

Home Made Math

Fun ideas to promote early math

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"Play is the highest form of research." Albert Einstein

Presented by the York Region Early Literacy Specialists

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Remember to make learning fun. If an activity is too difficult, it won't be fun, and your child will not want to play. Also, when your child likes a game, you'll get tired of it before he does!

1. Simon Says

Learning: space, math vocabulary, (up, down, in front of, behind, to this side), following directions, body parts, big and small muscle development, turn-taking, listening skills, attention span

Materials:

- Just you and your child (or some friends/family)

To play:

1. Stand facing each other
2. Lead movement by saying, "Simon says put your hand on your tummy", "Simon says put both arms over your head", "Simon says hop up and down", "Simon says grab your ears!"
3. If your child is old enough, you can make it harder by adding the rule, 'You only do it, if Simon says.' Then if you say, "Spin around", they should not do it, because Simon didn't say it.
4. Let your child be the leader and do the "Simon Says" commands.

Variation:

- Change the game to Mommy Says/Child's Name Says



2. Boxes, Balls, Cans and More

Learning: Geometry, shapes (sphere, cylinder, cube, rectangular, cuboid), sensory awareness, vocabulary, comparing and contrasting

Materials:

- several balls (one could be an orange)
- boxes that are either cubes or rectangular cuboids
- various cans (tuna, soup, beans)

To play:

1. Place a ball in your child's hand. Explain that we call it a ball or a sphere. Try rolling it back and forth. Look at the other balls you may have and compare sizes and similarities.
2. You could put them down in order from smallest to largest or group together ones which are the same.
3. Put down the ball and pick up a can. Explain that we call this a can or a cylinder. Ask them to notice the shapes on the ends. Round, but not like a ball! Can you roll it?
4. Now look at the other cans you have. Compare them and talk about the similarities and differences.
5. Now look at the boxes that you've gathered. We can call them boxes, cubes or rectangular cuboids. Feel the corners. Feel the flat sides. Count the edges.
6. Now compare them to each other. Again you could put them in order by size.
7. Mix them all up and sort them by shape. See if your child can remember the real math vocabulary. You could make a sign for each group.
8. Look around your home and see if your child can find other things that match – furniture, toys, etc.
9. Which ones have pointy "corners"? Which ones can roll?

Variation:

- Put plastic can, ball, and box in a bag. Ask your child to guess which is which by feeling them.
- Be careful of cans with sharp edges – use plastic cups or play cans for this activity as well

3. Will it Fit?

Learning: shapes, space, vocabulary, problem-solving, prediction, matching

Materials:

- Several containers, of different sizes (open box, pot, bin)
- Different sized balls

To Play:

1. Start with one box and one ball. Have your child see if it will fit. Why or why not? If the box has a lid, will it fit with the lid closed?
2. Use lots of comparing words; big, bigger, small, smallest, more space, less space, sphere, cube, rectangular cuboid.
3. Bring out another container of a different size. Ask your child if he thinks the ball will fit inside this time (prediction). Is this box bigger or smaller than the one you used last time?
4. Line up three containers and three balls of different sizes. Ask your child to fit each ball into a container. Ask your child how he made each match (e.g. biggest ball with biggest container).



4. Matching

Learning: recognizing likenesses and similarities, sorting, sets, vocabulary (e.g. hard, soft, big, small, wide, thin, heavy, light, hot, cold, same, different, striped, solid, high, low), small motor skills, attention span, listening skills

Materials:

- Several pairs of socks and pairs of shoes

To play:

1. Hold up one shoe and ask the child to find another the same. Then find one sock and ask the child to see if she can find another one just the same.
2. Point out the words same and different.
3. Describe the socks and shoes – soft, wooly, hard, striped, etc.

Variation:

- Put one sock and one shoe together (based on size, daddy's sock with daddy's shoe, baby's sock with baby's shoe). You've just created a set. See if your child can find another set. How many sets do you have?



5. Measure Me!

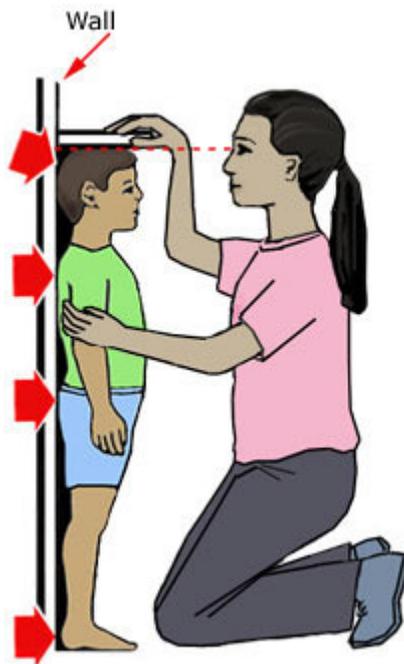
Learning: Measurement, numeration, number sense

Materials:

- Wall
- Marker
- measuring tape
- meter stick

To Play:

1. If you don't have one already, choose a door way or wall that you're not afraid to write on. Record your child's growth on a regular basis by marking height right on the wall. Put the date or child's age when measured.
2. Get out the tape measure and show your child how tall they are in inches and/or centimetres. Figure out how many inches/cm they have grown since the last time they were measured.
3. Put the whole family on the wall.
4. This really is meaningful math!



