

Navigating the digital program

Unit Landing Page



4.1 Unit Overview

Factors and Multiples

Explore patterns and identify multiples, factor pairs, and prime and composite numbers.

Let us know what you thought about this lesson by filling out [this survey](#).

Unit at a Glance

Sub-Unit 1: Patterns, Factors, and Multiples (Lessons 1–8)

- Generate and extend shape and number patterns.
- Determine whether a number is prime or composite.
- Relate the side lengths and area of a rectangle to factors and multiples.

Sub-Unit 2: Using Factors and Multiples (Lessons 9–12)

- Apply multiplication fluency within 100 and the relationship between multiplication and division to identify factor pairs and multiples.

Review Vocabulary

- area
- even
- expression
- factor

Vocabulary

- common multiple
- composite number
- multiple
- prime number

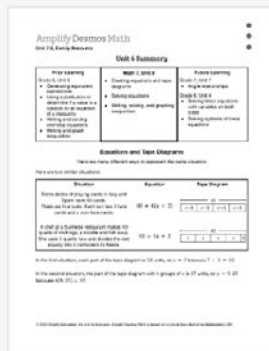
On the Unit Landing Page for each unit, you'll find Unit-at-a-Glance information, including sub-unit descriptions and learning goals, vocabulary found in the unit, and standards addressed in the unit (where applicable).

Paper Resources

Student Goals and Glossary



Family Resource



Admin Guide



Routine Facilitation Guides



Teacher Edition + Answer Key



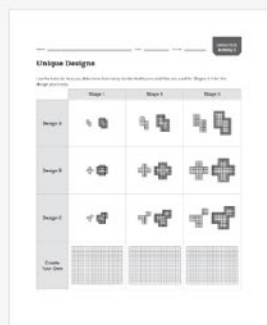
Student Lessons + Practice



Show What You Know Collection



Activity Sheets and Cards



The Unit Landing Page also includes a variety of paper resources available for that unit. Those resources include:

- A printable PDF of the Teacher Edition and Student Edition pages for the entire unit (the Teacher Edition pages include assessment answer keys)
- A caregiver resource for teachers to share with families about the math in the unit and how to support learning at home
- Student goals and glossary of vocabulary in the unit
- An administrator guide for what to look for as the unit is being taught
- Routine Facilitation Guides for the routines found in the unit
- Activity Sheets and Cards for lessons in the unit that call for additional resources not included in the Student Edition

Lesson Landing Page

Like the print Lesson Overview, the Lesson Landing page has helpful information for planning and facilitating the lesson.

Amplify.

Grade 4 - Beta

Teacher Garry

Search

Amplify Desmos Math

Grade 4 - Beta

Unit 1: Factors ...

4.1 Unit Overview

I Contain Multitudes

4.1 Pre-Unit Check

1. Investigate: Quilt Patterns

2. How Does It Grow?

3. Numbers Rule!

4. What Do They Have in Common?

5. Building Rectangles

6. How Many Rectangles?

7. How Many Factors?

8. Which Products Do You Know?

4.1 Sub-Unit 1 Quiz

9. Hamster Homes

10. Factor or Multiple?

11. Mystery Numbers

12. A Number Game

4.1 End-of-Unit Assessment

4.1 Performance Task

4.1 Lesson Practice

4.1 Show What You Know Collection

4.1 Mini-Lessons

4.1 Centers

4.1 Extensions

4.1 Boost

4.1 Personalized Learning

4.1 Fluency Practice

4.1 Math Adventures

Hamster Homes

Lesson 9: Real-World Problems Involving Factors and Multiples

Let's solve problems that involve factors and multiples.

Let us know what you thought about this lesson by filling out [this survey](#).

Student devices recommended. Student Edition pages are also available.

Why digital? Students explore factors and multiples and receive responsive feedback in real time.

Instruction

Differentiation Beyond the Lesson

Today's Goals

Apply an understanding of factors and multiples in the range 1 – 100 to solve real-world problems.

