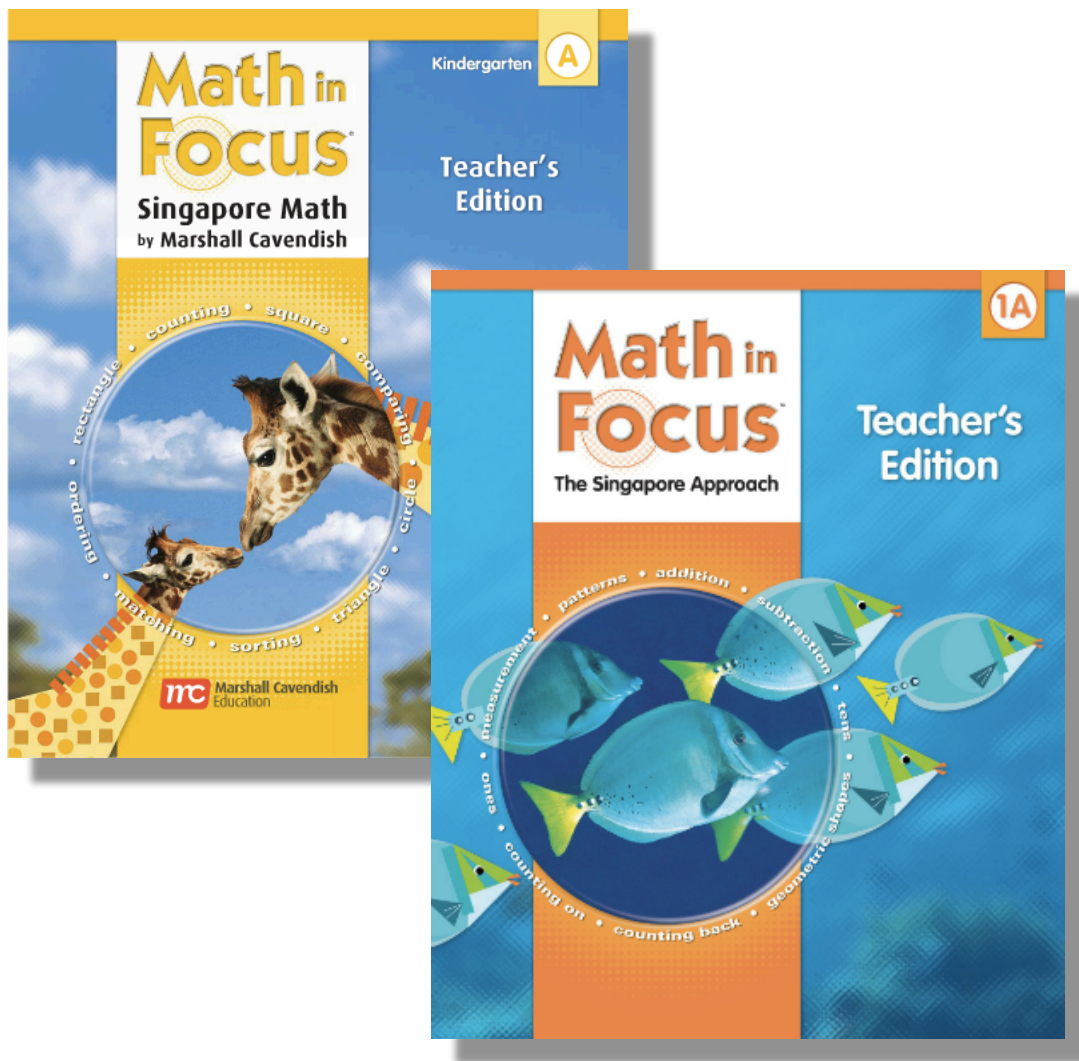


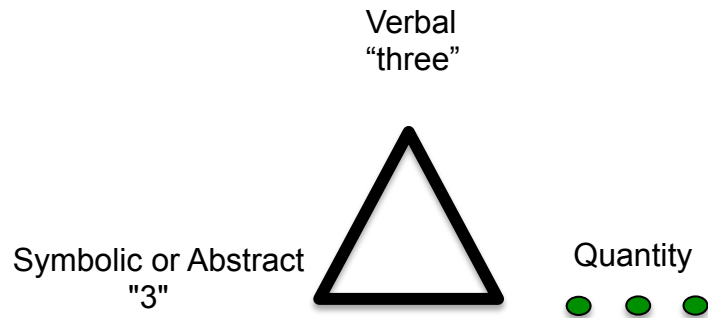
Math in Focus

An In-Depth Look at the Big Ideas at Grades K and 1



Beth Ardell
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Teaching Number



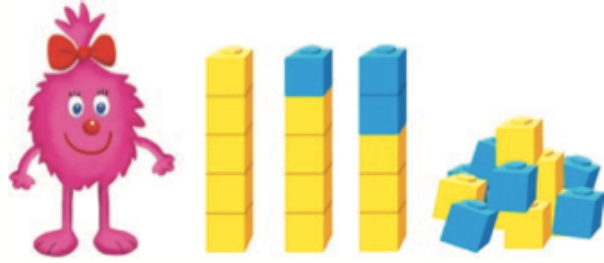
Composing and Decomposing Numbers Kindergarten

