

Dear Family,

Today my class started **Chapter 1: Use Place Value to Communicate**. I will be learning to find patterns in numbers and to read, write, and identify place value of numbers through ten thousands. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

pattern A sequence of numbers, figures, or symbols that follows a rule or design.

Example: 2, 4, 6, 8, 10

place value The value given to a *digit* by its place in a number. In 349 the 3 is in the hundreds place and has a value of 300.

equal to Having the same value

round To change the *value* of a number to one that is easier to work with. 27 rounded to the nearest ten is 30.

Activity

Assemble about 50 of any small items you have around the house (pennies, paper clips, buttons, etc.). In the first row, put 3 items. Add 2 items to each new row for several rows. Ask: How many items will go in the next row? Ask: How do you know? What is the pattern? Take turns arranging the items in new patterns.

Books to Read:

How Many Snails

by Paul Giganti, Jr.

The King's Commissioner

by Aileen Freidman

17 Kings and 42 Elephants

by Margaret Mahy

Dear Family,

Today my class started **Chapter 2: Add to Solve Problems**. I will learn how addition will help me every day. I will also learn how addition can help when you want to buy things. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

Commutative Property of Addition states that the order in which the numbers are added does not change the sum

$$3 + 4 = 7 \text{ and } 4 + 3 = 7$$

Identity Property of Addition states that the sum of any number and zero is the number

$$4 + 0 = 4 \text{ and } 0 + 4 = 4$$

Associative Property of Addition states that grouping the addends does not change the sum

$$(3 + 3) + 4 = 10 \text{ and } 3 + (3 + 4) = 10$$

regroup renaming a number using place value
10 ones = 1 ten

estimate finding an answer that is close to the exact answer

Activity

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?

Books to Read

The Hershey's Kisses Addition Book

by Jerry Pallotta

Once Upon a Dime

by Nancy Kelly Allen

The M & M's Counting Book

by Barbara McGrath

Dear Family,

Today my class started **Chapter 3: Subtract to Solve Problems**. I will be learning how to subtract large numbers and how to estimate differences. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

difference The answer in a subtraction problem.

front-end estimation An estimation method that uses the front digit of a number and replaces the other digits with zeros.

regroup To take apart a number to write it in a new way.

number sentence A way to express a math idea using numbers and operational symbols.

Activity

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 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.

Books to Read

Subtraction Action

by Loreen Leedy

Hannah's Collections

by Marthe Jocelyn

Alice in Pastaland

by Alexandra Wright

Dear Family,

Today my class started **Chapter 4: Model Multiplication Concepts and Facts**. I will be exploring the meaning of multiplication, using models to multiply, and using multiplication properties and rules. I will also learn how to multiply by the numbers 2, 4, 5, 10, 0, and 1. Here are my vocabulary words and an activity we can do together.

Love, _____

Key Vocabulary

multiply The operation of repeated addition of the same number.

factor A number that divides into a whole number evenly. Also a number that is multiplied by another number.

product The answer to a multiplication problem.

array Objects or symbols displayed in rows of the same length and columns of the same length.

Commutative Property of Multiplication The property that states that the order in which two numbers are multiplied does not change the product.

Zero Property of Multiplication The property that states any number multiplied by zero is zero.

Identity Property of Multiplication If you multiply a number by 1, the product is the same as the given number.

Activity

Place two cups together on the table. Place another set of two cups next to the first two. Finally, place one last set of two cups next to those. On the table you should have three pairs of cups. Count the cups to see how many you have in three sets of two. Now rearrange the cups into two groups, with three cups in each group. Count the cups again to see how many you have in two sets of three. Ask: What was your answer each time? Ask: What property of multiplication does this demonstrate?

Books to Read

Anno's Mysterious Multiplying Jar

by Mitsumasa Anno

The Rajah's Rice

by David Barry

The King's Chessboard

by David Birch

Dear Family,

Today my class started **Chapter 5: Model More Multiplication Facts**. I will be learning to multiply by 3, 6, 7, 8, 9, 11, and 12. I will also be learning to use the *associative and commutative properties of multiplication*. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

Associative Property of Multiplication The property that states that the grouping of the factors does not change the product.

$$3 \times (6 \times 2) = (3 \times 6) \times 2$$

factor A number that divides into a whole number evenly. Also a number that is multiplied by another number. 8 is a factor of 24.

product The answer to a multiplication problem. It also refers to expressing a number as product of its factors.

