Primary Success Publications

Kindergarten Math Ideas

Ideas Collected by
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Primary Teachers Everywhere!

Kindergarten Math Centres

Activities for your Math Centres:

1. Buy a large bucket of foam shapes from a craft store. Have a laminated strip of paper about 3 inches in width and an egg carton. Students make patterns or sort the objects.

2. Write numbers on stickers (round price stickers for garage sales work well) and glue them into the bottom of egg cartons. Place a bag with small objects with the carton. Students can read number and count that many objects into the egg cups.

3. Playdough, mat, spinner. Write target numbers on spinner - you'll find spinners in most math books. Student spins a number and then makes that many balls from playdough and then a numeral that is the same. Have large numerals for the children to copy.

4. Pocket charting: include a variety of number cards for students to sequence in the pocket chart. Remember to include a number line for self checking.

5. Macaroni patterns: strips of paper, glue, coloured macaroni. Students create patterns. To make this more difficult - have students create half the pattern and then exchange with partner- each must finish the other's pattern.

6. Wipe-off number cards for number writing practice. Use dry erase pens.

7. Number writing station: include individual chalk boards, number cards or strips, paper, dry erase boards.

8. Magnetic numbers for sequencing on magnetic board.

9. Felt letters and objects for felt board: student can sequence numbers, match objects and numbers; e.g. number two and two felt ducks, or sort objects.

10. Spin and count game: use a large plastic container like a dream whip container. Inside place small objects for counting. On the top you can write numbers with a permanent marker. The spinner is a brad and large safety pin. Include a small portion cup. Student spins and lands on 8: then counts 8 objects into portion cup. You can make several of these to match targeted numbers.

11. Read and count - index cards, small containers (clear plastic cups are great), small objects to count. On one side of the index card write a number. On the other side of the card place stickers in the same amount). Write the number on a small container. Student shuffles cards and

then picks one. Student reads the number (or counts stickers) then finds container with the same number. Student then counts the same amount of objects into the cup.

12. Spinner with 3 numbers and a programmed sheet with the 3 numbers at the top. Student spins and then writes the correct number underneath its heading. Students can work with partners. This is a lesson in probability and number recognition. The object is to see which number comes up the most.

13. Number books: have students complete each page with the number of objects designated for the book. The child prints the numeral on the front page. One page has a unifix cube pattern - student makes a pattern with cubes and records on page. Stamp 5 stamps. Stick 5 stickers. Make a pattern with 5 paper pattern blocks. Make a design with 5 toothpicks. You can add as many pages as you with. You can include some number writing pages.

Numbers About Me

"We make a book called 'Numbers About Me'.

On the cover the children draw a self-portrait.

The second page of their book asks for their first name and last name. It asks how old they are and they draw that number of candles on a cake. They can also print the birthday month and day.

On page three they print their phone number.

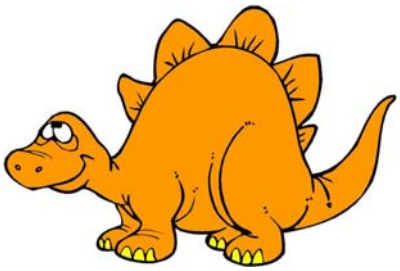
Page four is their height. We measure them and they record the number in centimetres.

On page five you can do some (or all) of these: Draw a picture of their families. There are ____ people living with me. There is (are) _____ pets living with me.

Page six they trace their hands. How many fingers?

Page seven they trace their foot. How many toes?

Countasauras



Teacher: I'm a countasaurus. I'll tell you what to count.
I'll give you a number. You give me the amount.
I like to eat numbers. I like them large and small.
In all the ways that you will hear. I like to eat them all.
I'm very hungry. Feed me 10 claps. (kids clap and count to 10)
I'm still hungry. Feed me 20 pats. (kids pat lap and count to 20)
I'm very very hungry. Feed me 10 toe touches. (kids do toe touches and count)
(Keep on making up things like foot stomps, waist bends, arm twirls, etc.)

(last verse) I like to eat numbers. I like them large and small.
In all the ways that you have heard, I like to eat them all.

Zero the Hero

"I have played 'Zero the Hero' with my students. Whenever there is a zero in the date we played this. The kids all stand in a circle and we count backwards from 9 to 0. On each count I tap a child on the head. The child that is tapped on 0 sits down. The last child standing is Zero the Hero and wears a paper 0 on his/her shirt."

