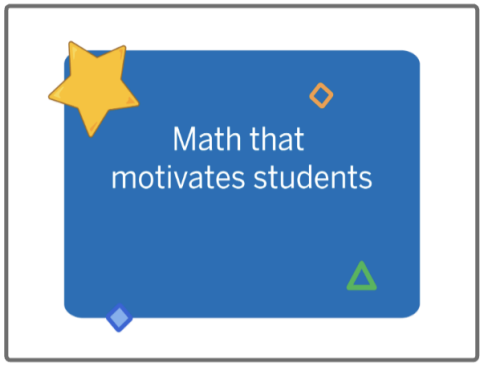
Agenda:

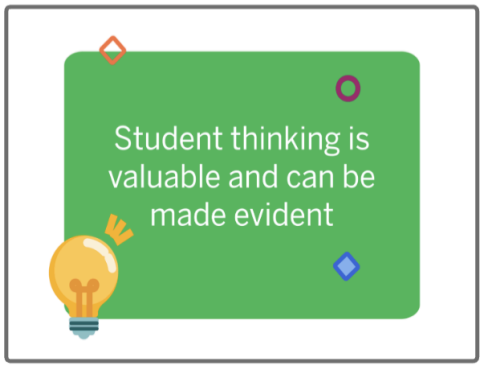
- Unpacking Amplify Desmos Math
- Experience an Amplify Desmos Math Lesson
- Facilitating with Amplify Desmos Math
- Regents Prep Course: Scope and Sequence
    - Includes Track I and II options
- Navigating the Amplify Desmos Math platform
- Lesson Structure and Differentiated Resources
- Getting Started with Amplify Desmos Math
- Link to session Participant Notebook

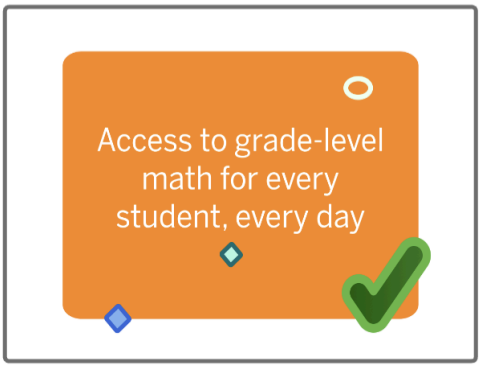
Unpacking Amplify Desmos Math

Teacher Bundle	Student Bundle
• Teacher Edition (digital only- can be printed) • Digital access to planning and instruction resources • Presentation Screens (for paper lessons) • Facilitation and progress-monitoring tools • Assessment and reporting suite, including growth assessments	• Student Edition (digital only- can be printed) • Digital access to lesson resources and practice • Interactive student activity screens • Responsive feedback • Collaboration tools • Personalized practice

Amplify Desmos Math Core Tenets:







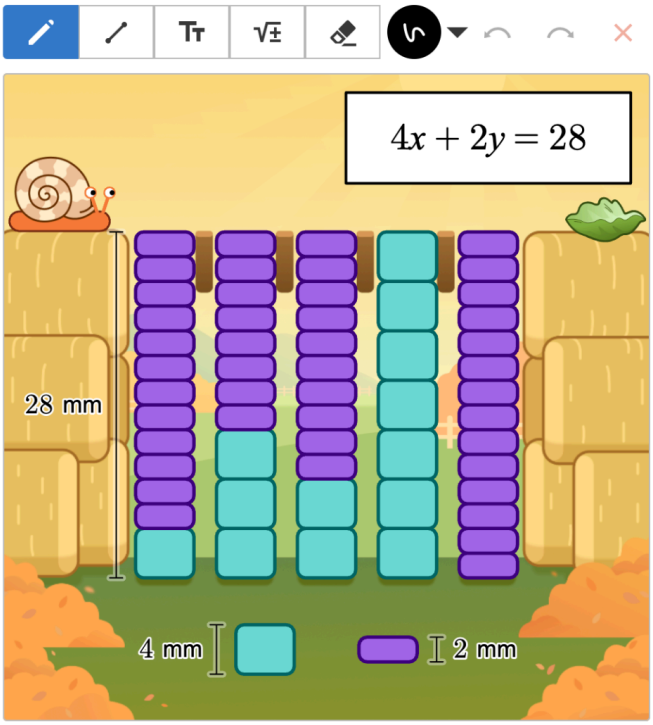
Experience an Amplify Desmos Math Lesson:

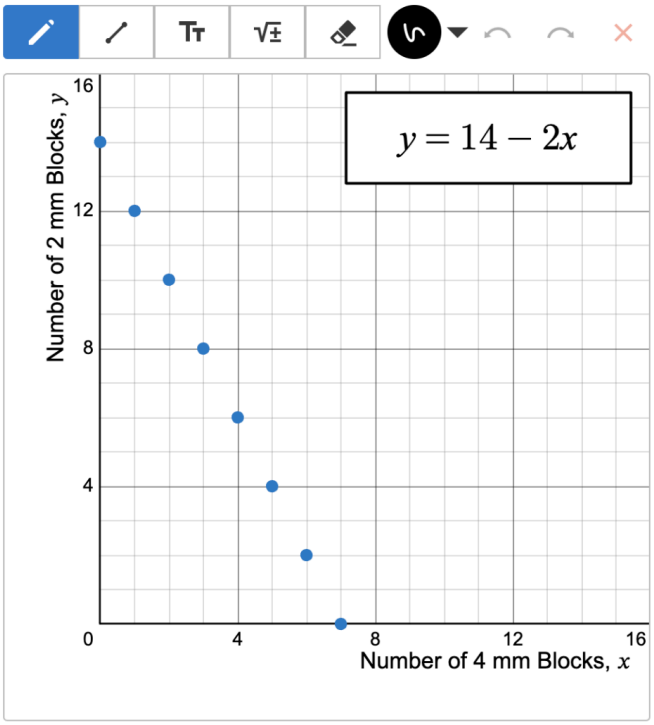
- Algebra I Model Lesson: Shelly the Snail (Unit 2, Lesson 6)
  - Student Edition (student print outs)
  - Teacher Edition (teacher guide)
- Activity 1 Key Takeaway (Connect): The graph of a linear equation represents all the pairs of values that are solutions to the equation and make the equation true. There are different, equivalent forms of linear equations, and each form helps us understand different parts of the graph, table, and situation.

Equation Situation

Here is the same relationship represented in two different ways.

💬 Discuss: How do you see the equation in each representation? Are these equations equivalent? Why or why not?





- Related Regents problems: 10, 20, 22, 35
  - These problems cover how variables in a linear relationship relate to each other, what a solution is, how to manipulate an equation to isolate a variable, and/or how equations relates to a graph

Facilitating with Amplify Desmos Math

- Dashboard tools in action video (real classrooms using dashboard tools)
- Lesson facilitation help articles

- Dashboard views:
  - Summary view: for monitoring student progress, correctness of answers
  - Teacher view: where you can see student responses on a specific screen in real time
  - Student view: to see a preview of what students will see on each screen

- Dashboard tools:
  - Anonymize: student names are swapped out and replaced by names of famous mathematicians
    - You can hover over any anonymous name to see which student it is
  - Pace: allows you to restrict student screens to one or more screens
  - Sync to Me: bring all students together on one screen
  - Pause: students can see their current screen but cannot interact with the activity at all

Regents Prep: Course Structure

- Amplify Desmos Math 6-A1 Scope and Sequence: Participant Notebook pg. 13
- Regents Prep accelerated tracks:
    - Track I: 45-Day Plan (+11 optional days)
    - Track II: 57-Day Plan (+13 optional days)
- Major topics covered:
    - Linear equations and inequalities, systems of linear equations and inequalities, describing functions, exponential functions, quadratic functions, *describing data (track II only)*

Track I: Designed for 45 minute classes meeting 3 times per week

45-Day Plan + (11 optional days)	
Unit/Lessons	Days

Unit 2: Linear Equations and Inequalities
Lessons: 2, 4-10
 	
Optional Practice and Assessment:
• A1.2 Practice Day
• Sub-Unit Quiz:
  ○ 1, 4a, 4b, 5a, 5b, 5c
• End-of-Unit Assessment:
  ○ 5, 6a, 7a, 7b, 7c, 7D
	8 days + (1-3 optional days)

