

Julian Curtiss School

**Supporting Parents in Navigating**

# K-5 Math Curriculum

Wednesday

11/8

Evening

Principal Trish McGuire and AP Matt Hartigan

*In partnership with:*

Mike Reid

Website: [K-8 Math](#)

Email: [mike\\_reid@greenwich.k12.ct.us](mailto:mike_reid@greenwich.k12.ct.us)

**K–5 Math:**

# Why, What, How

## The Why:

Connecticut Core Standards in Math Grades K-5

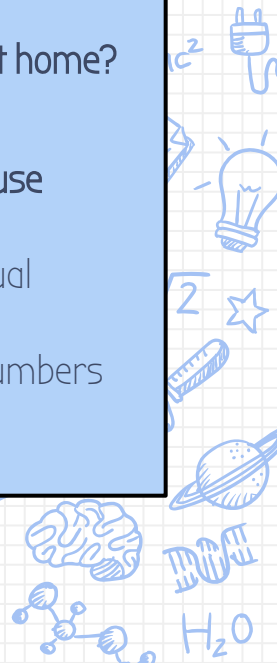
## The What:

Big Ideas Math is the vehicle for curriculum, instruction and assessment.

## The How: How can you support at home?

After today, you will...

- Understand my child will learn to use algorithms just like I did.
- Understand the importance of visual models.
- Support my child with breaking numbers apart and comparing them.



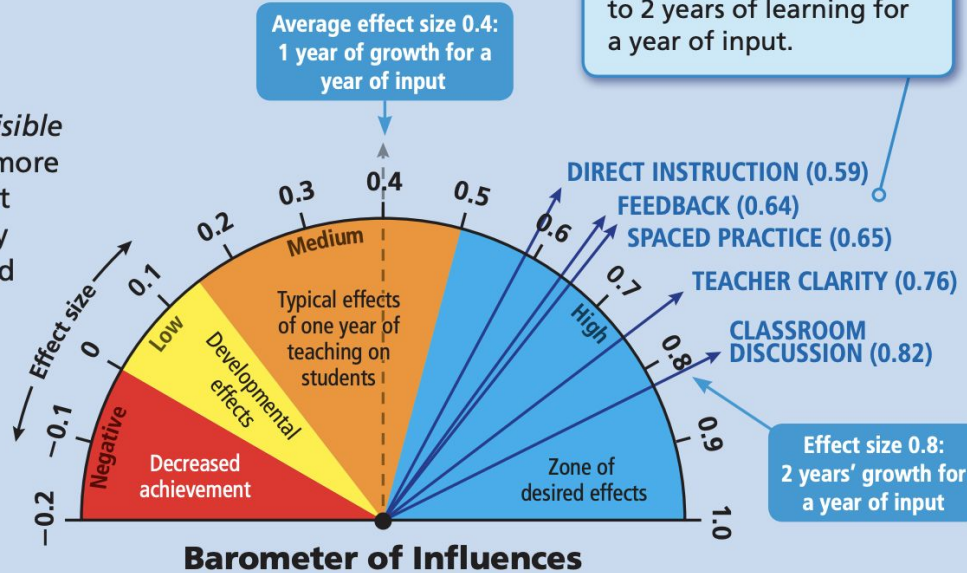


# Why Big Ideas Math?

Embedded in every lesson!

## Five Strategies for Purposeful Focus

Professor John Hattie, in his *Visible Learning* network, identified more than 250 influences on student learning, and developed a way of ranking them. He conducted meta-analyses and compared the influences by their **effect size**—the impact the factor had on student learning.



We focus on **STRATEGIES** with some of the **HIGHEST IMPACT** on student achievement—up to 2 years of learning for a year of input.

