

Core Content

Cluster Title: Use place value understanding and properties of operations to add and subtract.
Standard 8: Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
MASTERY Patterns of Reasoning:
<p>Conceptual: Students will understand that adding 10 or 100 to any number only changes the digit in the 10s or 100s place.</p> <p>Procedural: Students can add or subtract 10 or 100 mentally.</p> <p>Representational: Students can draw a picture of the number in base ten format (or use base ten blocks), and demonstrate the change being made (i.e., cross out a set of 10 or 100, or draw another set of 10 or 100). After children have a solid understanding of how to relate the drawing to adding/subtracting 10 or 100, they can demonstrate proficiency in being able to mentally add or subtract 10 or 100 from a given number.</p>

Supports for Teachers

Critical Background Knowledge
<p>Conceptual: Students will understand that counting patterns can start from any number. Students will understand how to use a hundreds chart. Students will understand skip-counting patterns (e.g., by 10s, 20s, 30s, etc.).</p> <p>Procedural: Students can count on and back by one. Students can skip-count by tens and hundreds; discuss how the number in the tens place changes when skip-counting by tens; and discuss how the number in the hundreds place changes when skip-counting by hundreds. Students can add or subtract ten or 100 to ANY starting number and extend the counting pattern (e.g., 28: 38, 48, 58, etc.).</p>

<p>Representational: Students can model (using base ten blocks) addition or subtraction of 10 or 100. Students can show the relationship between skip-counting by 10s and mentally adding 10 to a given number (e.g., with the number 64, the related skip-counting pattern is 60, 70, so that to mentally add 10 to 64, the answer would be 74), and apply the same concept when adding or subtracting hundreds.</p>									
<p>Academic Vocabulary and Notation increase, decrease, skip count, mental math</p>									
<p>Instructional Strategies Used</p> <p>Roll the place value dice and build the number using base ten blocks; draw a “change” card and follow the directions on the card to change the number. Make the change with the blocks and record both number and answer in math journal. Write down the change that was made.</p> <p>Play a game similar to “I have.../Who has...” where each child has a number and a statement such as “Who has ten more?” and the next person has the answer and a new question.</p>			<p>Resources Used</p> <p>hundreds chart base ten blocks place value dice numeral cards</p>						
<p>Assessment Tasks Used</p>									
<p>Skill-Based Task: Teacher will create an assessment using the following format (choose amount of problems and difficulty of numbers according to ability level of class):</p> <table border="1"> <tr> <td>- 100</td> <td>- 10</td> <td>Number</td> <td>+ 10</td> <td>+100</td> </tr> </table>			- 100	- 10	Number	+ 10	+100	<p>Problem Task: Sara reads 313 pages during the week. Mark reads 100 more pages than Sara. Gary reads ten fewer pages than Mark. How many pages does Gary read? Explain how you know.</p>	
- 100	- 10	Number	+ 10	+100					