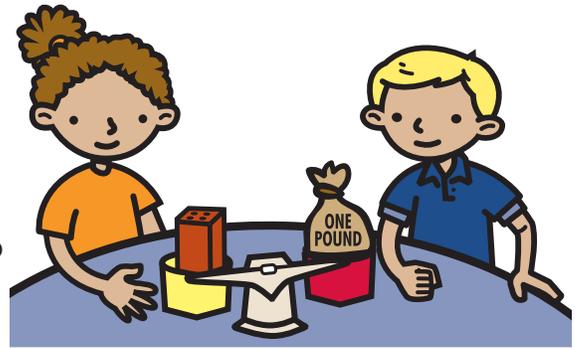


# Bridges in Mathematics Kindergarten Unit 7

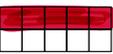
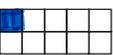
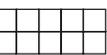
## Weight & Place Value

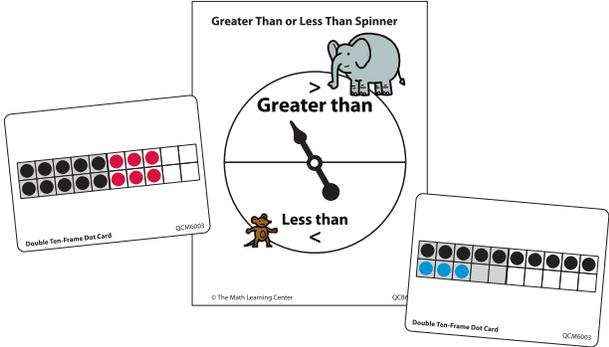
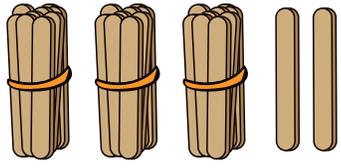
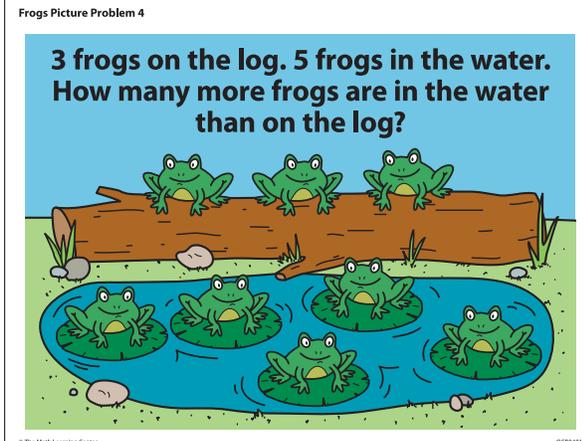
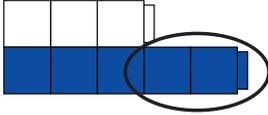
In this unit your child will:

- Explore weight and capacity concepts
- Count groups of objects by 10s and 1s to build an understanding of place value
- Compare numbers to determine which number is more than, less than, or equal to another number
- Solve addition and subtraction equations and story problems within 10



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

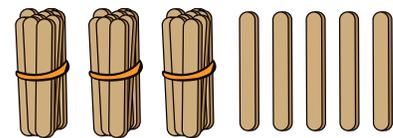
PROBLEM	COMMENTS
<p>Which object is heavier?</p>  <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; background-color: #0070c0; color: white; padding: 5px; text-align: center;">               heavier         </div> <div style="border: 1px solid black; background-color: #0070c0; color: white; padding: 5px; text-align: center;">               lighter         </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div> <p style="text-align: center; margin-top: 10px;"><i>"The soup is heavier than the boat. The balance scale tipped all the way down."</i></p>	<p>Students use a balance scale like the one shown to the left to compare items and tell which is heavier and which is lighter. Students are also encouraged to bring an item from home to use with the scale.</p> <p>Students also explore how much something will hold (its capacity). In the example shown, students estimate how many cubes they think they can grab in a handful. Next they count the actual number. They record both the estimate and actual quantity on ten-frames.</p>
<p>How many cubes are in a handful?</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="font-size: small;">Unit 7 Module 1   Session 5 class set, plus more as needed, stored in the Work Place bin</p> <p style="font-size: x-small;">NAME _____   DATE _____</p> <p><b>7B Measuring Handfuls Record Sheet</b></p>  <p>How many Unifix cubes in my handful? My estimate <u>15</u></p> <div style="display: flex; align-items: center;">    </div> <p>The actual number _____</p> <div style="display: flex; align-items: center;">    </div> </div> <p style="text-align: center; margin-top: 10px;"><i>"These cubes are bigger than I thought. I could only hold 11 — 10 and 1 more. That's 4 less than I guessed."</i></p>	

PROBLEM	COMMENTS
<p>In the game Double Top Draw, players take turn drawing cards, naming the 10s and 1s, and telling how many dots in all are on their cards. They spin the Greater Than or Less Than Spinner to determine who wins each round.</p>  <p><i>"My card has 1 ten and 6 ones. That's 16! Sixteen is more than 13, so I get both cards this time."</i></p>	<p>Games like Double Top Draw help students recognize that teen numbers are composed of 1 ten and some more ones. Models like the double ten-frame shown on the cards help students see the ten and ones structure of the numbers in our base ten system.</p> <p>As they count groups of objects by 10s and 1s, students gain an understanding that 2-digit numbers are made of tens and ones, the first step in learning place value.</p>  <p>three 10s and two 1s</p>
<p>Solve the picture story problem.</p>  <p><i>"I used cubes for the frogs. I matched the frogs on the log to the frogs in the water. There are 2 frogs without partners. There are 2 more frogs in the water."</i></p>	<p>Problems that involve comparing groups, like the frogs shown on the card, involve understanding the relationship between two numbers. By now, most kindergarteners are thinking flexibly about numbers within 5, and some will simply know that 5 is 2 more than 3. Others will have different ways to solve this problem.</p> <p>In this example, the student made a direct comparison using blue cubes for frogs in the water and white cubes for frogs on the log. She matched one white cube to one blue cube until no more matches could be made, and then counted leftovers to find the difference.</p>  <p>Other students might use counting strategies such as counting up from the smaller number to the larger number while keeping track of the count on their fingers: 3 ... 4, 5. Or they might think of an addition or subtraction equation: <math>5 - 3 = []</math> or <math>3 + [] = 5</math>.</p>

## FREQUENTLY ASKED QUESTIONS ABOUT UNIT 7

**Q:** How does this unit help my child understand place value?

**A:** Understanding place value means recognizing that the value of each digit in a number depends on its place in the number. In this unit students count by 10s and 1s using materials such as craft sticks, ten-frames, and double ten-frames (shown with the Double Top Draw game above). First they count all the groups of ten by 10s, and then they switch to counting by ones.



10, 20, 30 ... 31, 32, 33, 34, 35.  
The number 35 is made of 3 groups of ten and 5 ones.

One benefit of learning to count by 10s and 1s with materials is seeing that one group of 10 (shown as one bundle of sticks) is composed of 10 ones. In other words, students are learning that the quantity of 10 can be 1 ten and 10 ones at the same time. While we may take this fact for granted, this concept is crucial to their understanding of place value and of adding and subtracting with numbers larger than 10.