# Student Dashboard

## Dashboard

Grade 2: MRL CC 2022



Continue



Chapter 1 - Numbers and Arrays  
Section - 1.1 Even and Odd Numbers

## Assignments

See All



There are no in-progress assignments

## Games



Naming Numbers Flip and find

Chapter 7 - Understand Place Value to 1,000

## Skills



Determining Whether a Number is Even or Odd



Writing Even Numbers as the Sum of Two Equal Numbers



Using Arrays

## Math Musicals



Sing Your Song

Representing numbers between 11 and 20

## Student Resources



Math Tools



Skills Review Handbook



eBook



Videos



Glossary



Flash Cards



Apps



State Specific Resources

# Grades K-2

Name \_\_\_\_\_

Practice 1.5

**Learning Target:** Make an array to solve a word problem.

A paint tray has 2 rows. There are 4 paint colors in each row. How many paint colors are there in all?



$$\begin{array}{r} 4 \\ + 4 \\ \hline 8 \end{array}$$

8 paint colors



1. A parking lot has 3 rows. There are 5 parking spots in each row. How many parking spots are there in all?



$$\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

         parking spots

2. A bookcase has 4 shelves. There are 3 books on each shelf. How many books are there in all?



$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

         books

# Grades 3-5

Name \_\_\_\_\_

Homework & Practice 1.6

**Learning Target:** Compare decimals to the thousandths place.

**Example** Compare 5.167 and 5.16.

Use place value. Line up the decimal points. Start at the left. Compare the digits in each place until the digits differ.

5.167

5.160 ← Place a zero to help you compare.

The digits in the ones place, the tenths place, and the hundredths place are the same. Compare the thousandths.

7 thousandths > 0 thousandths

So, 5.167 > 5.16.

Write which place to use when comparing the numbers.

1. 0.521  
0.576

2. 17.422  
17.946

3. 9.678  
9.67

Compare.

4. 3.445 ○ 3.472

5. 23.049 ○ 23.409

| Ones | Tenths | Hundredths | Thousandths |
|------|--------|------------|-------------|
| .    | .      | .          | .           |
| .    | .      | .          | .           |
| .    | .      | .          | .           |

6. 75.4 ○ 75.391

7. 14.10 ○ 14.100

8. 4.05 ○ 4.005

9. 15.2 ○ fifteen and two thousandths

10. 0.021 ○ twenty-six thousandths

# Big Ideas Math Games

The screenshot shows the Big Ideas Math website interface. At the top left, there is a navigation bar with "BIG IDEAS MATH" and a home icon. Below it, a "Welcome to Big Ideas Math!" message is followed by an "Assignments" section with tabs for "To Do", "Overdue", and "Submitted". A table lists assignments, including "Chapter Test (Adding and Subtracting Decimals)" and "Grade 5: MRL, Chapter 3 - Add and Subtract Decimals".

On the right side, there is a sidebar menu with icons for "Dynamic Student Edition", "Assignments", "Skills Trainer", "Math Tools", "Game Library", and "Math Musicals". A pink arrow points to the "Assignments" icon. At the top right, another pink arrow points to a notification bell icon.

The screenshot shows the "Game Library" interface. It features a "Grade Level" sidebar on the left with options from K to High School. The main area is titled "Interactive" and displays a grid of game cards. Each card includes a game title, a brief description, and a small icon.

| Game Title                            | Description                          |
|---------------------------------------|--------------------------------------|
| Place Value Plug In                   | Place Value Concepts                 |
| Expression Boss                       | Numerical Expressions                |
| Decimal Dots                          | Add and Subtract Decimals            |
| Decimal Dots: Florida Edition         | Add and Subtract Decimals            |
| Multiplication Quest                  | Multiply Whole Numbers               |
| Race Around the World: Multiplication | Multiply Decimals                    |
| Division Dots                         | Divide Whole Numbers                 |
| Race Around the World: Division       | Divide Decimals                      |
| Mixed Number Subtract and Add         | Add and Subtract Fractions           |
| Fraction Connection: Multiplication   | Multiply Fractions                   |
| Fraction Connection: Division         | Divide Fractions                     |
| Surround and Capture                  | Convert and Display Units of Measure |
| Treasure Hunt                         | Patterns and the Coordinate Plane    |
| Volume Solve and Connect              | Understand Volume                    |
| Quadrilateral Line Up                 | Quadrilateral Line Up                |

# GPS Website

TEACHING & LEARNING

DEPARTMENTS

BOARD OF EDUCATION

COMMUNITY/PTAC

## K-8 CURRICULUM

GPS believes that a coherent, articulated PK-12 Standards-Based Curriculum supports all learners (adults and students) in creating and engaging in high impact learning tasks that ensure students develop and demonstrate the Vision of the Graduate capacities. Below, you will find a grade by grade break down of student progress monitors, academic and auxiliary and arts content area curriculum, and links to parent information.

