Wilson County Schools

1st grade Community Resource Framework

Mathematics

2017-2018

Parental Involvement

Parent Roadmap for 1st grade
Common Core Math Grade Level View

Questions to Ask When Helping Your Child with Math Homework

Keep in mind that homework in elementary schools is designed as practice. If your child is having problems, please let the classroom teacher know. When helping your child with his/her math homework,you don't have to know all the answers! Instead, we encourage you to ask probing questions so your child can work through the challenges independently.

What is the problem you're working on?
What do the directions say?
What do you already know that can help you solve the problem?
What have you done so far and where are you stuck?
Where can we find help in your notes?
Are there manipulatives, pictures, or models that would help?
Can you explain what you did in class today?
Did your teacher show examples that you could use?
Can you go onto another problem & come back to this one later?
Can you mark this problem so you can ask the teacher for an explanation tomorrow?

Vocabulary Card- English (1) English (2)
Vocabulary Cards- Spanish (1) Spanish (2)

Numbers in Base Tens (NBT)

Vocabulary

add:to join groups together

addend: numbers that are added

and: to combine or join; put together two or more quantities

compose: to join or put parts together to make a whole

decompose: to separate into parts

difference: an answer to a subtraction problem

equation: a number sentence that uses the equal sign

greater than: a number larger than another >

less than: a number less than another <

minus: The symbol (-); show subtraction

number line: a line in which each point represents a number

place value:The value of where the digit is in the number, such as units, tens, hundreds

plus: The symbol (+); shows addition; to add or combine

Standards Included

- **1.NBT.A.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
- **1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
- **1.NBT.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
- **1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- **1.NBT.5** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- **1.NBT.6** Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete

Parent Activities

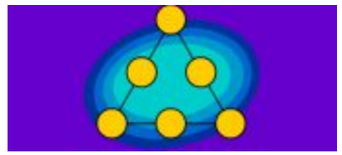
- Count objects in your house (up to 120)
- Practice counting when walking together
- Say a number between 0 and 119 and ask your child to say the number before or after it.
- Pick a number between 1 and 20 (or between any 2 numbers up to 100). Have your child guess the number, then you tell if your number was greater than or less than his guess. Have your child keep revising his guess until he guesses your number. Then trade roles.
- Count 8 pennies, then hide 4. Ask “How many are hidden?” Does she know there are 4?
- Go berry picking. Explore the berry patch with your child. Which color berries are ripe and good to pick? Have your child pick ten berries, then eat one. How many does he have left?
- Dice, cards, and board games can help your child learn addition combinations.
- Dominoes helps practice counting by 5’s.
- The card game “War” helps kids recognize which number is greater and which is less.
- Yahtzee
- Mancala
- Checkers and Chinese Checkers
- Any game that includes counting board steps, such as Chutes and Ladders

Online Activities

sum: the answer to an addition problem	models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.		  

Operations and Algebraic Thinking (OA)

Vocabulary	Standards Included	Parent Activities	Online Activities
add: to join groups together **addend: numbers that are added** **and: to combine or join; put together two or more quantities** **compose: to join or put parts together to make a whole** **count back: start at a number and count back** **count on: start at a number and count forward**	**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.1 **1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. **1.OA.3** Apply properties of operations as	• Count objects in your house (up to 120) • Practice counting when walking together • Say a number between 0 and 119 and ask your child to say the number before or after it. • Pick a number between 1 and 20 (or between any 2 numbers up to 100). Have your child guess the number, then you tell if your number was greater than or less than his guess. Have your child keep revising his guess until he guesses your number. Then trade roles. • Count 8 pennies, then hide 4. Ask “How many are hidden?” Does she know there are 4? • Go berry picking. Explore the berry patch with your child. Which color berries are ripe and	 

decompose: to separate into parts **difference: an answer to a subtraction problem** **equation: a number sentence that uses the equal sign** **greater than: a number larger than another >** **less than: a number less than another <** **minus: The symbol (-); show subtraction** **number line: a line in which each point represents a number** **place value:The value of where the digit is in the number, such as units, tens, hundreds** **plus: The symbol (+); shows addition; to add or combine** **related facts: "fact family" using the same digits using the inverse operation** **sum: the answer to an addition problem** **ten frame: a rectangle used to build numbers** **unknown number: a number that is not given in a problem**	strategies to add and subtract.2 *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)* **1.OA.4** Understand subtraction as an unknown-addend problem. *For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.* **1.OA.5** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). **1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). **1.OA.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2. **1.OA.8** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _- 3,6 + 6 =_.*	good to pick? Have your child pick ten berries, then eat one. How many does he have left? • Dice, cards, and board games can help your child learn addition combinations. • Dominoes helps practice counting by 5's. • The card game "War" helps kids recognize which number is greater and which is less. • Yahtzee • Mancala • Checkers and Chinese Checkers • Any game that includes counting board steps, such as Chutes and Ladders	   

Measurement and Data (MD)

Vocabulary

analog clock:a clock with a minute hand and an hour hand

analyze: examining parts to understand how they work together

bar graph: a graph that uses bars to show data

classify: to sort into categories or to arrange into groups by attribute

digital clock: a clock that shows time in numbers

compare: to find how things are different or the same

data: a collection of facts, such as values or measurements

height: a measure of how tall something is

key: used to identify the number of categories present in a graph; also called a legend

length: how long something is from end to end

picture graph: a graph that uses symbols or pictures to represent data

table: information organized in columns and rows

Standards Included

1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.

