

Section a.

Brief Curriculum Overview & Background: Share a brief description of the curriculum, including its philosophy and origins. Include the strengths and philosophy of the Curriculum, how/why was the curriculum created, and collaborators/authors involved in the creation of the curriculum.

Curriculum overview and background

On behalf of the Amplify team, we thank you for considering us to be a part of this pivotal moment for mathematics teaching and learning in New York City Public Schools. We're confident that this program, along with comprehensive professional development and ongoing collaboration with your team and the district teams, will support the school- and district-level instructional shifts needed to implement your transformative vision.

Amplify Desmos Math New York represents the convergence of two groundbreaking research and development efforts in K–12 mathematics instruction. The acquisition of Desmos Classroom by Amplify Education in 2022 was driven by the recognition that both of our organizations were pursuing distinct yet reinforcing projects. The Desmos team was leveraging their unique and widely-adopted interactive learning platform both for free users and through a comprehensive curriculum. Amplify brought expertise in real-time teacher support, embedded assessment, and data visualization. As both curricula development efforts were based on Illustrative Mathematics'® IM K–12 Math™, we knew that merging the organizations would result in a program of unprecedented quality built on a strong pedagogical foundation.

The union of Amplify and Desmos Classroom brings together industry-leading math curriculum development and instructional technology expertise. The Amplify Desmos Math New York curriculum is nearing completion and the national version is already being implemented for middle school by San Diego Unified School District. Many districts have recently decided to adopt Amplify Desmos Math for 2024–25, including Lucia Mar USD, Eureka Union SD, Berkeley USD, Washington USD, Santa Barbara USD, Bend La Pine SD, North Clackamas SD, Redmond SD, Oregon City, Southwest Local Ohio, Strongsville City Schools, Lakota, Greenfield, Plymouth Canton, Naperville, Raytown, Edwardsville, IL, and Global Education Excellence network. The list grows daily as district leaders seek a curriculum that gradually guides teachers through the instructional shifts they desire.

Amplify is uniquely positioned to deliver a comprehensive and proven core curriculum to New York City Public Schools—one that will support your vision for transforming math teaching and learning for all New York City students.

About Amplify Desmos Math New York

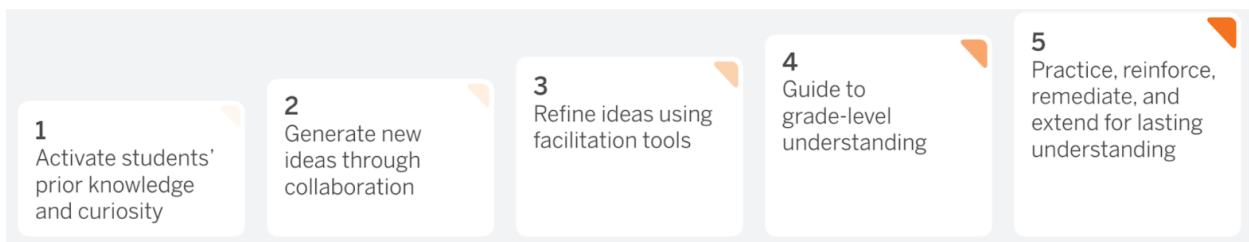
Students are so eagerly, collaboratively engaged in a math lesson that they wish it wouldn't end. A classroom is buzzing with the sounds of natural curiosity. This is what we regularly see with Amplify Desmos Math New York. This is math that motivates.

Amplify Desmos Math New York is a comprehensive core program based on Illustrative Mathematics'® IM K–12 Math™. Our new, curiosity-driven program builds lifelong math proficiency by helping teachers create an engaged, collaborative math community with students at its center. Student discourse is fueled by each other's ideas, developing student agency and a positive math identity.

Deep and lasting learning occurs when students are able to make connections to prior thinking and experiences. This is why we help teachers deliver math instruction that balances exploring and explaining and puts student thinking at the center of classroom instruction.

Amplify Desmos Math New York takes a structured approach to problem-based learning, providing teachers with clear step-by-step instructional moves to build systematically from students' prior knowledge to grade-level learning. The program thoughtfully combines conceptual understanding, procedural fluency, and application, motivating students with interesting problems they are eager to solve while supporting teachers in guiding all students to grade-level outcomes.

Lessons are designed around what we call the Proficiency Progression, a model that steps out problem-based learning by systematically building students' curiosity into lasting grade-level understandings for all students.



The curriculum centers on student ideas and poses tasks that invite a variety of approaches, promoting mathematical curiosity and student engagement.

The unique combination of features in Amplify Desmos Math New York includes:

- **An inclusive curriculum centered on rigorous instruction with a high-quality assessment suite that is aligned with New York State Next Generation Learning Standards.**
 - A rigorous **curriculum based on a wealth of research** around how students best develop numerical reasoning, procedural fluency skills, conceptual understanding, problem-solving strategies, and a positive math identity.
 - Engaging problem-based lessons with **low floors and high ceilings** that invite all students into the mathematics and elicit student thinking along the way.
 - **Print and digital flexibility** that enables all students to participate and connect, every day.
 - **An integrated, asset-based assessment and reporting system** that includes benchmark and progress monitoring assessments to provide teachers with targeted, actionable insights and instructional guidance.
 - A **variety of personalized learning resources** such as asset-based, adaptive, Boost Personalized Learning, beautifully designed interactive flash cards, and dynamic online games that support intervention and enrichment opportunities in and outside of the classroom.
- **Extensive teacher support to guide teachers as they facilitate delightful learning experiences with their students.**
 - **Embedded guidance** in the Teacher Edition and digital experience provides all necessary teacher moves for each activity in a Launch, Monitor, Connect format, enabling teachers to set students up for success with each task.
 - Teacher guidance invites a variety of approaches, enabling students to actively develop their own ideas (individually, in pairs, and in small groups) before **synthesizing learning as a class**.
 - **Digital tools** are provided for classroom use everyday, while student devices are recommended for an age-appropriate number of lessons (10% for K-2; 20% for 3-5).
 - A **teacher dashboard** provides powerful facilitation tools (pausing, snapshotting, and screen sharing) to support teachers in advancing the ideas of the lesson, comparing and contrasting different ways of thinking, and promoting a social and collaborative classroom.
 - We will customize our **professional learning plan** to meet the NYC Department of Education's specific needs.
- **Ample support for parents and caregivers.** Supplemental at-home activities and communications from teachers are accessible through the Amplify Caregiver Hubs.

We believe in supporting teachers and leaders in creating **socially responsive and sustaining learning environments**, which is why we approach our content development with an asset-focused mindset. Students of Amplify Desmos Math New York engage deeply with both historical and current events as contexts for learning relevant and powerful mathematics, and they learn to apply their understanding to solving the social, political, and economic issues of today and tomorrow.

Our commitment to **access and equity** underpins every development decision. All students can dive into problems on their own, and activities are designed to honor different approaches. Additional information is included in the section on our [Research Base](#).

Philosophy and origins

The developers at Amplify and Desmos Classroom joined together because they knew that every student is brilliant, yet not every student *feels* brilliant in math class. Both teams recognized the dearth of resources available to help teachers change that reality in their classrooms.

