


HPISD First Grade Math

Unit Name		Estimated Duration	9 Weeks			
UNIT 1: UNDERSTANDING ADDITION		3 WEEKS	1	2	3	4
Unit Overview						
This unit develops ideas about addition as a way to join parts to make a whole. Whole numbers can be broken into parts in many different ways and numbers can be added in any order.						
Enduring Understandings						
The student will understand that:	<ul style="list-style-type: none"> ● The number of objects in some patterned arrangements can be recognized without counting. ● Numbers 6, 7, 8, and 9 can be broken into parts of the whole in different ways. ● Parts of a whole is one interpretation of addition. Addition number sentences can be used to show parts of a whole. ● Joining parts to make a whole is one interpretation of addition. Addition number sentences can be used to show joining situations. ● There are different interpretations of addition. Addition number sentences can be used to show each interpretation. ● Two numbers can be added in any order. ● Some problems can be solved by writing and completing a number sentence or equation. 					
Concepts						
Operation Meanings and Relationships	There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers, and each operation is related to other operations.					
Properties	For a given set of numbers there are relationships that are always true, called properties, and these are the rules that govern arithmetic and algebra.					
Guiding/Essential Questions						
<ul style="list-style-type: none"> ● What are ways to think about addition? ● How can counting strategies be used to join, separate, or compare sets? ● What questions can be answered using subtraction and / or addition? ● How can symbols be used to represent quantities, operations, or relationships? 						

Learning Targets & Prerequisites	Progressions
<p>Prerequisite:</p> <ul style="list-style-type: none"> Identify strategies for adding: counting on, tally marks, drawing pictures, counting with manipulatives, and creating a plan for solving a problem. Recall the actions that a plus sign represents. Understands the addition process is the joining of separate parts (addends) to make a whole. Applies spatial patterns to recognize how many objects are in a group up to 10. <p>Learning Target:</p> <ul style="list-style-type: none"> The student will solve addition word problems using objects and pictorial models. <p>Second Grade Connection:</p> <ul style="list-style-type: none"> Solve addition word problems using objects and pictorial models with efficiency and accuracy for numbers higher than 120. 	<ul style="list-style-type: none"> Understand the meaning of the equal sign in addition number sentences. Use strategies for adding: recognizes numbers in groups, using 10 frames, number line, and 100 chart <p>Example: 42 cubes can be grouped many different ways and still remain a total of 42 cu</p> 
<p>Prerequisite:</p> <ul style="list-style-type: none"> Recites addition facts up to 10 <p>Learning Target:</p> <ul style="list-style-type: none"> The student will solve addition word problems using objects and pictorial models when one of the addends is missing. <p>Second Grade Connection:</p> <ul style="list-style-type: none"> Solve addition word problems using objects and pictorial models when one of the addends is missing with efficiency and accuracy for numbers higher than 120. 	<ul style="list-style-type: none"> knowing addition facts to 10 and recognizing double facts to 10 Find the unknown number in an addition sentence Know that the sum is the same when the order of the addends is changed

<p>Prerequisite:</p> <ul style="list-style-type: none"> • Understands addition key words <p>Learning Target:</p> <ul style="list-style-type: none"> • The student will write addition expressions and number sentences to represent word problems. <p>Second Grade Connection:</p> <ul style="list-style-type: none"> • 2.7(C) represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem. 	<ul style="list-style-type: none"> • Explain strategies used to solve addition word problems using drawings and number sentences. • Find different combinations to make all numbers up to 10.
Formative Assessments	Summative Assessments
TEKS: Readiness Standards	TEKS: Supporting Standards
<p>*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 $2+4=$ ___; $3+$ ___ $=7$; and $5=$ ___ -3</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>*1.2(A) Recognize instantly the quantity of structured arrangements</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>
TEKS Process Standards	
<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>	

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.

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

Processes and Skills:

What students should be able to DO

- Students should be able to instantly recognize the quantity of structured arrangements.
- Students should be able to use visual organization strategies such as ten frames, number lines, and hundreds charts to determine part, part, whole combinations.
- Students should be able to count a set of up to 20 objects.
- Students should be able to combine two small quantities.
- Students should be able to interpret (retell the action and sequence) and solve addition and subtraction story problems.
- Students should be able to use objects and pictorial models to solve and represent word problems using joining, separating, and comparing sets within 20.

Facts:

What students should KNOW

- Addition can help you find how many in all.
 - (Example: There are 3 toy cars inside the box. There are 2 toy cars outside the box. How many toy cars are there in all? $3+2=5$. There are 5 toy cars in all.)
- Addition can help you solve joining problems.
 - (Example: There are 4 birds in a tree. 3 more birds join. How many birds are in the tree now? $4+3=7$. There are 7 birds in the tree now.)
- Addition can be used to solve story problems when the whole and the part are known.
 - (Example: Amy has 6 pencils. She has 2 yellow pencils. The rest are green. How many green pencils does Amy have? $2 + \underline{\quad} = 6$. Amy has 4 green pencils.)
- In addition the sum is the same regardless of the order of the addends.
 - (Example: $1 + 3 = 4$ and $3 + 1 = 4$)

<ul style="list-style-type: none"> • Students should be able to determine the unknown number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation. • Find multiple combinations of two addends for numbers up to 10. • Generate a number sentence that describes a picture or a story problem. 	<ul style="list-style-type: none"> • Students should know that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value. • Numbers can be broken into parts of the whole in different ways. (10 = 4+6, 10= 3+7, etc.)
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Topics	
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Envision Topic 1	
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Language of Instruction	
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add addend- the number that you add to another number to create a sum combine compare count equal equation fewer in all join more number line part pattern plus whole	
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State Assessment Connections	National Assessment Connections
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Resources

Envision Topic 3



https://www.youtube.com/watch?v=WT_wvEvkw4
<https://www.youtube.com/watch?v=EmXuvGvJtqo>