

## HPISD First Grade Math

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Unit Name	Estimated Duration	9 Weeks		
<b>UNIT 2: UNDERSTANDING SUBTRACTION</b>	<b>3 WEEKS</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Unit Overview</b>				
This unit develops ideas about subtraction as a way to determine missing parts of a whole, comparing two parts, and separating parts from a whole.				
<b>Enduring Understandings</b>				
The student will understand that:	<ul style="list-style-type: none"> <li>● A missing part of a whole can be found when the whole and the other part are known.</li> <li>● A missing part of a whole is one interpretation of subtraction. Subtraction number sentences can be used to show a missing part of a subtraction situation.</li> <li>● Separating parts from a whole is one interpretation of subtraction. Subtraction number sentences can be used to show separating subtraction situations.</li> <li>● Comparing two quantities to find how much more/less one quantity is than the other is one interpretations of subtraction. Subtraction number sentences can be used to show comparison subtraction situations.</li> <li>● Finding a missing part of a whole is one interpretation of subtraction. Subtraction number sentences can be used to show missing part subtraction situations.</li> <li>● There are different interpretations of subtraction. Subtraction number sentences can be used to show each interpretations.</li> <li>● Addition and subtraction have an inverse relationship. The inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has a related addition fact.</li> <li>● Some problems can be solved by using objects to act out the actions in the problem.</li> </ul>			
<b>Concepts</b>				
Number uses, Classification, and Representation	Numbers can be used for different purposes, and numbers can be classified and represented in different ways.			
Practices, Processes, and Proficiencies	Mathematics content and processes can be applied to solve problems.			

<b>Guiding/Essential Questions</b>	
<p>What are ways to think about subtraction?</p> <ul style="list-style-type: none"> <li>• What are some ways to find a number that is more than another? Less than another number? Between numbers?</li> <li>• How can counting strategies be used to join, separate, or compare sets?</li> <li>• What questions can be answered using subtraction and/ or addition?</li> <li>• How can sets and numbers be compared and ordered?</li> <li>• How can symbols be used to represent quantities, operations, or relationships?</li> </ul>	
<b>Learning Targets &amp; Prerequisites</b>	<b>Progressions</b>
<p><b>Prerequisite:</b></p> <ul style="list-style-type: none"> <li>• Understand the meaning of the equal sign in subtraction number sentences.</li> </ul> <p><b>Learning Target:</b></p> <ul style="list-style-type: none"> <li>• The student will write subtraction expressions and number sentences to represent problems.</li> </ul> <p><b>Second Grade Connection:</b></p> <ul style="list-style-type: none"> <li>• Write subtraction expressions in number sentences to represent problems higher than 20 with efficiency and accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>• Write subtraction expressions and number sentences to represent problems higher than 20 with efficiency and accuracy.</li> <li>• Represent subtraction problems with objects or pictures.</li> <li>• Continue practicing subtraction facts to 10</li> <li>• Fact recall numbers 0-10</li> </ul>
<p><b>Prerequisite:</b></p> <ul style="list-style-type: none"> <li>• Identify subtraction key words</li> <li>• Apply strategies for subtracting: counting on, tally marks, drawing pictures, counting with manipulatives, and creating a plan for solving a problem.</li> </ul> <p><b>Learning Target:</b></p> <ul style="list-style-type: none"> <li>• The student will use objects or pictures to solve word problems and written equations about separating, comparing, and missing parts.</li> </ul> <p><b>Second Grade Connection:</b></p>	<ul style="list-style-type: none"> <li>• Find the unknown number in an addition or subtraction sentence.</li> <li>• Use strategies for subtracting: related facts, using 10 frames, number line, and 100 chart</li> <li>• Find missing parts of 6 or 7</li> <li>• Find missing parts of 8 or 9</li> </ul>