Zero Hero Song *(tune Frere Jacques)*

Zero Hero, Zero Hero,
We love you.
We love you.
Though you may be nothing,
We really think you're something.
Yes, we do. Yes, we do.

Zero the Hero

Zero, the hero, came to school.
Zero, the hero, knows a rule.
Zero, the hero, stays in a space.
So all the other numbers
Get in the right place.

Zero the Hero

(Sung to Zippity-do-dah)

Zero the hero today is your day.
Zero the hero please come out and play.
Zero the hero today is your day.
Zero the hero, hip hip hooray!!

More Zero the Hero

Kindergarten teachers who teach every other full day will not get to 100 days in school – but you can celebrate every 10th day, and have a big celebration on day 50!

"Zero the Hero is a friend in our classroom every year. He comes to visit us every 10th day because he loves numbers that end in zero. His favourite day of the year was the 100th day of school. He brought us a special surprise on that day. Zero the Hero helps my children learn numbers that end in zero and helps us skip count by 10's."

"The Kindergarten teachers at my school celebrate Zero the hero on every day that ends in a zero. We get a parent volunteer to dress up in a costume (shorts with tights underneath, sweatshirt, a half mask, and cape) and come to the class carrying a small bag of treats. They count along the number line with the kids and make a big deal out of it being a 'zero' day. It basically ends on the 100th day with a celebration, but some teachers continue it all year."

"I have a stuffed bear. I used the double sided iron-on fabric stiffener and red fabric to make a big zero on his chest. Then I used some red fabric to give him a cape. He can live in a cupboard and only come out on a day in school that has a zero.

"I use an action figure for Zero the Hero. The little boys think that is really cool!"

Estimation Jar

"I send the clear plastic jar home every week with one child, and the parent is told the number of items to put into it and a letter outlining the procedure. The children estimate that week, and on Friday we make a big deal out of the opening and counting."

"One thing we do in kindergarten is list all the estimates on a piece of paper. Then after we count the actual number of items we look at the estimates. We put a circle around the ones that were close, a square around the ones that were too big, and a triangle around the ones that were too small. I like this activity because you can see how many children are estimating too high or too low and then you can discuss why their estimates weren't that accurate. We also discuss whether the estimate was reasonable.".

Assorted Ideas

Movie Ticket: Set your classroom chairs up in rows and aisles like a movie theater. As the children enter the "theater," hand them each an attribute block for their ticket. When they are all seated, ask all of the red ticket holders to stand, all of the large triangles to stand, all of the small thick rectangles to stand etc.

Read My Mind: Spread the attribute blocks on the carpet. In this game the children try to determine which block you have identified by asking you questions which can be answered with yes or no. They might ask if it is a large triangle. If it is not, remove all of the large triangles from the pile. The students will be describing the blocks by their attributes and, through elimination, be able to determine which attribute block you had identified.

Going Fishing: With the kindergarten class sitting on the carpet in front of you, pretend to get your fishing pole out and go fishing. Fish for students with easily identifiable attributes such as short sleeves. "Catch" all of the students with short sleeves and have them stand in a row at the front of the room but throw back any that do not have this attribute. The task of the students is to try to determine what attribute the fish have in common. Other attributes might be clothing with stripes, clothing with hoods, children wearing glasses etc.

Ask the children to show you the number that you say by putting that many objects on their workspace. For example, 'show 5 blocks'. This can be expanded using directional words such as, 'put 4 beans on top of ….behind….. inside….. near …… the cup', etc.

Dress-up numbers – the children in a small group draw a card with a numeral on it and put on that many pieces of dress-up clothing.

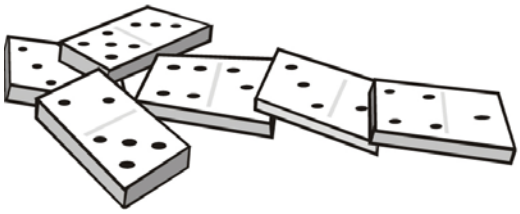
Use pattern blocks to make designs.

Count aloud whenever you get a chance. The children can do the following activities as they count: clap, tap, jump, blink eyes, sway from side to side, bounce a ball, march in place, swing arms, etc.

When sitting in a circle, count in turn. The object is to see how high they can count before missing a number.