Activity

Place 81 paper clips in a bowl. Take 9 paper clips and put them into a small plastic bag. How many small plastic bags will you need for all 81 paper clips? What if you put 18 paper clips in to each bag? How many bags would you need then?

Books to Read

Spaghetti and Meatballs for All!

by Marilyn Burns

Each Orange Has 8 Slices

by Paul Giganti, Jr.

2 × 2 = Boo Multiplication Stories

by Loreen Leedy

Dear Family,

Today my class started **Chapter 6: Model Division Concepts and Facts**. I will learn how to relate subtraction and multiplication to division. I will also learn how to divide by 2, 5, and 10. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

divide To separate into equal groups. Can also be thought of as repeated subtraction.

Example: $6 \div 2 = 3$ or $2 \overline{)6}$
 divisor quotient dividend

array Objects or symbols displayed in rows of the same length and columns of the same length. The length of a row might be different from the length of a column.

divide To separate into equal groups.

dividend A number that is being divided.

divisor The number by which the dividend is being divided.

fact family A group of related facts using the same numbers.

quotient The answer to a division problem.

Activity

Place 12 pencils on a table. Divide the pencils into two equal groups. How many pencils are in each group? How many pencils would be in each group if you divided them into four equal groups?

Books to Read

The M & M's Color Pattern Book
by Barbara McGrath

Math Curse
by Scieszka & Smith

17 Kings and 42 Elephants
by Margaret Mahy

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Dear Family,

Today my class started **Chapter 7: Model More Division Facts**. I will be learning to divide by 3, 4, 6, 7, 8, and 9. I will also be learning to find unit cost. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

unit cost The price for one item.

equation A mathematical sentence that contains an equals sign, =, indicating that the left side of the equal sign has the same value as the right side. $2 \times 8 = 8 \times 2$

numerical expression An expression that contains numbers and at least one operation.
 2×4

divisible Describes a number that can be divided into equal parts.

array Objects or symbols displayed in rows of the same length and columns of the same length. The length of a row might be different from the length of a column.

subtraction An operation that tells the difference, when some or all are taken away. $9 - 4 = 5$

Activity

Cut 10 circles out of construction paper. Ask: How many circles are there total? How many groups of 2 can you make? How many groups of 5 can you make? If you take two away, how many groups of 2 can you make?

Books to Read

Math Man

by Teri Daniels

The Toothpaste Millionaire

by Jean Merrill

Reeses' Pieces Count by Fives

by Jerry Pallotta

Dear Family,

Today my class started **Chapter 8: Use Patterns and Algebraic Thinking**. I will be learning to model and use number sentences and expressions. I will also be learning to make a table to show functions. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

number sentence An expression using numbers and the equal sign. $3 + 2 = 5$

expression A combination of numbers, variables, and operation symbols that represents a mathematical quantity. $4 \div 2$

function A relationship where one quantity depends on another quantity.

rule Tells you what to do to the first number in a pattern to get the second.

variable A letter such as x or y that represents an unknown number.

Activity

Write several different expressions on small slips of paper. Write the answers to the expressions on separate slips of paper. Pull one slip of paper from each pile at a time. Tell whether the slips form a correct number sentence. Repeat until all number sentences have been created.

Books to Read

Spaghetti and Meatballs For All!

by Marilyn Burns

17 Kings and 42 Elephants

by Margaret Mahy

Cardinal Numbers

by Marcia Schonberg

Dear Family,

Today my class started **Chapter 9: Measure Length, Perimeter, Area, and Temperature**. I will be learning to estimate and measure length in both metric and customary units. I will also be learning to calculate perimeter and area. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

length measurement of the distance between two endpoints.

meter a metric unit for measuring length or height

perimeter the distance around a shape or region

area the number of square units needed to cover the inside of a region or plane figure

thermometer a device that measures how hot or cold something is

Activity

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?

Books to Read:

How Tall, How Short, How Far Away
by David Adler

Mr. Archimedes' Bath
by Pamela Allen

Pigs on a Blanket
by Amy Axelrod

Dear Family,

Today my class started **Chapter 10: Measure Capacity, Weight/Mass, Volume, and Time**. I will be learning to estimate and measure capacity, weight/mass, and Volume. I will also be learning to tell time. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

capacity The amount a container can hold.

gram (g) A metric unit for measuring mass.

kilogram (kg) A metric unit for measuring mass. $1000\text{g} = 1\text{ kg}$

liter (L) A metric unit for measuring volume or capacity. $1\text{ liter} = 1000\text{ milliliters}$

mass The amount of matter in an object.

pint (pt) A unit of capacity larger than a cup.

quart (qt) A unit of capacity smaller than a gallon.