1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps*.

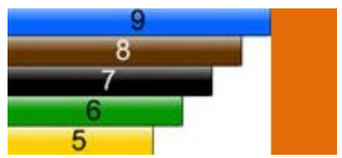
1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

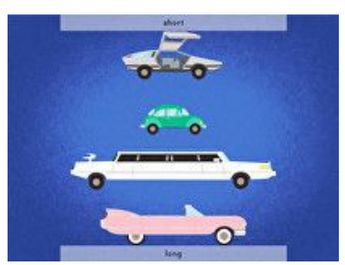
1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

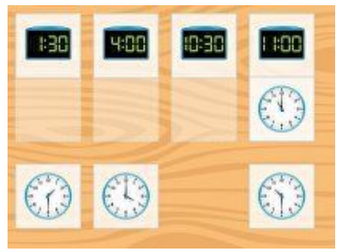
Parent Activities

- Read a recipe and have your child measure the amounts for the ingredients. Use different measures such as teaspoons, cups, and pints.
- Using a calendar, count by 7's and then 1's to find the number of days until an upcoming event.
- Plan a meal you'd like to cook together, then make a shopping list for items that fit your budget.
- If you bring some vegetables home from the store, have your child count them, counting on from the number of vegetables you already have.
- Find creative ways to measure: how many paper clips long is this sheet of paper? How many hands high is the dog?
- Read *How Big is a Foot?* by Rolf Myller, about a creative apprentice who comes up with a more accurate way of measuring size.
- Read weather charts, movie schedules, and other common numerical information you find in the news.
- When you're doing the laundry, have your child match all the pairs of socks. How many socks are there? How many pairs?
- Compare and organize tools, dishes, or other objects based on size, color, or weight.

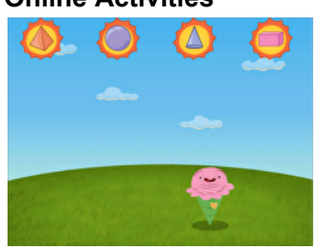
Online Activities

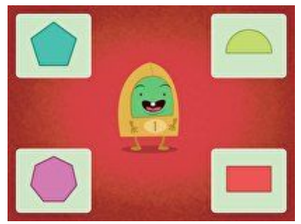




tally chart: a chart used to organize data using tally marks as a way to organize counting of objects **unit: a quantity used as a standard of measurement**			 

Geometry (G)

Vocabulary	Standards Included	Parent Activities	Online Activities
2-dimensional: lying flat (square, rectangle, cirlce, pentago, etc.) **3-dimensional: solid shapes; having points or sides that are not all on one plane** **analyze: examining parts to understand how they work together**	**1.G.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **1.G.2** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or	• At the grocery store, ask your child to find items that are triangles, circles, rectangles, and other shapes. • Ask your child to recognize or stack the groceries you bought by container shape or organize by size. • Organize a scavenger hunt where your child has to find objects of different shapes • Look for and discuss 2-D and 3-D shapes. (I	

attribute: a character that something has such as color, weight, height **classify: to sort into categories or to arrange into groups by attribute** **compare: to find how things are different or the same** **cone: a solid 3 dimensional object that a has a circular base and one vertex** **corner: the place where two lines meet** **cube: box shaped solid object that has 6 identical square faces** **cylinder: a solid object with 2 identical flat ends that are circular and 1 curved side** **decompose: to break up a number or object to show its parts** **hexagon: a six-sided polygon** **partition: to divide into groups or parts** **rectangle: a parallelogram with four right angles** **rectangular prism: a solid (3-dimensional) object which has six faces that are rectangles** **rhombus: a 4-sided flat shape with straight sides where all sides have equal length, opposite sides are parallel and opposite angles are equal; a type of parallelogram** **sphere: a 3-dimensional figure that is completely round; a ball**	three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.1 **1.G.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	see something that's a cube. Can you find it? or Can you see some rectangles out the window? How about circles? Do you notice more rectangles or circles?) • Shape Twister Game	  

trapezoid: A 4-sided flat shape with straight sides that has a pair of opposite sides parallel **triangle: a 3-sided polygon** **vertex: a corner point of a geometric figure**			

Assessment Practice

Practice Assessment Activities

K-5 WEBSITE RESOURCES

Math at Home
www.mathplayground.com
Online Math Games
Math Activities online
Online Manipulatives
Math Activities
Math Challenges for the Family
Math Zone
Common Core for Parents with students with disabilities
Math Videos

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ?	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? 2 + ? = 5	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? ? + 3 = 5
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? 5 – 2 = ?	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? 5 – ? = 3	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? ? – 2 = 3

	Total Unknown	Addend Unknown	Both Addends Unknown[1]
Put Together/ Take Apart[2]	Three red apples and two green apples are on the table. How many apples are on the table? 3 + 2 = ?	Five apples are on the table. Three are red and the rest are green. How many apples are green? 3 + ? = 5, 5 – 3 = ?	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? 5 = 0 + 5, 5 = 5 + 0 5 = 1 + 4, 5 = 4 + 1 5 = 2 + 3, 5 = 3 + 2

	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare[3]	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? 2 + ? = 5, 5 – 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? 2 + 3 = ?, 3 + 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ?, ? + 3 = 5