

# MATHEMATICS GRADE 2

# Extension Projects

## WITH INVESTIGATIONS

## 2009

These projects are optional and are meant to be a springboard for ideas to enhance the Investigations curriculum. Use them to help your students apply what they have learned each quarter and to expand their math skills. This is just the beginning of this process.

### Core Content

Numbers & Operation	<ul style="list-style-type: none"> <li>• Compare and represent whole numbers up to 1000, with an emphasis on place value.</li> <li>• Demonstrate mastery of addition and subtraction basic facts; add and subtract one- and two- digit numbers in real-world and mathematical problems.</li> </ul>
Algebra	<ul style="list-style-type: none"> <li>• Recognize, create, describe, and use patterns and rules to solve real-world and mathematical problems.</li> <li>• Use number sentences involving addition, subtraction, and unknowns to represent and solve real-world and mathematical problems; create real-world situations corresponding to number sentences.</li> </ul>
Geometry & Measurement	<ul style="list-style-type: none"> <li>• Identify, describe, and compare basic shapes according to their geometric attributes.</li> <li>• Understand length as a measurable attribute; use tools to measure length.</li> <li>• Use time and money in real-world and mathematical situations.</li> </ul>

<b>Grade 2 Quarter 1 Project</b>		<b>Unit 1 Unit 2 (Investigation 1)</b>
<b>Counting, Coins, and Investigations Shapes, Blocks, and Symmetry</b>		
<b>Strand</b>	<b>MN Benchmark</b>	<b>Benchmark #</b>
Number & Operation	Read, write and represent whole numbers up to 1000. Representations may include numerals, addition, subtraction, multiplication, words, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.	2.1.1.1
Number & Operation	Making tens, fact families, doubles plus or minus one, counting on, counting back, and the commutative and associative properties. Use the relationship between addition and subtraction to generate basic facts.	2.1.2.1
Number & Operation	Demonstrate fluency with basic addition facts and related subtraction facts.	2.1.2.2
Number & Operation	Use mental strategies and algorithms based on knowledge of place value to add and subtract two-digit numbers. Strategies may include decomposition, expanded notation, and partial sums and differences.	2.1.2.4
Number & Operation	Solve real-world and mathematical addition and subtraction problems involving whole numbers with up to 2 digits.	2.1.2.5
Geometry & Measurement	Identify and name basic two-dimensional shapes, such as squares, circles, and triangles, rectangles, trapezoids, and hexagons	2.3.1.2
Geometry & Measurement	Describe, compare, and classify two- and three-dimensional figures according to number and shape of faces, and the number of sides, edges and vertices (corners).	2.3.1.1

\*\*Note: The Geometry and Measurement standards will be addressed during the Quarter 2 Project.

**Numbers! Numbers! Everywhere!**

These activities can be done as a class, small group, individually, with a partner, or a team. They can be completed in class or as homework. Students' numbers can be as large or small as they choose. Choose one or all of the following:

1. Students will create a number journal using a variety of ways to record the numbers they find in their every day lives. This number can be found in the classroom, somewhere else at school, at home, in the neighborhood, at the store, wherever they can find a number! Any number they find will become the "number of the day." They will record their findings and show that number in a variety of ways. "My Number of the Day" could be a one time activity or something they can do again and again with a new number over several days.
2. Students will decompose numbers using "How many ways can you break up this number?" This could be a one time activity or something they can do again and again with a new number over several days.
3. Students will show the many ways to make the number 10 with "How many ways to make 10 are there?" using 2, 3, and/or 4 addends.
4. Students will create real-world mathematical addition problems using items and people that are in their classroom, school, or home with "Math in My World."

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Great **websites** for Number and Operation practice (and they're fun too!):

<http://www.oswego.org/ocsd-web/games/DogBone/gamebone.html>

(Finding numbers on the hundreds chart)

<http://www.mathplayground.com/index.html> (a variety of math games)

<http://www.funbrain.com/kidscenter.html> (a variety of math games)

[http://edweb.tusd.k12.az.us/ekowalc/math/elementary\\_web\\_sites.htm](http://edweb.tusd.k12.az.us/ekowalc/math/elementary_web_sites.htm)

(a variety of Math games)

Name: \_\_\_\_\_

## My Number of the Day

The number I found was

Where was your number? \_\_\_\_\_

Here are the different ways I can record this number:

Using...

<b>Numerals</b> <small>(Numbers Written Down)</small>	<b>Addition</b> <small>( ? + ? = ? )</small>	<b>Subtraction</b> <small>( ? - ? = ? )</small>	<b>Words</b>
<b>Pictures</b>	<b>Tally Marks</b> <small>(Use Another Paper If You Need To)</small>	<b>A Number Line Or Hundreds Chart</b> <small>(Use Another Paper If You Need To)</small>	<b>Tens And Ones</b>
<b>My Own Way</b> <small>(Choose One From Above And Do It A Little Differently Or Make Up Your Own)</small>	<b>Another Way</b>	<b>Still Another Way</b>	<b>The Last Way</b>

Circle the one you think was your best work and best shows the number you found. Put an X on the one you think was a difficult way to show this number. Why?

