

Core Content

Cluster Title: Generalize place value understanding for multi-digit whole numbers.

Standard 2: Read and write multi-digit whole numbers using base-ten numerals, number names and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.

MASTERY Patterns of Reasoning:

Conceptual:

Students will understand how to write numbers in base-ten numerals, number names, and expanded form less than or equal to one million.

Students will understand how to compare numbers less than or equal to one million based on place and value.

Students will understand the comparison symbols.

Procedural:

Students can write numbers in base-ten numerals, number names, and expanded form using numbers less than or equal to one million.

Students can read numbers in base-ten numerals, number names, and expanded form using numbers less than or equal to one million.

Students can use symbols ($>$, $<$, $=$) to compare multi-digit numbers less than or equal to one million.

Representational:

Students can use manipulatives (e.g., place value blocks, mats, charts, etc.) to model the different forms of numbers.

Students can use manipulatives (e.g., place value blocks, mats, charts, etc.) to compare different numbers.

Students can use manipulatives (e.g., place value blocks, mats, charts, etc.) and symbols ($>$, $<$, $=$) to compare numbers.

Supports for Teachers

Critical Background Knowledge	
<p>Conceptual: Students will understand how to read, write, and compare numbers less than or equal to 1,000.</p> <p>Procedural: Students can read and write numbers in base-ten numerals, number names, and expanded form using numbers less than or equal to 1,000. Students can use place and value of digits to compare numbers less than 1,000. Students can use comparison symbols (>, <, =).</p> <p>Representational: Students can use manipulatives (e.g., place value blocks, mats, charts, etc.) to show the different forms of numbers. Students can use manipulatives (e.g., place value blocks, mats, charts, etc.) to compare different numbers. Students can use manipulatives (e.g., place value blocks, mats, charts, etc.) and symbols (>, <, =) to compare numbers.</p>	
Academic Vocabulary and Notation	
<p>base-ten numeral (formally known as standard form), number names (formally known as word form), expanded form, greater than (>), less than (<), equal to (=)</p>	
Instructional Strategies Used	Resources Used
<p>Students build a number on their place value chart (mat, blocks, etc.). They practice reading the number to a partner, then write the number in different forms.</p> <p>Students build a number on their place value chart (mat, blocks, etc.). They compare their number with their partner's number using the symbols. They need to read and say the comparison correctly.</p> <p>Students will be given examples of numbers in base-ten numeral form. They must match it to the correct example in</p>	<p>Read and write numbers: http://www.uen.org/Lessonplan/preview?LPid=18917</p> <p>Comparing numbers: http://www.aaastudy.com/cmp.htm#topic3 http://nrich.maths.org/public/search.php?search=compare</p>

<p>number name and expanded form. Students will read and write the number in both forms. For example: $1,234 = \text{one thousand two hundred thirty-four} = 1,000 + 200 + 30 + 4$</p> <p>In pairs, students use dice or number cards to generate their number. Students write both numbers down and use the correct symbol (>,<=) to show the comparison.</p>	
<p>Assessment Tasks Used</p>	
<p>Skill-Based Task: Using ten-sided dice, roll and place digits on a place value mat to create a six digit number. Compare that number to a partner's using vocabulary such as <i>greater than</i>, <i>less than</i>, or <i>equal to</i>. Then record the results in many different forms.</p>	<p>Problem Task: Johnny read 5,076 pages in a year. His friend read 5,126 pages in the same year. Who read more, how do you know?</p> <p>Meg has a collection of 23,566 marbles. What two other ways can you write to show how many marbles she has?</p>