Ready, Set, Go
Mission Possible

ELEMENTARY

Summer Fun

Mathematics

Curriculum and Instruction
Division of Mathematics, Science, & Advanced Academic Programs

Welcome to the Miami-Dade County Public School's Summer Fun packets. These fun activities are designed to help promote learning throughout the summer break. The activities are divided by grade levels and curriculum content – Social Studies, Science, Mathematics, and Reading/Language Arts. Educational web-links are also included with all packets. Please be sure to supervise your child while they are using the internet.

In addition to the fun packets, it is strongly recommended that you encourage you child to continue to read at least 30 minutes each day. Support for reading includes: Barnes & Nobles' *Summer Reading Journal* http://bn.com/summerreading and Miami-Dade Public Library's *Wild About Reading Summer Reading Adventure* http://www.mdpls.org. In addition, *Ticket to Read* is available through the Student Portal: http://www.dadeschools.net/students/students.htm.

In an attempt to conserve paper and ink, if you wish to print these activities, they are combined using a little space as possible and no color except for the links on this page and this note. If you wish to avoid printing in color, please select "Print in grayscale" on your printer's properties/color tab located on the "Print" screen. See the figures below.
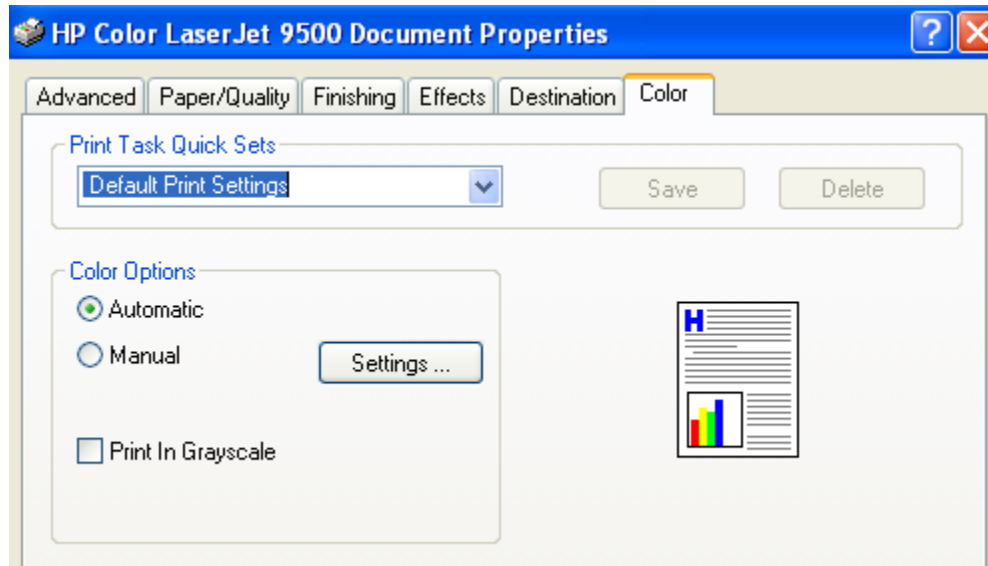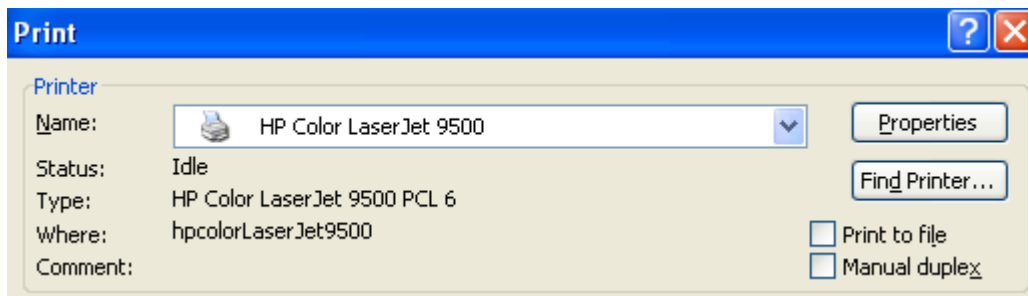
Primary Grades K-2
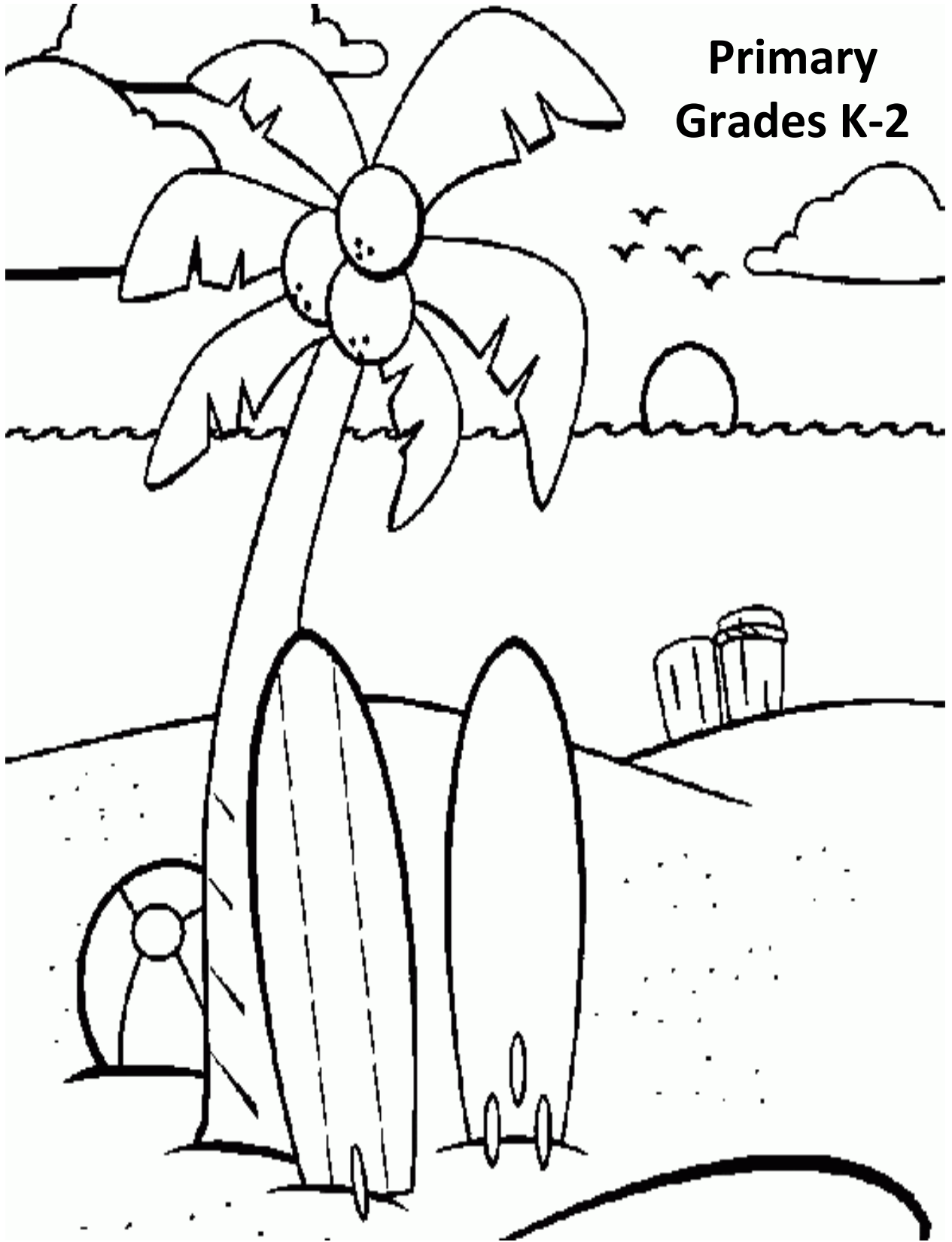
TITLE: More or Fewer, Greater or Less Than

