



A MAGAZINE FOR PARENTS
AND CAREGIVERS

- ▶ Indoors
- ▶ Outdoors
- ▶ On the Go

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SESAME STREET

happy, healthy, ready for school!

math
is everywhere

discover!

1, 2, 3...

explore!

PNC



Grow Up Great

Brought to you by PNC Grow Up Great in
partnership with Sesame Workshop.
Helping children get ready for school and life.

pncgrowupgreat.com

ACHIEVEMENT: A MILLION QUESTIONS, THE CONFIDENCE TO ASK MILLIONS MORE

Early education leads to success, now and in the future. That's why PNC created Grow Up Great® — a program designed to help prepare young children for school and life. To see how PNC is helping young children achieve today and preparing them for the future, log on to pncgrowupgreat.com





Math Is Everywhere!

Wonderful learning moments can happen anytime, anywhere – and they're already happening. You are developing your child's math skills every time you help him find two socks that match or measure his height.

Making math a part of your daily routines right from the start helps your child understand that math is fun – and important. Math is all around us, and we use it every day. Early exploration of math helps your child develop skills that will help her succeed in school and beyond.

Sesame Street is excited to join you in discovering math everywhere you go:

INDOORS: Check out the nooks and crannies of your home. Math awaits!

OUTDOORS: Explore math in the park, at the beach, even on the sidewalk.

ON THE GO: Add math to a routine errand and make the time fly!

As you and your child try the activities in this guide, your child will realize that math isn't just about numbers, but also about shapes, spaces, sizes, asking questions – and about having a positive attitude that can help her tackle any problem.

Math Talk!

- + "Math talk" helps children define the world around them by giving them the tools to describe relationships and ask (or answer!) questions. Throughout this guide you'll see **bold** math words that you can use with your child. You'll be surprised to learn how many of these words you already use!
- + Also, turn to the center of this guide for some examples of math words you can explore with your child.



Indoors

Math awaits you in the living room, kitchen, and bedroom. By showing your child that the places most familiar to her are full of opportunities to discover math, you empower her to find math everywhere!

Spatial spies: Play “I Spy” using math words like **under**, **over**, **next to**, and **behind**. Clue each other in to what you spy by describing where an object is. You might say, “I spy something **under** the glass,” or “I spy something **next to** the sofa.” Now ask your child to describe where other things are, using the words **under**, **over**, **next to**, and **behind**.

Go on a shape hunt: Call out a shape and ask your child to find things in the room with that shape. What is the shape of a magazine? A wall clock? As you search, explain that a rectangle has four **sides** and four **angles** and that a circle has no angles; it has **curves**. As you find shapes together, look for sides, angles, and curves.



Five math challenges for cleanup time:

- 1 **Count!** How many things can your child pick up at the same time?
- 2 **Look a-round!** Pick up five **round** things.
- 3 **Stack!** Try stacking three **small** things on top of one **big** thing.
- 4 **Sort!** Place toys into boxes or shelves based on size, such as **big**, **bigger**, **biggest**.
- 5 **Predict!** Say, “I wonder if this toy can fit in this box? Do you think it will? Let’s find out!”

shapes!

Game On!

Did you know that everyday games are full of math learning?

PUZZLES encourage your child to observe shapes. Point out the **curves**, **lines**, and **angles** on the pieces. See if a curve can fit next to a straight line or angle. Ask, "What might fit instead?" Encourage your child to **rotate** and **flip** pieces to make them work.

Use **GAME-BOARD DICE** to help your child learn to add. After she rolls a pair of dice, count the dots on one die, then count the dots on the other. Ask, "How many dots did you roll all together?" Take away one of the dice. How many dots are left?

CARD GAMES can encourage your child to **match** and **group** items. Challenge her to find all the cards of the same suit in a deck of cards. Then ask, "How else could we group them?" Try grouping by number, color, or other ways!



MATH ONLINE, ANYTIME! The computer is a great tool for discovering math. Press the number keys on the keyboard, or count how many times your child can type the first letter of his name. Online, visit sesamestreet.org and search for the names of these great math games:

- Magical Numbers
- Big Bird's Shapes
- Big Bird's Numbers
- Checkout Cookie
- Egg-Counting Elmo

Three quick mealtime math moments:

- 1 **Fold!** Make shapes with your napkins. **How many shapes** can you make? Count the sides and angles of each shape.
- 2 **Compare!** Look at two drinking glasses of the same size. Which has **more** liquid? Which has **less** liquid? During a meal, how does the amount change?
- 3 **Count!** Common kitchen items can help your child learn to count! Encourage her to count spoons, forks, or plates.

IN THE KITCHEN

Explore parts of a whole: As you share a sandwich, say, "I'm cutting the sandwich in **half** so that each of us gets one piece." Hold the **two** pieces together to remind your child that they make up one **whole** sandwich. Now cut the sandwich halves in half again. Ask, "How many pieces did I make?"