To ensure that students develop positive identities about themselves as mathematicians and thus achieve more in math, Amplify Desmos Math New York is built around four core tenets:

1. **Math can motivate students.** Amplify Desmos Math New York builds math proficiency for life by helping teachers create an engaged, collaborative math community with students at its center. The program thoughtfully combines conceptual understanding, procedural fluency, and application, motivating students with interesting problems they are eager to solve.
2. **A structured approach to problem-based learning best tends to all aspects of rigor.** The program uses a pedagogical approach grounded in problem-based learning with strong teacher supports that enable teachers to facilitate joyful student learning experiences. In the teacher guides and the digital platform, teachers receive clear step-by-step instructions on how to build systematically from students' prior knowledge to grade-level learning.
3. **Student thinking is valuable and can be made evident.** To guide the learning process, students are connected to each other's thinking and to an understanding that they can use math to make sense of the world. Students learn and engage with each other in every lesson. Whether using print, digital, or a mix of both, students are connected to each other's ideas and thinking, fueling classroom conversations and a shared understanding of math.
4. **Students can keep up while catching up with grade-level math.** To ensure all students access grade-level math, Amplify Desmos Math New York includes core instruction, a suite of assessments, and tailored practice resources that adjust to student learning. Multiple points of entry to lesson content and Responsive Feedback enable every student to be challenged, yet successful. Cohesive differentiation and intervention resources provide the necessary support to prevent students from falling behind or allow them to extend their thinking.

In addition to being based on Illustrative Mathematics'® IM K–12 Math™, Amplify Desmos Math New York is informed by Peg Smith and Mary K. Stein's *5 Practices for Orchestrating Productive Classroom Discourse*, and a wealth of research around how students best develop numerical reasoning and procedural fluency skills, problem-solving strategies, and a positive math identity. Additional information is included in the section on our [Research Base](#).

Curriculum strengths

Amplify Desmos Math New York lessons and the accompanying teacher tools are designed to help teachers develop the skills they need to build classrooms where students collaborate, explore, and discover.

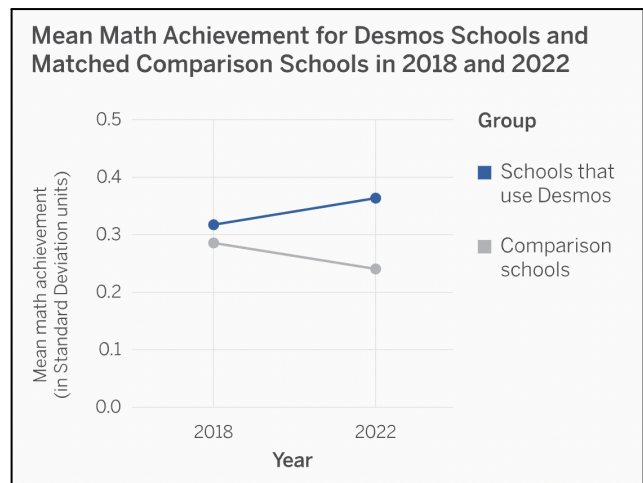
With Amplify Desmos Math New York:

- **Students** build deep conceptual understanding alongside procedural fluency, resulting in high levels of math achievement.
- **Students** apply their learning regularly to cognitively-demanding problems and situations.
- **Students** work in social and collaborative ways.
- **Teachers** deepen their understanding of the content and effective pedagogical approaches as they facilitate classroom discussions using the Teacher Edition.
- **Teachers** are supported by digital slides for every lesson and live classroom management tools to see student thinking, present student work, and facilitate classroom conversation.
- **Caregivers** can support their students at home by referencing embedded, stepped-out examples and videos.
- **Leaders** gain insight into how students are doing through detailed reports.

By connecting everyone in the learning community through common language and goals, students see themselves as **doers of math**. Students of Amplify Desmos Math New York will love math and learning math, all while meeting grade-level standards. They'll both feel seen *and* see themselves, fostering a belief that they belong and are capable in the math classroom.

Proven effective:

Amplify Desmos Math New York expands on the approach of the Desmos Math 6–A1 curriculum, which was recently proven to increase average math achievement in a study of more than 900 schools in nine states led by WestEd. More details available [here](#).



The Effect of Desmos Math Curriculum on Middle School Mathematics Achievement in Nine States. WestEd., (McKinney, D., Strother, S., Walters, K. & Schneider, S., 2023).

What’s included in this submission

Amplify Desmos Math New York is designed to leverage the best aspects of Illustrative Mathematics, while enhancing, augmenting, and replacing lessons, where necessary, to significantly improve teachability and effectiveness. This process, in contrast with verbatim repackaging of the material, necessitates a predictably longer program development timeline. As you will see below, we have prioritized the New York City Foundational Mathematics Standards and New York State standards-specific lessons in this process to afford a review opportunity that is substantial and reflective of New York City Public School priorities.

We’re submitting samples of teacher and student print and digital curriculum materials from Grades 1, 3, and 5. This includes one full set of print materials from Unit 1 in each grade to demonstrate the final format. The print materials include the Student Edition, the Teacher Edition, Unit Assessments, Mini Lessons, Centers, and Lesson Resources. The digital materials include teacher Presentation Screens, digital student activity screens, teacher planning support, and all print resources. In addition, for Units 2–7, print samplers include Student Edition and Teacher Edition lessons that address the complete New York City Foundational Mathematics Standards.

	Today	School Year 2025-2026
Print	<p><u>Grades 1, 3, 5: Unit 1</u> Student Edition and Teacher Edition All lessons complete in the final design.</p> <p>Unit- and Lesson-level Assessments, Centers, Lesson Resources All ancillary components include pre- and end-of-unit assessments, sub-unit quizzes, Show What You Know lesson checks, Center resources, and lesson teaching masters.</p> <p>Mini-Lessons Small-group differentiation activities to support each lesson in Unit 1.</p> <p><u>Grades 1, 3, 5: Units 2-7</u> Pre-publication lessons from the Student and Teacher Editions that address the NYC Foundational Standards</p>	<p><u>Grades K-5: Full curriculum, all units</u></p> <ul style="list-style-type: none"> ● Student Edition ● Teacher Edition ● Assessment Resources ● Centers Resources ● Intervention and Extension Resources ● Manipulative Kits (optional purchase)

	Today	School Year 2025-2026
Digital	<p>Grade K: Unit 2, Sub-unit 2 Grade 1: Unit 1, Sub-unit 2 Grade 2: Unit 1, Sub-unit 3 Grade 3: Unit 1, Sub-unit 3 Grade 4: Unit 1, Sub-unit 2 Grade 5: Unit 1, Sub-unit 3</p> <p>One sub-unit from each grade that includes:</p> <ul style="list-style-type: none"> • Lesson overview and planning support • Presentation Screens • Student Activity Screens (for digital recommended lessons) • Digital access to print resources (Student Edition, Teacher Edition, Assessments) 	<p><u>Grades K-5: Full curriculum, all units</u></p> <ul style="list-style-type: none"> • Lesson overview and planning support • Presentation Screens • Student Activity Screens (for digital recommended lessons) • Digital access to print resources (Student Edition, Teacher Edition, Assessments) • Teacher Reporting • Administrator Reporting • Boost Personalized Learning • Fluency Practice • Item Banks

For digital access and copies of the print lessons, visit <https://amplify.com/nycmathk5>.

Our team members, collaborators, and advisors

Jason Zimba, Chief Academic Officer, Math at Amplify

Jason Zimba is a proud product of our nation's public school system, a parent of two children in the New York City Public School system, and Chief Academic Officer of Math at Amplify. Jason founded Student Achievement Partners—a nonprofit organization dedicated to helping teachers and school leaders implement equitable, high-quality, college- and career-readiness standards—and has worked as a researcher, educator, and advocate for high-quality curriculum and instruction for all students. He was the lead writer of the Publishers' Criteria for Mathematics and the curriculum review rubrics that later became the foundation for the EdReports review rubrics.

A Rhodes scholarship recipient and former professor of physics and mathematics, Jason holds a bachelor's degree from Williams College with a double major in mathematics and astrophysics; a master's degree in mathematics from the University of Oxford; and a doctorate in mathematical physics from the University of California, Berkeley. He has worked as a researcher and educator, teaching mathematics and physics to university and high school students and incarcerated adults.