DESCRIPTION:
These activities focus on number concepts, specifically "more and fewer" for Kindergarten and "greater or less than" for grades 1 and 2.

A. Help your child with this activity. Ask him/her to grab a handful of handful of beans with the left hand and another handful with the right hand. Place the two sets of beans down on the table. Which group has more? Gather a group of pennies, or other beans, and line them up on the table in two groups of different quantities. Count the items in each group. Ask how many are in the set with more and how many are in the set with fewer.

B. Use pennies to model 15 and 20. Compare the numbers, using the words *is greater than* and *is less than*.

C. Materials: a deck of playing cards and three index cards (each one with either the e <, >, and = symbol). Place four cards on the table. Arrange the four cards to form a three-digit number; this is your first number. Place another four cards on the table. Arrange the cards to form another four-digit number; this is your second number. Place the correct symbol between the two numbers.

Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Big Idea 1** Represent, compare, and order whole numbers and join and separate sets.	Do problem "A" Mix the items again. Create one set of things with more than the other group. o How do you know it has more? o How do you know it has fewer?
Grade 1	**Big Idea 2** Develop an understanding of whole number relationships, including grouping by tens and ones.	Do problem "B" o Which do you compare first, the tens or ones? o How can you compare two numbers to find which is greater?
Grade 2	**Big Idea 1** Develop an understanding of base-ten numerations system and place-value concepts.	Do problem "C" o Which do you compare first, the thousands, hundreds, tens or ones? o How can you compare two numbers to find which is greater?

TITLE: Adding and Subtracting

DESCRIPTION:
These activities focus on invented strategies to solve addition and subtraction problems.

What to Do?
Choose a way to find the sum or difference. Draw a picture to show your work.

A. Model 20 pennies (or other object). Model 2 fewer than 20 with pennies (or other object).

B. Diana has 10 pennies. She gets more pennies. She has 90 pennies in all. How many more pennies does Diana get?

C. On Saturday, 468 popcorn bags were sold at the movie theater. On Sunday, 385 popcorn bags were sold. How many popcorn bags were sold on the two days?

Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Big Idea 1** Represent, compare, and order whole numbers and join and separate sets.	Do problem "A" o Tell how many objects that will be.
Grade 1	**Big Idea 1** Develop understandings of addition and subtraction strategies for basic addition facts and related subtraction facts.	Do problem "B" o Did you add or subtract? Why? o Model the problem. Draw quick pictures to show tens. Write how many tens; write the difference. o How can you subtract tens? o Explain how to solve the problem.
Grade 2	**Big Idea 2** Develop quick recall of addition facts and related subtraction facts and fluency with multi-digit addition and subtraction. **Supporting Idea 6** Number and Operations	Do problem "C" o Did you add or subtract? Why? o Model the problem. Write or draw to explain how to solve the problem.

TITLE: Measuring Up with Nonstandard Units
        Adapted from *Little Giraffes Teaching Ideas, Measurement Activities*

DESCRIPTION:
Use nonstandard measuring instruments and make length comparisons regarding shorter, longer, or the same as.

A. Use your shoe and find one thing in the room that is shorter than and one thing that is longer than your shoe.

B. On construction paper, trace your footprint and cut them out. Hang up a string of foot prints. Guess how many footprints tall are you. Stand next to the strip. Complete this sentence: I am about _____ footprints tall!