Count to discover an amount: At snack time, give everyone some food, such as a few pretzels or crackers. Ask your child to **count** the items in his pile. Did everyone get an **equal**, or the same, amount? If not, ask your child how many pieces you need to **subtract** from each pile to make them all the same.

Discover 3-D shapes from the cupboard: Give your child an empty, closed coffee or oatmeal container to help her discover the shape of a **cylinder**. Count the **two** bases (the top and bottom surfaces). Point out the circles on the bases. Explore all the ways to use a cylinder! Does it roll? How could your child use the cylinder's top or bottom?





IN THE BEDROOM

Adding and subtracting with stories: As your child winds down at bedtime, use fun math stories like these to help him learn to add and subtract.

Addition Story

One happy friend sings a song. **(Hold up one finger)** Then another comes to sing along. **(Add another finger)** La, la, la, ding, ding, dong! How many friends are singing a song? **TWO!** Two happy friends sing a song. **(Hold up two fingers)** Then another comes to sing along! **(Add another finger)** La, la, la, ding, ding, dong! How many friends are singing the song? **THREE!**

Continue adding fingers; see how high you can go!

Subtraction Story

Three little babies are dancing in the bed. **(Hold up three fingers)** One lies down to rest his head. **(Put down one finger)** Now how many babies are dancing in the bed? **TWO!**

Repeat the verse and actions using 2, 1, and "none."

Then say the final verse:

No little babies are dancing in the bed.
All the little babies went night-night instead!

End with shapes:

At bedtime, look at your child's picture books to find familiar shapes. Rotate the book and point out that the shapes stay the same – no matter which way the book faces!

Count down till bedtime:

Make lights-out count! Before you turn off the lights, hold up ten fingers. Then **count down** together, starting with the number ten: "Ten, nine, eight, seven, six, five, four, three, two, one. [Turn lights off.] Sweet dreams!"

Outdoors

You can find math at the park, playground, or beach, waiting to be discovered in ordinary objects. When you and your child talk about math discoveries, you help her know she can do math!

AT THE PARK AND PLAYGROUND

Five is always five: Give your child **five** rocks. Ask: "How many different ways can you hold these rocks in your hands?" Help her get started by observing, "You could put **two** rocks in one hand and **three** in the other. Or you could put all five rocks in one hand." You can repeat this activity with other objects, too – fallen pinecones, acorns, leaves – and with other numbers.

Use chalk to make patterns: Draw a **pattern** on the sidewalk, such as **circle, circle, square; circle, circle, square**. Encourage your child to notice that a pattern is a series of pictures or things that repeat in the same way over and over again. Then hand the chalk to him and ask him to continue your pattern. Ask, "What comes **next**?" Take turns making patterns for each other.

Monkey around (and over, under, and through!): On a jungle gym, encourage your child to say where he is: "I am **under** the monkey bars. I'm on the **highest** platform." Your child could also move **over, around, and through** different parts of the playground.

Count anywhere: Pebbles in a garden, petals on a flower, or cracks in a sidewalk all provide wonderful chances to count!

count!





EXPLORE WITH SAND OR WATER

Write numbers: Practice writing **numbers** in the sand or dirt. Use a stick to make three lines and then ask your child to write the number that will tell how many lines you drew. Then do the reverse: Draw a number and ask your child to make that many lines.

Explore new shapes: In the sand, explore some more-complicated shapes. You might try drawing an **octagon** (like a stop sign), or a **rhombus** (like a diamond). And don't stop there; introduce your child to other shapes, too! Then, talk about each shape. Count the sides, count the angles, and compare them all.

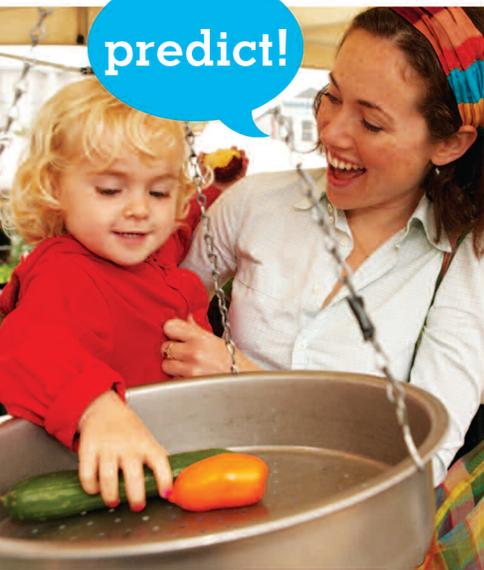
Measure as you play: Ask your child to **predict** which of three different-size cups will hold the **most** water and which will hold the **least**. As she uses a spoon to fill the cups, count how many spoonfuls it takes to fill each one. Were her predictions correct? If so, ask, "How did you know?" If not, arrange the cups in size order from largest to smallest. How does each cup differ from the next one?



