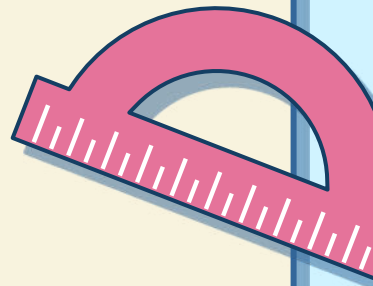




K-5

Illustrative Math Elementary

A Teacher Guide, By Ms. Janazyan



Introduction

In the following slides you will get an in depth overview of the Illustrative Math Curriculum. Along with resources that will help guide your teaching and support you your students' learning.

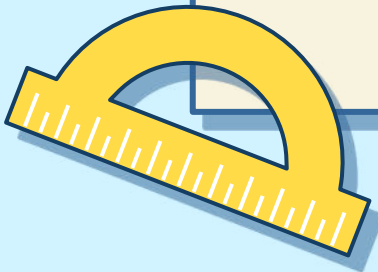


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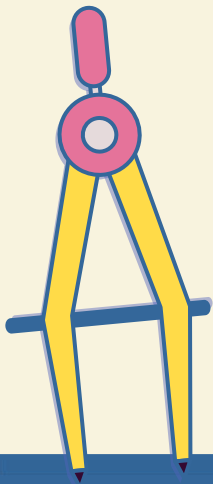
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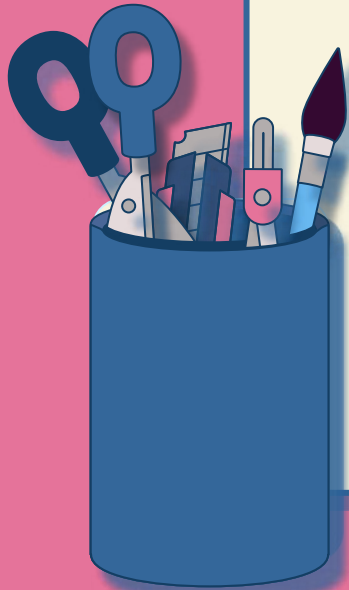
Free and paid resources to help you stay organized.



01

IM Materials

What you need, where to find it
and getting started.



Quick Facts

- Each grade level contains 8 or 9 units.
- Units contain between 8 and 28 lesson plans.
- Each unit, depending on the grade level, has pre-unit practice problems in the first section, checkpoints or checklists after each section, and an end-of-unit assessment.
- In addition to lessons and assessments, units have aligned center activities to support the unit content and ongoing procedural fluency.
- The time estimates in these materials refer to instructional time. Each lesson plan is designed to fit within a class period that is at least 60 minutes long.
- Some units contain optional lessons and some lessons contain optional activities that provide additional student practice for teachers to use at their discretion.
- Materials are available in digital and print formats.

Where to Access the Curriculum

IL Classroom formally Learnzillion

ILC login's are provided by administration or school districts. The ILC site has a organized system that can help you find grade levels, lesson numbers, and other materials by clicking through the website.

Why use ILC?

- Students can access lessons and assessments on devices.
- Assessments get graded by the site.
- Teachers can annotate directly on lessons during presentation mode from a device. For middle school only you can now download a PDF of all the cool downs for 1 unit under "Unit materials."

Kendall Hunt

Kendall Hunt provides the Illustrative Mathematics Curriculum for free via email sign in. All you need to do is create a login using your email.

Why use Kendall Hunt?

- Student facing problems created using google slides. These are great for presenting when teaching.
- Google Slides are clearer and straight forward.
- Zip files of all documents available for quick downloads.

How the curriculum looks in present mode.

IM via IL Classroom

The screenshot shows the IL Classroom interface. On the left is a navigation sidebar with steps 1 through 8. Step 3, 'Warm-up', is highlighted. The main content area displays the question 'Which one doesn't belong?' with four options labeled A, B, C, and D. Each option shows a different arrangement of blue dots. Option A is a 4x4 grid with one dot missing from the bottom right. Option B is a 4x4 grid with one dot missing from the top right. Option C is a 4x4 grid with one dot missing from the bottom left. Option D is a 4x4 grid with one dot missing from the top left. To the right of the main content are 'Teaching notes' and 'Instructional routine: Which One Doesn't Belong?'. At the bottom is a navigation bar with a 'Notes' button and a 'Back to top' button.

language precisely (MPE).

- It gives the teacher an opportunity to hear how students use terminology and talk about characteristics of the items in comparison to one another.
- During the synthesis, ask students to

Teaching notes

Instructional routine: Which One Doesn't Belong?

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2-3 minutes: partner discussion
- Share and record responses.

Student response

- A is the only one where the equal groups aren't in a straight line.
- B is the only one where the equal groups and the dots in the equal groups aren't always right next to one

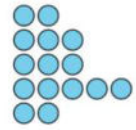
IM via Kendallhunt

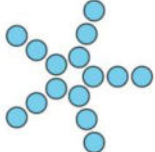
The screenshot shows the Kendall Hunt interface. At the top, the title 'Arrangements' is displayed in a purple header, followed by the question 'Which One Doesn't Belong?' and the page number '3'. The main content area displays the question 'Which one doesn't belong?' with four options labeled A, B, C, and D. Each option shows a different arrangement of blue dots. Option A is a 4x4 grid with one dot missing from the bottom right. Option B is a 4x4 grid with one dot missing from the top right. Option C is a 4x4 grid with one dot missing from the bottom left. Option D is a 4x4 grid with one dot missing from the top left. At the bottom, the text 'Unit 1 • Lesson 17 • Warm-up' is displayed, along with the Kendall Hunt logo and the tagline 'Illustrative Mathematics. LEARN MATH FOR LIFE'.

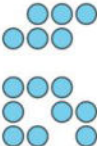
Arrangements 3

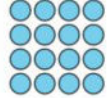
Which One Doesn't Belong?

Which one doesn't belong?

A 

B 

C 

D 

Unit 1 • Lesson 17 • Warm-up

Illustrative Mathematics. LEARN MATH FOR LIFE

Kendall Hunt

How the curriculum looks in present mode.