C. Lay either 10 paper clips or lima beans in a row. Cut a strip of packing tape the length of the row of paper clips or lima beans. Use a marker to write the numbers 1-10 over the clips or beans. Use the device to measure the length of different objects in the room and say how many paper clips or lima beans it is.

Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Big Idea 3** Order objects by measurable attributes**.**	Do problem "A" Find one thing shorter than and one thing longer than your shoe. o Tell how you know which one is shorter and which one is longer.

Grade 1	**Supporting Idea 5**
	Geometry and Measurement
		Do problem "B"
		You will then estimate someone else's height using your footprint. Estimate how many footprints he/she is? Then, use your footprint strip to measure his/her height. Complete the sentence:
		_____ is about _____ footprints tall!
		   o How close were you in your estimate?
		   o What did you learn, notice, or wonder about when measuring with nonstandard units?

Grade 2	**Big Idea 3**
	Develop an understanding of linear measurement and facility in measuring lengths.
		Do problem "C"
		Measure at least three objects.
		   o How helpful it is to use non-standard units to measure objects?
		   o When do you need to use *standard* units of measure?
		   o Explain, in your own words, why standardized units and tools are important when measuring.

TITLE: Pattern, Patterns . . .

DESCRIPTION:
Students will show that they are learning the pattern relationships by creating patterns using a wide variety of manipulatives.

A. Show a series of one apple, one orange, one apple, one orange... Ask your child to extend your pattern by adding what comes next. Ask the child to name the pattern. If another pattern shows two pennies, one nickel, two pennies, one nickel, two pennies; then what comes next? One nickel comes next. Ask your child to place the nickel after the two pennies. Any sets of shapes, numbers, letters or objects that are repeated over and over again help children learn about patterns.

B. Materials: 2 (or more) colors of construction paper. Create patterned paper chains. Create this "house decoration" by alternating colors in a repetitive pattern. Cut the construction paper into ten to fifteen 1" x 4" strips. Overlap the ends of one strip and tape together forming a circle. Take a different color strip of paper and do the same, looping the ends through the hole of the first "circle" so that the two form a link, and then taping the ends. Continue the steps, alternating the colors until all strips have been used. Other option is to loop the first two in the same color and then the next two in the second color and the next two of the first color etc. (AABB pattern).

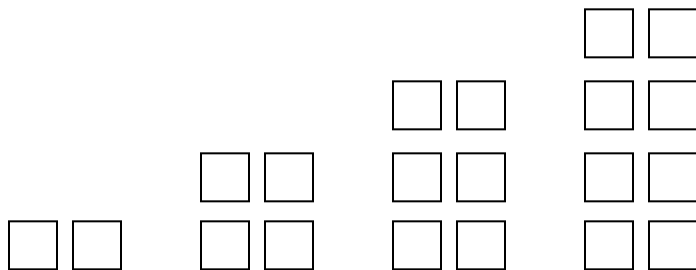C. What shape is missing in this pattern? Explain your answer.

D. What number comes next in this pattern {3, 6, 9, 12, 15, __}? Why?

E. Say the name of each shape, starting from the left.

If you continue saying those words in the same order, what is the 19th word you'll say? Why?

F. Draw what might come next in the pattern.

Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Supporting Idea 4** Algebra	Complete the patterns in problem "A" ○ Use objects in the home to show a color pattern, or find things around the house that have color patterns, and identify the patterns. ○ Show a size pattern (big, small, big, small) ○ Show a shape pattern
Grade 1	**Supporting Idea 4** Algebra	Do problem "B" As you were making the paper chain, did were you able to predict what color strip will you need to tape next? Why? ○ Do problem "C". Explain your answer. ○ Do problem "D". Explain why.
Grade 2	**Supporting Idea 4** Algebra	○ Find the pattern in problem "E". Describe the pattern. ○ Complete problem "F". Explain how.

TITLE: The Math around Us

DESCRIPTION:
With the assistance of an adult, create a scrap book of samples of ten mathematics terms.
Examples: sphere- picture of a ball, cube- gift box, cylinder- can of soup.

Optional: *Ask an adult to help you with your mini project.*
                  Take pictures of "the mathematics around you." Create a picture album. For each picture, write about the math you photographed- record the name of the math concept and its definition in your own words.

Write a summary on what you learned about the mathematics around us.

Grade Level	Big Idea Supporting Idea	Your Mission

Kindergarten	**Big Idea 2**
	Describe shapes and space.
	
	Big Idea 3
	Order objects by measurable attributes.
		Help your child to:
		o Include the following terms:
		   ▪ Two-dimensional shapes such as squares, triangles, circles, rectangles, hexagons, and trapezoids
		   ▪ Three-dimensional shapes such as spheres, cubes and cylinders.
		o Find pictures/things that show the concept of length, height, and weight.

Grade 1	**Big Idea 3** Compose and decompose two-dimensional and three-dimensional geometric shapes.	Help your child to: o Include two-dimensional and three-dimensional geometric shapes as in grade K.
Grade 2	**Big Idea 3** Develop an understanding of linear measurement and facility in measuring lengths. **Supporting Idea 5** Geometry and Measurement	Help your child to: o Use geometric models to demonstrate the relationships between wholes and their parts o Measure weight/mass and capacity/volume of objects

TITLE: How Long Will It Take?

DESCRIPTION:
This activity is for second grade students. Second graders learn the basic fundamental skills of telling time, which include understanding what units of time really mean. In this fun game, children practice to estimate the most basic unit of time--a minute--without a clock. They will use repeated activities that each last a minute to truly understand what fits into 60 seconds!

