

# Composing and Decomposing Numbers

Use with Math by Myself

<b>Concept</b>	Apply knowledge of place value by building numbers using standard and expanded form.						
<b>Materials Needed</b>	<p>Each student will need the following:</p> <ul style="list-style-type: none"> <li>• One die</li> <li>• <i>Composing and Decomposing Numbers</i> recording sheet</li> <li>• Numeral cards (optional)</li> <li>• Pencil</li> </ul>						
<b>Directions</b>	<p>Students will work independently on this activity.</p> <p><b>The goal of this activity is for students to recognize the value of each digit in a two- or three-digit number.</b></p> <ol style="list-style-type: none"> <li>1. The student rolls the die.</li> <li>2. The student records the number on the die in the space labeled <i>die roll 1</i>.</li> <li>3. Repeat steps 1 and 2 for die rolls 2 and 3.</li> <li>4. In the top box provided on the recording sheet, the student constructs a three-digit number. (For example, if the student rolled the numbers 7, 2, and 6, he or she would record 726 in the top box.)</li> <li>5. The student uses the numeral cards, if necessary, to decompose the three-digit number by place value (e.g., <math>726 = 700 + 20 + 6</math>).</li> <li>6. The student records the values in the appropriate box under the three-digit number.</li> </ol> <p>For example:</p> <p>die roll 1: <b>7</b>   die roll 2: <b>2</b>   die roll 3: <b>6</b></p> <table border="1" data-bbox="826 1318 1133 1493" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="3" style="text-align: center;">726</td> </tr> <tr> <td style="text-align: center;">700</td> <td style="text-align: center;">20</td> <td style="text-align: center;">6</td> </tr> </table> <ol style="list-style-type: none"> <li>7. The student repeats steps 1–6 to build new three-digit numbers.</li> </ol>	726			700	20	6
726							
700	20	6					
<b>Differentiate</b>	<p>To differentiate for students who are struggling:</p> <ul style="list-style-type: none"> <li>• Have students practice composing and decomposing two-digit numbers (1.NBT.b.2b, c).</li> <li>• Have them work with a partner to complete the activity.</li> </ul> <p>To differentiate for students who are more advanced:</p> <ul style="list-style-type: none"> <li>• Have students round their three-digit number to the nearest 10 and to the nearest 100 (3.NBT.A.1).</li> </ul>						