IM via IL Classroom

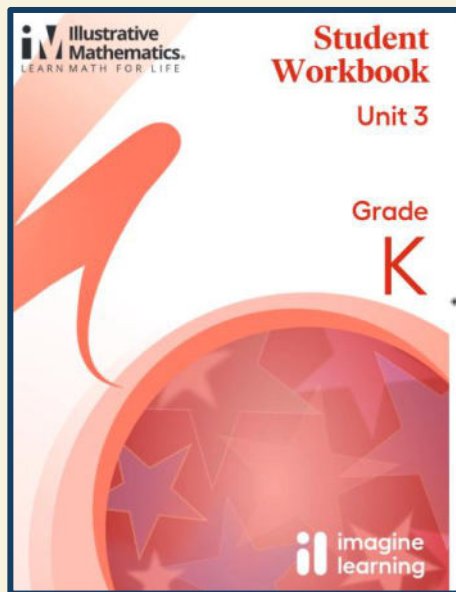
The screenshot shows a digital classroom interface. On the left is a vertical sidebar with a list of activities: 11. 17.2 Activity Prep, 12. 17.2 Activity: Draw Arrays, 13. 17.2 Virtual Activity, 14. 17.2 Activity: Draw Arrays (highlighted in blue), 15. 17.2 Virtual Activity, 16. 17.2 Synthesis: Draw Arrs..., and 17. Lesson Synthesis. The main content area is titled '14 17.2 Activity: Draw Arrays'. It contains two parts: 'a) Draw ways that the dots could be arranged into arrays. Draw as many ways as you can.' and 'b) Explain or show how each array is related to multiplication.' To the right of the text is a cluster of 16 blue dots. Further right is a 'Teaching notes' section with 'Activity, continued' and 'Student response' sub-sections. At the bottom, there is a navigation bar with a 'Back to top' arrow, a 'Teaching notes' label, and a 'Back to top' button. A bottom toolbar includes a 'Sidebar' icon, an 'Annotate' icon, a numeric keypad (7-20), a 'Notes' icon, and an 'Exit' icon.

IM via Kendallhunt

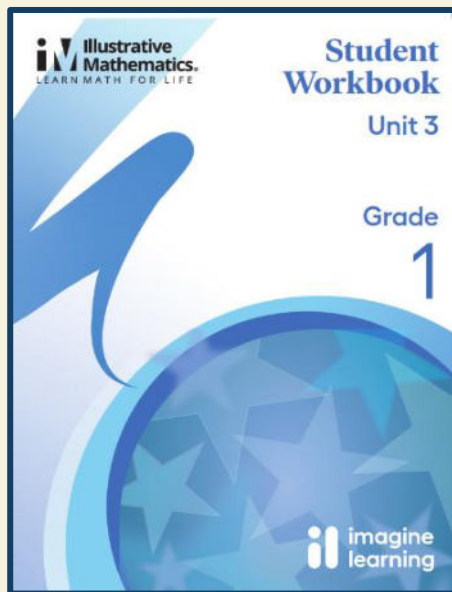
The screenshot shows a digital activity page titled 'Draw Arrays' with a purple header and the number '3' in the top right corner. The page contains two main parts: '1. a. Draw 1 way the dots could be rearranged into an array.' and 'b. Explain or show how the array is related to multiplication.' To the right of the text is a cluster of 16 blue dots. Below this is '2. a. Draw ways that the dots could be arranged into arrays. Draw as many ways as you can.' and 'b. Explain or show how each array is related to multiplication.' To the right of the text is another cluster of 16 blue dots. At the bottom, there is a footer with the 'Illustrative Mathematics' logo (with the tagline 'LEARN MATH FOR LIFE'), the text 'Unit 1 • Lesson 17 • Activity 2', and the 'Kendall Hunt' logo.

Student Work Books

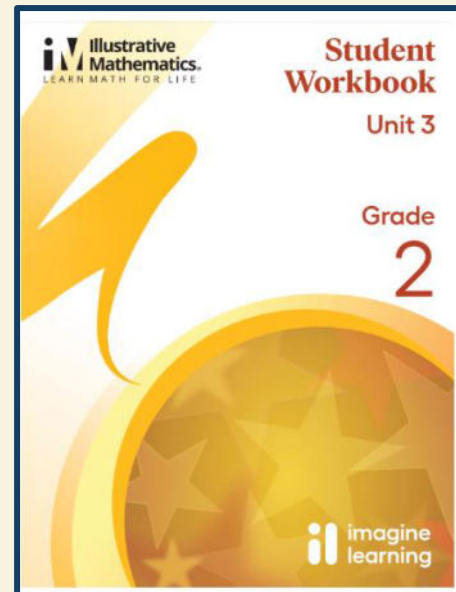
Kinder



1st Grade



2nd Grade



Centers

Via ILC you access all centers in one location unless you go to your unit and section to view center summary by section.

Via Kendall Hunt you can access all the centers per grade level.

IM K-5 MATH [K-5 V1 Centers Blackline Masters \(PDF\)](#) PDF version of IM K-5 Centers materials for print or download. [HTTPS://DRIVE.GOOGLE.COM/FILE/D/1UdLSubjG0YYvT...](https://drive.google.com/file/d/1UdLSubjG0YYvT...)
ILLUSTRATIVE MATHEMATICS

Centers

- Bingo (K)**
Students generate a number and cover the appropriate space on the board with a counter.
ILLUSTRATIVE MATHEMATICS
- Build Shapes (K)**
Students build shapes with clay and straws.
ILLUSTRATIVE MATHEMATICS
- Can You Build It? (3-5)**
Students construct and describe the structure of rectangles and rectangular prisms.
ILLUSTRATIVE MATHEMATICS
- Can You Draw It? (1-5)**
Students describe and draw two-dimensional shapes.
ILLUSTRATIVE MATHEMATICS
- Capture Squares (1-3)**
Students generate a number and connect two dots that are adjacent to the number.
ILLUSTRATIVE MATHEMATICS
- Check It Off (K-1)**
Students choose two number cards and add or subtract to make given numbers. The partner who makes the most numbers wins.
ILLUSTRATIVE MATHEMATICS

UNITS RESOURCES CENTERS [How To Use These Materials](#) [Course Guide](#)

Can You Build It? (3-5)	Can You Draw It? (1-5)	Capture Squares (1-3)
Compare (1-5)	Creating Line Plots (2-5)	Estimate and Measure (1-4)
Five in a Row: Addition and Subtraction (1-2)	Five in a Row: Multiplication (3-5)	How Are They the Same? (1-5)
How Close? (1-5)	Mystery Number (1-4)	Number Line Scoot (2-3)
Number Puzzles: Addition and Subtraction (1-4)	Picture Books (K-5)	Rectangle Rumble (3-5)
Rolling for Fractions (3-5)	Secret Fraction (3)	Sort and Display (1-3)
Target Measurements (2-5)	Target Numbers (1-5)	Tic Tac Round (3-5)
Which One? (K-5)		

Manipulatives

Click on images below to see where you can buy them if you don't already have them.

A list of manipulatives needed for each grade level can be found in your curriculum. Manipulatives are a big part of this curriculum.



Vocabulary

Each grade level has a glossary of words for each unit. Kinder is the only grade that has some images included with the vocabulary words. To help present and teach students the vocabulary words you can look for your grade level vocabulary cards on TPT. The curriculum only presents the words with no images.



Illustrative Math Vocabulary Cards Bundle Grade 4 Units 1-9

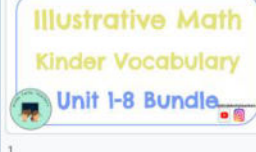
 By Kinda Techy Teachers

This is a bundle of all our vocabulary cards for Illustrative Math in grade 4. Units 1-9. These posters are editable.*There are NO Unit 5 and Unit 9 terms included in glossary of Illustrative Mathematics for...

