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6–8 Math

# The Top-Rated Middle School Math Curriculum

Explore the Curriculum (<https://im.openupresources.org/>)

**Our 6–8 math curriculum is top-rated!**

[Learn More \(/curriculum-awards/\)](/curriculum-awards/)

## Kids *truly* get math – and they love it.

Learn how we support teachers in transforming classrooms into hives of activity, questioning, and debate – and deeper learning follows.

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<https://vimeo.com/267600696>

## Core Program Essentials

Our core curriculum comes complete with:

- **Student Materials** – digital & print



- **Teacher Materials** – including unit plans, lesson plans, digital and print assessments
- **Scope & Sequence**
- **Integrated, lesson-specific supports for ELLs**
- **Lesson-level strategies for students with disabilities**
- **Family Resources**

To foster success, a comprehensive suite of Professional Development options is available.

## What Sets Our Core Curriculum Apart?



### **We truly foster mathematical literacy for students.**

Our signature mathematical language routines (MLRs) offer detailed guidance for developing students into mathematical thinkers. Facilitate and assess students' ability to communicate mathematical thinking verbally, visually, and in writing.



([https://openupresources.org/wp-content/uploads/2017/02/OpenUp\\_Math\\_03.jpg](https://openupresources.org/wp-content/uploads/2017/02/OpenUp_Math_03.jpg)).



### **Our teacher materials facilitate daily professional learning.**

Every lesson plan contains topic-specific professional learning resources. Our materials speak intelligently and professionally to educators, meeting teachers where they are in their practice and advancing them.

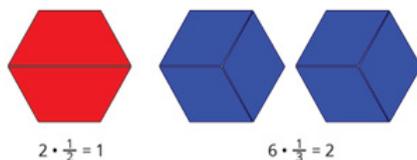
## Activity 1: 15 Minutes

### Reasoning with Pattern Blocks

#### Building background and content knowledge

Students use the relationships between the areas of geometric shapes to reason about division situations that involve fractions, especially the "how many groups?" interpretation of division. For example, if a hexagon has an area of 1, and 6 triangles have the same areas as a hexagon, then each triangle represents  $\frac{1}{6}$  and thus  $6 \cdot \frac{1}{6} = 1$ . Later, students reason in the opposite direction, by answering questions such as, "How many  $\frac{1}{2}$  s are in 4?", and then move to more abstract questions such as, "What is 4 divided by  $\frac{1}{2}$ ?"

2. Here are Elena's diagrams for  $2 \cdot \frac{1}{2} = 1$  and  $6 \cdot \frac{1}{3} = 2$ . Do you think that these diagrams represent the equations? Explain or show your reasoning.



([https://openupresources.org/wp-content/uploads/2017/02/EmbeddedPD\\_REV\\_2-28.jpg](https://openupresources.org/wp-content/uploads/2017/02/EmbeddedPD_REV_2-28.jpg)).



### **Our topic-specific and activity-specific differentiation is groundbreaking.**

From below-benchmark to accelerated learners, we provide content-specific resources within lessons, from warm up to cool down.

### Activity 3: 15 Minutes

#### Finding Sums in Different Ways

In this optional activity, students use symbols and diagrams to find a sum that requires regrouping of base-ten units. Use this activity to give students more explicit instruction on how to bundle smaller units into a larger one and additional practice on using the addition algorithm to add decimals.

#### Differentiation with manipulatives

Again, consider having physical base-ten blocks, a paper version of the base-ten figures, or this digital applet <https:ggbm.at.n9yaWPQj> available as alternatives to diagram drawing, or to more concretely illustrate the idea of bundling and unbundling.

([https://openupresources.org/wp-content/uploads/2017/02/Differentiation\\_REV\\_2-28.jpg](https://openupresources.org/wp-content/uploads/2017/02/Differentiation_REV_2-28.jpg)).



### **We foster the 5 Practices for Orchestrating Productive Mathematics Discussions.**

Discussion-filled classrooms beget deeper learning. Our materials encourage student communication and the development of problem-solving and reasoning skills.



([https://openupresources.org/wp-content/uploads/2017/02/OpenUp\\_Math\\_08\\_Image.jpg](https://openupresources.org/wp-content/uploads/2017/02/OpenUp_Math_08_Image.jpg)).



### **Teachers adore our ‘Anticipated Misconceptions’ for prep.**

Educators can easily prepare to recognize, analyze, and respond to common student struggles thanks to the scaffolding we provide with each lesson.

