught during my math class.

10 responses



**What did you enjoy most about the Amplify Desmos Math lessons you did with Mr. Senatore in math class?**

**Please try to write 1-2 sentences to explain your answer and use a specific example if you can.**

9 responses

What I enjoyed the most about Amplify Lessons is that it helps me have a better understanding of the math.

I liked when we were randomizing the numbers and trying to make closest to 5. Also I overall enjoyed working with my partner Chaudhry.

I enjoy how it gave us a visual example of the fractions while we were doing some of the problems. I also like how it also explained in the end after we solved the problem.

The learning experience is amazing learned so much!

What I enjoyed most was the fractions and how I learned something new.

I liked the fraction lessons and being able to work through the lessons on the computer. When I needed help, the lessons were able to show how to help me.

I liked that we got to work through these lessons with a partner and talk about the math problems we had to solve.

Both classes consistently have 100% completion of exit tickets among students, some of which you can take a look at below.

**Exit Ticket** 2.12

There are 5 people equally sharing 3 liters of water. Write a division equation to represent how much water is available for each person to drink.

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$3 \div 5 = 3 \times \frac{1}{5} = \frac{3}{5}$

I got the answer by changing the division to multiplication and putting a 1 over the 5

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The answer is less than 1 because the first number (3) is less than the second number (5)

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**Exit Ticket** 2.09

Evaluate each expression.

**i** Show or explain your thinking.

1  $\frac{7}{3} \times 5$

$\frac{7}{3} \times \frac{5}{1} = \frac{35}{3} = 11\frac{2}{3}$

answer:  $11\frac{2}{3}$

2  $2 \times 3\frac{2}{3}$

↓

$\frac{2}{1} \times \frac{11}{3} = \frac{22}{3} = 7\frac{1}{3}$

answer:  $7\frac{1}{3}$

**Up Next...**

3 Determine the missing value in the equation.

$? \times 6 = 42$

A. 36      **B. 7**

C. 48      D. 252

**I can...**

Multiply a whole number by any fraction.

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