Materials:
- Two players
- watch or clock with a second hand

Directions:

1. Start this activity by letting your child know you will be playing a game with time. Review with him how many seconds are in one minute. Tell your child you will be timing him to see how many times he can do something (for example, clapping his hands) in a minute.
2. Ask your child to make a guess as to how many, for example, 'hand claps' he can make in one minute. Using a clock or watch, time your child for one minute as he counts how many hand claps he can do. Be sure to tell him when to begin and stop counting.
3. Repeat Step 2 with each of the following activities: have your child do jumping jacks, count to 10 (count the sets), snap his fingers, and write his first name. As your child becomes more familiar with the amount of time elapsed with these activities, have him guess when one minute has elapsed as you time him.

Kindergarteners learn about estimates and measures of time of day as day or night morning; afternoon or evening; and about which two activities takes more or less time.

Second graders should know how to identify time to the nearest hour and half hour.   .

Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Supporting Idea 5** Geometry and Measurement	o For time of day, look at pictures in magazines and talk about the time of day the picture shows. o In any order, ask your child to name three activities (for example, playing, eating breakfast, going to sleep). Ask him to put them in order from morning to afternoon to evening. o Talk about how long it takes to brush his teeth and take a bath. Ask which activity takes more, or less time.
Grade 1	**Supporting Idea 6** Number and Operations	Ask an adult to talk with you about: o Estimating the amount of time needed to do something o Ask which activity takes more, or less time; for example, how long it takes to brush his teeth or take a bath. o Model using clock o Describing daily events related to a

Grade Level	Big Idea Supporting Idea	Your Mission
		time period; ordering events related to daily activities. o Draw pictures to describe a measuring time situation
Grade 2	**Supporting Idea 5** Geometry and Measurement	Complete steps 1 – 3. o Switch roles, and now you are the time keeper while the adult counts how many of the activities in step 3 he/she can do in a minute. o What would happen in the above activities if you were to do them for two minutes, three minutes, five minutes…?

TITLE: Volumes of Math Fun

DESCRIPTION:
You will have volumes of mathematics fun as you explore the math ideas in the stories. With an adult, *do the math* as you read the book, and *use the math* after you read the book.

Big Fat Hen - by Keith Baker
As children read about a hen that counts her eggs and chicks, they explore math concepts such as numbers, colors, shapes…

Ten, Nine, Eight - by Molly Bang
Children learn about the numbers one through ten are they read this lullaby…

The Very Hungry Caterpillar - by Eric Carle
Children read about a caterpillar's path as he eats his way through one apple (and the pages of the book itself), until he is really fat and has a stomachache…

| Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Big Idea 1** Represent, compare, and order whole numbers and join and separate sets. **Big Idea 2** Describe shapes and space.	*Big Fat Hen-* ○ Identify the numbers, colors, and shape as you read this book with an adult. *Ten, Nine, Eight-* ○ Practice counting down as you read this book with an adult.
Grade 1	**Supporting Idea 4** Algebra	*The Very Hungry Caterpillar-* ○ What happens on weekdays? What happens on the weekend? ○ Food Patterns - Use the foods that the caterpillar ate through in patterns. Draw many of each type of food that he ate through. Use these foods to create many types of patterns. Ex. orange, apple, orange, apple ○ Estimate the number of items eaten on Saturday.
Grade 2	**Supporting Idea 4** Algebra	*The Very Hungry Caterpillar-* ○ Estimate the number of items eaten on Saturday.

TITLE: Keep Me Linked with Math

DESCRIPTION:
Browse through the math activities at the websites listed. Help your child pick a math activity and enjoy the fun together!

1. Education.com –
   http://www.education.com/activity/

2. IXL –
   http://www.ixl.com/

3. The National Library of Virtual Manipulatives –
   http://matti.usu.edu

4. PBS Parents – Early Math –
   http://www.pbs.org/parents/earlymath/

5. Figure This! –
   http://www.figurethis.org

6. At Home with Math –
   http://athomewithmath.terc.edu/math_kits.html

7. Helping Your Child Learn Mathematics –
   http://www.ed.gov/parents/academic/help/math/index.html

8. Parent Connection – *from Utah Education Network*
   http://www.uen.org/k-2educator/parent.shtml

Grade Level	Big Idea Supporting Idea	Your Mission
Kindergarten	**Big Idea 1** Represent, compare, and order whole numbers and join and separate sets. **Big Idea 2** Describe shapes and space. **Big Idea 3** Order objects by measurable attributes. **Supporting Idea 4** Algebra **Supporting Idea 5** Geometry and Measurement	o Write about a math activity or game you played. Record the name, date, how long you played it and with whom. o What mathematics did you practice and learn?

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 1	**Big Idea 1** Develop understandings of addition and subtraction strategies for basic addition facts and related subtraction facts. **Big Idea 2** Develop an understanding of whole number relationships, including grouping by tens and ones. **Big Idea 3** Compose and decompose two-dimensional and three-dimensional geometric shapes. **Supporting Idea 4** Algebra **Supporting Idea 5** Geometry and Measurement **Supporting Idea 6** Number and Operations	o Write about a math activity or game you played. Record the name, date, how long you played it and with whom. o What mathematics did you practice and learn?
Grade 2	**Big Idea 1** Develop an understanding of base-ten numerations system and place-value concepts. **Big Idea 2** Develop quick recall of addition facts and related subtraction facts and fluency with multi-digit addition and subtraction. **Big Idea 3** Develop an understanding of linear measurement and facility in measuring lengths. **Supporting Idea 4** Algebra **Supporting Idea 5** Geometry and Measurement **Supporting Idea 6** Number and Operations	o Write about a math activity or game you played. Record the name, date, how long you played it and with whom. o What mathematics did you practice and learn?

