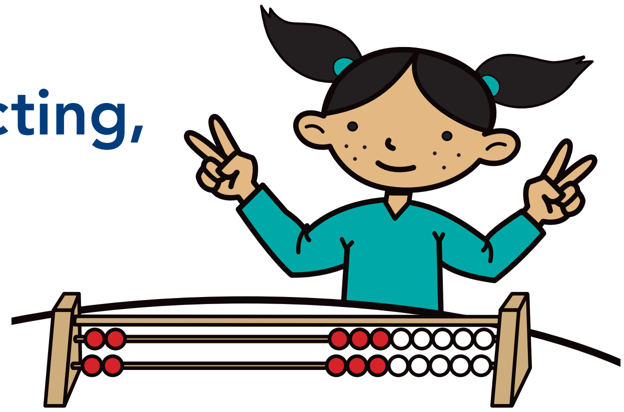
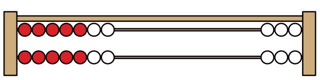
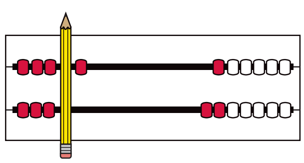
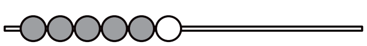
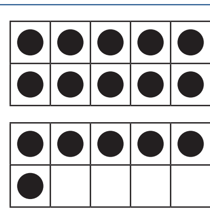
Unit 3: Adding, Subtracting, Counting & Comparing

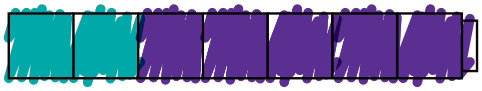
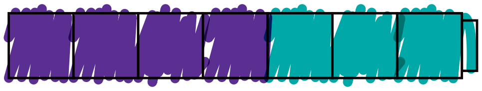
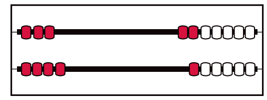
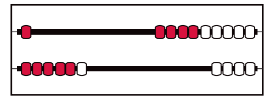
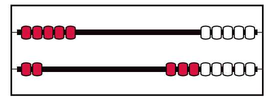
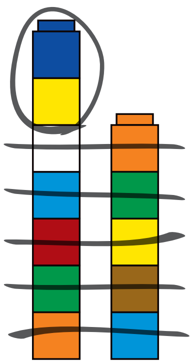


In this unit your child will

- Practice efficient math strategies to add and subtract within 10 and 20
- Build an understanding of place value with tens and ones
- Solve addition and subtraction story problems with pictures, numbers, and words

Your child will practice these skills by solving problems like those shown below.

PROBLEM	COMMENTS
Using Doubles How many beads can you see on the left?  The number rack shows 7 + 7 as 2 rows of 7 beads.  This number rack shows 4 + 3. Students can see this as a double 3 and 1 more: 3 + 3 + 1.	**Doubles Facts** (1 + 1, 2 + 2 … 10 + 10) When a number is added to itself, it's called a Doubles fact. Students notice things that come in pairs: car wheels, insect legs, their own eyes, hands, and feet. This makes doubles facts one of the first strategies they learn. Doubles facts can also help students with combinations like 6 + 7. This problem can be thought of as 6 + 6 + 1. Subtraction Halves are the opposite of doubling. If students know that 5 + 5 = 10, they can apply 10 – 5 = 5. Later, students can use doubles to solve larger combinations such as 50 + 50, 500 + 500, 100 – 50, and 1,000 – 500.
Making Ten How many more beads are needed to make 10? Write the number.  4 Fill in the box to complete the equation. **6 + ☐ = 10** **4 + ☐ = 10**	**Make Ten Facts** (10 + 0, 9 + 1, 8 + 2, 7 + 3, 6 + 4, 5 + 5…0 + 10) Make Ten facts are pairs of numbers that equal 10. Instantly recognizing combinations that make 10 (for example, 3 + 7 = 10) helps when adding 30 + 70 = 100 or 43 + 7 = 50.
Adding Ten Fill in the answer. **10** **+ 6**  The number rack (shown above), dimes & pennies, and ten-frames (shown left) are used as models for visualizing Add Ten facts.	**Add Ten Facts** (10 + 1, 10 + 2 … 10 + 9) When 10 is added to a single digit number, it's called an Add Ten fact. Add Ten facts help students understand that the teen numbers, 11–19, are made up of a ten and some more ones. This strategy helps students work flexibly with tens and ones.

PROBLEM	COMMENTS
Color in the Unifix cubes in different ways to make 7, and write an equation to match each train.  7 = 2 + 5  7 = 4 + 3	The visual models used in Bridges helps students "see" numbers inside of larger numbers. Students use 5 as an anchor or use their Doubles facts to break apart numbers in more than one way. This increases their flexibility and fluency. 7 = 3 + 4  7 = 1 + 6 or 1 + 5 + 1  7 = 5 + 2 
Compare the two towers to find the difference.  $\boxed{7} - \boxed{5} = \boxed{2}$ Cubes in taller tower / How many do they have in common? / What's the difference?	In the example on the left, students compare two stacks of cubes. First they determine which tower has more and count the cubes in the taller tower. Next they match up the cubes that the towers have in common. The remaining cubes or "extras" are seen as the ***difference*** between the two towers. This number answers the question *What's the difference?* or *How many more?* Subtraction is sometimes a "take away" situation, and sometimes it involves finding the difference.

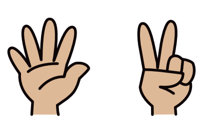
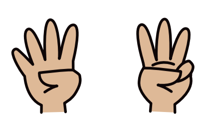
FREQUENTLY ASKED QUESTIONS ABOUT UNIT 3

Q: Why are students spending time learning strategies? Why not just memorize the addition and subtraction facts?

A: First grade students are expected to use strategies for addition up to 10 and subtraction from 10. Bridges develops students' fluency with math facts by equipping them with strategies that give them a solid understanding of addition and subtraction. The program provides multiple opportunities to practice basic facts. Visual models like the number rack, ten-frames, and cubes help your child create a visual picture of the quantity they "see" in their mind's eye. These strategies enhance number sense, so your child can work flexibly and accurately as a problem solver.

Q: My child is using fingers to solve the problems. Is this OK?

A: Fingers are one of the best visual models for helping students understand numbers between 1 and 10. Students use finger patterns to link quantity to numbers and to understand that numbers can be made in different ways. For example, the number 7 can be shown as 5 fingers on one hand and 2 on the other, or 4 on one hand and 3 on the other.

Fingers act as objects to count, just as cubes or beads do, when adding and subtracting. Students begin by counting their fingers by 1s. Soon they can display quantities quickly—just by popping up their fingers without much thought. As children learn other strategies and commit facts to memory, they become confident in their answers, and their reliance on fingers diminishes.