

# @ Home Math ideas

## Data & Graphing

- Have your child pick five colors. Then count the number of cars of each color in a parking lot. Use tally marks to record the data.
- To use graphing skills and practice math fluency (speed with accuracy), see how many flash cards your child can answer in 2 minutes and graph their accomplishments. Try addition then subtraction. For a challenge, do mixed addition and subtraction.
- Prepare a fresh fruit salad. Count out the number of pieces of each fruit used. Record the data on a bar graph.

## Estimation

- Pour some raisins onto a plate. Have your child estimate the number of raisins. Then count to find how close the estimate is. Continue to change the amount and estimate. See if your child's estimates get closer to the actual number.
- Fill a container with small objects (pennies, buttons). Write down the amount of items in the container. Then, fill another container with other small objects (popcorn kernels, beads). Do not fill this container as full as the first. Write down the amount of items in the second container. Keep the amounts hidden and ask a family member to guess the amount of objects in each container. Write down their guesses. Round each guess to the closest ten and subtract the amounts. Compare this number to the actual difference in objects.

## Multiplication & Division Concepts

- Pick up a handful of crayons and share them equally. Write the total number of crayons, the number each person gets, and the number left over if there are any.

[www.aMathsDictionaryforKids.com](http://www.aMathsDictionaryforKids.com)

An animated, interactive dictionary for students which explains over 600 common mathematical terms in simple language.



### Layout Design & Collaboration

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### Source Documents:

Based on Common Core State Standards for Mathematics, June 25, 2010

Adapted from North Dakota Content Standards: "I Can" Statements

Adapted from Arizona Department of Education Mathematics Standards, 2010

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The graphic features the text "Grade 2 CCSS Math Expectations Checklist" in large, bold, blue letters. Below the text is a wooden signpost with five directional arrows pointing to different math topics: "Operation and Algebraic Thinking" (yellow), "Number and Operations in Base 10" (red), "Measurement and Data" (blue), "Geometry" (green), and "Mathematical Practices" (purple). A large blue number "2" is positioned to the right of the signpost. At the bottom left, there is a cartoon owl wearing a graduation cap and holding a stack of books. At the bottom right, there is the logo for the "COMMON CORE STATE STANDARDS INITIATIVE" with the tagline "PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER".

# Grade 2

## Making Sense of Numbers

- When at the kitchen table toss out some macaroni (or cereal) and make groups of 2, 5, 10. Count by 2's, 5's, and 10's. Count 100 macaronis, etc.

## Addition and Subtraction

- Count out 50 beans, paper clips, or buttons. Have your child close his or her eyes while you take some of them away. Count the items left on the table and figure out how many are missing.
- Collect 10 items your child can "sell" to you. Place price tags ranging from \$99 to \$499 on each item. Have your child set up the store, and then you pick two items at a time to purchase. For each sale, have your child write out the bill, including what was purchased and the price. Return one item. Have your child subtract to find the amount still owed.
- Collect various items around the house and set up a store. Make whole number price tags for each item. Take turns acting as the store clerk and the shopper. When acting as the store clerk, write down each item the shopper chooses and add the items up. Give the shopper the bill. Acting as the shopper, use paper and buttons as play money to pay for the items. Ask: How much money did I spend? Ask: How much change did I get back?

## Measurement

- Look at different coins with your child and discuss ways to identify them. Have your child tell one thing about each coin. For example, have them tell you its name, value, or what is on the coin.
- Have your child use a thermometer to measure the temperature at 7:00 A.M., 12:00 P.M., and 5:00 P.M. Record your findings on a chart.
- Measure common things around the house using both standard and non-standard (string, paper clips, etc.) measuring devices.
- Use an inch ruler to measure the length of various items around the house. Compare the length of all of the items. Which is the longest? Which is the shortest?



# My checklist of what I can do in 2<sup>nd</sup> grade math . . . . .

I understand that it is important to apply the mathematical practices (identified on the inside cover) on a regular basis.

## Operations & Algebraic Thinking . . . . .

### Represent and solve problems involving addition and subtraction: (2.OA.1)

I can add and subtract to solve word problems (within 100).

### Add and subtract within 20: (2.OA.2)

I can fluently add and subtract within 20 in my head.

I can recall basic math facts from memory.

### Work with equal groups of objects to gain foundations for multiplication: (2.OA.3, 2.OA.4)

I can tell whether a group of objects (up to 20) is odd or even.

I can write an equation which shows adding the same two numbers will result in an even number.

I can use addition to find the total of an array.

I can write an equation that represents an array.

## Number & Operations in Base 10 . . . . .

### Understand place value: (2.NBT.1, 2.NBT.2, 2.NBT.3, 2.NBT.4)

I can explain three-digit numbers using hundreds, tens, and ones.

I can explain 100 is a bundle of ten tens.

I can explain how many hundreds are in multiples of 100.

I can skip-count within 1,000:  
\_\_\_\_\_ by 5's \_\_\_\_\_ by 10's \_\_\_\_\_ by 100's

I can read numbers to 1000.

I can write numbers to 1000 in different forms.

I can compare three-digit numbers using symbols.

### Use place value understanding and properties of operations to add and subtract: (2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.8, 2.NBT.9)

I can fluently add/subtract within 100.  
\_\_\_\_\_ add \_\_\_\_\_ subtract

I can add up to four two-digit numbers.

I can add/subtract within 1000 using strategies I can explain. \_\_\_\_\_ add \_\_\_\_\_ subtract

I can relate addition and subtraction strategies to written methods.

I can add and subtract numbers 100-900 in my head.

\_\_\_\_\_ add 10      \_\_\_\_\_ subtract 10  
\_\_\_\_\_ add 100      \_\_\_\_\_ subtract 100

I can explain why addition/subtraction strategies work.  
\_\_\_\_\_ addition      \_\_\_\_\_ subtraction

## Measurement and Data . . . . .

### Measure and estimate lengths in standard units: (2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4)

I can select appropriate tools for measuring length.

I can measure the length of an object.

I can measure the length of objects using different length units.

I can describe the relationship of different length units.

I can estimate lengths.

I can find the difference in length of two objects.

### Relate addition and subtraction to length: (2.MD.5, 2.MD.6)

I can add/subtract within 100 to solve word problems that involve length. \_\_\_\_\_ add \_\_\_\_\_ subtract

I can add/subtract within 100 using a number line.  
\_\_\_\_\_ add \_\_\_\_\_ subtract

### Work with time and money: (2.MD.7, 2.MD.8)

I can tell/write time to the nearest five minutes.  
\_\_\_\_\_ tell time      \_\_\_\_\_ write time

I can solve word problems involving dollar bills, quarters, dimes, nickels, and pennies.

I can use the \$ and ¢ symbols.

### Represent and interpret data: (2.MD.9, 2.MD.10)

I can collect data by measuring lengths.

I can make a line plot to show data.

I can draw a picture/bar graph.  
\_\_\_\_\_ picture graph      \_\_\_\_\_ bar graph

I can solve problems using a bar graph.

## Geometry . . . . .

### Reason with shapes and their attributes: (2.G.1, 2.G.2, 2.G.3)

I can recognize shapes by attributes.

I can draw shapes with given attributes

I can divide a rectangle into rows and columns of same-size squares and count the total number.

I can divide circles and rectangles into equal parts.

I can describe equal parts as part of a whole.

I can recognize equal shares of identical shapes do not have to be the same shape.

#### How to use checklist:

- Show the date of when you were able to do the math expectation.
- Show an example of what you did in a journal.