Language Goal: Explain how to solve problems using factors and multiples. (Reading, Writing, Speaking, and Listening)

Standards

Addressing MP1 MP2 MP3 4.OA.B.4

Instructional Routines

Notice and Wonder

Think-Pair-Share

At a Glance

Practice Problems

Show What You Know

Your Assignments

Assign this activity to one of your classes or create a single session code

Screens

Preview

Warm-Up

Activity 1

Activity 2

Show What You Know

Synthesis

Paper Resources

Teacher Edition

Student Edition

A Differentiation Beyond the Lesson

The Differentiation Beyond the Lesson tab provides guidance and differentiation resources after each lesson for students in three categories: Support, Strengthen, and Stretch.

B At a Glance

The At a Glance button will pull up a preview of the lesson Warm-Up, lesson activities, Synthesis, and Show What You Know. You'll find suggested timing for each part of the lesson, as well as guidance on whether students should work individually, in pairs, or with the whole class. The Focus and Coherence and Rigor and Balance information for the lesson is also found here.

C Practice Problems

Every Amplify Desmos Math lesson includes a digital Practice Problems set, which you and students can access via the Lesson Landing Page.

D Lesson prep

In the gray box on the Lesson Landing Page, you'll find the goals for that lesson, any materials needed for the lesson, vocabulary found in that lesson, and standards addressed in the lesson.

E Lesson Thumbnails

Teacher Presentation Screens enhance lessons and are for the teacher to project. Lessons where student devices are suggested have Student Activity Screens.

F Paper resources

Paper resources for each lesson include print Teacher Edition pages, print Student Edition pages, and the lesson Show What You Know printable PDF.

Student Screens

Student Activity Screens make the lesson highly interactive for students working on devices individually or in pairs or small groups. You can preview by clicking Activity Screens from the lesson landing page.

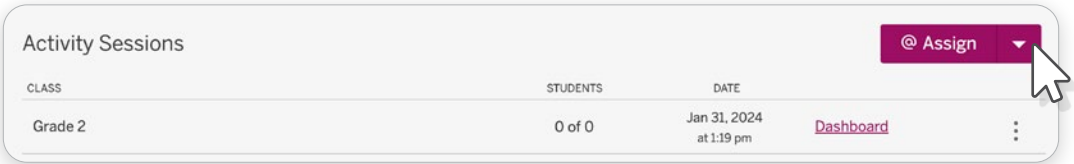
To make planning and teaching seamless, tips for instruction are available in both the print Teacher Edition and digitally at point of use. At the bottom of Activity Screens, the teacher will see suggestions for facilitation to support great classroom conversations:

- **Teacher moves:** Suggestions for pacing, facilitation moves, discussion questions, examples of early student thinking, and ideas for early finishers, as well as opportunities to build and develop the math community in your classroom.
- **Sample responses:** One or more examples of a possible student response to the problem.
- **Student supports:** Facilitation suggestions to support students with disabilities and multilingual students.

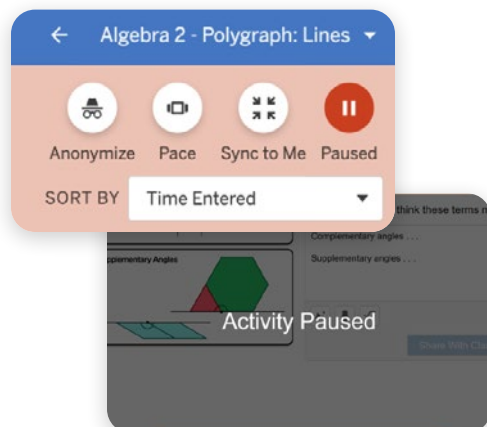


Assign

Getting your students started with a digital lesson is a breeze. To have your students try one of these program preview lessons, simply generate and share a single-session code by clicking the arrow next to @Assign. If you have individual classes set up, getting students online is even quicker!