"I have a centre for math – this activity is also good for fine motor training…. Each child has an egg carton (or ice-cube tray) and a pair of tongs. One child rolls a die numbered as high as is suitable. Whatever number shows on top, ALL the children have to use their tongs to pick up that many objects and place in their egg cartons, one object to a cup. The die passes to next person and the play continues until tray is filled. This is good for one-to-one correspondence. You can easily who is counting pieces correctly!"

- Do lots of counting! Count crayons. Count children with hair bows, shorts, wearing green, etc. Count apples (and then make applesauce), count things in the classroom, count objects – count, count, count!



Play with dominoes.

Count steps as you walk to a specified place.

Make counted patterns using cut-and-paste activities, or paper chains.

Count how many you hear. Count claps, taps, beats of a drum, rings of a bell, etc.

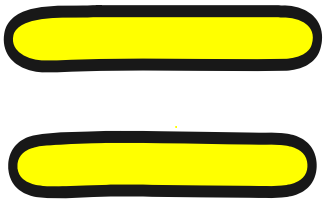
Ask questions: How many chairs … books … pencils …. will we need for this group? Are there enough …. for everyone? How will we find out? Do we have more chairs than children? Which is more?

Helpers: have children pass out just the right number of objects to the group. Count the children first and then count out the objects – then pass them out. Did it come out right? Did you remember yourself?

Do the subtraction poems with objects as the poem is said. For example, Read '10 Little Monkeys' The kids put 10 objects on their mats, and then take one away for each verse.

Use a 'magic stick' or pointer or wand to count children for attendance.

Teaching the 'Equals' Sign



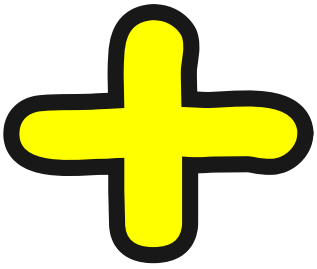
Play a guessing game. Hold some counters in each hand and then put your hands behind you. Ask the children which hand they think has 'more'. Then show the counters and see which hand has more. If there are 5 in one hand and 3 in the other, hold out the hand with 5 and say "This hand has more!" Hold out the hand with 3 and say, "This hand has less." "How many is in this hand?" "And this hand?" "5 is more than 3." Do this with varying amounts. Make it a big secret as the children are guessing! Do some that are equal or the 'same'.

Discuss the word 'equal'. 'Equal' means 'the same'. Use the word when you have the same number of items in your hands. Introduce the = sign. The children can 'read' this sign. It says 'equal'.

Use a magnetic board or felt board, and an equal sign backed with a magnet or felt. Put two sets up. Have the children tell you if the sets are equal or not. If they are equal, have a child put the = sign between the sets. If not, can a child make the sets equal? Pieces can be added or pieces taken away to make the sets equal. When they are equal, put the = sign between.

Put the children into pairs. Give each child approximately 7 blocks and one of the small = cards. Each child can make a set in secret, and then the two children can compare their sets. Who has more? Who has less? Are the sets equal? Can they make the sets equal? When they are, put the = card between them.

Teaching the 'Plus' Sign



Introduce the + sign. We will say that it says 'and' until the children are comfortable with the concept. Have several cards with a large +. Give one to a child to hold. Have one child stand up, then the child with the + sign and then another child. Can we 'read' what we see? There is _____ (child's name) 'and' (the + sign) _____. Do this with two children 'and' one child, two children 'and' two children, etc.

Now do this with patterns on a felt or magnetic board. Read this '2 and 1'. Do this with a number of patterns.

Hold some objects in one hand and some in the other. Say '3 and 2', for example. As you will be facing the students, say the amount in your right hand first for correct left to right direction. Ask children to tell you the amount of the different sets in your outstretched hands, reading it with the word 'and'. Ask the children how many there are all together. You can bring your hands together to show this.

Put a large + sign on the floor. Put 2 books on one side and 2 books on the other side of the plus sign. The children read this as '2 books and 2 books'. If you have 2 books and 2 books, how many do you have all together? Do this with different objects and different sets.

Use a magnetic board or felt board, and an plus sign backed with a magnet or felt. Put

two sets up with the plus sign between. Have the children read it as '4 and 2', for example. Ask how many there are all together.

What does the + sign mean? It means we are going to put the two sets together.