Subjects: Math

Grades: 4th

Types: Printables, Posters, Centers



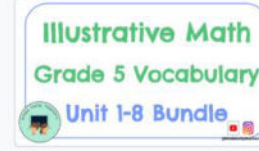
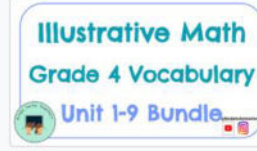
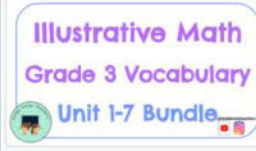
1



2



3

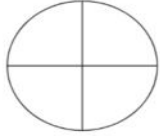


Images include links to products.

Examples of Vocab Cards

fourths

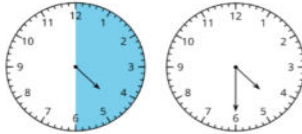
The circle is split into fourths, or quarters.



The pieces created when a shape is split into 4 pieces that are the same size.

IM 17

half-past



The clock shows half-past 4 o'clock or 4:30.

IM 17

greater than

Symbol	Words	Example
$>$	greater than	$10 > 3$



10 is greater than 3.

IM 14

less than

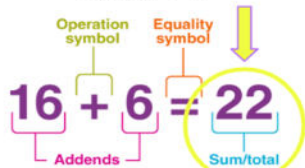
Symbol	Words	Example
$<$	Less than	$2 < 6$



2 is less than 6.

IM 14

sum

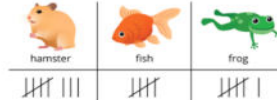


The total when two or more numbers are added.

IM 11

survey

A student took a survey in his class on which animal would make the best class pet? Their responses are shown below.



A way to collect data using a group of people answering the same question.

IM 11

Math Vocabulary

array



An arrangement of objects in rows and columns. Each column must contain the same number of objects as the other columns, and each row must have the same number of objects as the other rows.

multiplication

$$9 \times 3 = 24$$

$$\begin{array}{r} 349 \\ \times 91 \\ \hline \end{array}$$

The operation that tells you the total number of objects when you have a certain number of equal measures.

expression

$$3 \times 2$$

An expression has at least 2 numbers and at least one math operation, such as addition, subtraction, multiplication, or division.

equation

$$4 \times 1 = 8 \div 2$$

A statement that includes an equal sign (=). It tells us that what is on one side of the sign is equal to what is on the other side.

factor

$$\begin{array}{c} 2 \times 3 = 6 \\ \text{Factor} \quad \text{Factor} \end{array}$$

When we multiply two whole numbers to get a product, each of those numbers is a factor of the product.

picture graph



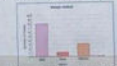
A way to show how many in each group or category using pictures of the objects or symbols.

scaled picture graph



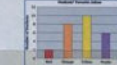
A picture graph where each picture represents a certain number of units.

bar graph



A way to show how many in each group or category using the length of rectangles.

scaled bar graph



A bar graph marked in multiples of a certain number.

key



The part of a picture graph that tells what each picture represents.

How to find the standards connected to each problem on the end of unit assessments to add them to your grading rubric spreadsheet.

Step 1.

- Locate end of unit assessment answer key.
- Each problem has a standard attached to it.
- Write those down next to the problem number or add them to spreadsheet.

Printable versions

- [3.1 End-of-Unit Assessment \(PDF\)](#)
- [3.1 End-of-Unit Assessment \(Word\)](#)
- [3.1 End-of-Unit Assessment Answer Key](#)
- [3.1 Spanish End-of-Unit Assessment \(PDF\)](#)
- [3.1 Spanish End-of-Unit Assessment \(Word\)](#)

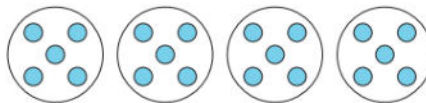
Problem 3

Students write multiplication expressions to represent the number of dots in different images. These include an array and an equal groups image. In each case, students may write the order of the factors in two different ways. Students could possibly see the diagrams differently, that is they could write 2×10 for the first if they group pairs of 5 dots. This is not likely but if they write a multiplication expression whose value is 20 for the first diagram or 30 for the second diagram they may understand the meaning of multiplication but may view the diagram differently.

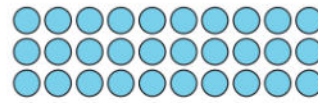
Statement

Write a multiplication expression that could represent the number of dots in each drawing.

A



B



Solution

A: 4×5 or 5×4

B: 3×10 or 10×3

Aligned Standards

3.OA.A.1

How to find the standards connected to each problem on the end of unit assessments to add them to your grading rubric spreadsheet.

Step 2.

- Locate end of unit assessment in present mode.
- Click into it, standards are listed at the top.
- Place cursor over the standards numbers to read the standard. It will pop up.
- Write those down next to each standard number with problem number or copy and paste the standard into the spreadsheet.

Unit assessments

Section Checkpoints and checklists for observation of students can be found in the Te assessment is below.

3.MD.B.3, 3.OA.A.1, 3.OA.A.3, 3.OA.A.4

3.1 End-of-Unit Assessment

This is the digital version of the end-of-unit assessment for Grade 3, Unit 1. Paper-based versions of this assessment are available in the Additional Materials tab. This assessment is intended to gauge students' understanding of...

3.1 INTRODUCING STRATEGIC MATHEMATICS

ASSESSMENT

3.1 End-of-Unit Assessment

Standards: 3.MD.B.3 3.OA.A.3 3.OA.A.1 3.OA.A.4

Assessment Materials About this assessment

1 Get ready!

Teaching notes

Directions:

- Answer each question.
- Use the arrow to go to the next problem.
- Check your work.
- Tap Submit when you are done.

Submit >

classroom

Illustrative Mathematics K-5 > Grade 3 > 3.1 Introducing

Lesson Standard - 3.MD.B.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

Standards 3.MD.B.3 3.OA.A.3 3.OA.A.1 3.OA.A.4

Assessment Materials About this assessment

How to find the standards connected to each problem on the end of unit assessments to add them to your grading rubric spreadsheet.

Step 3.

- Duplicate a copy of the end of unit assessment spreadsheet from grade 3 into a new spreadsheet.
- Under (setting) tab fill in your student names.
- Under the (U1 End) tab edit the white and gray boxes to fit your assessment.
- Enter the standard #s and the standards (see previous slides).
- Adjust the white fill in boxes and gray blank boxes to fit your assessment by copy and pasting them under the right number/standard to be filled in when grading.
- Score each problem #/4.