Dan Meyer, Director of Research at Amplify

Dan Meyer loves questions—the kind that rattle around in your brain at all hours, in the shower, etc. Math always had the most interesting questions for him as a kid, then math education in adulthood. He's chased those questions through several continents, with thousands of teachers in talks and workshops, in a doctoral program at Stanford, finally landing at Desmos in 2012.

Dan taught high school math to students who didn't like high school math. He has advocated for better math instruction on CNN, "Good Morning America," TED.com and "Everyday With Rachel Ray," and is the author of the *dy/dan* blog. He earned his doctorate from Stanford University in math education.

Fawn Nguyen, Speaker and Math Specialist at Amplify

Fawn Nguyen spent 30 years in the classroom, a career path she has loved enough to honestly say she'd do it all over again in her next life. She enjoys cooking, gardening, taking care of eight hens, and cleaning on a steady rotation.

Fawn started blogging in late 2011 about her lessons and how her students interacted with them. She is grateful for the opportunities to speak at math conferences and facilitate workshops across the country.

Paulo Tan, Lecturer at Johns Hopkins School of Education

Paulo Tan teaches special education courses and coaches teacher candidates in the Urban Teachers program in Dallas, Texas. Prior to joining Johns Hopkins University in 2020, he was an Assistant Professor at the University of Hawai'i at Mānoa and the University of Tulsa. He is passionate about supporting teachers in building inclusive learning environments and is an advocate for justice in and out of schools. Paulo's research focuses on teacher learning toward inclusive STEM education, and toward structures and

processes that facilitate such learning. He has published widely in peer-reviewed journals and is lead author of the book *Humanizing Disability in Mathematics Education: Forging New Paths*.

Phil Daro, Executive Committee Member, International Society for Design and Development in Education

Philip Daro, a lead writer of the Common Core State Standards for Mathematics, works to advance the design and use of leadership tools for improving mathematics instruction and assessment at every level of the educational system.

Philip has held leadership positions with the California Department of Education and served on numerous national committees addressing issues in mathematics assessment, standards, and instruction. He currently serves on the Executive Committee of the International Society for Design and Development in Education and on several boards. He previously served on the boards for Open Up Resources and the Noyce Foundation. He is a member of the NAEP Validity Studies Panel and sits on the advisory boards for the Algebra for All initiative, Illustrative Mathematics, and Making Mathematics.

Philip holds a bachelor's degree in English with a minor in mathematics from the University of California, Berkeley, as well as a Secondary Education Teacher Credential from the State University of New Jersey, Trenton. He was a Senior Fellow for Mathematics at America's Choice.

Other contributors include:

- Jack Dieckmann, Senior Advisor, Mathematics at English Learners Success Forum (ELSF)
- Brianne Durst, Curriculum Developer at Amplify, Former Curriculum Developer at Illustrative Mathematics
- Karen Everly, Vice President, Math Curriculum at Amplify
- Michael Fenton, Vice President, K-12 Math Curriculum at Amplify
- Kristin Gray, Executive Director, Math Suite at Amplify; Former Director at Illustrative Mathematics
- Marni Greenstein, Executive Director, PK-5 Math Curriculum at Amplify; Former Lead at Illustrative Mathematics
- HJ Habte, Director, K-5 Math Curriculum at Amplify
- Eli Luberoff, CEO of Desmos Studio PBC
- Jenna Sewell, Curriculum Developer at Amplify, Former Curriculum Developer at Illustrative Mathematics
- Suzanne von Oy, Director of Interaction Development at Amplify

Research Base

Amplify Desmos Math New York is designed to foster a student-centered environment that promotes student engagement and results in increased learning opportunities. Traditionally, mathematics classrooms have been teacher-centered. In these kinds of classrooms, the work tends to be passive resulting in students who are disengaged from the classroom activities and learning in general.¹ Many of these students are not only disengaged, but tend to believe that math is not for them.²

To reverse these kinds of outcomes in the classroom, it's important to create a student-centered classroom, where students are engaged in learning and can picture themselves as capable of doing math. In 2014, the National Council of Teachers of Mathematics set forth guiding principles for teaching mathematics based on their research. These practices³ include Teaching and Learning, Access and Equity, Curriculum, Tools and Technology, and Assessment. Below we describe each of these principles and how they have guided the design of Amplify Desmos Math New York.

- **Teaching and Learning**

An excellent mathematics program requires effective teaching that engages students in meaningful learning through individual and collaborative experiences that promote their ability to make sense of mathematical ideas and reason mathematically.

We embedded the structures laid out by Peg Smith and Mary K. Stein's *5 Practices for Orchestrating Productive Classroom Discourse* into the Amplify Desmos platform and lesson structures to ensure that teachers could effectively engage students in meaningful and productive mathematics conversation. Additionally, Amplify Desmos Math New York relies on collaboration and lots of hands-on, curiosity-driven learning to help students dive into problems on their own and develop skills in expressing their perspectives. Lessons often include collaborative use of manipulatives, movement around the classroom, or other social features to support students in seeing each other's brilliant ideas.

Additional information is included in the section on [developmentally appropriate pedagogical approaches to instruction](#).

¹ Fredricks, J.A., Parr, A., Amemiya, J. L., & Wang, M.-T. (2019). What matters for urban adolescents' engagement and disengagement in school: a mixed methods study. *Journal of Adolescence Research*, 34, 491–527.; Juvenon, J. (2007). Reforming middle schools: focus on continuity, social connectedness and engagement. *Educational Psychologist*, 42(4), 197–220.; Roeser, R.W., Peck, S. C., & Nasir, N. (2006). Identity and self processes in school learning, achievement and well-being. In P. Alexander & P.H. Winne (Eds), *Handbook of educational psychology*. 2nd edn. (pp. 391–424). Mahwah, NJ: Lawrence Erlbaum.

² Binning, K.R., Wang, M.T., & Amemiya, J.L. (2019). Persistence mindset among adolescents: who benefits from the message that academic struggles are normal and temporary? *Journal of Youth and Adolescence*, 48, 269–286.; Blackwell, L.S., Trzesniewski, K.H., & Dweck, C.S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: a longitudinal study and an intervention. *Child Development*, 78, 246–263.

³ NCTM (2014). Principles to Actions, Executive Summary. Retrieved from https://www.nctm.org/uploadedFiles/Standards_and_Positions/PtAExecutiveSummary.pdf

👥 Pairs | ⌚ 15 min

Activity 2 *More and Fewer With 5-Frames and Fingers*

Purpose: Students apply their understanding of the $5 + n$ structure as they use their fingers to show groups that are more than, fewer than, and the same as groups of dots arranged on 5-frames.

Presentation
Screens 5-6



Materials

Lesson Resources:

- Display the *Number Reference Chart* PDF from prior lessons during the Monitor (optional).
- Ensure that each pair has one set of the Activity 1 PDF pre-cut cards (from Activity 1).

1 Launch



5 Display Card H.

Ask, “How are these groups different from the groups in the last activity?”

Say:

- “You will use your fingers to show the *same* number as, *more* than, and *fewer* than a group of dots.”
- “Use your fingers to show how many dots there are.”
- “There are 8 dots on the 5-frame, and you held up 8 fingers. You are holding up the *same* number of fingers as there are dots on the card.”
- “Now, use your fingers to show *more* than the group of dots on the card.”
- “Use your fingers to show *fewer* than the group of dots on the card.”
- “Take turns flipping over a card. Then both partners will show the *same* number of fingers. Next, if you flipped over the card, you will show *more* on your fingers. If you did not flip over the card, you will show *fewer* on your fingers.”

In this kindergarten lesson, students work with partners to communicate concepts of less and more using their fingers to represent quantities.