Pause



Pause allows you to stop the lesson and gather student attention—whether for a brief announcement or a class discussion.

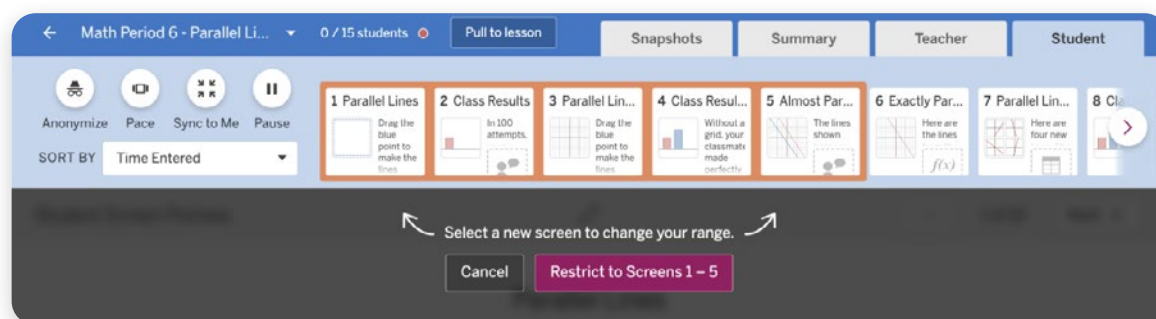
Keep an activity paused for as long (or as briefly) as you want. When you're ready for students to continue, press the Pause button again to resume the activity.

With Pause activated, students can see their current screen but cannot interact with the activity at all.

Pacing

Pacing allows you to lead students through part of an activity one screen or one section at a time. To activate, click the Pacing icon. Then select the screen (or screens) you'd like to gather your students on. They'll automatically go to that location in the activity, and the navigation outside of that range will temporarily be disabled.

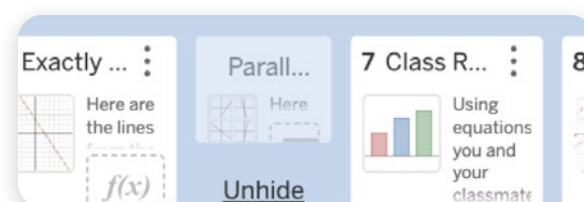
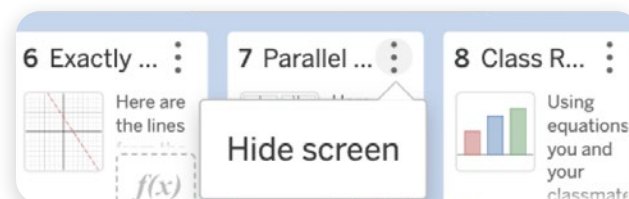
Once Pacing is activated, you'll see clear indicators for what screens your students may access. You can edit or extend that range, or even disable pacing, with a single click.



Hide screens

Are you running out of time in class? Or do you want to refine an activity to better suit your students' needs? You can hide screens from students by clicking the Menu (three vertical dots) on the screen's thumbnail. This allows for non-sequential teacher pacing.

Notice that the screens automatically renumber themselves when one is hidden. Change your mind? Simply click Unhide and students will be able to access the screen again.



Teacher supports and facilitation tools

Teacher Dashboard

The powerful Teacher Dashboard helps teachers play an active role as discussion facilitators, monitoring student work in real time, choosing moments to share and discuss, and synthesizing learning. Teachers get insight into student thinking in real time, meaning they can select student work to display and discuss quickly and easily, and ask better questions to guide more productive discussions.

To teach a lesson with students on devices, click the Dashboard link next to your single-session code or class name to launch your Teacher Dashboard with facilitation tools.

Activity Sessions				
CLASS		STUDENTS	DATE	
E5YPM2	New students can join until Jan 2, 2025	0	Jan 3, 2024 at 10:50 am	Dashboard
YMMVC5	New students can join until Jul 17, 2024	0	Nov 17, 2023 at 3:18 pm	Dashboard

The Teacher Dashboard has four tabs at the top. In addition to these views, the Teacher Dashboard also has facilitation tools, including the Class Conversation Toolkit and Written Feedback.