Student	Standard	Description	#1	#2	#3	#4	#5	#6	#7	Avg
	3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets	3	-	-					3
	3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .			-					<- Enter Ratings
	3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. See Glossary, Table 2.					-	-	-	<- Enter Ratings
	3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$.							-	<- Enter Ratings

Student	Standard	Description	#1	#2	#3	#4	#5	#6	#7	Avg	Avg
	3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets	4	-						3	2.75
	3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .		2						4	
Valeria	3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. See Glossary, Table 2.			4					3	
	3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$.				2	4	3		1	

Avg	Avg
3	
4	
3	
1	
Avg	
4	
4	
Sum: 11	

To get total average score, highlight the 4 Avg boxes, and at the bottom of spreadsheet click on box labeled sum.

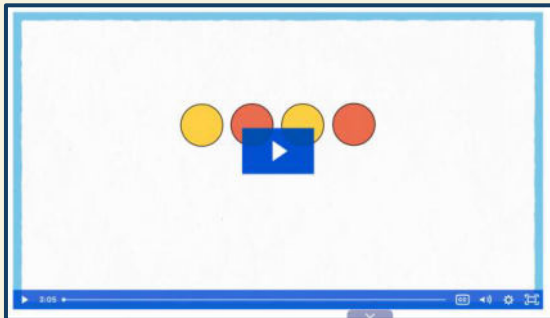
Standards Based Scoring Rubric

		Missing	1	2	3	4
	"I'm here..."	<i>"I don't know where to begin."</i>	<i>"I can complete this task with substantial assistance."</i>	<i>"I am familiar with the concept, but I make some significant errors."</i>	<i>"I understand the concepts well enough to complete the task without significant errors."</i>	<i>"I understand the concepts well enough to teach it to someone else."</i>
	"Because.."	I provided no evidence for evaluation or...	I can begin the task with the assistance of the teacher.	I can begin and make meaningful progress on the task but need help to complete it.	I can complete the task with limited guidance.	I can complete the task independently.
		I did not attempt the opportunity.	I can apply a strategy with assistance.	I can apply a strategy but there are significant procedural errors in my work.	I can apply an appropriate strategy and perform procedures accurately.	I can apply an effective strategy and perform procedures accurately, efficiently, and flexibly.
			I can demonstrate a beginning understanding of the concept.	I can demonstrate a developing understanding of the concept.	I can demonstrate a general understanding of the concept.	I can demonstrate a thorough understanding of the concept.
	"So I should..."	Provide evidence for evaluation	Progress toward independence with the help of reteaching.	Reflect on feedback and make revisions in order to develop a greater understanding.	Deepen my understanding by explaining my thinking and making connections to related ideas.	Teach the concepts to someone else.

Unit Videos & Family Videos

The curriculum now has unit videos that give you an overview of what your students will be learning along with videos you can share with families so they know what their child is learning in math. There are also videos to inspire student learning that you play for students after certain lessons.

Unit Launch Video



Unit Launch Video For Families



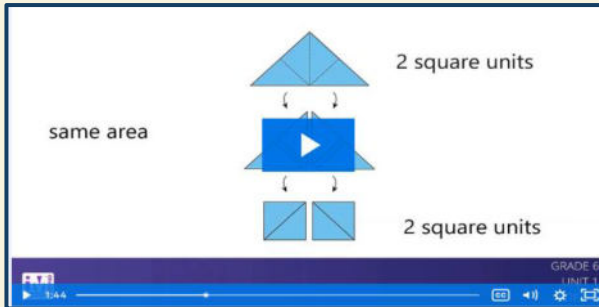
Inspire Videos



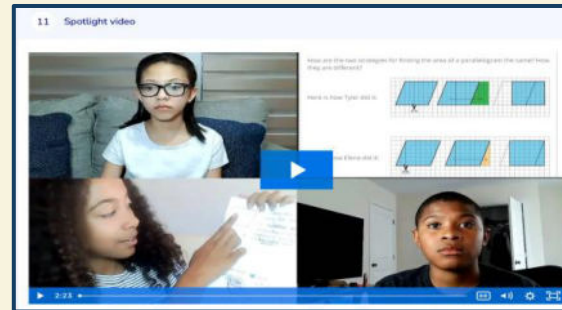
Middle School Unit Videos & Family Videos

The curriculum for middle school has two types of videos that can be utilized to help with learning. The video lesson summaries give a overview of what the lessons will teach in each unit. The spotlight videos are embedded into the lessons and are used to help students see different perspectives and strategies used by kids their age. They can think of these kids in the videos as thinking partners.

Video Lesson Summaries



Spotlight Videos



02

IM Lessons

Teaching the lessons, student groups, and assessments.



Problem Based Instruction

Learning Mathematics by Doing Mathematics

A problem-based instructional framework supports teachers in structuring lessons so students are the ones doing the problem solving to learn the mathematics. The activities and routines are designed to give teachers opportunities to see what students already know and what they can notice and figure out before having concepts and procedures explained to them. The teacher has many roles in this framework: listener, facilitator, questioner, synthesizer, and more. In all these roles, teachers must listen to and make use of student thinking, be mindful about who participates, and continuously be aware of how students are positioned in terms of status inside and outside the classroom. Teachers also guide students in understanding the problem they are being asked to solve, ask questions to advance students' thinking in productive ways, provide structure for students to share their work, orchestrate discussions so students have the opportunity to understand and take a position on the ideas of others, and synthesize the learning with the whole class at the end of activities and lessons.



Example of how I teach my IM lessons.

Teacher presents lesson slides.

Warm-up *Whole Class Work (Teachers poses question/students take turns sharing ideas)

Warm-up Synthesis * Whole Class Work

(Teacher asks students to synthesis what they learned from the warm up/teacher might need to synthesis depending on level of learning.)

Students will go into math groups with their workbooks.

Activity 1 *Math Group Work

(Depending on classroom abilities, teacher go over activity directions and have students work together as a group to solve the problems. Teacher will walk around and monitor/facilitate groups/differentiate or guide students in the right direction)

Activity 2 (This may be optional if you don't have enough time. Same model as above.)

Lesson Synthesis *Whole Class Work

(Teacher review what students have discovered in their math learning)

Cool Down *Mini Test

(Students show what they have learned in the lesson by completing 1 problem based on new learning.)