• Access and Equity

An excellent mathematics program requires that all students have access to a high-quality mathematics curriculum, effective teaching and learning, high expectations, and the support and resources needed to maximize their learning potential. This commitment reflects a broader push within the educational community to foster a culture of equity, ensuring that every student has the opportunity to thrive as a learner and practitioner of mathematics.⁴

The differentiation of Amplify Desmos Math New York extends beyond academic differences to encompass variations in student motivation, interests, and identity. Understanding and addressing these aspects are essential for creating inclusive learning environments where all students feel

⁴ National Council of Teachers of Mathematics. (2017). Positioning NCTM for a second century. Retrieved from <https://www.nctm.org/secondcentury/>

valued and empowered to succeed.⁵ We incorporated Universal Design for Learning guidelines (Engagement, Representation, Action & Expression) into each lesson and developed a platform that is intuitive and easy-to-use for all learners. To support Multilingual Learners, Amplify Desmos Math New York incorporates research-based Mathematical Language Routines (MLRs) by providing sentence frames where appropriate, both in the teacher language provided for each task and in the differentiation support section found throughout the program.

Additional information is included in the section on [supports for diverse learners](#).

- **Curriculum**

An excellent mathematics program includes a curriculum that develops important mathematics along coherent learning progressions and develops connections among areas of mathematical study and between mathematics and the real world.

The Amplify Desmos Math New York curriculum is based on the same scope and sequence as Illustrative Mathematics'® IM K–12 Math™ which is highly rated for its focus, coherence, and rigor (specific IM EdReports ratings and details can be found [here](#)). Materials in Amplify Desmos Math New York assess grade-level content and give all students extensive work with grade-level problems to meet the full intent of grade-level standards. Assessments are aligned to grade-level standards, including all quizzes and end assessments. Lessons give students extensive work with grade-level problems and additionally include practice problems that serve to reinforce understanding of grade-level concepts. Regarding coherence, the materials address the major clusters of the grade, have supporting content connected to major work, make connections between clusters and domains, and have content from prior and future grades connected to grade-level work.

Each course additionally addresses each aspect of rigor in mathematics. Lessons develop students' conceptual understanding by inviting them into familiar or accessible contexts and asking them for their own ideas before presenting more formal mathematics. Several structures in the curriculum support procedural fluency: repeated challenges, where students engage in a series of challenges on the same topic; challenge creators, where students challenge themselves and their classmates to a question they create; and paper practice days that use social structures to reinforce skills before assessments. Students also have opportunities to apply what they have learned to new

⁵ Amélie Roy, Frédéric Guay & Pierre Valois (2013). Teaching to address diverse learning needs: development and validation of a Differentiated Instruction Scale. *International Journal of Inclusive Education*, 17:11, 1186-1204, DOI: 10.1080/13603116.2012.743604; Tomlinson, C. A. (2014). *The Differentiated Classroom: Responding to the Needs of All Learners* (2nd Ed.). Association for Supervision and Curriculum Development.; Katharina-Theresa Lindner & Susanne Schwab (2020). Differentiation and individualisation in inclusive education: a systematic review and narrative synthesis. *International Journal of Inclusive Education*, DOI: 10.1080/13603116.2020.1813450.

mathematical or real-world contexts. Concepts are often introduced in context and most units end by inviting students to apply their learning.

- **Tools and Technology**

An excellent mathematics program integrates the use of mathematical tools and technology as essential resources to help students learn and make sense of mathematical ideas, reason mathematically, and communicate their mathematical thinking.

Multiple studies on the use of feedback in education has shown that rich feedback provided during the instructional cycle is the most effective in teaching students new skills. This type of feedback not only shows whether a student's answer is right or wrong, but also helps students understand the specific mistakes they made, see the math in those mistakes, realize why they made those mistakes and know what they can do to avoid making the same mistakes in the future.⁶

Digital lessons in Amplify Desmos Math New York incorporate an interactive **Responsive Feedback** feature that shows students the meaning of their own thinking, providing students with the kind of high-information feedback proven to help students most. Lessons allow students to input different variables in a problem so that they can see how correct and incorrect answers impact a solution. The playful nature of the lessons allow students to explore their mathematical thinking without embarrassment and discover why certain answers are incorrect or correct.

For example, in the Grade 3 [Puppy Pile lesson](#), students extend their understanding of scaled picture graphs to scaled bar graphs. As students represent data on scaled bar graphs and compare the graphs, they consider how the same data can look different when represented on graphs with different scales. This mathematical understanding is strengthened as individual items build into the accurate bar graph for a student to compare against their response. Students are able to adjust the scale of the graphs and visually see the impact of the different scales.

The student digital platform is highly interactive and allows students to respond in a variety of ways. Students show their understanding through digital interactions, discussion, open ended text responses, sketches, and digital manipulatives. When appropriate, teachers can allow students to see others' responses to spark discussion. Digital tools are provided for classroom use everyday, while student devices are recommended for an age-appropriate number of lessons (10% for K-2; 20% for 3-5)

⁶ Wisniewski, B., Zierer, K. and Hattie J. (2020). The Power of Feedback Revisited: A Meta-Analysis of Educational Feedback Research. Retrieved from <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2019.03087/full#B18>.

Choose a scale for your graph.

2 3 4

Drag the points on the graph to represent the number of each animal in your collection.

Animal	Number of each animal
dog	3
fox	4
raccoon	7



The Puppy Pile lesson allows students to play with bar graphs to see how different scales and quantities of animals impact the data representation.

Synthesis 10 of 13

Mel determined that tube lengths of 2 inches, 3 inches, 4 inches, and 6 inches connected to a platform with a height of 24 inches.

Did Mel find all the possible tube lengths that can connect to this platform? How do you know?

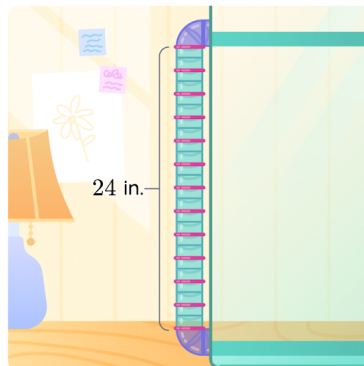
Aa

1/23

Share with class

Select to view a tube length:

2 in. 3 in. 4 in. 6 in.



Students can show their thinking in open ended text responses like the one shown in this example.

- **Assessment**

An excellent mathematics program ensures that assessment is an integral part of instruction, provides evidence of proficiency with important mathematics content and practices, includes a variety of strategies and data sources, and informs feedback to students, instructional decisions, and program improvement.

Research shows that the most effective forms of assessment support student learning. These assessments are integrated into the learning experience, provide immediate knowledge of student

performance, and give students prompt feedback about their performance.⁷ Amplify Desmos Math New York provides many ways for educators to understand what their students know and provide the support needed for students to progress in the math learning journeys.

Benchmark and progress monitoring assessments in the program are powered by integrated mCLASS Assessments. These assessments measure students' knowledge and provide teachers with targeted, actionable insights based on assessment results. mCLASS Assessments provide instructional recommendations that are linked to core instruction and supplemental practice and intervention resources, ensuring that each assessment contributes to improving students' mathematical understanding. This connection between assessment and instruction results in an impactful assessment system that supports Multi-tiered Systems of Support (MTSS) in the classroom and ultimately helps students learn.