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Name: \_\_\_\_\_

## How Many Ways Can You Break Up This Number?

Here is an example. If I choose the number 5, then these are all of the addition equations I can make:

1+4	4+1	2+3	3+2	2+2+ 1	2+1+2	1+2+2
1+1+3	3+1+1	1+3+1	1+1+1+1+1	0+5	5+0	
1+1+1+2	2+1+1+1	1+2+1+1	1+1+2+1	I made 17 addition equations! 😊		

Pick a number between 1 and 20. Write it here: \_\_\_\_\_

Write all your addition equations in the box...or on another piece of paper

How many addition equations did you make with your number being the sum?

\_\_\_\_\_ (Count your equations when you are finished).

Name: \_\_\_\_\_

Making 10 – 2 addends

## How Many Ways Can You Make 10?

Show all ways to make ten. Color some of the blocks red and the other part blue. Then write the equation.

red	red	red	red	red	blue	blue	blue	blue	blue
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Equation  $5 + 5 = 10$

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

Name: \_\_\_\_\_

Making 10 – 3 addends

## How Many Ways Can You Make 10?

Show all ways to make ten. Color some of the blocks red, some blue, and the other part yellow. Then write the equation.

red	red	red	red	red	blue	blue	blue	blue	yellow
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Equation  $5 + 4 + 1 = 10$

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

Are there more ways? Show them on another piece of paper. →

Name \_\_\_\_\_

Making 10 – 4 addends

## HOW MANY WAYS CAN YOU MAKE 10?

Show all ways to make ten. Color some of the blocks red, some blue, some green, and the other part yellow. Then write the equation.

red	red	red	red	red	red	red	blue	green	yellow
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Equation  $7 + 1 + 1 + 1 = 10$

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

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Equation \_\_\_\_\_

Are there more ways? Show them on another piece of paper. →



**Name:** \_\_\_\_\_

More Equations for 10...

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

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**Equation** \_\_\_\_\_

Name: \_\_\_\_\_

## My Own Math Problems - Addition

### Someone Gives You Things! What Do YOU Want More Of?

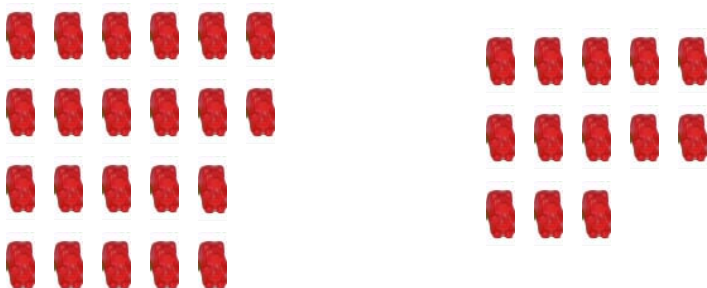
Example:

One day my friend Fred gave me 22 gummy bears .  
(person) (number) (things)

The next day my uncle Joe gave me 13 more gummy bears .  
(person) (number) (same things)

How many gummy bears do I have now?  
(same things)

Picture:



Equation: 22 + 13 = 35 gummy bears  
Label (things)

**Now do a problem from YOUR world.**

One day \_\_\_\_\_ gave me \_\_\_\_\_ .  
(person) (number) (things)

The next day \_\_\_\_\_ gave me \_\_\_\_\_ more \_\_\_\_\_ .  
(person) (number) (same things)

How many \_\_\_\_\_ do I have now?  
(same things)

Picture:

Equation: \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
Label (things)

Name: \_\_\_\_\_

## My Own Math Problems - Addition

### Moving things come along...be creative! 😊

There were \_\_\_\_\_ at the \_\_\_\_\_.

(number)                      (things)                      (place)

\_\_\_\_\_ more \_\_\_\_\_ came along.

(number)                      (same things)

How many \_\_\_\_\_ are there now?

(same things)

**Picture:**

Equation: \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Label (things)

#### What else can come together?

There were \_\_\_\_\_ at the \_\_\_\_\_.

(number)                      (things)                      (place)

\_\_\_\_\_ more \_\_\_\_\_ came along.

(number)                      (same things)

How many \_\_\_\_\_ are there now?

