

## Mathematics: Numbers and Operations in Base Ten

<b>1.NBT.2</b>	<b>Cluster Heading: 1.NBT.B</b> Understand place value <b>Content Standard(s): 1.NBT.2</b> Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones - called a “ten”. b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). <b>Practice Standard(s): MP2</b> Reason abstractly and quantitatively, <b>MP7</b> Look for and make use of structure.
	<b>Problem/Task Suggestions</b>
<b>Roll and Build</b> Students work in pairs. Student A rolls the dice or spins the spinners (2 ten-sided dice or 2 spinners 0-9). Student B makes a number using the values displayed as digits and both students write it on paper. For example, if a student rolls a 3 and a 4, the number can be 34 or 43. Student A represents the number with the tens and ones blocks/popsicle sticks. Student B counts the blocks/sticks to check that they correctly represent the number. Both students draw a picture of the tens and ones on the paper. The students take turns.  <b>Differentiation</b> <b>Supports</b> <ul style="list-style-type: none"><li>• Students work together and decide what the number rolled could represent.</li><li>• Use normal dice or spinners with fewer numbers.</li></ul> <b>Extensions</b> <ul style="list-style-type: none"><li>• Play the game and see who can make the largest number or smallest number.</li></ul>	<b>Observation of Students</b> <ul style="list-style-type: none"><li>• Listen for accuracy as each student says the value they give to the two numbers rolled.</li><li>• Observe how students build and draw the numbers they roll.</li></ul> <b>Questions to Guide Student Thinking</b> <ul style="list-style-type: none"><li>• How did you make the numbers you rolled, using unifix cubes, tens-and ones-blocks, or popsicle sticks?</li><li>• Why do you bundle ones and tens when you have a big number?</li><li>• How many ones are in a ten?</li><li>• What happens when we have more than 9? How do you show it?</li></ul> <b>Misconceptions</b> <ul style="list-style-type: none"><li>• Students may not understand, when they are counting, the last number they say indicates how many items are in the group.</li></ul> <b>Vocabulary Considerations</b> Ones, tens, number
<b>Source:</b> <a href="http://www.illustrativemathematics.org/illustrations/987">http://www.illustrativemathematics.org/illustrations/987</a>	