Pacing Guides

	Kindergarten	Grade 1	Grade 2
week 1	Unit 1 Math in Our World (18–19 days) Optional Lesson: 17	Unit 1 Adding, Subtracting, and Working with Data (16–17 days) Optional Lesson: 15	Unit 1 Adding, Subtracting, and Working with Data (16–20 days) Optional Lessons: 6, 12, 17, 18
week 2			
week 3			
week 4			
week 5			
week 6	Unit 2 Numbers 1–10 (23–24 days) Optional Lesson: 22	Unit 2 Addition and Subtraction Story Problems (23–24 days) Optional Lesson: 22	Unit 2 Adding and Subtracting within 100 (14–18 days) Optional Lessons: 4, 10, 15, 16
week 7			
week 8			
week 9			
week 10			
week 11	Unit 3 Flat Shapes All Around Us (16–17 days) Optional Lesson: 15	Unit 3 Adding and Subtracting within 20 (29–30 days) Optional Lesson: 28	Unit 3 Measuring Length (16–20 days) Optional Lessons: 7, 13, 17, 18
week 12			
week 13			
week 14			
week 15			
week 16	Unit 4 Understanding Addition and Subtraction (18–20 days) Optional Lessons: 13, 18	Unit 4 Numbers to 99 (23–25 days) Optional Lessons: 12, 23	Unit 4 Addition and Subtraction on the Number Line (14–17 days) Optional Lessons: 6, 14, 15
week 17			
week 18			
week 19			
week 20			
week 21	Unit 5 Composing and Decomposing Numbers to 10 (15–17 days) Optional Lessons: 4, 15	Unit 5 Adding within 100 (15–16 days) Optional Lesson: 14	Unit 5 Numbers to 1,000 (13–15 days) Optional Lessons: 7, 13, 14
week 22			
week 23			
week 24			
week 25			
week 26	Unit 6 Numbers 0–20 (13–15 days) Optional Lessons: 2, 13	Unit 6 Length Measurements within 120 Units (18–19 days) Optional Lesson: 17	Unit 6 Geometry, Time, and Money (18–23 days) Optional Lessons: 5, 10, 14, 20, 21
week 27			
week 28			
week 29			
week 30			
week 31	Unit 7 Solid Shapes All Around Us (18 days) Optional Lessons: none	Unit 7 Geometry and Time (19 days) Optional Lessons: none	Unit 7 Adding and Subtracting within 1,000 (16–20 days) Optional Lessons: 5, 11, 17, 18
week 32			
week 33			
week 34			
week 34			
week 34	Unit 8 Putting It All Together (17–23 days) Optional Lessons: 2, 4, 5, 17, 18, 19	Unit 8 Putting It All Together (12 days) Optional Lessons: none	Unit 8 Equal Groups (12–15 days) Optional Lessons: 5, 6, 13
week 31			
week 32			
week 33			
week 34			
week 34	Unit 9 Putting It All Together (12 days) Optional Lessons: none	Unit 9 Putting It All Together (15 days) Optional Lessons: none	Unit 9 Putting It All Together (15 days) Optional Lessons: none
week 31			
week 32			
week 33			
week 34			

	Grade 3	Grade 4	Grade 5
week 1	Unit 1 Introducing Multiplication (22–23 days) Optional Lesson: 21	Unit 1 Factors and Multiples (8–10 days) Optional Lessons: 4, 8	Unit 1 Finding Volume (13–14 days) Optional Lesson: 12
week 2			
week 3			
week 4			
week 5			
week 6	Unit 2 Area and Multiplication (15–17 days) Optional Lessons: 11, 15	Unit 2 Fraction Equivalence and Comparison (18–19 days) Optional Lesson: 17	Unit 2 Fractions as Quotients and Fraction Multiplication (17–19 days) Optional Lessons: 16, 17
week 7			
week 8			
week 9			
week 10			
week 11	Unit 3 Wrapping Up Addition and Subtraction within 1,000 (22–23 days) Optional Lesson: 21	Unit 3 Extending Operations to Fractions (20–22 days) Optional Lessons: 19, 20	Unit 3 Multiplying and Dividing Fractions (19–22 days) Optional Lessons: 9, 10, 20
week 12			
week 13			
week 14			
week 15			
week 16	Unit 4 Relating Multiplication to Division (23–24 days) Optional Lesson: 22	Unit 4 From Hundredths to Hundred-thousands (24–25 days) Optional Lesson: 23	Unit 4 Wrapping Up Multiplication and Division with Multi-Digit Numbers (21–23 days) Optional Lessons: 17, 21
week 17			
week 18			
week 19			
week 20			
week 21	Unit 5 Fractions as Numbers (19–20 days) Optional Lesson: 18	Unit 5 Multiplicative Comparison and Measurement (19–20 days) Optional Lesson: 18	Unit 5 Place Value Patterns and Decimal Operations (26–28 days) Optional Lessons: 4, 26
week 22			
week 23			
week 24			
week 25			
week 26	Unit 6 Measuring Length, Time, Liquid Volume, and Weight (17–18 days) Optional Lesson: 16	Unit 6 Multiplying and Dividing Multi-digit Numbers (26–27 days) Optional Lesson: 25	Unit 6 More Decimal and Fraction Operations (21–23 days) Optional Lessons: 20, 21
week 27			
week 28			
week 29			
week 30			
week 31	Unit 7 Two-dimensional Shapes and Perimeter (17 days) Optional Lessons: none	Unit 7 Angles and Angle Measurement (17–18 days) Optional Lesson: 16	Unit 7 Shapes on the Coordinate Plane (15 days) Optional Lessons: none
week 32			
week 33			
week 34			
week 34			
week 34	Unit 8 Putting It All Together (17 days) Optional Lessons: none	Unit 8 Properties of Two-dimensional Shapes (9–12 days) Optional Lessons: 6, 9, 10	Unit 8 Putting It All Together (19–20 days) Optional Lesson: 9
week 31			
week 32			
week 33			
week 34			
week 34	Unit 9 Putting It All Together (14 days) Optional Lessons: none	Unit 9 Putting It All Together (14 days) Optional Lessons: none	Unit 9 Putting It All Together (14 days) Optional Lessons: none
week 31			
week 32			
week 33			
week 34			

Pacing Guides Middle School

GRADE 6 Pacing Guide

	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	UNIT 7	UNIT 8	UNIT 9
	Area and Surface Area	Introducing Ratios	Unit Rates and Percentages	Dividing Fractions	Arithmetic in Base Ten	Expressions and Equations	Rational Numbers	Data Sets and Distributions	Putting It All Together <i>(Optional)</i>
Total Days	22	19	19	20	18	22	21	21	0-6
Assessment Days	3	2	2	3	3	3	2	3	0
Instructional Days	19	17	17	17	15	19	19	18	0-6

GRADE 7 Pacing Guide

	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	UNIT 7	UNIT 8	UNIT 9
	Scale Drawings	Introducing Proportional Relationships	Measuring Circles	Proportional Relationships and Percentages	Rational Number Arithmetic	Expressions, Equations, and Inequalities	Angles, Triangles, and Prisms	Probability and Sampling	Putting It All Together <i>(Optional)</i>
Total Days	15	17	13	18	19	26	19	23	0-13
Assessment Days	2	2	2	2	2	3	2	3	0
Instructional Days	13	15	11	16	17	23	17	20	0-13

Pacing Guide

Illustrative Mathematics 6-8 Pacing Guide

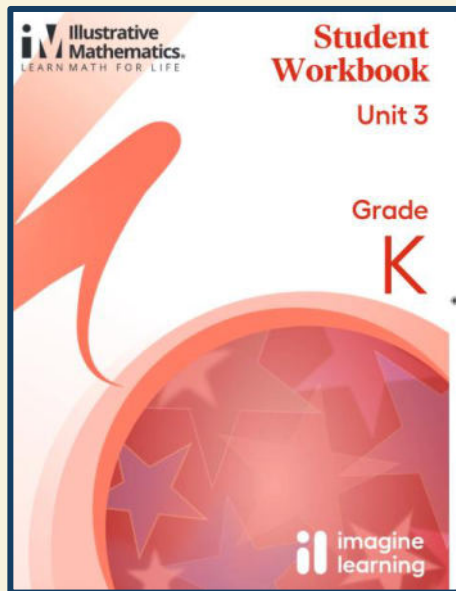
Number of days includes assessments. Upper bound of range includes optional lessons.