Intermediate
Grades 3-5
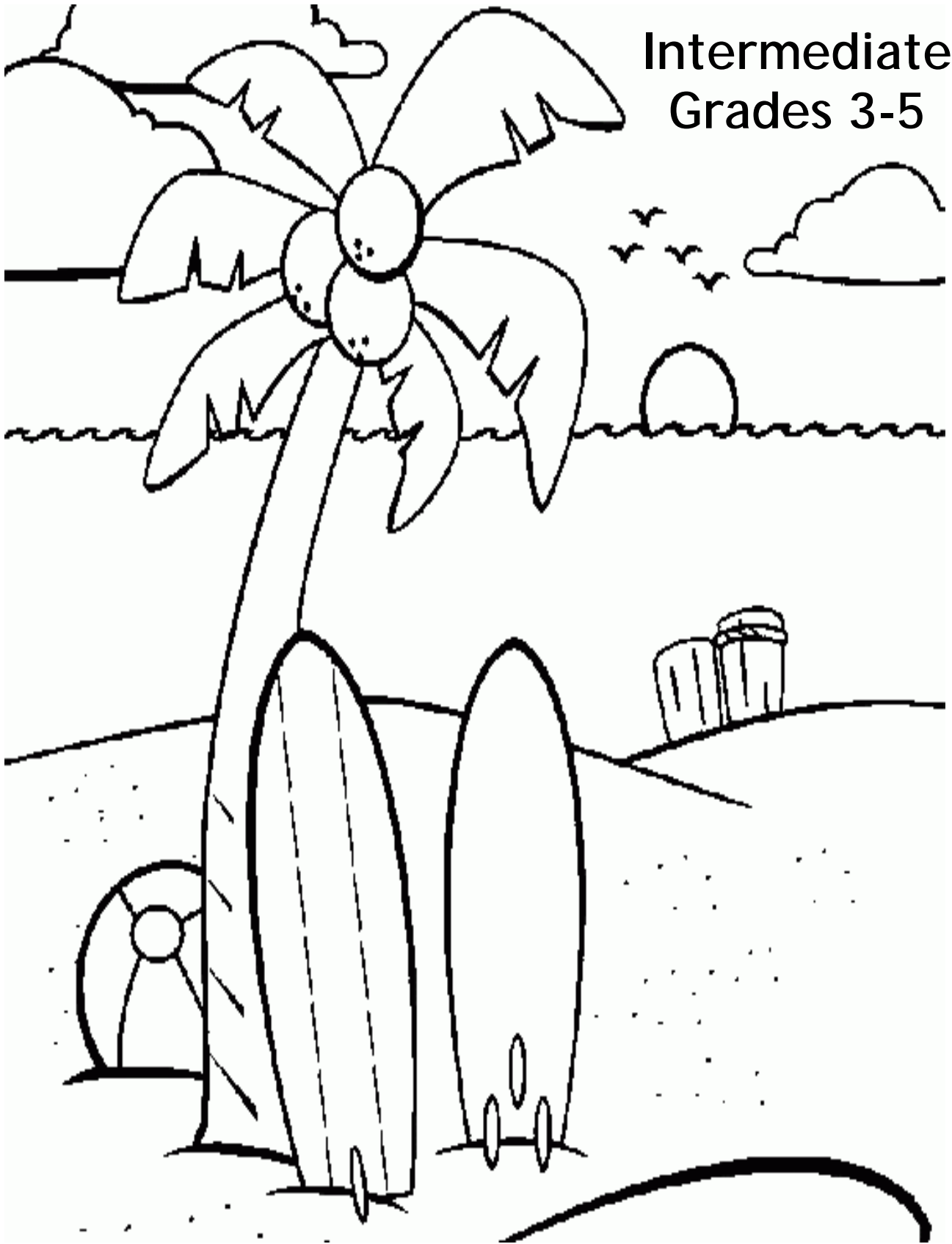
TITLE: The Math around Us

DESCRIPTION:
 With the assistance of an adult, create a scrap book of samples of _**fifteen**_ mathematics terms.

Examples: circle- picture of a ball, parallel lines- picture of a fence, symmetry.

Optional: *Ask an adult to help you with your mini project.*
      Take pictures of "the mathematics around you." Create a picture album. For each picture, write about the math you photographed- record the name of the math concept and its definition in your own words.

Write a summary on what you learned about the mathematics around us.

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 6** Number and Operations	1. Classify each mathematics term in your scrapbook into the following categories **(Unfamiliar, *Somewhat Familiar, Very Familiar)*** 2. Explain/define each term in your own words.
Grade 4	**Supporting Idea 6** Number and Operations	1. Classify each mathematics term in your scrapbook into the following categories **(Unfamiliar, *Somewhat Familiar, Very Familiar)*** 2. Explain/define each term in your own words. 3. Write common Facts/Rules/Formulas that are affiliated with each term.
Grade 5	**Supporting Idea 6** Number and Operations	1. Classify each mathematics terms in the following categories **(Unfamiliar, *Somewhat Familiar, Very Familiar)*** 2. Explain each term in your own words. 3. Write common Facts/Rules/Formulas that are affiliated with the term 4. Using five of the fifteen terms included in your scrapbook; create a problem situation and/or question which involves using the selected term's Facts/Rules/Formulas to solve the problem. Have a family member answer the 5 questions you developed; discuss their answers and provide feedback.

TITLE: How Much Did You Save?

DESCRIPTION:
With the assistance of an adult, cut, from a newspaper or mailing, coupons of things you would purchase.