Model the following procedure before the children try it. Put the children into pairs. Give each child approximately 8 blocks and one of the small + cards. They can work together to make '+' stories. Read the story, using the word 'and'. Make a set, put the + sign and then another set. Can they tell how many there are all together?

"Math Their Way has many unifix cube activities. We use them to make number combinations. I give the students just two colours to work with and they have to see how many ways they can come up with a number; for example, if the number is 5, they try to make as many patterns as possible with the two colours..... 3 + 2, 1 + 4, etc.
I tell them that the colours that are the same have to touch so they can't do blue, red, blue, red, blue but have to do red, red, red, blue, blue, etc. so that they can see the patterns."

Printing Numerals

"I have used lots of fun artsy ideas for these kinds of lessons. Write the numbers in corn starch, pudding, on chalk boards. Trace over the number with different coloured crayons, chalk, water colours and more. Use noodles, beads, seeds, etc. Glue over the letter. Use the children's bodies and create the number (you will need several children). Make giant numbers on the sidewalk outside in chalk."

0 Start at the top and around you go. It's always fun to make a zero.
1 Numeral writing can be fun, especially when you run with one.
2 Around the zoo and back to you. That's the way to make a two.
3 Around a lake and around a lake. Numeral 3 is fun to make.
4 Down and over and through the door. It's very simple to make a four.
5 Over, down and around the bend. Numeral five will be a friend.
6 With numeral six you start at the top. Down and around without a stop.
7 Across the bridge and down the slide. Numeral seven will be your guide.
8 Make a snake and add a tail. With numeral eight you'll never fail..
9 Do your best with numeral nine. Make a hoop and then a line.

Teaching Numeral Formation – More Ideas

1. Trace the outline of different numbers on wallpaper. Cut them out into 5-6 pieces and give out as puzzles. Use different paper for different numbers.
2. Choose a manipulative and form the numeral with the manipulative.
3. Do the above with edibles. Children may eat the final numeral (fruit pieces, raisins, cereal, popcorn, pretzels, chocolate chips, cheese, pickle cubes).
4. Make numerals in shaving cream or pudding.

5. Have children trace around their numerals with a crayon. Have them change colours and trace until no room is left on the paper.
6. Roll a snake out of clay. Provide each child with a numeral card. Lay their snake on the card forming the number.
7. Make numerals out of prepared biscuit dough.
8. Stamp out numerals 0-9 and then have children trace over them.
9. Using precut 1 inch squares of construction paper make a mosaic of the numeral.
10. Stuffed numerals. Cut about 8" wide numerals from butcher paper, 2 of each number. Have each group of students twist sheets of newspaper and tape to one of the butcher papers. Staple both numerals together, enclosing the stuffing.
11. Cut numerals 0-10 from sand paper. Have students place a sandpaper numeral under a sheet of paper and rub with a crayon.
12. Paint with water on a sidewalk.

Number Printing Poem

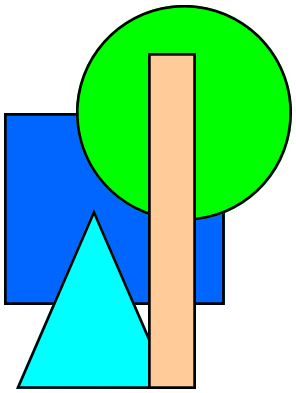
Number 1
is like a stick
A straight line down
that's very quick!
For number 2
go right around
Then make a line
across the ground!
Go right around
What will it be?
Go round again
to make a 3!

Down and over
and down some more
That's the way
to make a 4!
Go down and around
Then you stop
Finish the 5
with a line on top!
Make a curve
Then a loop
There are no tricks
to making a 6!

Across the sky
and down from heaven
That's the way
to make a 7!
Make a "S"
And then don't wait
Climb up again
to make an 8!
Make a loop
And then a line
That's the way
to make a 9!

Make a 1
and then an 0
10 are all your fingers
you know!

Math – Shapes



"We hunted for shapes in the classroom (the clock is a circle). Then each child made their own shape book. Each page said, 'A _____ is a (shape name).' The children drew the item and wrote what the item was on a line. Some children copied words next to the item they drew (I have signs all over the classroom - desk, chalkboard, closet, door, sink, etc....) The children really loved doing this activity and many of them were very creative!"

"Cut out assorted shapes in sandpaper, about 10 cm. down to 5 cm. big. The kids place them under large white or manila construction paper and rub with the sides of crayons. By overlapping the sandpaper shapes, and changing crayon colours, the kids can make beautiful shape collages!"