## K-8 CURRICULUM, BY GRADE LEVEL

K Grade 1 Grade 2 Grade 3 Grade 4 Grade 5 Grade 6 Grade 7 Grade 8

Overview

In **English Language Arts** students develop foundational reading, listening, and writing skills through explorations of how to be good readers, writers, and listeners. In **Social Studies** students explore their place in the community, their family, and the foundations of being a good citizen in the community. In **Science**, the performance expectations in kindergarten help students formulate answers to questions such as: "What happens if you push or pull an object harder? Where do animals live and why do they live there? What is the weather like today and how is it different from yesterday?" In **Math**, instructional time will focus on two critical areas: (1) representing and comparing whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in Kindergarten will be devoted to numbers than to other topics.

English Language Arts, Social Studies

Math

Science

FLES and Fine Arts

## K-8 CURRICULUM, BY GRADE LEVEL

K Grade 1 Grade 2 Grade 3 Grade 4 Grade 5 Grade 6 Grade 7 Grade 8

Overview

English Language Arts, Social Studies

Math

Curriculum Overview

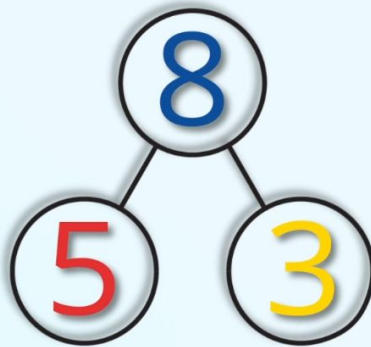
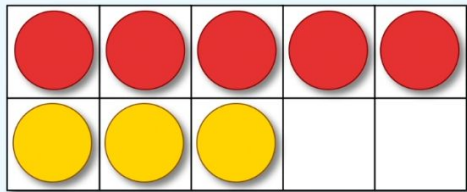
Video/IXL Support

BIM-IXL Unit Videos and Practice : Math 3

| Ch | Les. | Math 3 Topic                 | BIM Videos  | IXL Practice   |
|----|------|------------------------------|---|--|
| 1  | 1.1  | Use Equal Groups to Multiply | <a href="#">Use Equal Groups to Multiply</a><br>Think and Grow: <a href="#">Modeling Real Life</a>  | 1.1-1. <a href="#">Count equal groups</a><br>1.1-2. <a href="#">Relate addition and multiplication for equal groups</a><br>1.1-3. <a href="#">Write multiplication sentences for equal groups</a><br><br>Also consider: <a href="#">Identify multiplication expressions for equal groups</a><br>Also consider: <a href="#">Relate addition and multiplication</a>                        |
| 1  | 1.2  | Use Number Lines to Multiply | <a href="#">Use Number Lines to Multiply</a><br>Think and Grow: <a href="#">Modeling Real Life</a>  | 1.2-1. <a href="#">Write multiplication sentences for number lines</a><br>1.2-2. <a href="#">Multiply using number lines</a><br><br>Also consider: <a href="#">Skip-counting</a><br>Also consider: <a href="#">Skip-counting sequences</a>   |
| 1  | 1.3  | Use Arrays to Multiply       | <a href="#">Use Arrays to Multiply</a><br>Think and Grow: <a href="#">Modeling Real Life</a>  | 1.3-1. <a href="#">Write multiplication sentences for arrays</a><br>1.3-2. <a href="#">Make arrays to model multiplication</a><br><br>Also consider: <a href="#">Identify multiplication expressions for arrays</a><br>Also consider: <a href="#">Write addition sentences for arrays: sums to 25</a><br>Also consider: <a href="#">Identify repeated addition in arrays: sums to 25</a> |
| 1  | 1.4  | Multiply in Any Order        | <a href="#">Multiply in Any Order</a><br>Think and Grow: <a href="#">Modeling Real Life</a>   | 1.4-1. <a href="#">Write two multiplication sentences for an array</a>   |
| 1  | 1.5  | Divide: Size of Equal Groups | <a href="#">Divide: Size of Equal Groups</a><br>Think and Grow: <a href="#">Modeling Real Life</a><br><a href="#">Divide: Number of Equal</a> | 1.5-1. <a href="#">Divide by counting equal groups</a>   |