(same things)

**Picture:**

Equation: \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Label (things)

Grade 2 Quarter 2 Project		Unit 2 (Investigations 2 and 3) Unit 3
Shapes, Blocks, and Symmetry Stickers, Number Charts, and Story Problems		
Strand	MN Benchmark	Benchmark #
Number & Operation	Read, <b>write</b> and represent whole numbers up to 1000 ( <b>Q2: up to 200</b> ). Representations may include numerals, addition, subtraction, multiplication, words, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.	2.1.1.1
Number & Operation	Compare and order whole numbers up to 1000. ( <b>Q2: up to 200</b> )	2.1.1.5
Number & Operation	Use place value to describe whole numbers between 10 and 1000 ( <b>Q2: between 10 and 200</b> ) in terms of groups of hundreds, tens and ones. Know that 100 is ten groups of 10, and 1000 is ten groups of 100.	2.1.1.2
Number & Operation	Use mental strategies and algorithms based on knowledge of place value to add and subtract two-digit numbers. Strategies may include decomposition, expanded notation, and partial sums and differences.	2.1.2.4
Number & Operation	Estimate sums and differences up to 100.	2.1.2.3
Number & Operation	Solve real-world and mathematical addition and subtraction problems involving whole numbers with up to 2 digits.	2.1.2.5
Number & Operation	Demonstrate fluency with basic addition facts and related subtraction facts.	2.1.2.2
Number & Operation	Use strategies to generate addition and subtraction facts including <b>making tens, fact families, doubles plus or minus one, counting on, counting back, and the commutative and associative properties</b> . Use the relationship between addition and subtraction to generate basic facts.	2.1.2.1
Algebra	Understand how to interpret number sentences involving addition, subtraction and unknowns represented by letters. Use objects and number lines and create real-world situations to represent number sentences.	2.2.2.1
Geometry & Measurement	Identify and name basic two- and <b>three-dimensional shapes</b> , such as squares, circles, and triangles, rectangles, trapezoids, hexagons, <b>cubes, rectangular prisms, cones, cylinders and spheres</b> .	2.3.1.2
Geometry & Measurement	Describe, compare, and classify <b>two- and three dimensional figures</b> according to number and shape of faces, and the <b>number of sides, edges and vertices (corners)</b> .	2.3.1.1
Geometry & Measurement	<b>Identify pennies nickels, dimes and quarters. Find the value of a group of coins</b> and determine combinations of coins that equal a given amount.	2.3.3.2

These activities can be done as a class, small group, individually, with a partner, or a team. They can be completed in class or as homework. Choose one or all of the following:

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**Project #1**  
**Extreme Math Makeover!**

Students will create a mathematical room. Depending on your students, they can create one or two rooms or an entire house.

Students will use their number sense and understanding of shapes to create the perfect room for a family who loves numbers and geometric shapes. They will use as many two- and three-dimensional shapes as possible. They will keep track of the quantity of shapes used.

- Students will make a list of the different items (walls, windows, doors, and furniture etc.) they will need for the mathematical room.
  - Students will make a list of the different shapes they will need to create the mathematical room.
  - Students will keep track of the number of each item they will need and will calculate the totals.
  - Students will create a blueprint for their room design.
  - Students can also create a 3D model of their design.
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**Project #2**  
**Let's Go Shopping!**

Students will use their understanding of coins and their values to create a store.

- Students will decide on a store name and create a logo.
- Students will prepare a magazine or TV advertisement.
- Students will price items and display them.
- Students will pretend they are store clerks and customers.

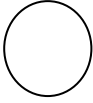

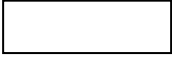




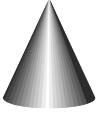
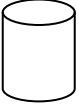


## The Story:

The Geometry Family loves math! The grown-ups in the family have jobs that need a lot of math skills. The children all love math and think it is fun. The family wants a room that shows their love of numbers and shapes. They have hired you to create this room. They want to have lots and lots of shapes and patterns and numbers that will show how much they love math. They have hired you to be the architect, the contractor, and the interior designer of their new room. Be sure to have lots of windows and bricks and things for the children to count! They love it! Be creative! Use as many 2D and 3D shapes as you can. Just think of the interesting shaped windows, doors and furniture you can create! Your imagination can run wild! Make the best house you can for the Geometry family. Have fun!



# \_\_\_\_\_ 's Math Room

(Your name)

<b>Geometric shapes to use:</b>	circles 	triangles 	rectangles 
Trapezoids 	hexagons 	squares 	cubes 
cones 	cylinders 	rectangular prisms 	spheres 

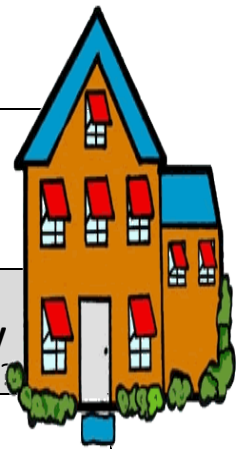
**Room** (Kitchen? Bathroom? Living room?)

\_\_\_\_\_

Item (Windows, furniture, appliances, walls, doors, pictures etc.)	Shape	2D or 3D shape?	Quantity (How many?)

Name: \_\_\_\_\_

Use these pages to make more rooms for your house.



Room \_\_\_\_\_

Item (window, furniture, wall etc.)	Shape	2D or 3D shape?	Quantity (How many?)