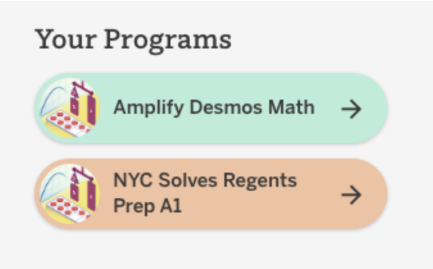
Unit 5: Systems of Equations and Inequalities Lessons 1-6, 9-11 Optional Practice and Assessment: • A1.5 Practice Day 1 • A1.5 End of Unit Assessment: ○ 3a, 3b, 4c, 5a, 5b, 6, 7a, 7b, 7c	9 days + (1-2 optional days)
Unit 6: Exponential Functions Lessons 1-6 Optional Assessment: • Sub-Unit Quiz: ○ 3a, 3b, 4, 5a, 5b, 5c	6 days + (1 optional day)
Unit 7: Quadratics Part 1 Lessons 2-12 Optional Practice and Assessment: • A1.7 Practice Day 1 • Sub-Unit Quiz: ○ 3a, 3b, 4, 5a, 5b, 5c	10 days + (1-2 optional days)

Unit 8: Quadratics Part 2
Lessons 1-7, 11-12, 14-16
 	
Optional Practice and Assessment:
• A1.8 Practice Day 1
• Sub-Unit Quiz:
  ○ 2, 3a, 3b, 4a, 4b, 5a, 5b
• End of Unit Assessment:
  ○ 3a, 3b, 4a, 4b, 4c, 6a, 6b, 6c, 7a, 7b, 7c
	12 days + (1-3 optional days)

Track II: Designed for 45 minute classes meeting 5 times per week (includes Unit 3: Describing Data)

57-Day Plan + (13 optional days)	
Unit/Lessons	Days
Unit 2: Linear Equations and Inequalities Lessons: 2, 4-10 Optional Practice and Assessment: ● A1.2 Practice Day ● Sub-Unit Quiz: ○ 1, 4a, 4b, 5a, 5b, 5c ● End-of-Unit Assessment: ○ 5, 6a, 7a, 7b, 7c, 7D	8 days + (1-3 optional days)
Unit 3: Describing Data Lessons 4-10 Optional Practice and Assessment: ● A1.3 Practice Day 1 ● Sub-Unit Quiz: ○ 1, 2a, 2b, 5a, 5b	6 days + (1-2 optional days)
Unit 5: Systems of Equations and Inequalities Lessons 1-11 Optional Practice and Assessment: ● A1.5 Practice Day 1 ● A1.5 End of Unit Assessment: ○ 3a, 3b, 4c, 5a, 5b, 6, 7a, 7b, 7c	11 days + (1-2 optional days)
Unit 6: Exponential Functions Lessons 1-6 Lessons 7-10 Optional Assessment: ● Sub-Unit Quiz: ○ 3a, 3b, 4, 5a, 5b, 5c	10 days + (1 optional day)
Unit 7: Quadratics Part 1 Lessons 2-12 Optional Practice and Assessment: ● A1.7 Practice Day 1 ● Sub-Unit Quiz: ○ 3a, 3b, 4, 5a, 5b, 5c	10 days + (1-2 optional days)
Unit 8: Quadratics Part 2 Lessons 1-7, 11-12, 14-16 Optional Practice and Assessment: ● A1.8 Practice Day 1 ● Sub-Unit Quiz: ○ 2, 3a, 3b, 4a, 4b, 5a, 5b ● End of Unit Assessment: ○ 3a, 3b, 4a, 4b, 4c, 6a, 6b, 6c, 7a, 7b, 7c	12 days + (1-3 optional days)