<ul style="list-style-type: none"> <li>2.7(C) represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.</li> </ul>	
<b>Formative Assessments</b>	<b>Summative Assessments</b>
<b>TEKS: Readiness Standards</b>	<b>TEKS: Supporting Standards</b>
<p><b>*1.3(B) Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as <math>2 + 4 = [ ]</math>; <math>3 + [ ] = 7</math>; and <math>5 = [ ] - 3</math>;</b></p> <p>1.5(D) Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences</p>	<p>1.5(E) Understand that the equal sign represents a relationship where expressions [statements] on each side of the equal sign represent the same value(s) [are true]</p> <p>1.5(F) Determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation;</p>
<b>TEKS Process Standards</b>	
<p>1.1 (A) Apply mathematics to problems arising in everyday life, society, and the workplace.</p> <p>1.2 (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.</p> <p>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.</p> <p>1.1 (D) Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.</p> <p>1.1 (E) Create and use representations to organize, record, and communicate mathematical ideas.</p> <p>1.1 (F) Analyze mathematical relationships to connect and communicate mathematical ideas.</p>	

1.1 (G) Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

<b>Processes and Skills:</b> <b>What students should be able to DO</b>	<b>Facts:</b> <b>What students should KNOW</b>
<ul style="list-style-type: none"> <li>● In a compare situation when two amounts are compared, the student will determine “How many more” or “How many less”.</li> <li>● Use objects or pictures to solve problems about separating, comparing, or missing parts.</li> <li>● Write a subtraction number sentence to represent problems.</li> </ul>	<ul style="list-style-type: none"> <li>● Subtraction can help you find a missing part.               <ul style="list-style-type: none"> <li>○ (Example: Tina has 7 balloons. Some are red and some are yellow. 4 balloons are red. How many are yellow? <math>7-4=3</math>. Tina has 3 yellow balloons.)</li> </ul> </li> <li>● Subtraction can tell you how much is left when part of a whole is taken away.               <ul style="list-style-type: none"> <li>○ (Example: 6 birds are in a tree. 2 fly away. How many are left? <math>6-2=4</math>. There are 4 birds left.)</li> </ul> </li> <li>● Subtraction helps you compare things.               <ul style="list-style-type: none"> <li>○ (Example: Tom has 5 oranges. Ana has 3 oranges. How many more oranges than Ana does Tom have? <math>5-3=2</math>. Tom has 2 more oranges than Ana.)</li> </ul> </li> <li>● Subtraction is related to addition.               <ul style="list-style-type: none"> <li>○ (Example: What subtraction sentences use the same numbers as in <math>2+5=7</math>? The sentences <math>7-5=2</math> and <math>7-2=5</math> use the same numbers.)</li> </ul> </li> </ul>
<b>Topics</b>	
<b>Language of Instruction</b>	
difference minus separate subtract subtraction sentence subtrahend- a whole number that you subtract from another number to generate a sum take away	

Resources

Envision Topic 2

### SUBTRACTION STRATEGIES

**Counting Back**

- ✂ number line
- ✂ fingers

**Make a Model**

- ✂ counters
- ✂ draw

**Use Addition Facts**

6-3=? I know 3+3=6 so it must be 3

**Count On (known part → whole)**


- ✂ number line
- ✂ fingers (bump)
- ✂ part-part-whole mat



## Subtract Zero

\*A **number** minus **ZERO** always equals the **other number**!

$6 - 0 = 6$

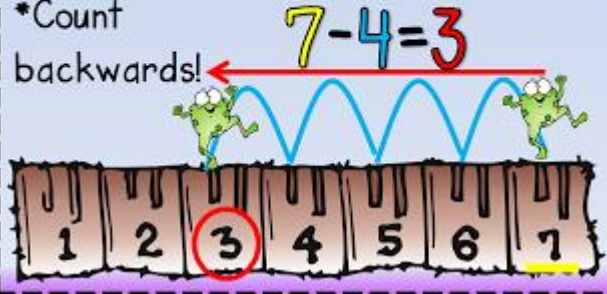


## Counting Back

\*Put the **BIG** number in your head.

\*Count backwards!

$7 - 4 = 3$



# Subtract ALL

\*A number minus the SAME number always equals ZERO!

$$8 - 8 = 0$$