Amplify Desmos Math New York also includes unit- and lesson-level assessments and additional knowledge checks that keep teachers apprised of what their students know, available in both print and digital formats. When administered through the Amplify Desmos Math New York digital platform, educators are able to see a student's approach to solving math problems in real time, giving educators an opportunity to provide immediate feedback that students can use as they learn new skills. Built-in teacher supports help teachers use students' partial or unfinished learning to have productive conversations in the classroom, spurring occasion for group learning, which studies show optimize math learning in the classroom.⁷

⁷ National Academies of Sciences, Engineering, and Medicine. 1993. *Measuring What Counts: A Conceptual Guide for Mathematics Assessment*. Washington, DC: The National Academies Press.
<https://doi.org/10.17226/2235>. Accessed at <https://nap.nationalacademies.org/read/2235/chapter/6#82>

Developmentally Appropriate Pedagogical Approaches to Math Instruction

As children age, they learn differently. Students in the elementary grades are entering school for the first time—they must learn how school works while also acquiring fundamental math skills. We've taken these developmental stages into consideration when developing the different pedagogical approaches students will encounter in Amplify Desmos Math New York.

Unit Stories in K–5 Help Students See Themselves in Math

Amplify Desmos Math New York lessons are designed to promote student engagement and inquiry by inviting students to build upon their prior knowledge and lived experiences while learning and formalizing new math concepts. The program is intentionally designed to put student ideas at the center by inviting a variety of ideas and approaches.

Every unit in grades K–5 contains a Unit Story. These Unit Stories are brief fiction stories read aloud by the teacher at the beginning of each unit that connect to the math of the unit and introduce characters that students will get to know as they engage in the unit. Teachers read the story aloud from their Teacher Edition while projecting illustrations for students from the story, found in the Teacher Presentation Screens for the story.

In just a few minutes, students get to know the characters, setting, and plot of the story, all of which they will encounter again across the unit. Across the unit, the Unit Story context and characters are used at appropriate points to inspire and engage students in the math as well as in reflections about their math identity and community.

Research has proven that children's literature in math class helps students to mathematize their world.⁸ Reading with a math lens provides students with the opportunity to ask questions about and make connections between math and their lives. This approach:

- Develops students' math identities
- Allows students to encounter a rich representation of cultures and identities
- Encourages students to see math in their world
- Provides natural avenues for students to share their thinking
- Inspires students to pursue math ideas outside of math class

Amplify Desmos Math New York Unit Stories provide authentic contexts for the math of the unit that capture student interest, increase engagement, provide entry points for students, and provide intrinsic motivation for students to want to learn the math.

⁸ Alison Hintz and Antony T. Smith. 2022. *Mathematizing Children's Literature: Sparking Connections. Joy and Wonder Through Read-Alouds and Discussion.*

Sample Unit Stories



Kindergarten, Unit 2: In *What's in a Restaurant?*, characters visit different restaurants in their town with their families. As they dine out and spend time with their loved ones, they learn more about restaurants and all the people who work together to make an enjoyable experience.



Grade 2, Unit 1: In *A New Class Pet*, Mr. Roy's class is getting a class pet. He has asked the class to decide among themselves which animal they should get. The students have narrowed their choices to two candidates: a goldfish and a guinea pig. When a vote is taken, they find someone has written "millipede" on the ballot. By the end of the story, Benita convinces her classmates that a millipede would be the best class pet.



Grade 5, Unit 1: In *Joyful Green*, Trashville's excess garbage is being packed and shipped away, ultimately finding a home in Joyful Green, where the containers of trash are sorted and reconfigured to serve a new purpose.

Other Developmentally Appropriate Approaches

Rich with visually appealing graphics, each 60-minute daily lesson includes instructional materials built around consistent features and routines. Lesson routines promote developmentally appropriate skills and develop class community and purposeful language development. For example:

- Lessons have a specific language goal to guide teachers to understand how students can show understanding through speaking, listening, and writing about math.
- Lessons incorporate opportunities for students to develop and use content-specific vocabulary as they grapple with new math ideas.
- Math Identity and Community activities support the development of social and emotional skills.
- Show What You Know problems encourage students to reflect upon the day's learning.
- Teachers can incorporate check in screens and "get to know you" activities into any lesson through the digital platform.
- Many lessons incorporate manipulatives to help students explore these concepts and represent their thinking.
- Activities make use of different grouping recommendations to create collaborative classrooms where students are connected to each other's thinking.
- Students will have multiple opportunities for fluency practice, including independent practice to support the day's lessons, practice problem item analysis, and digital Fluency Practice activities that allows students to practice basic operations and adapts to student performance.
- Technology use is strategically deployed where it offers the most power for learning, with less overall prevalence than in the middle grades. In K–2, student devices are recommended for 10% of lessons, while in 3–5, devices are recommended for 20% of lessons.

Examples from the program

Challenge #1
Choose the block that makes 10 with the block shown.

Grade 2

In this activity, students arrange number pairs into a pattern to notice that recognizing patterns can be useful when finding all the ways to make 10.

Grade 4

Students use the Notice and Wonder routine to share what they notice and wonder about platform heights and tube lengths in hamster homes. They then choose a tube length to connect to platform heights for their hamster home. They identify possible heights using what they know about multiples.

Target Volume	My dimensions	My partner's dimensions	Score

Grade 5

Students are introduced to the Center Can You Build It?, Stage 2, in which they compete to build as many different rectangular prisms as possible with a given volume. This prepares students to recognize the layered structure in images of prisms in the next lesson.

Supports for Diverse Learners

Amplify Desmos Math New York is an engaging curriculum that promotes equity, honors students' culture and experiences, and offers access and representation. We used Universal Design for Learning principles to design lessons that respect the different approaches students use to dive into problems and to ensure that the platform is intuitive and easy to use for all learners. The problem-based lessons and teacher facilitation encourage teachers to allow diversity of thought and to invite students to share their perspectives in making sense of contexts.

The screenshot shows a lesson page for 'Unit 2 Lesson 7'. The title is 'Seats at the Table' with the instruction 'Let's figure out how many objects are in the pictures.' An illustration of a girl holding a card with three forks and the number '3' is shown. A callout box asks, 'We are a math community. How do you tell someone that you disagree with their math solution or answer?' Below this is a 'Warm-Up' section with the prompt 'What do you notice? What do you wonder?' and an image of various tableware items: a knife, a fork, a spoon, three cups, and two plates.

We are a math community.
How do you tell someone that you disagree with their math solution or answer?

Students can discuss questions that support building a strong math community and build empathy and trust.

Amplify Desmos Math New York reflects the racial, cultural, and linguistic diversity of students and teachers in multiple ways. The curriculum invites students to engage with a broad spectrum of the human experience through images, names, scenarios, and text. Fictional students in the curriculum reflect the diversity of the students using the materials. Additionally, there are opportunities throughout the curriculum for students to use mathematics in pursuit of goals of fairness that matter to school age children.



Unit stories include colorful and engaging illustrations to accompany the story.

Throughout the program, teachers will find specific suggestions to support students with disabilities and multilingual learners. Additionally, embedded instructional supports provide practical guidance for scaffolding or extending learning for all students, using an asset-based approach.

- **Differentiation:** Each lesson includes differentiation recommendations to support Tier 1 and Tier 2 learnings with Support (Intervention), Strengthen (Practice), and Stretch (Extension), such as:
 - Mini-Lessons: 15-minute small group lessons targeted to a specific concept or skill.
 - Item Banks: Space for teachers to create practice and assessments using filters and searches for standards, summative-style items and more.
 - Personalized Practice: Engaging, independent digital practice that provides access to grade-level math through Responsive Feedback that adjusts to student work with item-level adaptivity to support their learning. Designed to be used alongside core instruction.
 - Fluency Practice: Adaptive, personalized practice with key math fluencies, including fact families, mental calculation, and number sense of whole numbers and fractions.
 - Centers: Lesson-embedded routines and practice for students that are vertically aligned across grade levels.
 - Lesson Practice: Additional practice problems to balance the instructional approach for students if needed.
 - Lesson Summary: Support for students and caregivers that provide efficient explanation of the learning goal with clear examples.