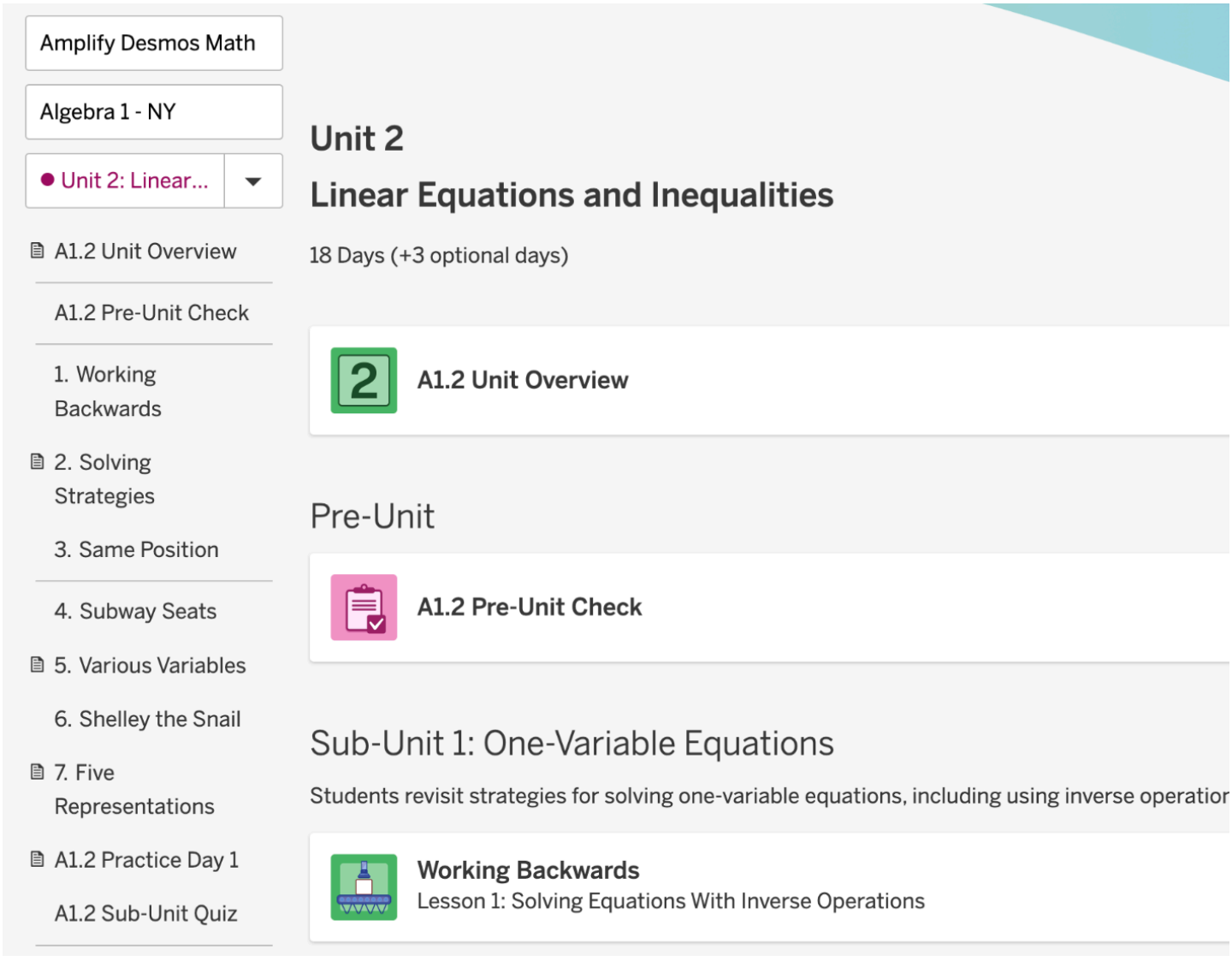
Navigating the Amplify Desmos Math Platform:



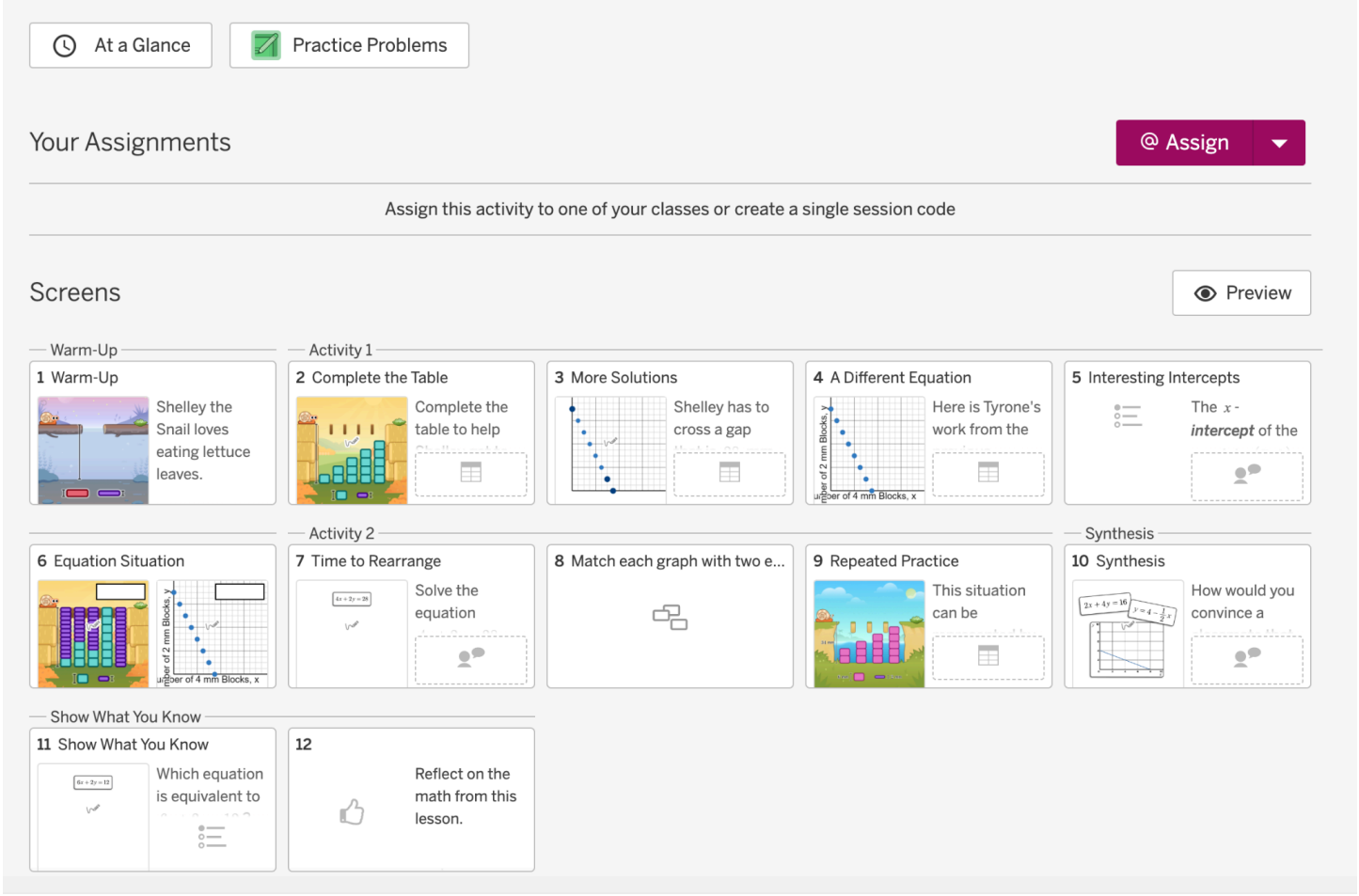
1. Login at learning.amplify.com
2. Select “Log in with Amplify”
3. Enter your unique Username and Password
4. From the left hand side, select “NYC Solves Regents Prep A1”

5. Under **Courses**, choose “Algebra I”
    a. Units 1-4 have been released
    b. Units 5-6 are coming in October
    c. Units 7-8 are coming in November

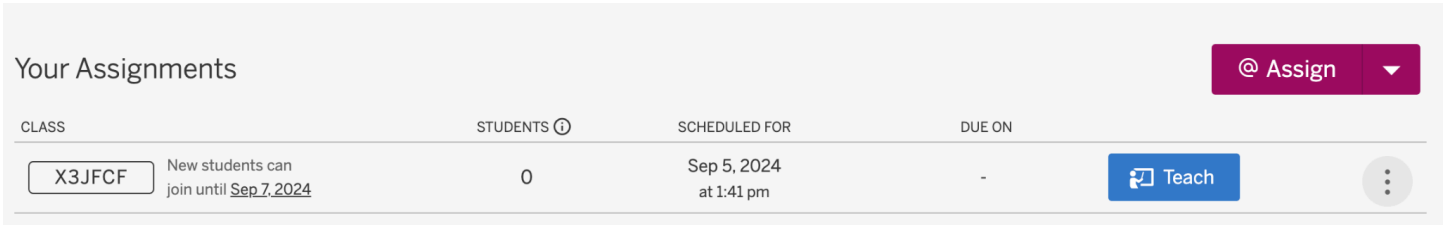
6. Select a **Unit** to navigate to (Unit 2 shown below)
    a. Unit Overview contains Unit Level Teacher Editions and Student Editions
        i. You can also find an Instructional Routines Facilitation Guide here!
    b. Unit Assessments are highlighted in pink:
        i. Pre-Unit Check, Sub-Unit Quizzes, End-of-Unit Assessment
    c. Lessons are listed under Sub-Units
        i. If there is a paper symbol next to a lesson, it is a paper-only lesson
        ii. If there is no paper symbol, this lesson can be facilitated either print or digitally