Room \_\_\_\_\_

Item (window, furniture, wall etc.)	Shape	2D or 3D shape?	Quantity (How many?)

**COOL STUFF!** On a separate piece of paper create a blueprint for your room (house) design. You can also create a 3D model of their design using clay, boxes, wood shapes, etc. Share your blueprint and your 3D model!



**Name:** \_\_\_\_\_

**Let's Go Shopping!**



You are now the owner of a store where your classmates are going to be your customers. You will create a logo and an advertisement for your new store. You will price your items and make believe that you are selling items to your friends.

**The Name of My Store**

**The Logo for My Store**

Name: \_\_\_\_\_

## Let's Go Shopping!

### The Advertisement for My Store

You can choose to do a TV advertisement or a magazine advertisement. The TV ad will be a chance for you to write a script, gather your props and work on your acting skills. The magazine ad needs to have something that catches people's attention and persuades people to come to your store. Remember to include the name of your store and your store logo in whatever advertisement you choose to do.

Our decision:    \_\_\_\_\_TV ad    \_\_\_\_\_magazine ad

### Here is the plan:

Name: \_\_\_\_\_

## Let's Go Shopping!

Create a list of the items you will sell at your store. Choose 10 things to sell and decide on their price. All items need to be less than \$1.00 each.

Item	Price

If you sell everything at your store, how much money will you make?

\$ \_\_\_\_\_

Grade 2 Quarter 3 Project		Unit 4, Unit 5, Unit 6
Pockets, Teeth, and Favorite Things How Many Floors? How Many Rooms? How Many Tens? How Many Ones?		
Strand	MN Benchmark	Benchmark #
Number & Operation	Read, write and represent whole numbers up to 1000 ( <b>Q3: up to 500</b> ). Representations may include numerals, addition, subtraction, multiplication, words, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.	2.1.1.1
Number & Operation	Compare and order whole numbers to 1000.	2.1.1.5
Number & Operation	Solve real-world and mathematical addition and subtraction problems involving whole numbers with up to 2 digits.	2.1.2.5
Number & Operation	Demonstrate fluency with basic addition facts and related subtraction facts.	2.1.2.2
Number & Operation	Use place value to describe whole numbers between 10 and 1000 ( <b>Q3: between 10 and 500</b> ) in terms of groups of hundreds, tens and ones. Know that 100 is ten groups of 10, and 1000 is ten groups of 100.	2.1.1.2
Number & Operation	Use addition and subtraction to create and obtain information from tables, bar graphs and tally charts.	2.1.1.6
Algebra	Identify, create and describe simple number patterns involving repeated addition or subtraction, skip counting and arrays of objects such as counters or tiles. Use patterns to solve problems in various contexts.	2.2.1.1
Algebra	Understand how to interpret number sentences involving addition, subtraction and <b>unknowns represented by letters</b> . Use objects and number lines and create real-world situations to represent number sentences.	2.2.2.1
Algebra	Use number sentences involving addition, subtraction, and <b>unknowns</b> to represent given problem situations. Use number sense and properties of addition and subtraction to find values for the unknowns that make the number sentences true.	2.2.2.2
Geometry & Measurement	Identify pennies, nickels, dimes and quarters. Find the value of a group of coins and <b>determine combinations of coins that equal a given amount.</b>	2.3.3.2

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**Project #1**  
**The Gigantic School**

With a copy of the school's floor plan or creating their own design by counting all the rooms, students will add several floors to their school.

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**Project #2**  
**Algebra is Awesome Alphabet Book**

Students will create algebra problems for each letter of the alphabet and create an alphabet book of algebra problems using letters as variables. The variable letter and the topic of the page will match. Students will create a story problem and a solution for each letter. This activity can be done individual, with a partner, as a team or with the entire class. Students could work on this all at once or do a page or two per day.

Note: To make a class book or to do a display of algebra stories, use the enlarged version at the end of the book pages. Each child will choose a letter or letters.

Some more great math websites for a variety of math subjects:

- <http://jmathpage.com>
- <http://www.gamequarium.com>

Name: \_\_\_\_\_

Here is the information about my school.

The number of rooms on first floor \_\_\_\_\_.

Now create a table describing how many floors would be in your school if you added a second and third floor.

<b>Number of Floors</b>	<b>Rooms on this floor</b>	<b>Number of Rooms</b>
<b>1</b>	<b>17</b>	<b>17</b>
<b>2</b>	<b>17</b>	<b>34 (17+17)</b>
<b>3</b>	<b>17</b>	<b>51 (34+17)</b>
<b>4</b>	<b>17</b>	<b>68 (51+17)</b>

If your school already has several floors, you can use first floor as your model and keep the pattern going or you can look at the map of your school and repeat that pattern.