On the Go

Adding a little math to a trip to the grocery store or the gas station doesn't have to take extra time. As a matter of fact, it can help engage your child and make the time fly!

predict!



AT THE STORE

Make a numbered shopping list: Create a shopping list with numerals. For example, you might write, "4 apples, 2 containers of yogurt, 12 eggs." As you shop for these items, count aloud.

Group items as you go: As you pass different displays, talk about how the items are organized. Point out the way things are **grouped**. Talk about how you might group things by **color**, **size**, or **weight**. Which items would go together?

Use math to involve your child: Ask your child to pick out two items while you pick out three. Put all the items into one bag. Then say, for example, "I put in three and you put in two. How many did we gather **all together**?" Then count to find out.

Predict: Before you weigh your fruits and veggies at the market, ask your child to predict which item will be the **heaviest**. Will a watermelon weigh **more** than a lemon? Why or why not? Then place your items on the scale. What number does the arrow point to? Explain that this is the item's **weight**. Test more predictions! Try using items that are close in size, such as an orange and an apple.



While You Travel to the Store

- 1 Look for the smallest and biggest buildings.
- 2 You can also try counting things such as the number of benches, trash cans, or people that you see.
- 3 Can you spot numbers on houses?
- 4 Point out the shapes of the different things that you pass. You might point out that a tire is similar to a circle. Ask, "What shape is that roof? What shape is that window?"

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While Waiting in the Checkout Line

- 1 Look in your cart and all around for numbers that your child knows. Call out a number or hold up a certain number of fingers and ask your child to find it on a package, a magazine, or an aisle sign.
- 2 Try tapping or clapping a number pattern. You might tap once and then clap twice, tap once and then clap twice. Ask your child to continue the pattern. Then encourage her to make up a pattern for you to extend.



Keep Exploring! Don't stop here – math is everywhere! No matter where you are, no matter what you do, math will always follow you. Making math moments a part of every day helps strengthen your child's understanding of the world around her. With curiosity and a positive attitude, discovering math is not only fun, but sets your child on a path to becoming a lifelong problem solver, thinker, and innovator.

Numbers, shapes,
patterns too –
Math is right
in front of you.
Add, subtract,
look up and down;
math is truly
all around!

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1 2 3 4 5 6 7 8 9 10 11

Math Talk! These pictures illustrate the meaning of some of the math words you can explore any time.

¡Hablar de las matemáticas!

Estas fotografías ilustran el significado de algunas de las palabras matemáticas que pueden explorar en cualquier momento.



Talk about shapes Hablemos de formas

Octagon! An octagon has eight sides and eight angles.

¡Octágono! Un octágono tiene ocho lados y ocho ángulos.

8 sides!
¡8 lados!



Cylinder! A cylinder has one curved surface and two circular bases.

¡Cilindro! Un cilindro tiene una superficie curva y dos bases circulares.



Rhombus! A rhombus has four equal sides.

¡Rombo! Un rombo tiene cuatro lados iguales.



Pentagon! A pentagon has five sides of any length.

¡Pentágono! Un pentágono tiene cinco lados de cualquier largo.

Cube! A cube has six square faces that are the same size.

¡Cubo! Un cubo tiene seis caras cuadradas que son del mismo tamaño.



12 13 14 15 16 17 18 19 20

One Fine Line: Number lines like this one can help your child learn to count! Your child can place a finger at any point on the line and move it from one number to another. How many places does she move between numbers?

Una línea fina: Líneas enumeradas como esta puede enseñar a sus niños la contar! Sus niños pueden poner uno de sus dedos sobre la línea y moverlo de un número a otro. ¿Cuántos lugares se mueven entre números?

Talk about numbers Hablemos de números

Adding: To add is to put one or more things with a group of things and then count how many there are all together.

Sumar: Sumar es agregar una o más cosas a un grupo y luego contar cuántos hay en total.



$$2 + 1 = 3$$

Subtracting: To subtract is to take one or more things away from a group of things and then count how many are left.

Restar: Restar es quitar una o más cosas de un grupo de cosas y luego contar cuántos quedan.



$$3 - 1 = 2$$



Directions Direcciones

Great math words for talking about where things are in relationship to other things: **under, over, around, through, behind, next to.**

Excelentes palabras matemáticas para conversar sobre la relación de las cosas: **Debajo, sobre, alrededor, a través, detrás, al lado de.**



Measurements Medidas

Great math words for measuring things: **full, empty, more, less, a lot, a little, whole, half, equal, many, few.**

Excelentes palabras matemáticas para medir cosas: **Lleno, vacío, más, menos, mayor, menor, completo, mitad, igual, mucho, poco.**



Comparisons Comparaciones

Great math words to use as you compare, group, and sort: **large, small, light, heavy.**

Excelentes palabras matemáticas para usarlas al comparar, agrupar y separar: **Grande, pequeño, liviano, pesado.**