- Find shapes in magazines. Cut and glue to create robots on construction paper.
- Craft stores sell big tubs of foam shapes in different colours. These can be used for sorting and classifying, and can be glued to make pictures.
- Spray a small glob of shaving cream onto each child's work space. Encourage them to draw shapes.
- Make 'shape' cookies. Roll out refrigerated sugar cookie dough and then cut with circles, squares, triangles, etc.
- Make shapes with your bodies – circles with fingers, triangles with two hands. Four children can make a square or a circle, three children can make a triangle – in different ways – standing, lying on the floor, etc. let the children be creative!
- Build with shape blocks.
- Put shape blocks in a bag. The child puts his hand in the bag and picks a shape. He attempts to identify the shape without looking at it. Have the child justify the guess before removing the shape from the bag.
- Put shapes in bag. Tell the child to find a _____ without looking. Again have them tell why they think the shape they have is the correct one.
- Give each child a shape – shapes could be attached to the student's clothing with clothespins or safety pins. Ask the circles to stand up, triangles to hop, rectangles to crawl under the table, etc.
- Hide a shape in your hand and give clues (one at a time) and have the children guess/tell what the shape is/could be.
- Use shapes to make patterns on paper or in pocket charts. Children practice the names of the shapes by reading the pattern (circle, triangle, circle, triangle).
- Put toothpicks on the table and instruct them to make various shapes (ask them to make a circle and see how many actually try!)
- Use a shape as the beginning of a picture: a circle can be turned into a face, a square

can be turned into a house, a triangle can be turned into an ice cream cone, a diamond can be turned into a kite, etc.

- Cut out different shapes – circles, triangles, rectangles and squares. Place them on the floor and have the kids 'cross the river' or 'cross the street' only walking on triangles or squares or another specified shape.

- If you have a garbage can dressed as a 'Muncher', it can be called a 'Shape Muncher' for this:

Shape Muncher, Shape Muncher, munch, munch, munch...
How about a red circle for your lunch? (blue square, yellow triangle, etc.)

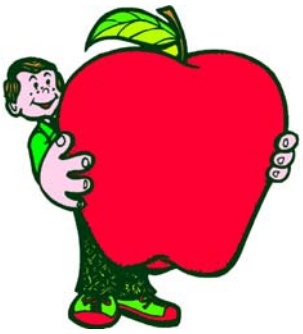
- Eat shapes: pizza, cookies, graham crackers, triangle crackers, slices of radish and cucumber – you can also use cookie cutters to cut bread into shapes.

- Cut a large orange felt tapered triangle for a pizza slice. Have the children add brown circles for pepperoni, black circles for olives, long yellow rectangles for cheese, etc.

- Make shape books, and glue in pictures of that shape from magazines.

Apple Math

An apple theme is a good way to cover many different math activities!



"I have the students bring in an apple. First we count how many apples we have – move each apple as we count. Then the children decide on a way that the apples can be sorted – usually on colour – and they do this. There are discussions on apples that have more than one colour, and they decide on the answer. The children count the number of apples in each group, and the results can be graphed. We use the words 'more' and 'less'.

We line all the apples up, from biggest to smallest.

We taste the apples and make a graph to see which apple is the favourite.

I have small wooden apples, and every day we estimate how many apples are in a jar – then count to see the true number.

We estimate which of three apples is the heaviest, and then weigh them.

How many seeds are in apples?

Does an apple sink or float?

Make patterns with real apples and/or cut-outs.

Make a number counting book……. I see 1 apple, I see 2 apples, I see 3 apples, etc.

Cut the apple across the center to see the star. Read one of these stories:

http://waldorfschoolonline.blogspot.com/2007/10/stories-apple-star-new-story.html
http://www.tooter4kids.com/Apples/Apple_Story.htm

Calculators

"My kids love to use calculators! We often borrow them from an older class. The children count on them, count up from a number they are given, print in numbers to answer questions, etc. They print in their phone numbers and house numbers, too. We learned to use the on-off key, the number keys, the addition key and the equal keys."

Numbers in the Environment

"Have the children bring in samples of numbers that they see in the environment. A watch, a house number, the price on a toy, a TV channel changer, etc. They will remember their numbers if there is a good reason to use it – a TV channel numbers, their age, a birthdate, and so on."