- How much money will you save if you use these coupons?
- With adult supervision, go to the nearest store. Calculate the discounted price if you use a coupon.
- If you use a restaurant coupon clipping, how much money would you save?   About how much will you spend after tax and tip? Call the restaurant to do your research…

Optional: Ask an adult to help you with a purchase.

1. *Purchase at least 1 item with a coupon. Keep the receipt. Write about your experience using coupons. Record the name of the store you went, date, the name of the item you purchased with a coupon, the discount and final price. Was it a good savings? What mathematics concepts did you practice and learn.*

2. *Go to the restaurant and use the coupon. Keep the receipt. Write about your experience using the coupon. Record the name of the restaurant where you went, date, name of item you ordered with the coupon, the discount, and final price. Was it a good savings? What mathematics concepts did you practice and learn?*

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 6** Numbers and Operations	Write a **_visual_** representation of the money you saved with the coupon using as few items (bills/coins) as possible.
Grade 4	**Supporting Idea 4** Algebra	Write an algebraic expression for finding the discounted price of the item using your coupon.
Grade 5	**Supporting Idea 6** Numbers and Operations	If you are only allowed to use your coupon on regular priced items. Determine if you would save more money using your coupon on the item at regular price or taking a 10% sales discount. What would be the price if you used your coupon on a regular priced item? What would be the price if you took the 10% discount? Explain which method is better and why.

TITLE: Measuring Up!

DESCRIPTION:

Grades 3-5
1. Use your ruler or tape measure to measure the following items in **inches**, put your answers in the column labeled **Inches**.

2. Use a ruler or tape measure and find the length of the above items in **centimeters**; put your answers in the column labeled **Centimeters**.

Items to Measure	Inches (use fractional parts of linear units etc. 1/2, 1/4 and 1/10)	Centimeters (use fractional parts of linear units etc. 1/2, 1/4 and 1/10)
Length of a colored marker		
Width of this paper		
From your wrist to your elbow		
The length of your little finger		

3. This line segment represents 2 feet of a dog's leash: ‾2 ft.‾ estimate the length of the dog's leash below.

4. Draw a line segment that you would estimate to be 6 cm long.

Grades 4-5
5. A yard is a unit for measuring length or distance. Name 4 other units for measuring length or distance.

6. Which of the units that you used in question 5 would you use to measure the following?
    a. The length of a cat's tail. _____
    b. How high a cat can jump? _____
    c. The distance across a cat's nose. _____
    d. The distance a cat can walk around the outside of your house. _____

7. Calculate the distance around the outside of your house using two of the units you listed in questions 5.

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 5** Geometry and Measurement	Complete Questions 1-4
Grade 4	**Supporting Idea 5** Geometry and Measurement	Complete Questions 1-5
Grade 5	**Supporting Idea 5** Geometry and Measurement	Complete Questions 1-7

TITLE: Tree Measurement
         By Jeanette Vratil, Lowell Elementary, KS

DESCRIPTION:
This activity is used to help understand vertical and horizontal measurement of large objects by demonstrating the measurement of the trunk, crown and height of a tree.

MATERIALS:
- String
- ruler
- paper
- pencil
- measuring tape
- tree

TRUNK Exploration:
1. Measure from the ground to 4 1/2 feet high on the trunk of a large tree.
2. At that height, measure the trunk's circumference by using a string around the trunk and measure the length of the string. Round to the nearest inch.
3. Record the number on a sheet of paper and label it.

CROWN Exploration:
1. Locate the tree's five longest branches.
2. Put markers on the ground beneath the tip of the longest branch.
3. Find a branch that is opposite it and mark its tip on the ground.
4. Measure along the ground from the first marker to the second marker.
5. Record the number and label it as the crown.

HEIGHT Exploration:
1. Have a partner stand at the base of the tree.
2. Back away from the tree, holding your ruler in front of you in a vertical position. Keep your arm straight. Stop when the tree and the ruler appear to be the same size. (Close one eye to help you line it up.)
3. Turn your wrist so that the ruler looks level to the ground and is in a horizontal position. Keep your arm straight.
4. Have your partner walk to the spot that you see as the top of the ruler. Be sure the base of the ruler is kept at the base of the tree.
5. Measure how many feet he or she walked. That is the tree's height. Round to the nearest foot and record your answer as the height.