Grade 2: Ways to Make ...48 students

SnapshotsSummaryTeacherStudent

AnonymizedPauseSync to MePaused

1 Warm-Up2 Make 103 Get Org...4 Compa...5 Milliped...6 Chant...7 Chant...8 Sharing...9 Synthesis10 Synthesis

Sort By: Time Entered

1 of 12

Warm-Up

Choose 2 blocks. What do you notice? What do you wonder?

Try it!

92

75

61

34

8

Teacher Moves

Sample Responses

Student Supports

Snapshots

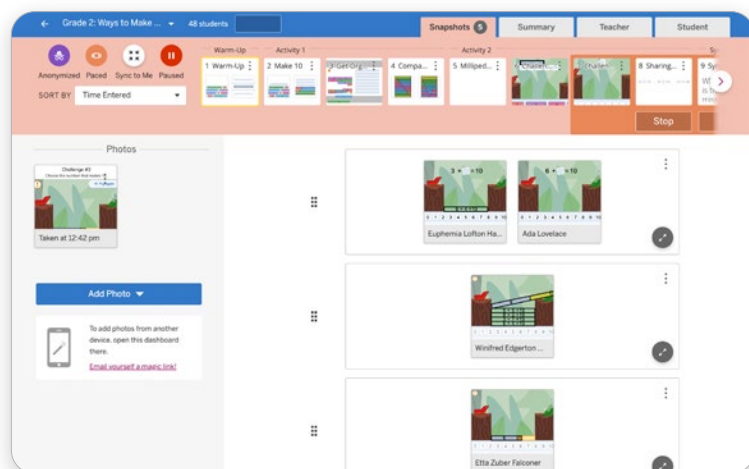
Peg Smith and Mary Kay Stein's *5 Practices for Orchestrating Productive Mathematics Discussions* offers a clear and useful framework for facilitating class discussions around student thinking. We added a Snapshot tool to make it even easier to select and sequence student work for those discussions. Try your hand at selecting and sequencing student work for discussion during your next Amplify Desmos Math lesson.

Snapshot student screens

To select a response for discussion, simply click the camera icon.



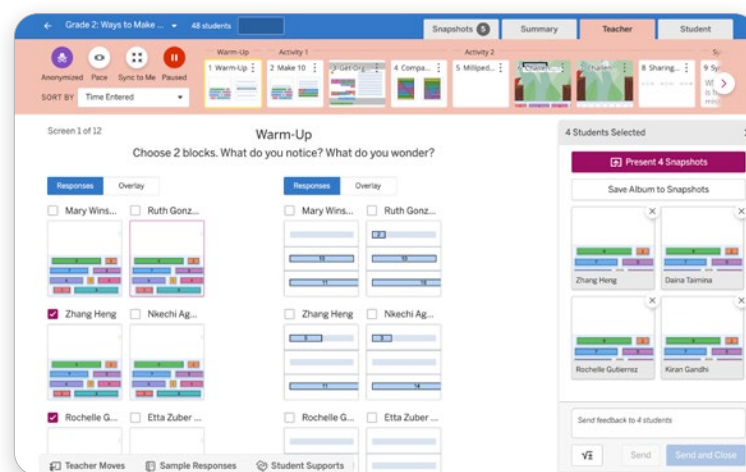
Then, in the Snapshots View, you can organize your snapshots into albums. Each album can hold up to four snapshots.



Present your albums to facilitate class discussions. Consider entering a title or question, or simply share your discussion prompt aloud! (**Note:** The teacher must present the album of snapshots to students in order for the album to show on student devices.)

Snapshot in Teacher View

To select a response for discussion in the Teacher View, click the response's checkbox to bring up the snapshots and the Feedback sidebar.