(MA) means the unit has a mid-unit assessment.

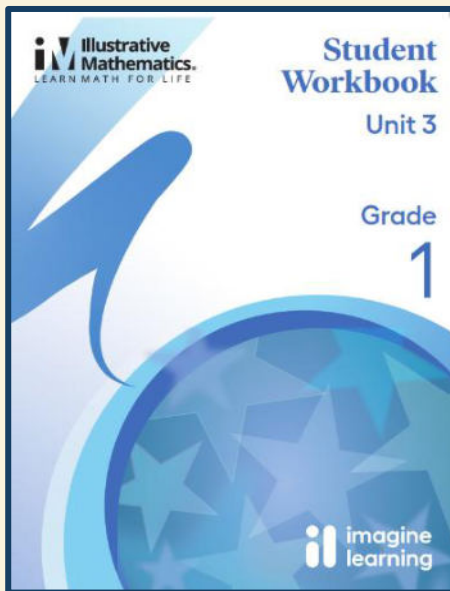
	Grade 6	Grade 7	Grade 8
week 1	Unit 1 Area and Surface Area (21-22 days) (MA) Optional Lesson: 16	Unit 1 Scale Drawings (13-15 days) Optional Lessons: 8, 13	Unit 1 Rigid Transformations and Congruence (20 days) (MA) Optional Lessons: none
week 2		Unit 2 Introducing Proportional Relationships (17 days) Optional Lessons: none	Unit 2 Dilations, Similarity, and Introducing Slope (15 days) Optional Lessons: none
week 3	Unit 2 Introducing Ratios (19 days) Optional Lessons: none		
week 4		Unit 3 Measuring Circles (11-13 days) Optional Lessons: 5, 11	Unit 3 Linear Relationships (16 days) Optional Lessons: none
week 5		Unit 4 Proportional Relationships and Percentages (17-18 days) Optional Lesson: 15	Unit 4 Linear Equations and Linear Systems (18 days) Optional Lessons: none
week 6		Unit 5 Rational Number Arithmetic (19 days) Optional Lessons: none	Unit 5 Functions and Volume (22-25 days) (MA) Optional Lessons: 17, 18, 22
week 7	Unit 3 Unit Rates and Percentages (18-19 days) Optional Lesson: 2	Unit 6 Expressions, Equations, and Inequalities (26 days) (MA) Optional Lessons: none	Unit 6 Associations in Data (12-13 days) Optional Lesson: 11
week 8	Unit 4 Dividing Fractions (20 days) (MA) Optional Lessons: none	Unit 7 Angles, Triangles, and Prisms (19 days) Optional Lessons: none	Unit 7 Exponents and Scientific Notation (18 days) Optional Lessons: none
week 9		Unit 8 Data Sets and Distributions (21 days) (MA) Optional Lessons: none	Unit 8 Pythagorean Theorem and Irrational Numbers (18 days) Optional Lessons: none
week 10		Unit 9 Putting It All Together (0-13 days) Optional Lessons: all	Unit 9 Putting It All Together (0-10 days) Optional Lessons: all
week 11			
week 12			
week 13			
week 14			
week 15			
week 16			
week 17			
week 18			
week 19			
week 20			
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week 35			
week 36			

Work Books vs. Online Platform

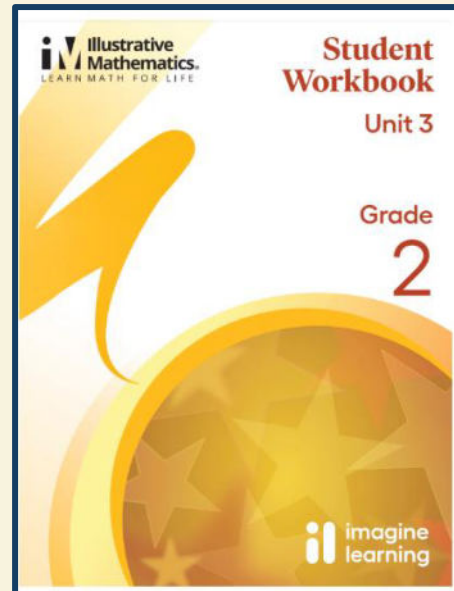
Kinder



1st Grade



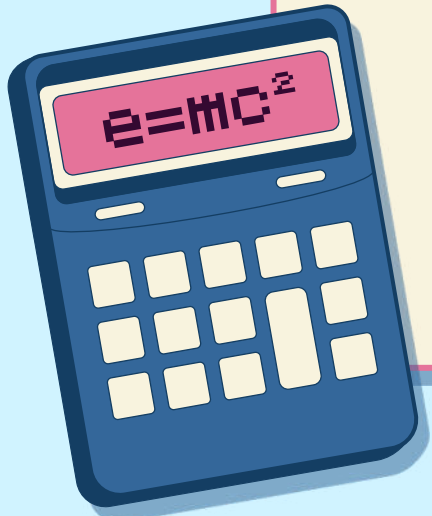
2nd Grade



01

IM Centers

Organizing and playing centers.



Centers

Structure of Center Time

In **kindergarten and grade 1**, center time is **built into lessons** so that students have a chance to spend more time on topics that require more time to develop understanding. New centers are introduced during this time and students are given a choice to work on previously introduced centers.

In **grades 1 and 2**, there is a **center day at the end of each section of each unit**. In grade 2, these lessons are optional. In these lessons, new centers are introduced and students also have time to choose between previously introduced centers that reinforce content from the unit or build grade-level fluencies.

In **grades 3–5**, center time is in **addition to regular class time, as desired by the teacher**. Optional center day lessons are included occasionally in a unit to introduce a center to students, but in general centers are provided as an extra resource for teachers.

Centers can be used in a variety of additional ways. Students can work on centers if a lesson is completed and there is class time remaining. Entire class sessions can also be dedicated to centers for students to practice or solidify the mathematical ideas of a unit. Students can work on center activities during morning work time, or any other free periods throughout the day. Centers can also be used as support for students when practice with prior grade-level standards is needed.

Example of how I teach my IM lessons.

Whole Class Centers

I introduce the center, and play a game with a student so the class sees an example of how to play the center.

I pair students up and everyone starts playing the center.

While students play, I walk around facilitating the game, differentiating for those who need it, or reteaching the rules of the game.

If things are going smoothly I participate in the games with some students.

Small Group Centers

At times, I also play centers in small groups. This is another way to introduce the games, practice fluency, and differentiate if needed. ,

Center Tools in the Curriculum

Center navigation tool shows what centers you will need for all of your units.