Big Ideas and Questions:

Composing and Decomposing Numbers

Kindergarten – Chapter 4

Composing 5:



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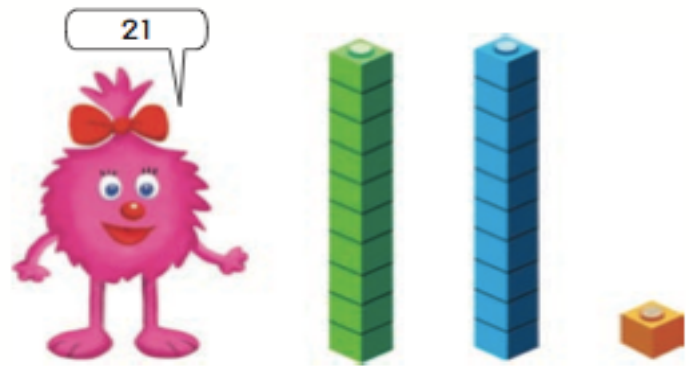
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Big Ideas:

Numbers to 20 – Kindergarten – Chapter 6
Numbers to 100 – Kindergarten – Chapter 8

Counting and Building Numbers:



Big Ideas, Language and Questions:

Working with Ten

Kindergarten – Chapters 12 and 14

How many more to make to ten?



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Big Ideas:

____ is more than ____.
____ is less than ____.
__ is __ more than __.
__ is __ less than __.
5 is ____ and ____.
____ and ____ makes 10.

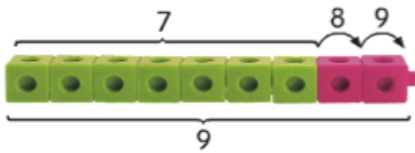
Addition Facts to 10

Grade 1 – Chapter 3

Learn

You can count on to find how many more.

What is 2 more than 7?



More than means added on to.

7, 8, 9

Ways to Add:

- Add by Counting On
- Add using Number Bonds
- Make Addition Stories

What are the parts?

What is the whole amount?

Big Ideas:

Subtraction Facts to 10

Grade 1 – Chapter 4



Ways to Subtract:

Subtract by Taking Away

Count On to Subtract

Subtract using Number Bonds

Make Subtraction Stories

What is the whole amount?

What part was taken away?

Big Ideas:

Numbers to 20



Grade 1 – Chapter 7

Learn

You can use models to show numbers to 20.



13 = 1 ten 3 ones

Tens	Ones
1	3
	

10 and 3 make 13.

Ten and three make thirteen.

$$10 + 3 = 13$$

__ones = __tens__ones

What does the ten tells us?

What does the three tell us?

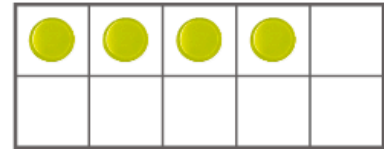
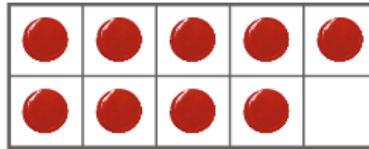
Big Ideas:

Addition and Subtraction Facts to 20

Grade 1 – Chapter 8

Add by making a 10:

1 $9 + 4 =$



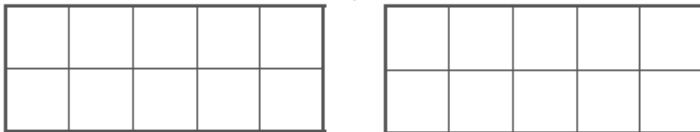
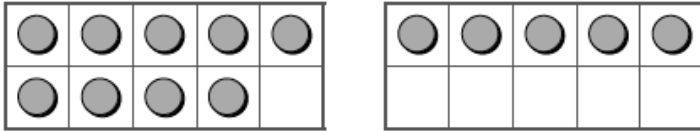
2 $7 + 9 =$



3 $9 + 8 =$

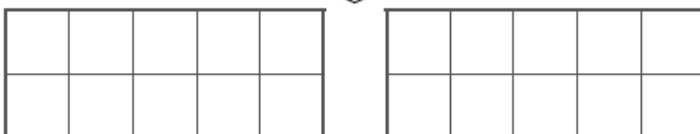
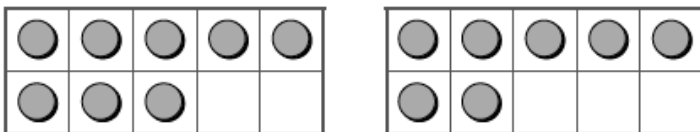


4.



$9 + 5 =$ _____ $+$ _____
 $=$ _____

5.