Example: If the first floor of your school has 20 rooms and the second floor has 17 rooms then the pattern would be as follows:

<b>Number of Floors</b>	<b>Rooms on this floor</b>	<b>Number of Rooms</b>
<b>1</b>	<b>20</b>	<b>20</b>
<b>2</b>	<b>17</b>	<b>37 (20 + 17)</b>
<b>3</b>	<b>20</b>	<b>57 (37 + 20)</b>
<b>4</b>	<b>17</b>	<b>74 (57 + 17)</b>

**Name:** \_\_\_\_\_

Now create a table of your own school. Complete the pattern.

Number of Floors	Rooms on this floor	Number of Rooms
<b>1</b>		
<b>2</b>		
<b>3</b>		
<b>4</b>		

Now make the school using connecting cubes.

# Algebra is Awesome!

## My Variable Alphabet Book

Written and illustrated by \_\_\_\_\_

**Here is your sample page.** You will make 26 pages for the letters in the alphabet. You will write an equation using the letter as the variable in that equation. Your story should include something that begins with that letter. Follow this example.

**Variable: a**

Equation  **$40 - a = 25$**

Solution  **$a = 15$**

Story **There were 40 alligators. Some of them jumped in the pond. There were 25 left on the shore. How many jumped in the pond?**  
**15 alligators jumped in.**

**Variable: a**

Equation \_\_\_\_\_

Solution  **$a =$**  \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: b**

Equation \_\_\_\_\_

Solution  **$b =$**  \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: c**

Equation \_\_\_\_\_

Solution **c** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: d**

Equation \_\_\_\_\_

Solution **d** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: e**

Equation \_\_\_\_\_

Solution **e** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: f**

Equation \_\_\_\_\_

Solution **f** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: g**

Equation \_\_\_\_\_

Solution **g** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: h**

Equation \_\_\_\_\_

Solution **h** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: i**

Equation \_\_\_\_\_

Solution **i** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: j**

Equation \_\_\_\_\_

Solution **j** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: k**

Equation \_\_\_\_\_

Solution **k** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: l**

Equation \_\_\_\_\_

Solution **l** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: m**

Equation \_\_\_\_\_

Solution **m** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: n**

Equation \_\_\_\_\_

Solution **n** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: o**

Equation \_\_\_\_\_

Solution **o** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: p**

Equation \_\_\_\_\_

Solution **p** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: q**

Equation \_\_\_\_\_

Solution **q** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: r**

Equation \_\_\_\_\_

Solution **r** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: s**

Equation \_\_\_\_\_

Solution **s** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: t**

Equation \_\_\_\_\_

Solution **t** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: u**

Equation \_\_\_\_\_

Solution **u** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: v**

Equation \_\_\_\_\_

Solution **v** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: w**

Equation \_\_\_\_\_

Solution **w** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: x**

Equation \_\_\_\_\_

Solution **x** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: y**

Equation \_\_\_\_\_

Solution **y** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: z**

Equation \_\_\_\_\_

Solution **z** = \_\_\_\_\_.

Story \_\_\_\_\_

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**Variable: \_\_\_\_\_**

Equation: \_\_\_\_\_

Solution: \_\_\_\_ = \_\_\_\_

**My Story**

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Grade 2 Quarter 4 Project		Unit 7 Unit 8 Unit 9
Parts of a Whole, Parts of a Group Partners, Teams, and Paper Clips Measuring Length and Time		
Strand	MN Benchmark	Benchmark #
Number & Operation	Read, write and represent whole numbers up to 1000 ( <b>Q4: up to 1000</b> ). Representations may include numerals, addition, subtraction, multiplication, words, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.	2.1.1.1
Number & Operation	Compare and order whole numbers to 1000.	2.1.1.5
Number & Operation	Demonstrate fluency with basic addition facts and related subtraction facts.	2.1.2.2
Number & Operation	Use place value to describe whole numbers between 10 and 1000 ( <b>Q4: between 10 and 1000</b> ) in terms of groups of hundreds, tens and ones. Know that 100 is ten groups of 10, and 1000 is ten groups of 100.	2.1.1.2
Number & Operation	Use mental strategies and algorithms based on knowledge of place value to add and subtract two-digit numbers. Strategies may include decomposition, expanded notation, and partial sums and differences.	2.1.2.4
Number & Operation	Find 10 more or 10 less than any given three-digit number. Find 100 more or 100 less than any given three-digit number.	2.1.1.3
Number & Operation	Recognize, name, compare and represent unit fractions with drawings and concrete materials.	2.1.1.5
Number & Operation	Round numbers up to the nearest 10 and 100 and round numbers down to the nearest 10 and 100.	2.1.1.4
Number & Operation	Estimate sums and differences up to 100.	2.1.2.3
Number & Operation	Solve real-world and mathematical addition and subtraction problems involving whole numbers with up to 2 digits.	2.1.2.5
Algebra	Identify, create and describe simple number patterns involving repeated addition or subtraction, skip counting and arrays of objects such as counters or tiles. Use patterns to solve problems in various contexts.	2.2.1.1
Geometry & Measurement	Demonstrate an understanding of the relationship between length and the numbers on a ruler by using a ruler to measure lengths to the nearest centimeter or inch	2.3.2.2
Geometry & Measurement	Tell time to the quarter-hour and distinguish between a.m. and p.m.	2.3.3.1
Geometry & Measurement	Understand the relationship between the size of the unit of measurement and the number of units needed to measure the length of an object.	2.3.2.1



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**Project #1  
Tick Tock, There Goes the Clock!**



1. Students will keep track of everything they do for an entire day and calculate the elapsed time.
2. Students will create a timeline for their day.
3. Students will create a timeline for their lives.