Center summaries found under each section of each unit.

IM K-5 MATH

Centers Navigation Tool

Click on your grade level to explore your grade's centers:

Grade K Grade 1 Grade 2 Grade 3 Grade 4 Grade 5

Counting, Place Value and Fractions (without Operations)

	K	1	2	3	4	5
Tower Build	✓					
Less, Same, More	✓					
Subtraction Towers	✓					
Grab and Count	✓	✓				
Number Race	✓	✓				
Counting Collections	✓	✓	✓			
Write Numbers	✓	✓	✓			
Get Your Numbers in Order	✓	✓	✓	✓		
Greatest of them All	✓	✓	✓	✓	✓	
Number Line Scoot	✓	✓	✓	✓	✓	
Mystery Number	✓	✓	✓	✓	✓	
Secret Fraction	✓	✓	✓	✓	✓	
Tic Tac Round		✓	✓	✓		

Operations & Algebraic Thinking and Fractions (with Operations)

	K	1	2	3	4	5
Roll and Add	✓					
Find the Value of Expressions	✓					
Make or Break Apart Numbers	✓					
5-Frames	✓					
Math Fingers	✓					
Bingo	✓					
Math Libs	✓					
Find the Pair	✓	✓				
Check It Off	✓	✓				
What's Behind My Back?	✓	✓	✓			
Shake and Spill	✓	✓	✓			
Math Stories	✓	✓	✓			
Capture Squares	✓	✓	✓	✓		
Target Numbers	✓	✓	✓	✓		
How Close?	✓	✓	✓	✓		
Compare	✓	✓	✓	✓		
Five in a Row: Addition and Subtraction	✓	✓	✓	✓		
Five in a Row: Multiplication	✓	✓	✓	✓		
Number Puzzles: Addition and Subtraction	✓	✓	✓	✓		
Number Puzzles: Multiplication and Division	✓	✓	✓	✓		
Jump the Line		✓	✓	✓	✓	
Rectangle Rumble		✓	✓	✓	✓	
Rolling for Fractions		✓	✓	✓	✓	
Find the Number		✓	✓	✓	✓	
Watch Your Remainder		✓	✓	✓	✓	

Measurement, Data and Geometry

	K	1	2	3	4	5
Connecting Cubes	✓					
Build Shapes	✓					
Pattern Blocks	✓					
Match Mine	✓					
Geoblocks	✓					
Which One?	✓	✓	✓	✓	✓	✓
Picture Books	✓	✓	✓	✓	✓	✓
Sort and Display	✓	✓	✓	✓	✓	✓
Estimate and Measure	✓	✓	✓	✓	✓	✓
Target Measurements	✓	✓	✓	✓	✓	✓
How are They the Same?	✓	✓	✓	✓	✓	✓
Can You Draw It?	✓	✓	✓	✓	✓	✓
Would You Rather?	✓	✓	✓	✓	✓	✓
Creating Line Plots	✓	✓	✓	✓	✓	✓
Can You Build It?	✓	✓	✓	✓	✓	✓
Symmetrical Designs	✓	✓	✓	✓	✓	✓

Center summary

Visit each center page for more information and for any needed Blackline masters.

Center	Stages
Rectangle Rumble (3–5)	Stage 2: Factors 1–5 (supporting)
Five in a Row: Multiplication (3–5)	Stage 2: Factors 1–9 (supporting)
Capture Squares (1–3)	Stage 6: Multiply with 1–5 (supporting)

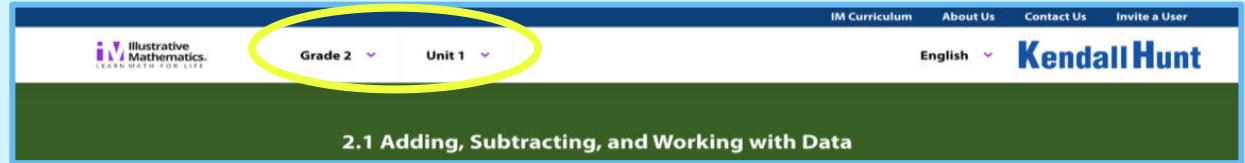
Center Google Slides by Kendall Hunt for Grades 1-2

Kendall Hunt has center google slides for teachers to use with their class. These slides give directions on how to use the slides and they look awesome. Unfortunately I believe they are only available for 1st and 2nd grade. If I am mistaken please let me know!!

Step 1: Go to your grade and click on a unit.

Step 2: Look at the list of lessons and you will see "Center Day". Click!

Step 3: Go to the bottom of the page to additional resources and click on "Google Slides."



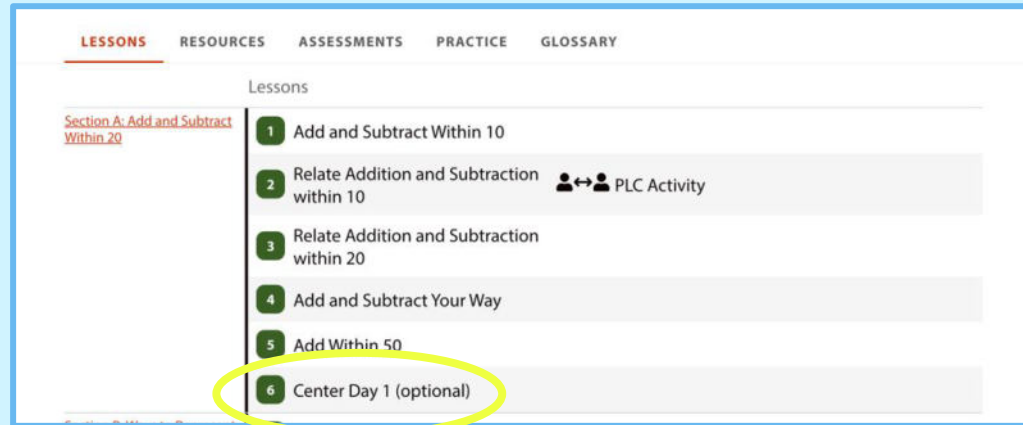
IM Curriculum About Us Contact Us Invite a User

Illustrative Mathematics. LEARN MATH FOR LIFE

Grade 2 Unit 1

English Kendall Hunt

2.1 Adding, Subtracting, and Working with Data



LESSONS RESOURCES ASSESSMENTS PRACTICE GLOSSARY

Lessons

Section A: Add and Subtract Within 20

- 1 Add and Subtract Within 10
- 2 Relate Addition and Subtraction within 10 PLC Activity
- 3 Relate Addition and Subtraction within 20
- 4 Add and Subtract Your Way
- 5 Add Within 50
- 6 Center Day 1 (optional)

Additional Resources

[Google Slides: 2.1.6 Presentation Slides](#)

2.1.6 Presentation Slides PP


Center Tools on TPT

If you find it difficult to manage and locate centers and directions etc. consider this TPT resource. A collection of all the centers you will use in your grade level, with center summaries, and images to help you organize or keep track of the manipulatives each center needs.