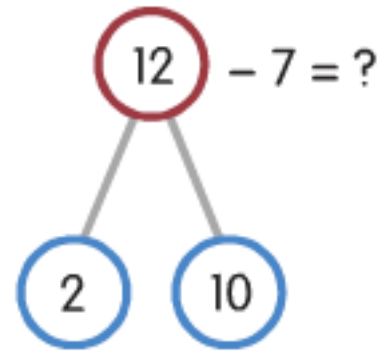
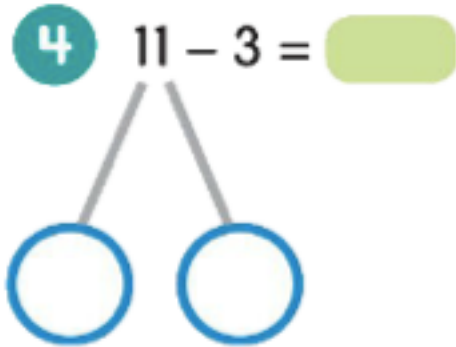
$8 + 7 =$ _____ $+$ _____
 $=$ _____



Big Ideas:

Addition and Subtraction Facts to 20

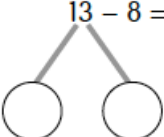
Grade 1 – Chapter 8

You can subtract by grouping into a 10 and ones:

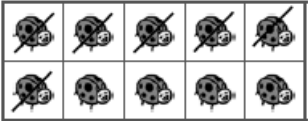
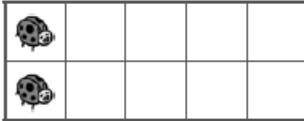


11.  

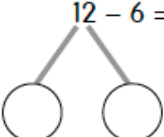
$13 - 8 = \underline{\quad}$



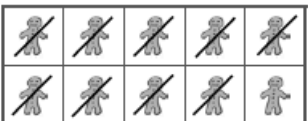

$\underline{\quad} - \underline{\quad} = \underline{\quad}$
 $\underline{\quad} + \underline{\quad} = \underline{\quad}$

12.  

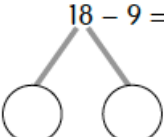
$12 - 6 = \underline{\quad}$



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

13.  

$18 - 9 = \underline{\quad}$



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

Big Ideas:

Addition and Subtraction to 40
Grade 1 – Chapter 13

Tens	Ones

Tens	Ones

Big Ideas:

Whole Number Addition and Subtraction with Regrouping

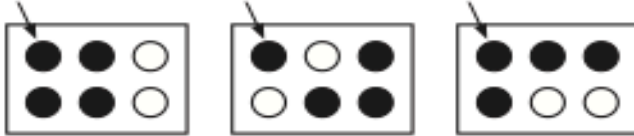
Concrete – Pictorial – Abstract

Big Ideas:

Questions, language or pictures to help dig deeper into addition and subtraction with regrouping:


PROBLEM SOLVING
Strategies
Color.
Example

Color different ways to show 4.



You can start with the same dot...

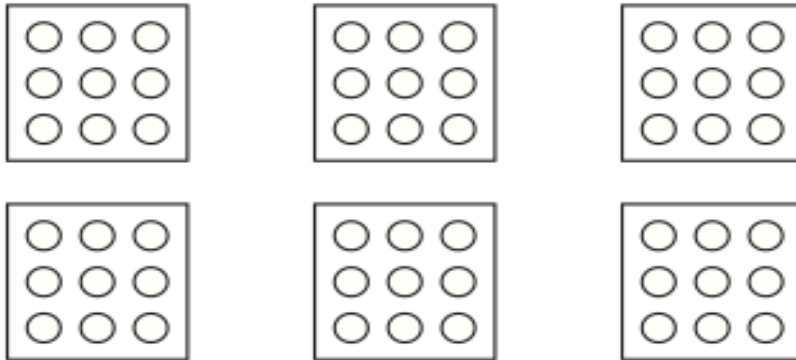


Or you can start at different points.



6

Color different ways to show 5.



- Why might this be difficult for students to solve?
- What are ways to scaffold this problem?
- Discuss with your group.



PROBLEM SOLVING



Find the missing numbers.



Fill in the  with 1, 2, 3, 4, 6, or 7.

Use each number once.

Then find the missing number in , , and .

These numbers are to be 10 or less than 10.

The answer in  is to be greater than the answer in .

The answer in  is to be less than the answer in .



$$\begin{array}{l} \text{green box} + \text{green box} = \text{orange box} \\ \text{green box} + \text{green box} = \text{blue box} \\ \text{green box} + \text{green box} = \text{purple box} \end{array}$$

There is more than one correct answer.

ON YOUR OWN

Go to Workbook A:
Put on Your Thinking Cap!
pages 57-58



- Why might this be difficult to solve?
- What are two ways students may go about solving it?
- What are two ways to scaffold this problem without giving away the answer?
- Discuss with your group.