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**Project #2  
Fractions – Can I Get a Piece of That?**

1. Students will make their own pizza with several different ingredients using fractions.
2. Students will draw examples of common fractions. They will draw fractions of whole shapes and fractions of a group of items.
3. Students will draw examples of fractions of their choice. They will draw fractions of whole shapes and fractions of a group of items.

<http://www.vectorkids.com/vkfractions.htm>

<http://www.gamequarium.com/fractions.html>

Name: \_\_\_\_\_

# Tick Tock, There Goes the Clock!

## My Day



Activity	Time Started	am or pm?	Time Ended	am or pm?	Time Elapsed

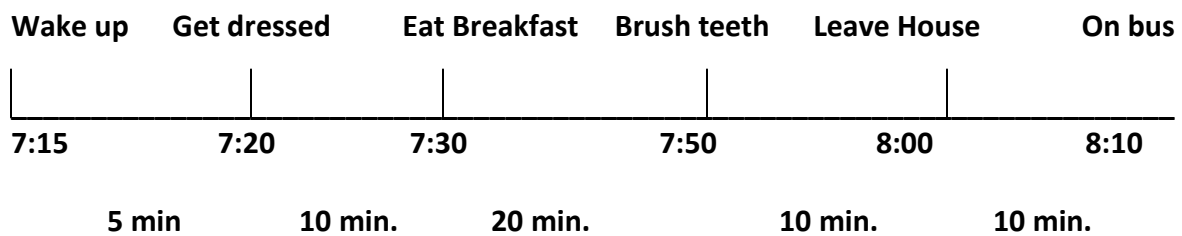
Total Time \_\_\_\_\_  
(24 hours = 1 Day)



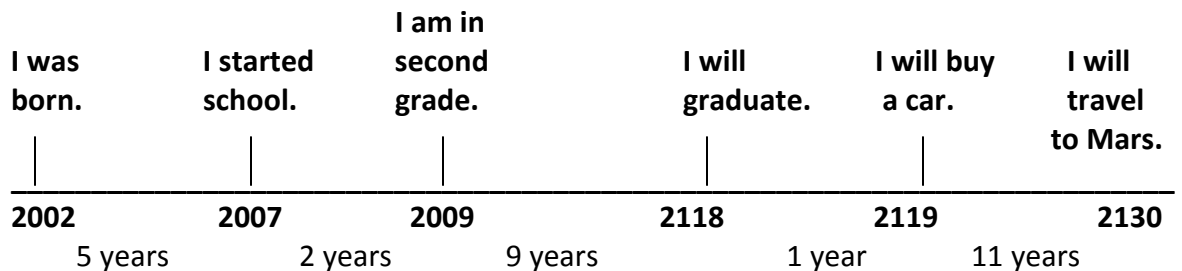
On a separate piece of paper, make a timeline of your entire day.

Include activities, times and elapsed times.

Here is a sample of a part of a day:



You can also make a timeline of your life. Start when you are born and put in the years of important events. You can end with today or go into the future and predict when you will do some great things! When will you graduate from school? When will you get a job? Will you have a family? What are your future dreams?



# Play TONY FRACTION'S PIZZA SHOP

<http://www.mrnussbaum.com/tonyfraction.htm>

**Make a PIZZA! Divide it into fourths, fifths, sixths, sevenths, eighths, ninths or tenths.**



Put a different ingredient on each section. If you want more than one piece with your favorite topping, that's fine, but you need to use at least 3 different ingredients. Draw your pizza and fill in the chart for how you divided your pizza. When you add your fractions together, you'll have a WHOLE pizza!

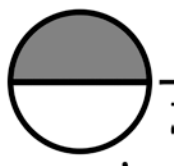
## Fractions! Fractions! Fractions!

Make different posters (12X18 or larger paper) and put them around the room. Students will draw examples of each of the fractions and also have the opportunity to create some of their own. As they finish their drawing, they can cut them apart and attach them to the correct poster.

The titles for the posters and the student pages are on the following pages.

$\frac{1}{2}$        $\frac{1}{3}$        $\frac{1}{4}$        $\frac{2}{3}$        $\frac{3}{4}$        $\frac{1}{6}$        $\frac{1}{8}$   
are the common fractions that will be used.