# Break Apart (Number Bonds)



$$\underline{5} + \underline{3} = \underline{8}$$

$$\underline{3} + \underline{5} = \underline{8}$$





# Algebra in Grade 1? Absolutely!!

## 1.OA.8. Addition & Subtraction Equations

Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 + ? = 11$ ,  $5 = \_ - 3$ ,  $6 + 6 = \_$ .

### Addition

➡  $8 + 6 = \_$

b.  $\_ = 8 + 6$

Missing Sum

c.  $8 + \_ = 14$

d.  $14 = 8 + \_$

Missing 2<sup>nd</sup> Addend

e.  $\_ + 6 = 14$

f.  $14 = \_ + 6$

Missing 1<sup>st</sup> Addend

### Subtraction

➡  $14 - 6 = \_$

b.  $\_ = 14 - 6$

Missing Difference

c.  $14 - \_ = 8$

d.  $8 = 14 - \_$

Missing Subtrahend

e.  $\_ - 6 = 8$

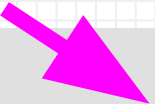
f.  $8 = \_ - 6$

Missing Minuend



# K-2 Word Problem Types



|  | <i>Easy</i>   | <i>Moderate</i>  | <i>Hard</i>  |
|--|---|--|--|
| <br><b>Add together/<br/>Take apart<br/>(part-part-whole)</b> | <b>Total Unknown</b>  | <b>Addend Unknown</b>  | <b>Both Addends Unknown</b>  |
|  | <p>7<sup>K</sup>. Three red apples and two green apples are on the table. How many apples are on the table?</p> | <p>8<sup>K</sup>. Five apples are on the table. Three are red and the rest are green. How many apples are green?</p> | <p>9. Grandma has five flowers. How many can she put in her red vase and how many in her blue vase?</p>          |
| <b>Compare with <i>more</i></b>  | <b>Difference Unknown</b>   | <b>Bigger Unknown</b>  | <b>Smaller Unknown</b>   |
|  | <p>*10. Tammy has two apples. Greg has five apples. How many <u>more</u> apples does Greg have than Tammy?</p>  | <p>12. Greg has three <u>more</u> apples than Tammy. Tammy has two apples. How many apples does Greg have?</p>       | <p>*14. Greg has three <u>more</u> apples than Tammy. Greg has five apples. How many apples does Tammy have?</p> |
| <b>Compare with <i>fewer</i></b>   | <p>11. Tammy has two apples. Greg has five apples. How many <u>fewer</u> apples does Tammy have than Greg?</p>  | <p>*13. Tammy has three <u>fewer</u> apples than Greg. Tammy has two apples. How many apples does Greg have?</p>     | <p>15. Tammy has three <u>fewer</u> apples than Greg. Greg has five apples. How many apples does Tammy have?</p> |

# Why do we need to visualize?

A jacket and scarf cost \$110. The jacket costs \$100 more than the scarf. How much does the scarf cost?

Algebra

$$\begin{aligned}\text{Scarf} &= x \\ \text{Jacket} &= x + 100\end{aligned}$$

$$x + x + 100 = 110$$

$$\begin{aligned}2x + 100 &= 110 \\ -100 &\quad -100\end{aligned}$$

$$\frac{2x}{2} = \frac{10}{2} \quad \boxed{x=5}$$



$$\begin{array}{r} 110 \\ -100 \\ \hline 10 \end{array}$$

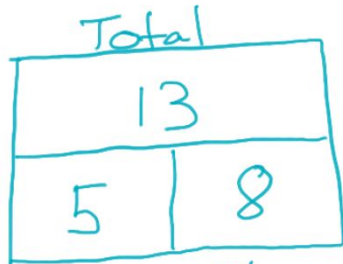
$$10 \div 2 = 5$$



# Grade 1- "Add to"

There were 5 birds in a flock. 8 more birds joined them. How many birds are in the troop now?