## WARM UP: 5 MINUTES

### Pencils on a Plot

#### Student-Facing Task

1. Measure your pencil to the nearest  $\frac{1}{4}$  inch. Then, plot your measurements on the class dot plot.
2. What is the difference between the longest and shortest pencil length in the class?

#### Anticipated Misconceptions for this Exercise

Some students may struggle with subtracting the shortest pencil length from the longest. Ask them if they could use the horizontal axis to find the difference (e.g. by adding up from the shorter length to the longer one).

([https://openupresources.org/wp-content/uploads/2017/02/AnticipatedMisc\\_REV\\_2-28.jpg](https://openupresources.org/wp-content/uploads/2017/02/AnticipatedMisc_REV_2-28.jpg)).



### **We've raised the bar for ELL support.**

Our integrated English language learner scaffolds are rich in topic- and activity-specific guidance. The Stanford University UL SCALE team, led by acclaimed neurolinguist Kenji Hakuta, guides our pioneering approach.

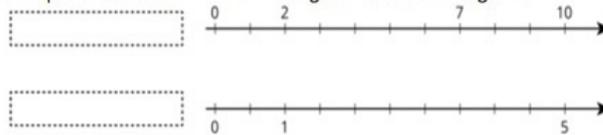
## WARM UP: 5 minutes

### Support for English Language Learners

Use MLR3 (Critique a flawed or partial explanation) instead of questions 2 and 3. Provide a flawed explanation such as "the numbers on top are always 1 more than the bottom" or "4 goes below 7" and have students explain the flaw in that reasoning.

### Student-Facing Task Statement

1. Complete the double number line diagram with the missing numbers.



2. What could each of the number lines represent? Invent a situation and label the diagram.
3. Make sure your labels include appropriate units of measure.

([https://openupresources.org/wp-content/uploads/2017/02/ELLSupports\\_REV\\_2-28-2-1.jpg](https://openupresources.org/wp-content/uploads/2017/02/ELLSupports_REV_2-28-2-1.jpg)).



## Our curricula are tailor-built to standards.

Authored by Illustrative Mathematics, our programs use state standards as a foundation. All curricula receive quality reviews against acclaimed alignment rubrics (IMET, EQUIP), conducted by leading experts.



([https://openupresources.org/wp-content/uploads/2017/02/OpenUp\\_Math\\_09.jpg](https://openupresources.org/wp-content/uploads/2017/02/OpenUp_Math_09.jpg)).

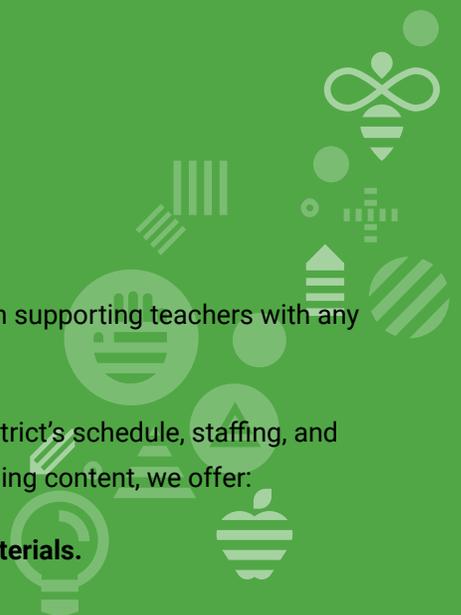
Access the Curriculum (<http://im.openupresources.org/>)

## Quality Professional Learning is *the* Essential Ingredient.

Our program is designed to elevate math practice, and success starts with supporting teachers with any necessary shifts.

We tailor professional learning and support recommendations to each district's schedule, staffing, and delivery needs. In addition to our curriculum-embedded professional learning content, we offer:

- **On-site introduction to themes, routines, practices, and design of materials.**
- **Workshops devoted to modeling and supporting practice change.**
- **Facilitation of peer-supported work, activating PLCs to build district capacity.**



- Remote-based 'phone an expert' support, to give teachers real-time help when needed.

Learn About Our Summer Academies (<https://openupresources.org/mathematics-professional-development/summer-professional-learning-open-up-resources-6-8-math/>)

"I had to learn to stop talking, and let the kids talk, struggle productively, and collaborate."