- **Accessibility:** Activities promote the key areas of cognitive functioning, including memory and attention, conceptual processing, visual-spatial processing, executive functioning, fine motor skills, and affective functioning.

- **Multilingual/English Learners:** Working in close collaboration with the [English Learner Success Forum](#), the Amplify Desmos Math team has created an integrated, comprehensive strategy for support for both multilingual learners and all learners in their development of mathematical language. The Amplify Desmos Math New York curriculum incorporates **Mathematical Language Routines (MLRs)** to help teachers foster academic discussion. These routines are designed to support Emerging, Expanding and Bridging Multilingual Learners. This was achieved by infusing the instruction with research-based MLRs and by providing sentence frames where appropriate, both in the teacher language provided for each activity as well as through built-in differentiation.

Specific student supports for multilingual learners (MLLs) can be found in the teacher guidance on digital screens and in the print Teacher Edition. These supports can range from sentence frames to suggestions for organizers and media that will support multilingual learners to access the curriculum. The lessons in the Amplify Desmos Math New York curriculum additionally utilize technology to present visually engaging contexts intended to support students with a wide range of reading levels. The digital lessons make animations, images, and interactions more accessible to students learning English.

Each lesson has a specific language goal to guide teachers to understand how students can show understanding through speaking, listening, and writing about math. Additionally, lessons incorporate opportunities for students to develop and use content-specific vocabulary to integrate new math ideas.

In the 2025–2026 school year, we will release the Spanish language version of Amplify Desmos Math New York for grades K–5. This version will include Spanish language Student Editions, digital lesson content, practice and assessments.

- **Mini-Lessons:** These 15-minute, teacher-led Mini-Lessons are aligned to the most critical topics throughout a unit to provide targeted intervention to small groups of students who need additional support or to re-engage students with content that they may need more time on. Mini-Lessons are the perfect complement to our problem-based approach because they provide more explicit instruction opportunities and leverage a consistent instructional routine (Modeled Review, Guided Practice, Check for Understanding).

Materials and supports included in the program

Every lesson in Amplify Desmos Math New York can be taught with students using print while the teacher projects Presentation Screens. Select lessons have been enhanced digitally and are recommended for student devices. Curriculum experts selected an age-appropriate number of lessons where the math content and learning was best done digitally. These lessons feature collaboration tools, interactive visuals, and Responsive Feedback and have additional guidance to support students on devices and those using pages from the Student Edition.

Every lesson supports learning with:

- Student Edition pages
- Presentation Screens
- Hands-on manipulatives (when applicable)
- Teacher moves
- Differentiation

Lessons where student devices are recommended also feature:

- Activity Screens for student devices
- Closely aligned Student Edition pages for offline note-taking or for students who may need to use print

Here is a list of sample lessons from each grade where student devices are recommended:

- [Grade K, Unit 2, Lesson 10, “Forest Friends”](#)
- [Grade 1, Unit 1, Lesson 12, “Leaping Lily Pads”](#)
- [Grade 2, Unit 1, Lesson 3, “Ways to Make 10”](#)
- [Grade 3, Unit 1, Lesson 15, “Puppy Pile”](#)
- [Grade 4, Unit 1, Lesson 9, “Hamster Homes”](#)
- [Grade 4, Unit 1, Lesson 12, “A Number Game”](#)
- [Grade 5, Unit 1, Lesson 10, “Figures Made of Prisms”](#)
- [Grade 5, Unit 1, Lesson 13, “Express Yourself”](#)

Districts that purchase Amplify Desmos Math New York will receive the following materials:

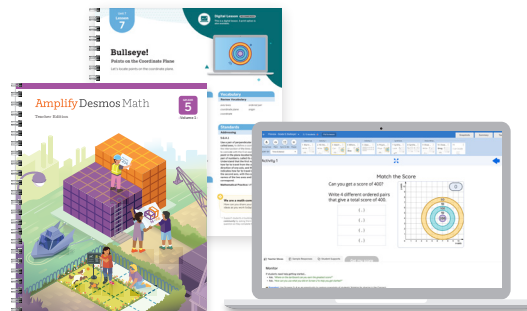
For students



- Student Edition (two-volume)
- Digital access to learning and practice resource
- Interactive Student Activity Screens
- Responsive Feedback
- Collaboration tools
- Personalized practice

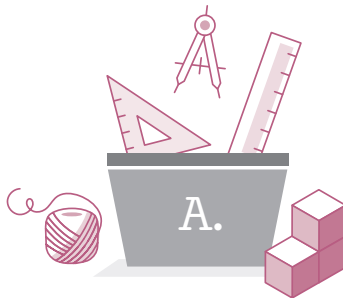
Note: Student materials available in Spanish.

For teachers



- Teacher Edition (two-volume)
- Digital access to planning and instruction resources
- Presentation Screens
- Facilitation and progress monitoring tools
- Assessment and reporting suite, including growth assessments

Optional: Manipulative Kits



Assessment Resources, Center Resources, Intervention and Extension Resources



In the 2025–2026 school year, we will release the **Spanish** language version of Amplify Desmos Math New York for grades K–5. This version will include Spanish language Student Editions, digital lesson content, practice and assessments.

Teacher facilitation tools and instructional support

Amplify Desmos Math New York contains comprehensive teacher guidance and implementation supports, both digitally and in print, that enable teachers to facilitate joyful, student-centered learning experiences for students.

At the beginning of the school year, teachers are supported in setting up a productive math learning community. Instructional routines and math language routines are extensively included in the first lessons of each school year, along with additional support and scaffolding for introducing and engaging in the routines. Each instructional routine included in an Amplify Desmos Math New York lesson creates opportunities for conversations and supports meaningful discussion. Implementing these routines can be a practical tool for establishing a classroom learning community that values student thinking.

1 **Display** the cover of the Unit Story, *Ying's New Town*.

Say, “You will use a routine called **Think-Pair-Share**. First, I will ask you a question and you will have time to think about your response. Next, you will pair up to share your thinking. Then some students will share their thinking with the whole class.”

Use the Think-Pair-Share routine. Activate students’ background and prior experiences by asking, “We are about to read a story called *Ying's New Town*. Have you ever explored a new town before? What new things did you see and do?”

The first time the Think-Pair-Share routine is used in first grade, additional guidance is given in how to facilitate the routine.

15 **Say**, “We are going to use a routine called the **Gallery Tour**. A gallery is a room that has different work displayed. In this routine, you will take a tour around our classroom to look at your classmates’ work and have a discussion with your group.”

Use the Gallery Tour routine. Have students use sticky notes to leave comments or questions on other groups’ posters.

Invite students to share new ideas or questions they have based on other groups’ work.

Have students revise their posters based on the feedback they received.

Invite students to share their reflections. Provide the *Investigation Organizer* PDF to those students who wish to write or draw their reflections.

The first time the Gallery Tour routine is used in fourth grade, additional guidance is given in how to facilitate the routine.

Every time an instructional routine is used, teachers have access with one click at point-of-use in the digital platform to helpful and useful guidance in facilitating the routine. Teachers are encouraged to use this guidance as they establish and maintain their productive classroom communities.

AmplifyDesmos Math

Instructional and Math Language Routines

Decide and Defend

This routine is intended to support students in strengthening their ability to make arguments and to critique the reasoning of others (MP3). In this routine, students make sense of someone else's line of mathematical reasoning, decide if they agree with that reasoning, and then draft an argument defending their decision. This includes situations where students are making sense of two students' different ideas about a situation (Settle a Dispute). This routine is adapted from *Fostering Math Practices*.