Illustrative Mathematics Center Labels & Guide by Unit & Section for Kinder

★★★★★ 3 Ratings



Grade Levels
K

Subjects
Math

Resource Type
Activities, Centers

Formats Included
✓ Google Slides™

Pages
77 pages

@kindatechteachers

Illustrative Math View



Center Tools on TPT

Center summaries are found under each section of each unit. This product organizes all the section summaries into a easy to use guide card you can print and laminate for continued use.

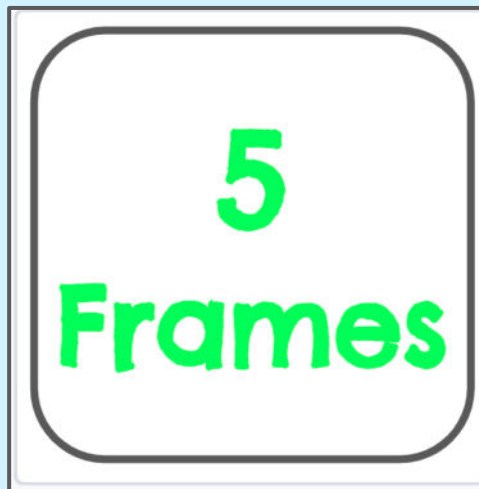
It also comes with labels for all the centers in your grade level and a mini guide to what you need for each center.

Print and laminate for a quick reference guide for what you need and how to play the center when you are ready for it.

Center	Stages
Connecting Cubes (K)	Stage 1: Explore (addressing) Stage 2: Build to Match (addressing)
Geoblocks (K-1)	Stage 1: Explore (addressing) Stage 2: Build to Match (addressing)
Pattern Blocks (K)	Stage 1: Explore (addressing) Stage 2: Puzzles (addressing)
Picture Books (K-S)	Stage 1: Explore (addressing) Stage 2: Create (addressing)

Note: I have included all the stages of each center in the slides. Please refer to these "Center Summaries" for which center to use in each grade/unit/section. Or look to your curriculum for guidance.

Gr. K



Stage 1 & 2

Stage 1: Add
Students begin with a full 5-frame and roll to see how many counters to add.

Stage 2: Subtract
Students begin with a full 5-frame and roll to see how many counters to take away.

*Blackline master for the 5-Frames center, Stages 1-2. You will need 1 copy per 2 students of the number mat 1-5, 1 copy for each student of the recording sheet with lines for numbers. • Connecting cubes and Counters.

Capture Squares

Stage 6 & 7



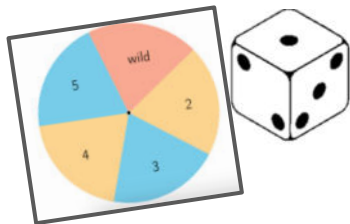
Stage 6

Directions:

- On your turn:
 - Roll the number cube and spin the spinner. Find the product.
 - Choose a square on the gameboard that shows that number. Draw one line connecting any 2 dots around the number.
 - If you can't draw a line, roll and spin again.
 - If you draw a line that finishes a square around a number, shade in that box with your color.
- Take turns with your partner. The first player to shade in 3 boxes wins.

4	15	8
12	30	40
18	50	20

Stage 5 & 6. Students roll a number cube and spin a spinner and find the product of the two numbers they generated. The spinner has numbers 2, 5, and 10 and a wild space where students can choose their own number.



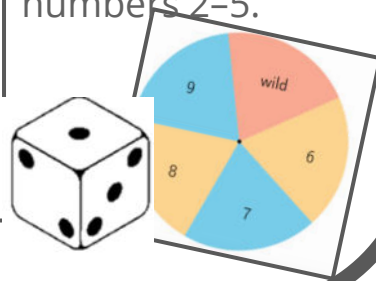
Stage 7

Directions:

- On your turn:
 - Roll the number cube and spin the spinner. Find the product.
 - Choose a square on the gameboard that shows that number. Draw one line connecting any 2 dots around the number.
 - If you can't draw a line, roll and spin again.
 - If you draw a line that finishes a square around a number, shade in that box with your color.
- Take turns with your partner. The first player to shade in 3 boxes wins.

24	35	16
36	40	42
18	54	28

Stage 7. Students roll a number cube and spin a spinner and find the product of the two numbers they generated. The spinner has numbers 2-5.






Five in a Row



Stage 1

Directions:

- Partner A:
 - Put a paper clip on 2 numbers in the grey row.
 - Multiply the numbers.
 - Cover the product of the 2 numbers with a counter.
- Partner B:
 - Move 1 of the paper clips, multiply the numbers, and cover the product with a counter.
- Take turns. The first partner to cover 5 squares in a row wins.



40	2	3	30	5
6	20	8	15	10
100	15	2	16	50
12	9	16	20	25
4	1	50	4	100

1	2	3	4	5	10
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Stage 1.

Students multiply using factors of 1–5 and 10. Partner A chooses two numbers and places a paperclip on each number. They multiply the numbers and place a counter on the product. Partner B moves one of the paper clips to a different number, multiplies the numbers, and places a counter on the product. Students take turns moving one paper clip, finding the product, and covering it with a counter.

Stage 2

Directions:

- Partner A:
 - Put a paper clip on 2 numbers in the grey rows.
 - Multiply the numbers.
 - Cover the product of the 2 numbers with a counter.
- Partner B:
 - Move 1 of the paper clips, multiply the numbers, and cover the product with a counter.
- Take turns. The first partner to cover 5 squares in a row wins.



1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

1	2	3	4	5
---	---	---	---	---

6	7	8	9
---	---	---	---

Stage 1.

Students multiply using factors of 1–5 and 10. Partner A chooses two numbers and places a paperclip on each number. They multiply the numbers and place a counter on the product. Partner B moves one of the paper clips to a different number, multiplies the numbers, and places a counter on the product. Students take turns moving one paper clip, finding the product, and covering it with a counter.

Resources

Click on Yellow Buttons for Links

Vocabulary
Cards

IM Center
Labels with
Guides

Lesson
Planning

Centers By
Grade

Unit Plans By
Britnee Write

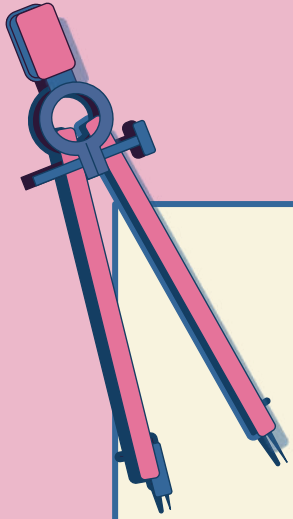
Center Navigation
Tool

Math Centers By
Standard

Unit Plans
Example Grade 3

Assessment Tool

Kinda Techy
Teachers TPT
Store



Thank you!

Presented By, Ms. Janazyan