6. Taller or Shorter

Learning: Measurement, vocabulary

Materials:

- Teddy bear
- wooden spoon
- cup

To Play:

1. Show your child an object such as a teddy bear. Ask if the bear is taller or shorter than your child.
2. Then make a game of going around the house to find things that are taller than the bear and things that are shorter than the bear.
3. Play again with a wooden spoon, cup, toy car, the child themselves.

Variation:

- Hold the bear so that it "stands" upon a countertop. Ask the child who is really taller? The bear, up on the counter, or the child whose feet are on the ground.
- Play the same game with wider/ narrower, heavier/lighter.

7. Setting the Table - One to One Patterning

Learning: One to one correspondence, Patterning

Materials:

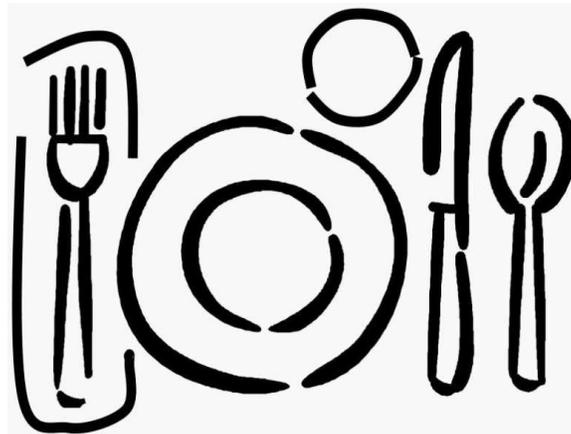
- three plates
- three forks
- three spoons

To Play:

1. Lay out three plates on the table. Give your child three spoons. Ask him/her if there is one for each plate? How does he/she know?
2. Give him/her the forks. Ask him/her if there is one fork for each plate. How does he/she know?
3. Next start again, but only give him/her two forks. Ask him/her how many more he/she needs to have one for every plate. Make it as hard or easy as suits him/her.

Variation:

- Model setting one place – fork, plate, spoon
- Now start the next one, with a fork. Ask your child what you should put down next?
- The place settings should match what works at your house: knives, cups, chopsticks, napkins...etc



8. Take One Away – How Many Are Left?

Learning: number sense, numeration, subtraction, addition

Materials:

- four cars
- two trays or box lids as the “garage”

To Play:

1. Put two cars on each tray “garage”
2. Count how many cars are on each tray “garage”. Notice that they hold the same amount. They are equal.
3. Now drive one car off of one tray. Together, count how many are left.
4. Wonder which “garage” has more cars and which “garage” has less cars.

Variations:

- Drive the car from one garage to the other. Then count again.

9. Lots More to Play!

Many more games and activities to promote math skills:

Bingo, lotto
Snakes and Ladders
Card games- Go Fish, Crazy Eights, Memory, Solitaire
Checkers, Chinese Checkers, Chess
Tic Tac Toe
Sorry
Trouble/Frustration
Scrabble/Scrabble Jr.
Monopoly Jr.
Guess Who?
Hopscotch
Mazes
Dominoes
Jigsaw Puzzles

Build Math Skills by:

- Looking at maps, calendars, phone numbers, addresses, sports scores, bus schedules, hockey schedules, clocks
- following recipes,
- doing origami
- playing mancala, playing with blocks, playing dice games
- checking the temperature
- sorting buttons, leaves or shells
- making lists for a party, looking at a menu
- using a phone or computer
- playing "store", counting money/coins
- planting a garden
- sewing
- playing with containers in the bathtub or sandbox
- counting cars, noticing speed limits, buying gas

Math Materials:

- Measuring tapes, scales, rulers, thermometers, mirrors, magnetic numbers for the fridge, blocks, beads, jar lids, boxes, egg cartons, flyers
- washers, buttons, rocks, calculators, cash register, patterned fabric, playdough, water, Lego, coins, money/coins, etc.

Lots More to Sing and Rhyme:

- Five Little Ducks
- Hokey Pokey
- Five Little Monkeys
- Three Little Kittens,
- This Old Man
- The Ants Go Marching
- This Little Piggy
- Baa Baa Black Sheep
- Five Green and Speckled Frogs

- Eensy Weensy Spider
- Roly Poly
- One Two Buckle My Shoe
- Jack and Jill
- Hickory Dickory Dock
- Over in the Meadow
- Zoom Zoom Zoom
- Wind the Bobbin Up, etc.

Lots More to Read and Tell:

- The Three Little Pigs
- Brown Bear Brown Bear
- The Very Hungry Caterpillar
- Big and Little
- Chicka Chicka 1 -2-3
- Three Billy Goats Gruff
- Little Red Hen
- Chicken Little, etc.

Read
Rhyme
Sing
Play