7. Select a **Lesson** to navigate to (Unit 2, Lesson 6 shown below)
    a. At a Glance will tell you timing and key takeaways from each part of the lesson
    b. Practice problems are available both digitally and on paper in the Student Edition print outs
    c. Lesson screens give you a preview of Student View screens
    d. Lesson Level Teacher Edition and Student Edition print outs can be found under Paper Resources



    e. To start a lesson, click the Assign button:
        i. Assign to your class OR create a Single Session code if you do not yet have classes
        ii. Students can type in the generated code to student.desmos.com to join
    f. Click Teach to pull up your Teacher Dashboard!



Lesson Structure and Differentiated Resources

- Amplify Desmos Math: A structured approach to problem-based learning

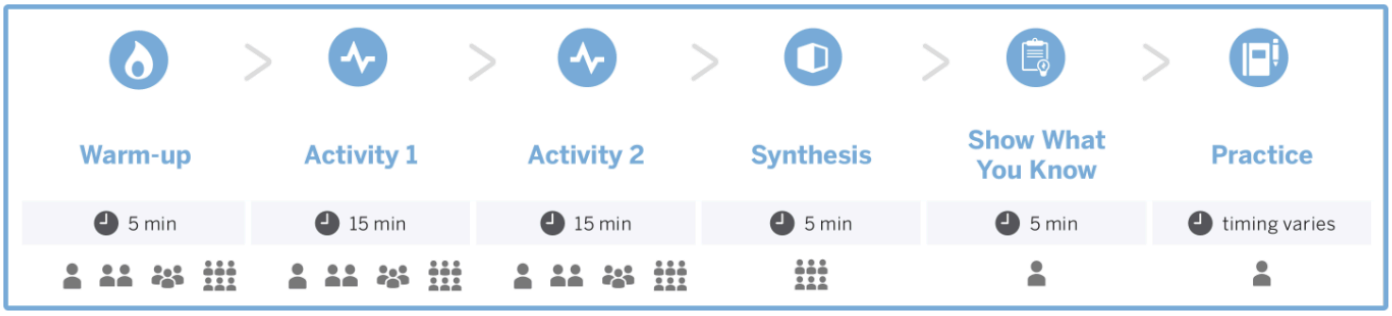
Students are...

- Exploring problems that create an intellectual need for new mathematical ideas
- Collaborating with classmates and having meaningful discussions
- Sharing their ideas and connecting them to the ideas of their classmates
- Using math to make sense of the world

Teachers are...

- Launching problems in a way that doesn't give away the mathematics
- Providing opportunities for students to collaborate and have meaningful discussions
- Posing questions to learn what students are thinking and propel their learning forward
- Building on strategies used by students and connecting their ideas to the learning goals of the lesson

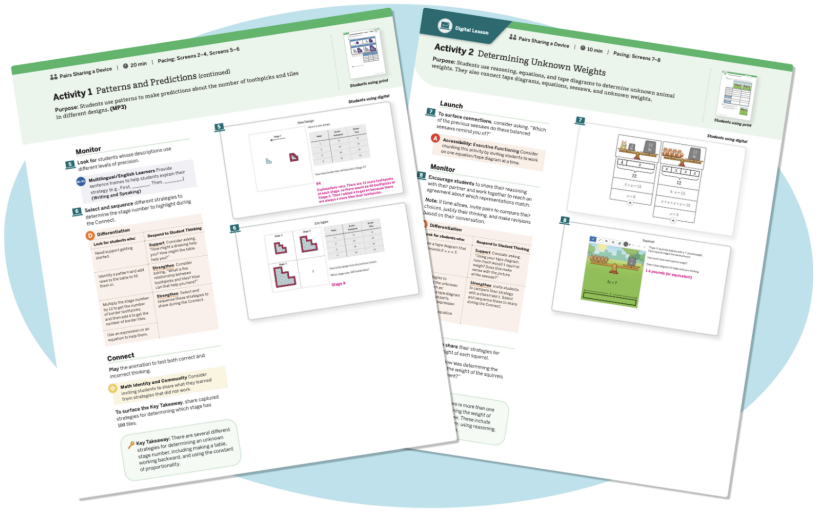
- Structure of every Amplify Desmos Math Lesson:



- Structure of every Amplify Desmos Math activity (more information on pg. 16 Participant Notebook)

- Launch provides guidance about the logistics for launching the activity to the whole class
- Monitor provides guidance about what to do to support students as they are working on the task
- Connect provides guidance for how to facilitate a student-centered discussion around the activity and its mathematical ideas

- In-the-moment Instructional supports: found in your Teacher Editions!



- Built in Differentiation: for in-the-moment support and after-lesson support
  - Support: provide targeted intervention
  - Strengthen: reinforce students' understanding of the concepts
  - Stretch: challenge students and extend their learning

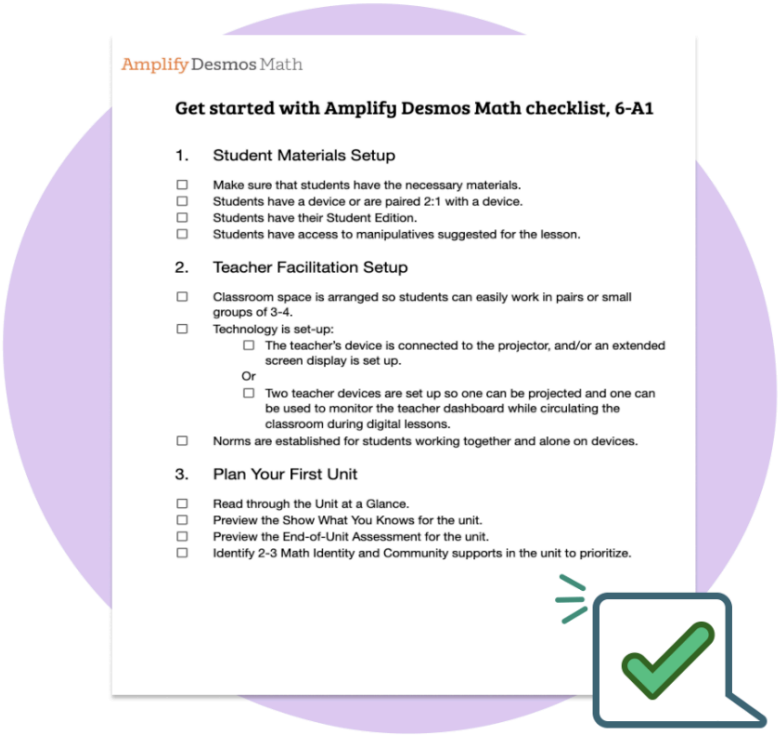
D Differentiation

Look for students who:	Teacher Moves
Need support getting started.	**Support** Consider chunking this screen into more manageable parts by asking, "Where do you see the 14 in the graph? In the diagram?"
Describe how the combinations of blocks are solutions to the equations.	**Strengthen** Capture a variety of student sketches that show connections to share during the Connect. Include things that surprise you or that other students may not have noticed.
Connect the stack of 14 blocks in the diagram to the 14 in the equation.	
Notice that there is a y-intercept of $(0, 14)$ on the graph and in the equation $y = 14 - 2x$.	
See that as the number of 4-millimeter blocks increases by 1, the number of 2-millimeter blocks decreases by 2.	

- Mini-lessons: 15-minute lessons aligned to the most critical topics throughout the unit
  - Mini-lessons complement the problem-based approach in the lessons. They provide more explicit instruction opportunities and leverage a consistent instructional routine (Modeled Review, Guided Practice, Check for Understanding).

Getting Started with Amplify Desmos Math

- Check out the Getting Started Checklist on pgs. 17-18 of your Participant Notebook for helpful tips to start the year strong!



- Next Steps:
  - Visit the Amplify Desmos Math PD Library to find useful resources.
  - Refer to the Get Started Checklist to prepare for your first days with Amplify Desmos Math
  - Plan your first Amplify Desmos Math lesson!
  - For more information about the beta release and FAQs, see the beta release support site or the Amplify Desmos Math Beta Release help center.