Facilitation

1. Give students one minute to make sense of the problem or of each student's claim.

Consider asking questions like:

- *What question are we/they trying to answer?*
- *What did they do? What did they find?*

2. Invite students to decide what they think and why, then to compare their solution and reasoning with a partner.
3. Display the distribution of responses using the dashboard's teacher view or poll the class, calling attention to any conflict or consensus you see.
4. Discuss each possible response. Invite students to share their reasoning.

Notes

- It may be helpful to invite students to think about who they are trying to convince with their argument (themselves, someone who agrees with them already, a skeptic, etc.)
- It may be helpful to reflect on what kind of evidence or language students found most convincing in their classmate's reasoning.

The Instructional Routine facilitation guidance for Decide and Defend

Math Community prompts are included at the beginning of each lesson. At the beginning of the year, these prompts focus on teachers and students working together to create math classrooms that are a place for coming together to think and talk about math in flexible, creative, and interesting ways. Teachers are encouraged to spend time deliberately setting up the conditions for successful classroom communities and reflecting on what is going well and what the class can continue to work on

Embedded Suggestions

Here are some examples of the **Math Identity and Community** supports embedded in each lesson:



I can be all of me in math class.

You will work with partners every day in math class. What do you want your partners to know about you?



We are a math community.

What does good listening look like and sound like in a math community?



I am a doer of math.

What math strengths did you use today?

The Teacher Edition contains a Unit Overview for each unit that outlines connections between prior, current, and future learning and outlines conceptual understanding, fluency, and application in the unit. The Unit at a Glance pages show teachers an informative outline of the unit, including pacing, learning goals, standards, and more.

Professional Learning

Here is an opportunity to deepen your understanding of the math in this unit and how to teach it.

Spotlight on Connecting Representations

Lesson 12, Activity 1

1. Your group will be assigned 1 strategy. Use the assigned strategy to determine the volume of the figure in cubic feet.

2. Write 1 expression or equation to represent how you determined the volume of the climbing wall.

3. Discuss in groups. Join a new group so that each member worked with a different strategy in Problem 1.

• How is your work in Problem 1 similar? Different?

• How are your expressions or equations in Problem 2 similar? Different?

Lesson 12: What's the Edge Length? 83

Try This
Put on your student hat and complete Problems 1–3.

Questions for reflection

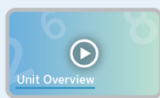
- Some students may benefit from referencing prior work.
 - How could they leverage their work from Lesson 10?
 - How could they leverage their work from Lesson 12?
- Some students may become overwhelmed by all the length measurements and different decompositions.
 - How could you support these students in organizing their work to help them write their expressions?

Other lessons that attend to connecting representations:

- Lesson 5: Students consider the volumes of rectangular prisms in diagrams in which not all unit cubes are shown, as layers of unit cubes, and relative to each face being the base or representing one layer.
- Lesson 11: Students explore different decompositions of figures composed of rectangular prisms in which unit cubes are shown.

Unit Overview Video

Unit Overview videos provide you with an overview of the content and key features of the unit. The videos tell the story of the unit and how the sub-units fit together to create an aligned experience for students. When possible, key interactions, models, and strategies used within the unit are showcased.



Connections to Future Learning

Here is how the content in this unit connects to where your students are headed in their math journeys.

Real-World Problems Involving Volume With Fractional Side Lengths

In this unit, students use the volume formulas to determine volumes of rectangular prisms with whole-number side lengths. In Grade 6, students will apply the volume formulas to determine the volumes of rectangular prisms with fractional edge lengths by packing them with unit cubes of the appropriate unit-fraction edge lengths. They see the volume is the same as would be found by multiplying the edge lengths of the prism.

Standard Addressed: NY.6.G.2

Example:

The volume of the 3 stacked storage boxes is $1\frac{1}{2}$ cubic feet. What is the height, in feet, of the storage box?



Example:

Leo's recipe for banana bread won't fit in his favorite pan. The batter fills the 8.5 inch by 11 inch by 1.75 inch pan to the very top, but when it bakes it spills over the side. He has another pan that is 9 inches by 9 inches by 3 inches, and from past experience he thinks he needs about an inch between the top of the batter and the rim of the pan. Should he use this pan?

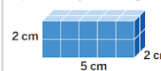
Real-World Problems Involving Surface Area

In this unit, students recognize that figures can be composed of rectangular prisms. They determined volumes of figures composed of rectangular prisms. In Grade 6, students will represent three-dimensional figures using nets made up of rectangles and triangles and use the nets to determine the surface areas of these figures.

Standard Addressed: NY.6.G.4

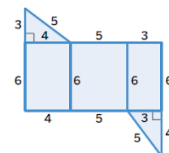
Example:

A rectangular prism has dimensions of 2 centimeters by 2 centimeters by 5 centimeters. What is its surface area? Explain or show your reasoning.



Example:

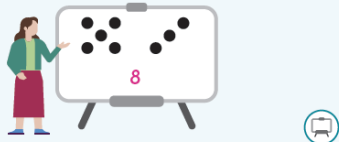
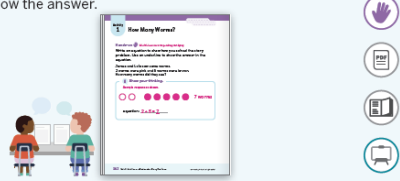



Here is a net of a polyhedron. What is the surface area of the polyhedron? Explain your reasoning.



Professional Learning support for unit planning (in the Teacher Edition and online) provides opportunities for professional learning communities.

At the lesson level, the Teacher Edition details the lesson’s learning goals and coherence, rigor and balance, and standards covered in the lesson. Teachers can see an overview of the lesson on the Lesson at a Glance page, including a prep checklist with all materials and modifications to pacing if they are short on time.

Lesson at a Glance 🕒 60 min

<p>Warm-up Fluency 👥 Whole Class 🕒 10 min</p> <p>Students use the <i>How Many Do You See?</i> routine, in which they develop fluency by looking at and describing the ways they see different arrangements of dots. (MP7)</p> <div style="text-align: center;">  </div>	<p>Activity 1 👥 Pairs 🕒 15 min</p> <p>Students describe a <i>Put Together/Take Apart, Total Unknown</i> story problem without numbers to discuss the structure of the problem and predict questions that could be asked about the information. Then they solve the problem and write an equation to show how they solved it, using an underline to show the answer.</p> <div style="text-align: center;">  </div>
<p>Activity 2 👥 Pairs 🕒 15 min</p> <p>Students analyze two different addition equations with the addends in different orders and justify whether they both represent a <i>Put Together/Take Apart, Total Unknown</i> story problem. They recognize that two groups of objects will have the same total no matter what order they are added in. Additional Prep: Assemble towers of connecting cubes.</p> <div style="text-align: center;">  </div>	<p>Summary 👥 Whole Class 🕒 5 min</p> <p>Students review and reflect on how two addition equations can represent <i>Put Together/Take Apart, Total Unknown</i> story problems.</p> <div style="text-align: center;">  </div>
<p>Center Choice Time 👥 Small Groups 🕒 15 min</p> <p>Students have an opportunity to revisit these Centers to build fluency with addition and subtraction within 10 and to practice sorting and solving story problems.</p> <ul style="list-style-type: none"> • Check It Off, Stage 1 • Counting Collections, Stage 2 • Math Stories, Stage 4 <div style="text-align: center;">  </div> <p style="font-size: 0.8em; margin-top: 10px;">141B Unit 2 Addition and Subtraction Story Problems</p>	<p>Prep Checklist 📄 All resources are available online or in print.</p> <p>This lesson includes:</p> <ul style="list-style-type: none"> <li style="width: 50%;">📄 Exit Ticket PDF (optional) <li style="width: 50%;">🗣️ Teacher slides* <small>* The Warm-up and Summary are intended to be projected.</small> <p>Additional required materials:</p> <ul style="list-style-type: none"> Activity 1 <ul style="list-style-type: none"> <input type="checkbox"/> Activity 1 PDF, <i>Story About Worms Without Numbers</i> (for display) (Lesson Resources) <input type="checkbox"/> connecting cubes, two-color counters (Manipulative Kit) Activity 2 <ul style="list-style-type: none"> <input type="checkbox"/> connecting cubes, two-color counters (Manipulative Kit)

The Lesson at a Glance page provides teachers with an overview of the lesson, including a prep checklist with all materials and modifications to pacing.

