

## HPISD First Grade Math

UNIT NAME	ESTIMATED DURATION	9 WEEKS			
<b>UNIT 10: COMPARING AND ORDERING NUMBERS TO 120</b>	<b>3 WEEKS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

### Unit Overview

This unit develops an understanding of how numbers are represented in a base ten system and how numbers can be described and compared using symbols and comparative language.

### Enduring Understandings

<p>The student will understand that:</p>	<ul style="list-style-type: none"> <li>• 1 more, 1 less, 10 more, and 10 less than a given number up to 120.</li> <li>• Numbers can be represented on a hundred chart.</li> <li>• Numbers can be represented on a number line.</li> <li>• Two-digit numbers that do not end in 5 are closer to either the previous or to the next multiple of 10.</li> <li>• For three-digit numbers, the number with more hundreds is the greater number. If the 2 numbers have an equal number of hundreds, then the number with more tens is greater.</li> <li>• Place value can be used to compare and order numbers.</li> <li>• Ordering 3 or more numbers is similar to comparing 2 numbers because each number must be compared to each of the other numbers.</li> <li>• The phrases less than and greater than can be used to explain number relationships. The number before is always 1 less than the number after is always greater than.</li> <li>• Some problems can be solved by generating a list of outcomes and organizing that list in a systematic way so all outcomes are accounted for.</li> </ul>
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### Concepts

Numbers and the Number Line	The set of real numbers is infinite and ordered. Whole numbers, integers, and fractions are real numbers. Each real number can be associated with a unique point on the number line.
The Base-Ten Numeration System	The base-ten numeration system is a scheme for recording numbers using digits 0-9, groups of ten, and place value.
Comparison and Relationships	Numbers, expressions, measures, and objects can be compared and related to other numbers, expressions, measures, and objects in different ways.
Patterns, Relations, and Functions	Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. For some relationships, mathematical expressions and equations can be used to describe how members of one set are related to members of a second set.

Practices, Processes, and Proficiencies	Mathematics content and processes can be applied to solve problems.
<b>Guiding/Essential Questions</b>	
<b>Learning Targets &amp; Prerequisites</b>	<b>Progressions</b>
<p><b>Prerequisites:</b></p> <ul style="list-style-type: none"> <li>Understand comparative language</li> <li>Order and Compare whole numbers</li> </ul> <p><b>Learning Target:</b></p> <ul style="list-style-type: none"> <li>The student will use comparative language and the symbols <math>&gt;</math>, <math>&lt;</math>, or <math>=</math> to represent the comparison of two numbers.</li> </ul> <p><b>Second Grade Connection:</b></p> <ul style="list-style-type: none"> <li>2.2 (D) Use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols. (<math>&lt;</math>, <math>&gt;</math>, <math>=</math>)</li> </ul>	<ul style="list-style-type: none"> <li>Use a hundred chart to find a number that is greater than or less than a given number to 120.</li> </ul> <p><b>Example:</b></p> <p>Compare these two numbers. <math>42 \_ 45</math></p> <p>Student A</p> <p>42 has 4 tens and 2 ones. 45 has 4 tens and 5 ones. They have the same number of tens, but 45 has more ones than 42. So, 42 is less than 45.</p> <ul style="list-style-type: none"> <li><math>42 &lt; 45</math></li> </ul> <hr/> <p>42 is less than 45. I know this because when I count up I say 42 before I say 45.</p> <p><math>42 &lt; 45</math></p> <p>This says 42 is less than 45.</p>
<p><b>Prerequisites:</b></p> <ul style="list-style-type: none"> <li>Apply place value concepts</li> </ul> <p><b>Learning Target:</b></p> <ul style="list-style-type: none"> <li>The student will use place value to compare whole numbers to 120.</li> </ul> <p><b>Second Grade Connection:</b></p>	<ul style="list-style-type: none"> <li>Use place value to order whole numbers to 120.</li> <li>Students should know the correct place value for each digit.</li> <li>Students should construct and evaluate any number up to 120 using the correct place value.</li> </ul>