You can select up to four pieces of work and present them to students right from the Teacher View, or save them as an album in Snapshots.

Dashboard summary view

When you open a dashboard, you will first see the Summary View. Here you will see a row for each student in the activity session, along with a quick overview of where they are in the activity, a symbol to let you know more about their work on that screen, and a triangle indicator in the corner if you've sent the student feedback on that screen.

You can click on any of these boxes to see the current state of the student's screen. You might use a student screen as a jumping-off point for a class discussion and modify the screen together with the class. Any changes you make will not change the work for the student.

Grade 2: Ways to Make ...48 students

Snapshots4SummaryTeacherStudent

AnonymizedPacedSync to MePaused

Warm-UpActivity 1Activity 2Synthesis

1 Warm-Up2 Make 103 Get Org...4 Compa...5 Milliped...6 Challen...7 Challen...8 Sharing...9 Synthesis10 Synth...

Sort ByTime Entered

StopEdit+

Mary Winston Jackson	⋯	●	✗									
Ruth Gonzalez	⋯	●	✓	●	—	—	✓	✗				
Zhang Heng	⋯	●	✗	●	—	—	✓	✗				
Nkechi Agwu	⋯	●	✗	●	—	—	✓	✗				
Rochelle Gutierrez	⋯	●	✓	●	—	—	✓	✓				
Etta Zuber Falconer	⋯	●	●		—	—	✓	✗				
Kiran Gandhi	⋯	●	●	●	—							
Dorothy Vaughan	⋯	●	✓	●	—	—	✓	✓			—	
Daina Taimina	⋯	●	✗	●	—	—	✓					
Sofia Kovalevskaya	⋯	●	✓	●	—	—	✗					

Here is what the symbols on this page mean:

- Dash:** There is no required input for this screen, but students still need to look at it.
- Check:** Everything on this screen is correct.
- Cross:** Something on this screen is incorrect.
- Warning:** Something on this screen isn't merely incorrect but indicates the student may have misunderstood the question itself—intervene ASAP!
- Dot:** This screen requires teacher interpretation.

You might also see a triangle indicator in the corner. Here's what they mean:

- Teal triangle:** You sent feedback to the student on that screen, but the student has not yet seen the feedback.
- Gray triangle:** You sent feedback to the student on that screen and the student has seen the feedback.

Teacher View

In the dashboard, you can use the Teacher View to answer questions like:

- How did all my students answer this question?
- What answers were most common?

If the screen has some components that can be correct or incorrect, you can check the Show Correctness checkbox in the upper-right corner of the screen. This will add icons to pieces of work showing if they're correct or incorrect.

You can also leave written feedback and create and present albums of snapshots from the Teacher View by selecting the student response checkboxes.

The screenshot shows the Teacher View interface for a lesson titled "Grade 2: Ways to Make 10" with 48 students. The top navigation bar includes tabs for "Snapshots 4", "Summary", "Teacher" (selected), and "Student". Below the navigation bar, there are controls for "Anonymized", "Paced", "Sync to Me", and "Paused". A "SORT BY" dropdown is set to "Time Entered". The main content area displays a sequence of activities: "1 Warm-Up", "2 Make 10" (highlighted), "3 Get Org...", "4 Compa...", "5 Milliped...", "6 Challen...", "7 Challen...", "8 Sharing...", "9 Synthesis", and "10 Synth...". The "Make 10" activity is currently selected, showing a screen titled "Make 10" with the instruction "Choose different ways to make 10 with 2 blocks." and a "Show Correctness" checkbox. Below the instruction, there are two columns of student responses, each with a "Responses" tab and an "Overlay" tab. The responses are organized into a grid with student names: Mary Wins..., Ruth Gonz..., Zhang Heng, Nkechi Ag..., Rochelle G..., and Etta Zuber ... Each response shows a visual representation of the student's work using colored blocks to make the number 10. The bottom of the screen features a "Teacher Moves" section with icons for "Sample Responses" and "Student Supports".