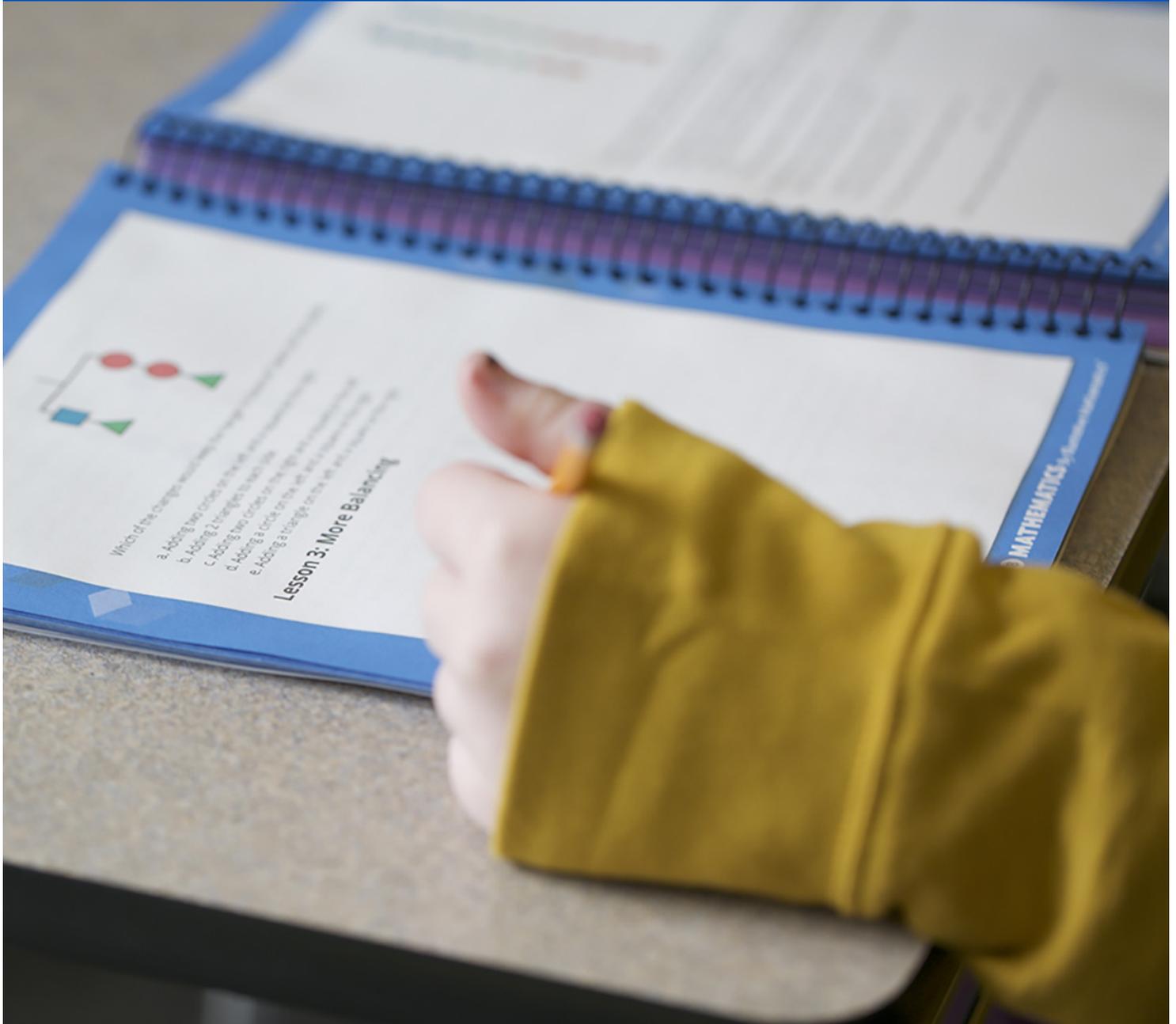
Teachers succeed with key practice shifts through supportive professional learning.



**Available in Digital and Print Versions**

We meet you where you are on the digital continuum:

- **Integrated with common Learning Management Systems + Microsoft OneNote**
- **Digital editions for 1:1 classrooms**
- **Low-cost, enhanced print options available**



## **Just Announced: High School Math**

We have an engaging high school math program that flows seamlessly from our middle school program available in print for Fall 2019–20.

Learn More (<https://openupresources.org/math-curriculum/high-school>)



[.https://openupresources.org](https://openupresources.org)

Sample Materials Login (</wp-login.php?materials=1>)

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