Volume The number of cubic units needed to fill a solid figure.

Weight How heavy something is.

Activity

Go around your house and count every instrument that measures time. How many did you find?

Books to Read:

How Tall, How Short, How Far Away
by David Adler

Mr. Archimedes' Bath
by Pamela Allen

Counting on Frank
by Rod Clement

Dear Family,

Today my class started **Chapter 11: Identify Geometric Figures and Spatial Reasoning**. I will be learning to identify, describe, and classify two- and three-dimensional figures. I will also be learning to identify geometric patterns and name whole numbers on a number line. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

perimeter The distance around a shape or region.

congruent Two shapes having the same size and the same shape.

polygon A closed plane figure formed using line segments that meet only at their endpoints

symmetry An object that has sides that are mirror images.

three-dimensional A figure that has length, width, and height.

two-dimensional The outline or shadow of a shape, which has only length and width.

Activity

On construction paper, draw the outline of a triangle, quadrilateral, pentagon, hexagon and octagon. Cut the shapes out and take turns quizzing each other on the names of the different shapes.

Books to Read:

Changes

by Marjorie N. Allen

The Greedy Triangle

by Marilyn Burns

Wing on a Flea

by Ed Emberley

Dear Family,

Today my class started **Chapter 12: Organize, Display, and Interpret Data**. I will be learning to collect, organize, record, and display data on a tally chart. I will also be learning to display and read data in a bar graph and pictograph. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

tally chart A way to keep track of data using tally marks to record the results.

bar graph A graph that compares data by using bars of different lengths and heights.

pictograph A graph that shows information by using picture symbols to represent data.

probability A number between 0 and 1 that measures the likelihood of an event happening.

survey A method of collecting data

data Information

prediction Something you think will happen such as a specific outcome of an experiment.

scale The numbers along the side of a bar graph.

Activity

Prepare a fresh fruit salad. Count out the number of pieces of each fruit used. Record the data on a bar graph.

Books to Read

The Water Home
by Graeme Base

Hannah's Collections
by Marthe Jocelyn

Tiger Math, Learning to Graph from a Baby Tiger
by Nagda and Bickel

Dear Family,

Today my class started **Chapter 13: Use Fraction Names and Symbols**. I will be learning to identify, read, and write fractions. I will also be learning to compare fractions. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

fraction A number that part of a whole or part of a set. $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{6}$

numerator The top number in a fraction. In $\frac{1}{2}$, 1 is the numerator.

denominator The bottom number in a fraction. In $\frac{1}{2}$, 2 is the denominator.

equivalent fractions Fractions that have the same value. $\frac{1}{2}$ and $\frac{2}{4}$

is greater than (>) A symbol to show that the first number is greater than the second.

is less than (<) A symbol to show that the first number is less than the second.

Activity

Use construction paper to cut out 4 circles. With a pencil or a marker, draw lines to divide the circle into equal parts. Divide each circle into a different amount of equal parts. After you have divided the circles, shade in as many areas as you choose on each circle. Finally, on the back side of the circle, record the fraction that represents the amount of shaded areas.

Books to Read:

Fraction Fun

by David Adler

The Fraction Family Moves West

by Marti Dryk

Piece=Part=Portion

by Scott Gifford

Dear Family,

Today my class started **Chapter 14: Multiply with Two-Digit Numbers**. I will be learning to multiply multi-digit numbers. I will also be learning to estimate products and multiply money. Here are my vocabulary words and an activity that we can do together.

Love, _____

Key Vocabulary

multiples A multiple of a number is the product of that number and any whole number. 5 is a multiple of 5 because $3 \times 5 = 15$.

estimate A number close to an exact value; an estimate indicates about how much. $47 + 22$ (estimate $50 + 20$) about 70.

round To change the value of a number to one that is easier to work with. 24 rounded to the nearest tenth is 20.

front-end estimation An estimation method in which the digits on the left are added or subtracted first, and then the digits in the next place value position are added or subtracted.

product The answer to a multiplication problem.

multiply Find the product.
 $4 \times 3 = 12$
 Four groups of three
 is equal to 12.

Activity

Collect items around the house that you would like to sell at a yard sale. Put price tags on the items. Figure out how much it would cost a buyer if they wanted to buy one, two or three of each of your items.

Books to Read

Anno's Mysterious Multiplying Jar
 by Mitsumasa Anno

Each Orange Has 8 Slices
 by Paul Giganti, Jr.

The Best of Times
 by Greg Tang