1/2 of a whole:

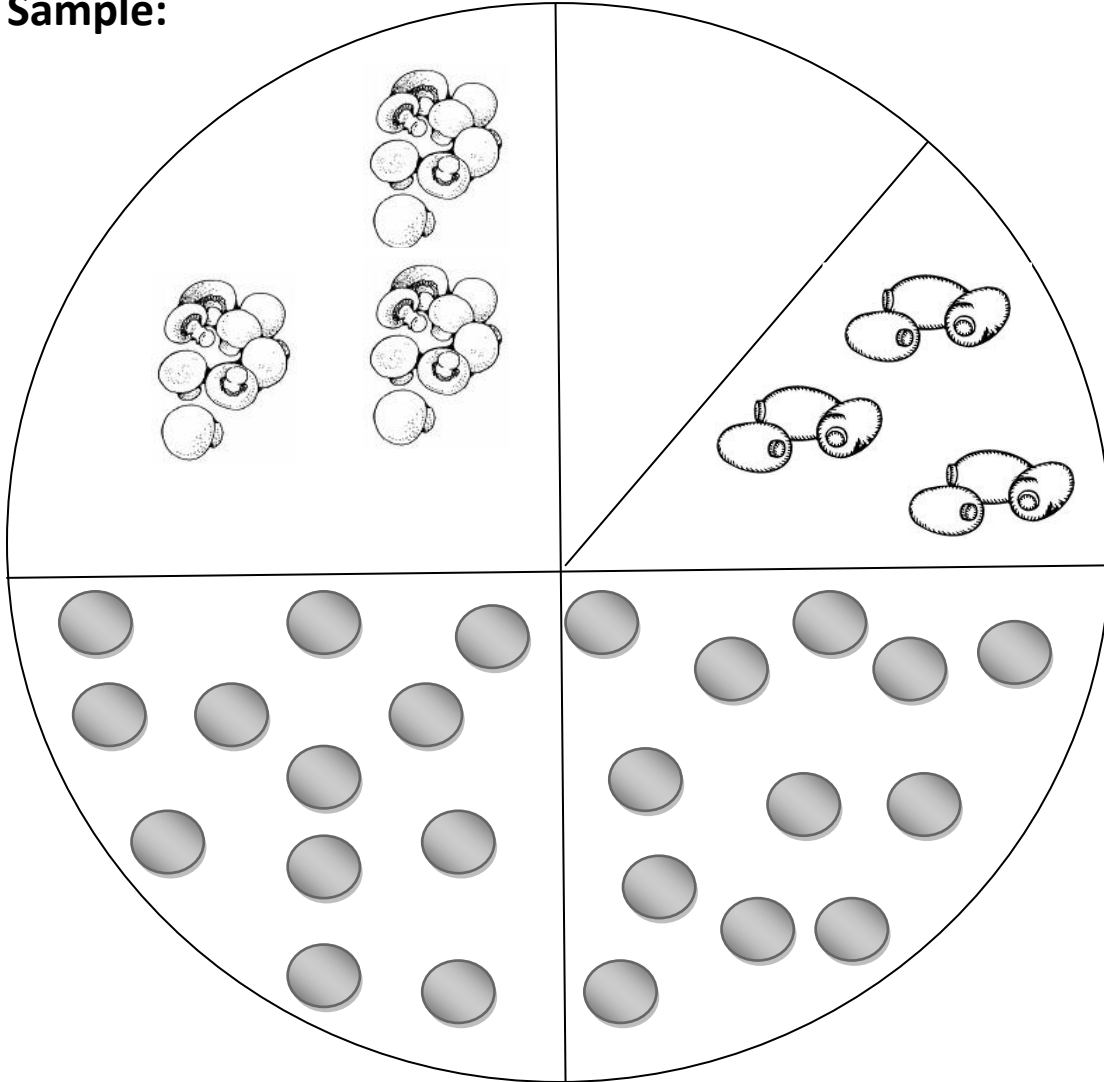


1/2 of a group:



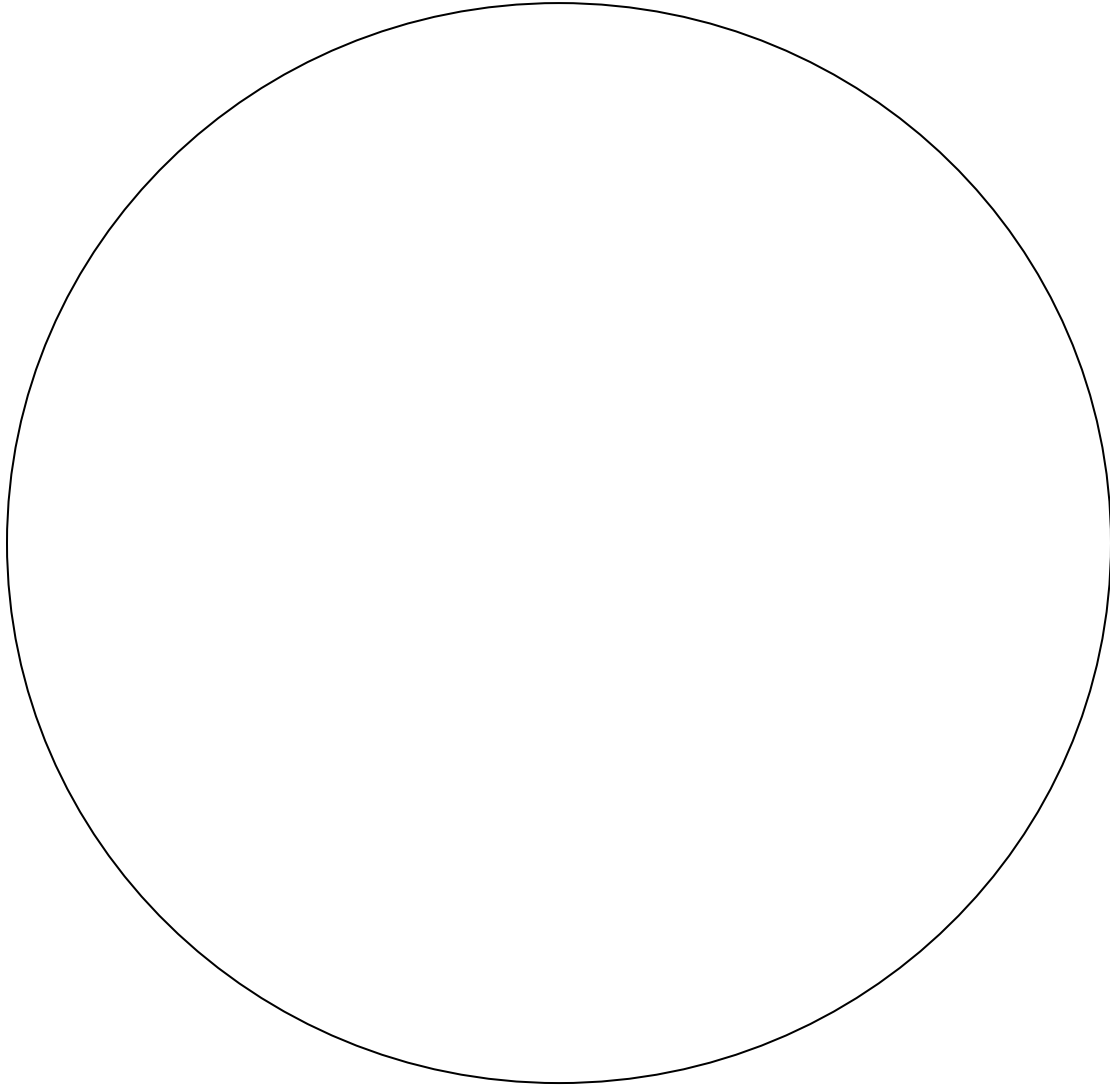
Name \_\_\_\_\_'s Pizza

Sample:



pepperoni cheese peppers olives bacon sausage pineapple ham onion mushrooms	
Fraction	Ingredient
1/4	mushrooms
1/2	pepperoni
1/8	olives
1/8	cheese
1 whole	Pizza!

Name \_\_\_\_\_'s Pizza



pepperoni cheese peppers olives bacon sausage pineapple ham onion mushrooms	
Fraction	Ingredient

<b>1/2 of a whole</b>	<b>1/2 of a group</b>	<b>1/3 of a whole</b>	<b>1/3 of a group</b>	<b>1/4 of a whole</b>
<b>1/4 of a group</b>	<b>2/3 of a whole</b>	<b>2/3 of a group</b>	<b>3/4 of a whole</b>	<b>3/4 of a group</b>
<b>1/6 of a whole</b>	<b>1/6 of a group</b>	<b>1/8 of a whole</b>	<b>1/8 of a group</b>	____ of a _____

Put these on the posters.

<b>1/2 of a whole</b>	<b>1/2 of a group</b>	<b>1/3 of a whole</b>
<b>1/3 of a group</b>	<b>1/4 of a whole</b>	<b>1/4 of a group</b>
<b>2/3 of a whole</b>	<b>2/3 of a group</b>	<b>3/4 of a whole</b>
<b>3/4 of a group</b>	<b>1/6 of a whole</b>	<b>1/6 of a group</b>
<b>1/8 of a whole</b>	<b>1/8 of a group</b>	<b>Your own fraction! </b>



## Great website for fraction flags:

- <http://www.oswego.org/ocsd-web/games/fractionflags/fractionflags.html>

## More fractions websites:

- <http://www.vectorkids.com/vkfractions.htm>
- <http://www.gamequarium.com/fractions.html>