<ul style="list-style-type: none"> <li>• 2.2 (D) Use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols. (&lt;, &gt;, =)</li> </ul>	
<p><b>Prerequisite:</b></p> <ul style="list-style-type: none"> <li>• Illustrate numbers to 120 on a number line.</li> <li>• Order whole numbers to 120 on a number line.</li> </ul> <p><b>Learning Target:</b></p> <ul style="list-style-type: none"> <li>• The student will locate the number that is 1 more or 1 less than and 10 more or 10 less than a given number to 120.</li> </ul> <p><b>Second Grade Connection:</b></p> <ul style="list-style-type: none"> <li>• 2.2 (C) Generate a number that is greater than or less than a given whole number up to 1,200.</li> <li>• 2.7 (B) Use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200.</li> </ul>	<ul style="list-style-type: none"> <li>• Students will be able to distinguish a missing number on a number line, open number line, and on a hundreds chart.</li> <li>• Students should be able to compose a number that is 1 more, 1 less, 10 more, 10 less than a given number up to 120.</li> <li>• Students should be able to generate and compare two sets of objects and whole numbers using comparison vocabulary (e.g., 42 is more than 31. 23 is less than 52, 61 is the same amount as 61.).</li> </ul>
<p><b>Formative Assessments</b></p>	<p><b>Summative Assessments</b></p>
<p><b>TEKS: Readiness Standards</b></p>	<p><b>TEKS: Supporting Standards</b></p>
<p>1.2 (G) Represent the comparison of two numbers to 100 using the symbols &gt;, &lt;, or =.</p>	<p>1.2 (D) Generate a number that is greater than or less than a given whole number up to 120.  <b>*1.2 (E) Use place value to compare whole numbers up to 120 using comparative language.</b>  <b>*1.2 (F) Order whole numbers up to 120 using place value and open number lines.</b>  1.5 (C) Use relationships to determine the number that is 10 or more and 10 less than a given number up to 120.</p>

## TEKS Process Standards

1.1 (A) Apply mathematics to problems arising in everyday life, society, and the workplace.

1.1 (B) Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.

1.1 (C) Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.

1.1 (D) Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

1.1 (E) Create and use representations to organize, record, and communicate mathematical ideas.

1.1 (F) Analyze mathematical relationships to connect and communicate mathematical ideas.

### Processes and Skills:

#### What students should be able to DO

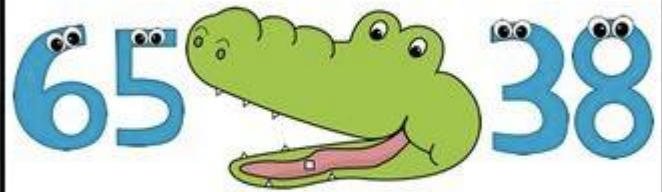
- Students should be able to use place-value blocks to help determine if one number is greater than or less than another number. (Example: Nico used place-value blocks in rows of tens and ones to show that 45 is greater than 41.)
- Students should construct and evaluate any number up to 120 using the correct place value.
- Students should compare two numbers by examining the amount of tens and ones in each number.
- Students should be able to generate and compare two sets of objects and whole numbers using comparison vocabulary (e.g., 42 is more than 31. 23 is less than 52, 61 is the same amount as 61.).
- Students should be able to generate and compare two sets of objects and whole numbers by connecting comparative vocabulary to the symbols: greater than ( $>$ ), less than ( $<$ ), equal to ( $=$ ).
- Students should be able to compose a number that is 1 more, 1 less, 10 more, 10 less than a given number up to 120.

#### What students should be able to KNOW

- Students should know the correct place value for each digit.
- Students should know the symbols  $>$ ,  $<$ , or  $=$  are used to compare two numbers.
- Students should know how to use place value to compare numbers up to 120.
- Students should know the definition of comparative language (greater than, less than, or equal to).
- Students should have knowledge of an open number line and hundreds chart.
- Students should know mathematical vocabulary including least, greatest, before, after, and in between.

<ul style="list-style-type: none"> <li>Students will be able to distinguish a missing number on a number line, open number line, and on a hundreds chart.</li> </ul>	
<b>Topics</b>	
Envision Topic 10	
<b>Language of Instruction</b>	
expanded form ones standard form tens	
<b>State Assessment Connections</b>	<b>National Assessment Connections</b>
<b>Resources</b>	
<ul style="list-style-type: none"> <li>Ideally, every class should have a number line taped to the floor so that students not only can see the number line, but also can physically use it. Number lines also can be drawn with chalk outside for activities.</li> </ul>	

Alligator, Alligator are you ready for lunch?



Look for the biggest number and crunch, crunch, crunch!

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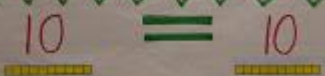
### Comparing Numbers



12 is greater than 5.



4 is less than 14.



10 is equal to 10.