The program continues to provide teachers with embedded supports that help them create a supportive classroom where students feel safe grappling with mathematical ideas and relationships. For example:

- Each activity in the program is organized into a Launch, Monitor, Connect format, enabling teachers to set students up for success with each task.
 - The **Launch** guidance helps teachers set up a task without revealing too much about the strategies students might use. This creates space for all students to contribute their ideas and thinking.
 - The **Monitor** guidance gives teachers an idea of strategies to look for and examples of early student thinking and how to guide students to a complete understanding.
 - The **Connect** guidance provides helpful questions to guide discussion of each activity, helping teachers to solidify student understanding.
- The program provides different grouping recommendations to create collaborative classrooms where students learn and engage with each other in every lesson.
- Each lesson contains point-of-use differentiation tips, and strategies to support multilingual learners. Teacher guidance is also easily visible on each digital slide and provides point-of-use support with teacher moves, sample student responses, and differentiation tips.

D Differentiation Teacher Moves		
Look for students who . . .	For example . . .	Provide support . . .
<p>Almost there Tell an addition story using the numbers from the expression.</p>	<p>They had 5 plums and then Ying's mom put 2 more in the basket.</p>	<p>Support Say, "Your story problem matches $5 + 2$. Now, tell a story problem that matches $5 - 2$."</p>
<p>Almost there Tell a subtraction story that represents the numbers in the expression in the reverse order.</p>	<p>There were 2 plums. Then Ying and her mom ate 5 of them.</p>	<p>Support Ask, "Look at the numbers in the expression. How many plums should Ying and her mom start with?"</p>
<p>Tell a subtraction story that represents the expression.</p>	<p>Ying's mom packed 5 plums. They ate 2 of them.</p>	<p>Stretch Ask, "Could 1 subtraction expression match more than 1 story? Could 1 story match more than 1 subtraction expression? How do you know?"</p>

Differentiation tables provide tips to stretch, strengthen, and support based on student needs.

2 Monitor



2 Use the **D Differentiation | Teacher Moves** table on the following page.

If students need help getting started . . .

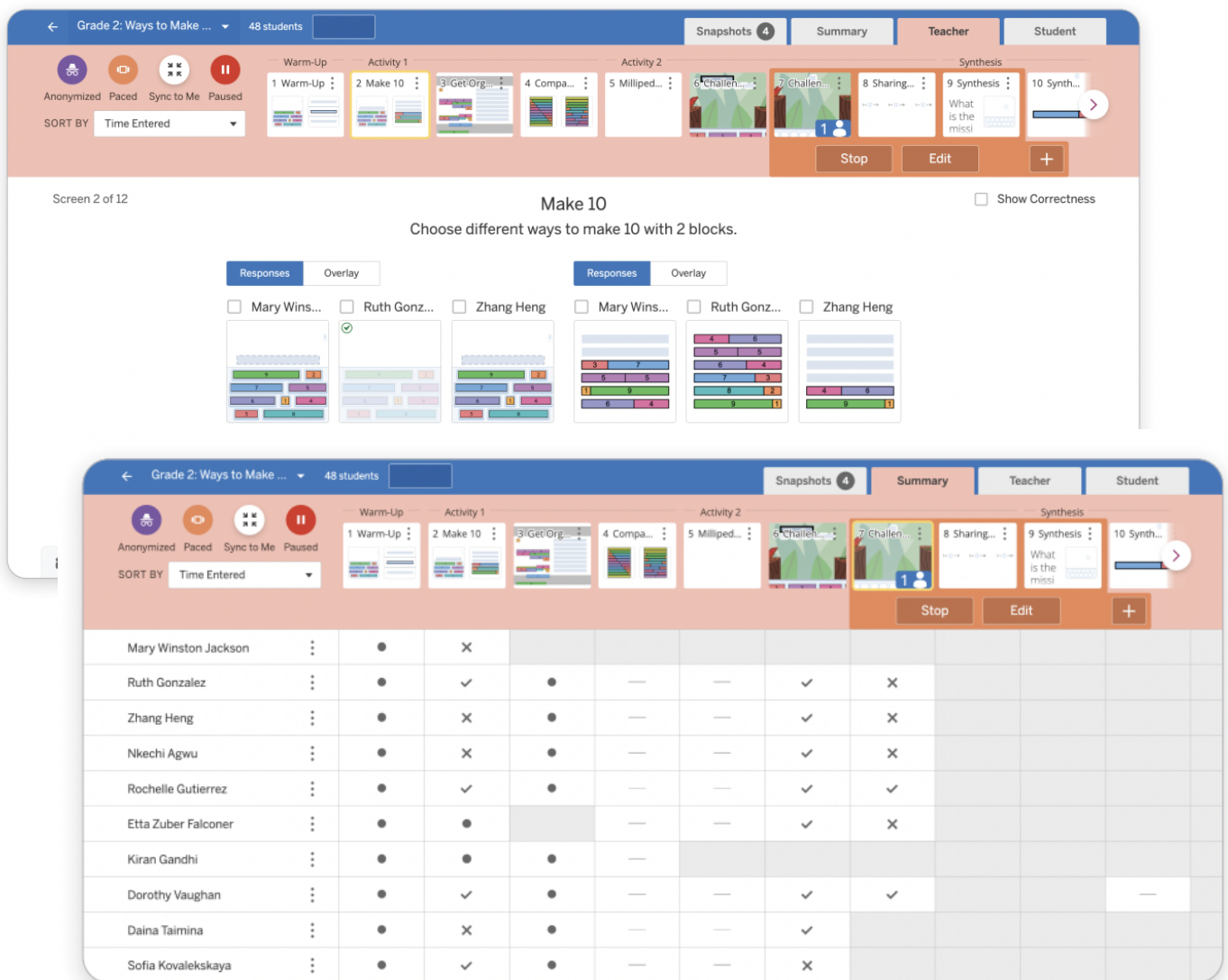
- For Player B, point to the cubes and ask, "What do you know about 10 and the number of cubes you see?"
- Provide a 10-frame and ask, "How can you use a 10-frame to help you find the number of missing cubes?"

A Accessibility: Conceptual processing Guide visualization by showing connections between parts of the equation and the cubes that are visible and those that are hidden.

The Teacher Edition and digital activity screens both provide point-of-use differentiation support.

The teacher dashboard gives educators insight into student thinking in real time, so they can select student work to display and discuss quickly and easily, and ask better questions to guide more productive discussions. The teacher dashboard provides the following tools:

- **The Teacher view** gives educators access to student responses, student-facing content, teacher moves, and sample responses. Teachers have the ability to pace screens, focusing students' attention on specific screens or pausing interactivity when eyes are needed on the teacher.
- **The Summary view** shows educators where students are working. The Summary view shows how students are doing and allows educators to look at individual student work.
- When an educator finds student work they want to share, they can collect it in their **snapshots** and then show individual responses or even groups of students' responses to move the conversation in the direction they want. Names can be anonymized to protect students' identities and encourage active participation by all students.



Teachers can see student responses in the Teacher view.

Teachers can see where students are working using the teacher dashboard.