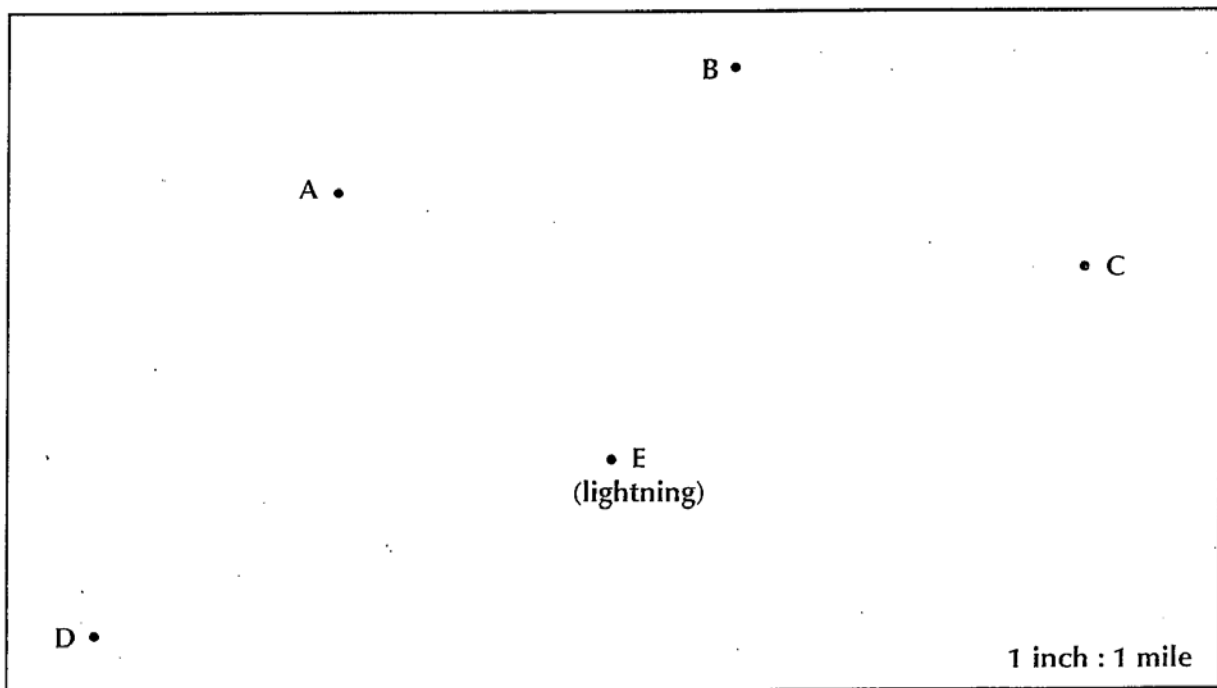| Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 5** Geometry and Measurement	1. Complete the Trunk Exploration 2. Fill in the Blank. The distance around the trunk of the tree is known as its _____ 3. Find the distance around three other circular objects found in your home.
Grade 4	**Supporting Idea 5** Geometry and Measurement	1. Complete the Trunk Exploration 2. Complete the Crown Exploration. 3. Did you notice any similarities in the values you found in the Trunk and Crown Explorations? 4. Explain the similarities or differences in your own words
Grade 5	**Supporting Idea 5** Geometry and Measurement	1. Complete the Trunk Exploration 2. Complete the Crown Exploration 3. Complete the Height Exploration 4. Did you notice any similarities in the values you fond in the Trunk, Crown and Height Explorations? Explain the similarities or differences in your own words.

TITLE: Lightning Strikes

DESCRIPTION:
Light travels faster than sound. So, if there is a thunderstorm, this would mean that you can see lightning flashes way before you hear the thunder.

Counting the number of seconds between a flash of lightning and the next clap of thunder, and dividing that number by 5 it will give you an estimate of how many miles away the thunderstorm is from where you are.   Example: When you see the lightning and count to 10 before hearing the thunder, divide 10 by 5 to get 2. This formula will tell you that the storm is about 2 miles away.

- Keep a mini log during a thunderstorm.   Follow the example above for each lightning/thunder episode. Do your counting, calculating, and collection of data

- **SAFETY IS FIRST-**
  "When you hear thunder or see lightning, get indoors quickly! Stay away from windows and don't use electrical appliances or talk on the phone when there is a lightning storm. Lightning can strike a power line and travel through it to your electric appliance and your phone. You could get shocked and hurt.
  Never stay in a swimming pool, lake or around any water in an electrical storm. Water is a conductor and so are you and you could get shocked. Lightning strikes can travel through the ground so the best place to be is indoors until the storm is over. "

Exploration
People are standing at the four points A. B, C, and D. They saw lighting strike at point E. Because sound travels more slowly than light, they did not hear the thunder right away. **Answer the questions in the table below for your grade level.**

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 6** Number and Operations	Look at the Figure above to determine: 1. Who heard the thunder first and why? 2. Who heard the thunder last and why?
Grade 4	**Supporting Idea 6** Number and Operations	Look at the Figure above to determine: 1. Who heard the thunder first and why? 2. Who heard the thunder last and why? 3. After how many seconds did the person at point "B" hear the thunder? _____ Show how you found your answer.
Grade 5	**Supporting Idea 6** Number and Operations	Look at the Figure above to determine: 1. Who heard the thunder first and why? 2. Who heard the thunder last and why? 3. After how many seconds did the person at point "B" hear the thunder? _____ Show how you found your answer. 4. Suppose lightning strikes again at a different place. The person at A and the person at C both hears the thunder after the same amount of time. Show on the map where the lightning might have struck. Label the new lightning point "F"

TITLE: Volumes of Math Fun

DESCRIPTION:
You will have volumes of mathematics fun as you explore the math ideas in the stories. With an adult, try to answer the questions after reading each book *if available*.

The Doorbell Rang - by Pat Hutchins
Two children are equally sharing twelve cookies that the mom had just baked, and then the doorbell rings…
- What happens as more children arrive?
- If the number of children doubles, what happens to the number of cookies each child receives?
- What happens if the number triples?

One Hundred Hungry Ants- by Elinor J Pinczes
100 ants are going on a picnic and begin to think about how to get to the picnic faster…
- As the number of rows get larger; what happens?
- What if the number of lines doubles? What happens to the number of ants in each line?
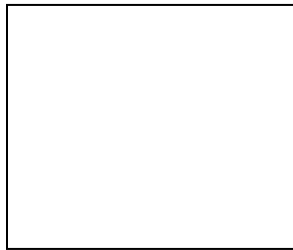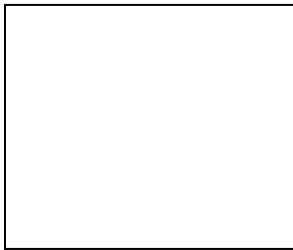- Is it possible to have eight lines?