Fall Grade 1  
Part Part Whole

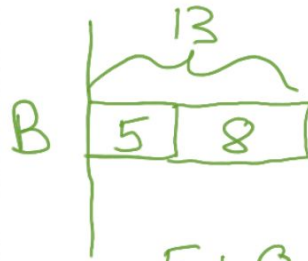


Start Change

$$5 + 8 = \boxed{13}$$

Grade 2

Bar Model or Tape Diagram



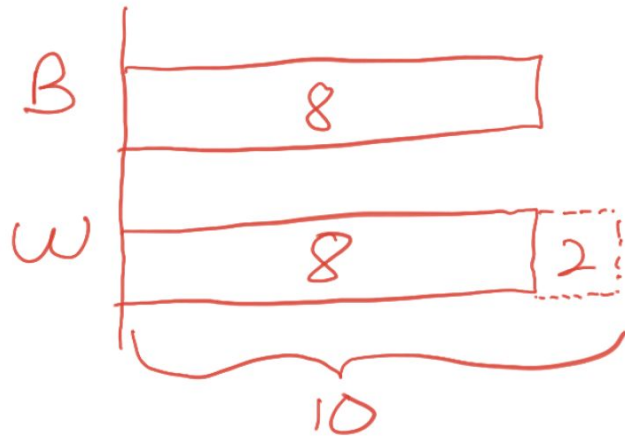
$$5 + 8 = \boxed{13}$$



# Grade 1- "Compare Bigger"

There are 2 fewer black sheep than white sheep. 8 sheep are black. How many sheep are white?

Bar Model



$$8 + 2 = 10$$

10 sheep are white.



# Grade 4

Last summer, Claire swam 4 times as many miles as Julie. Together they swam 65 miles. How many fewer miles did Julie swim than Claire?

Algebra

$$\text{Julie} = x = 13$$

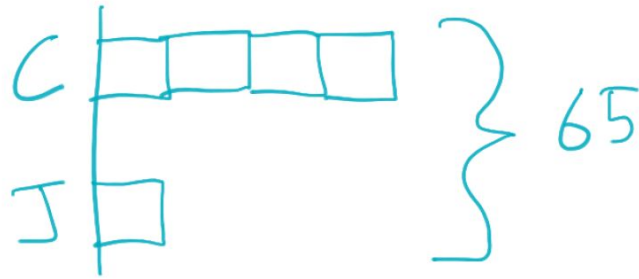
$$\text{Claire} = 4x = 52$$

$$4x + x = 65$$

$$5x = 65$$

$$x = 13$$

$$52 - 13 = \boxed{39}$$



$$65 \div 5 = 13 \text{ (Julie)}$$

$$13 \times 4 = 52 \text{ (Claire)}$$

$$52 - 13 = \boxed{39}$$





# Parent Resources!



## Big Ideas and IXL Login Information

### Big Ideas Login:

[tinyurl.com/gpsbigideas](https://tinyurl.com/gpsbigideas)

Video of how to log in:

<https://www.youtube.com/watch?v=hwP0wbCtfU0>

### IXL Login:

[ixl.com/signin/greenwichps](https://ixl.com/signin/greenwichps)

### We use Google Single Sign On:

Email: **first name.last name@greenwichschools.org** (ex. john.smith@greenwichschools.org)

Password: **Student ID#** (ex. 001099652)

# Questions about Math or another subject?

Mike Reid

Website: [K-8 Math](#)

Email: [michael\\_reid@greenwich.k12.ct.us](mailto:michael_reid@greenwich.k12.ct.us)

Tara Fogel

Website: [K-8 Science](#)

Email: [tara\\_fogel@greenwich.k12.ct.us](mailto:tara_fogel@greenwich.k12.ct.us)

Kim Paladino

Website: [K-8 ELA](#)

Email: [kimberly\\_paladino@greenwich.k12.ct.us](mailto:kimberly_paladino@greenwich.k12.ct.us)

