

Core Content

Cluster Title: Generalize place value understanding for multi-digit whole numbers.
Standard 3: Use place value understanding to round multi-digit whole numbers to any place.
MASTERY Patterns of Reasoning:
<p>Conceptual: Students will understand how to round whole numbers less than or equal to one million. Students will understand that rounding can be applied to any place within a number.</p> <p>Procedural: Students can identify the place to which they are rounding. Students can identify the digit that affects how they round the number. Students can identify the rounding choices (the digit stays the same or rounds higher). Students can correctly write the rounded number in base-ten numeral form.</p> <p>Representational: Students can use visual models to illustrate place value in rounding e.g., number line, place value drawings, base ten blocks.</p>

Supports for Teachers

Critical Background Knowledge
<p>Conceptual: Students will know the place and value of whole numbers less than or equal to one million. Students will know how to round numbers to the nearest 10 and 100.</p> <p>Procedural: Students can read and write multi-digit whole numbers less than or equal to one million. Students can do the following for numbers less than 1,000: Identify the place to which they are rounding. Identify the digit that affects how they round the number. Identify the rounding choices (the digit stays the same or rounds higher).</p>

<p>Correctly write the rounded number in base-ten numeral form.</p>	
<p>Representational: Students can model numbers less than or equal to 1,000.</p>	
<p>Academic Vocabulary and Notation</p>	
<p>estimate, round, about, close to, almost, exact, benchmark, place value, base-ten</p>	
<p>Instructional Strategies Used</p>	<p>Resources Used</p>
<p>Locate a target number on the number line. Determine the place value to which you are rounding. Identify which two benchmark numbers are on either side of the target number. Choose the benchmark number that is closer to the target number.</p> <p>Show populations of different cities. Ask students to estimate how many people are in each city.</p>	<p>Number lines: http://www.321know.com/grade4.htm#topic49</p>
<p>Assessment Tasks Used</p>	
<p>Skill-Based Task: Round 345,782 to the nearest: 10 100 1,000 10,000 100,000</p>	<p>Problem Task: On Saturday, 45,672 people visited Hogle Zoo. Sam and Dee both estimated how many people were there. Sam said that about 45,000 people visited the zoo on Saturday, and Dee said that about 46,000 people visited the zoo on Saturday. Who rounded the number of visitors correctly? Explain your choice.</p>