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 6** Number and Operations	Complete the Door Bell Rung Activities. Be sure to explain any patterns or sequences you discovered.
Grade 4	**Supporting Idea 6** Number and Operations	Complete the Door Bell Rung and 100 Hundred Hungry Ants Activity. Compare and contrast how the two activities are similar or different.
Grade 5	**Supporting Idea 6** Number and Operations	Complete the Door Bell Rung and 100 Hundred Hungry Ants Activity. Compare and contrast how the two activities are similar or different.

TITLE: Mary's Fraction Design

DESCRIPTION:
Mary's teacher asked her to use three colors to divide a square into parts and to color the parts as follows: 1/2 is colored blue, 1/8 is colored red, 1/4 is colored green.

On the squares below, draw three different designs to help Mary. Each square must contain all three colors. If you do not have markers or crayons, then label the parts R for red, G for green and B for blue.

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Big Idea 2** Develop an Understanding of fractions and fraction equivalence	Determine: 1. What part of each square is blank? 2. What part of each square is colored? 3. How many sections like the red one would it take to cover the whole square?
Grade 4	**Big Idea 2** Develop an understanding of decimals, including the connection between fractions and decimals.	Determine: 1. What part of each square is blank? 2. What part of each square is colored? 3. How many sections like the red one would it take to cover the whole square? 4. Determine the corresponding decimals for 1/2, 1/8 and 1/4 and graph them on a number line. Which fraction has the highest value?
Grade 5	**Big Idea 2** Develop an understanding of and fluency with addition and subtraction of fractions and decimals.	Determine: 1. What part of each square is blank? 2. What part of each square is colored? 3. How many sections like the red one would it take to cover the whole square? 4. Add the fractions 1/2, 1/8 and 1/4; is there a connection/correlation between this answer and the part of the square that is blank? Justify your answer.

TITLE: The School of Fantastic Learning

DESCRIPTION:
In the town of "We Know a Lot", there is an elementary school with lots of good teachers and, of course, lots of good students. The following chart shows how various groups help by giving money to make it easier for the teachers and supply them with materials to make it more fun to learn.

	Per Day	Per Week	Per Month	Per Year
Local Business				$2000.00
P.T.A			$130.00	
Individuals			$75.00	
County		$15.00		
State	$2.50			

Grades 3-5
Complete the last column of the chart above, showing how much each gave per year, (12 months).
- Show all your work.
- Remember to put your answers on the space provided.

Grades 4-5
The expenses for the classrooms (per year) are as follows:

Books	$1,500.00
Paper	$ 90.00
Markers	$ 45.00
Erasers	$ 22.50
Art Supplies	$ 150.00
Bulletin Boards	$ 120.00
Office Supplies	$ 200.00

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 3	**Supporting Idea 6** Number and Operations	Determine: 1. How much money does the school receive in all each year? 2.
Grade 4	**Big Idea 2** Develop an understanding of decimals, including the connection between fractions and decimals.	Determine: 1. How much money does the school receive in all each year? 2. How much are the total expenses for the school? 3. How much is left after the expenses are paid? 4. Estimate what fractional part of the money collected each year at the school is used for classroom expenses. Is this fraction greater than **.**50? Justify you answer.

Grade Level	Big Idea Supporting Idea	Your Mission
Grade 5	**Supporting Idea 6** Number and Operations	Determine: 1. How much money does the school receive in all each year? 2. How much are the total expenses for the school? 3. How much is left after the expenses are paid? 4. Estimate what fractional part of the money collected each year at the school is used for classroom expenses. Is this fraction greater than **.**50? Justify you answer. 5. If the Books expenses were doubled to $3,000.00 explain how this would affect your answer to question number 4.

INTERNET LINKS

The National Library of Virtual Manipulatives
http://matti.usu.edu

Figure This!
http://www.figurethis.org

At Home with Math-
http://athomewithmath.terc.edu/math_kits.html

Helping Your Child Learn Mathematics-
http://www.ed.gov/parents/academic/help/math/index.html

PBS Parents-
http://www.pbs.org/parents/

Optional: *Write about your experience with a math game you played. Record the name, date, how long you played it and with whom. What mathematics concepts did you practice and learn?*

Federal and State Laws

The School Board of Miami-Dade County, Florida adheres to a policy of nondiscrimination in employment and educational programs/activities and strives affirmatively to provide equal opportunity for all as required by law:

Title VI of the Civil Rights Act of 1964 - prohibits discrimination on the basis of race, color, religion, or national origin.

Title VII of the Civil Rights Act of 1964, as amended - prohibits discrimination in employment on the basis of race, color, religion, gender, or national origin.

Title IX of the Educational Amendments of 1972 - prohibits discrimination on the basis of gender.

Age Discrimination in Employment Act of 1967 (ADEA), as amended - prohibits discrimination on the basis of age with respect to individuals who are at least 40.
The Equal Pay Act of 1963, as amended - prohibits gender discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

Section 504 of the Rehabilitation Act of 1973 - prohibits discrimination against the disabled.

Americans with Disabilities Act of 1990 (ADA) - prohibits discrimination against individuals with disabilities in employment, public service, public accommodations and telecommunications.

The Family and Medical Leave Act of 1993 (FMLA) - requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to "eligible" employees for certain family and medical reasons.

The Pregnancy Discrimination Act of 1978 - prohibits discrimination in employment on the basis of pregnancy, childbirth, or related medical conditions.

Florida Educational Equity Act (FEEA) - prohibits discrimination on the basis of race, gender, national origin, marital status, or handicap against a student or employee.

Florida Civil Rights Act of 1992 - secures for all individuals within the state freedom from discrimination because of race, color, religion, sex, national origin, age, handicap, or marital status.

Veterans are provided re-employment rights in accordance with P.L. 93-508 (Federal Law) and Section 295.07 (Florida Statutes), which stipulates categorical preferences for employment.

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