

1



Math Talk - General

From birth, a child is exposed to a wide array of experiences and is discovering patterns. Expose your child to math even before they understand what you're saying.

Point, Describe, and Ask: Use words involving numbers, shapes, sizes, textures, and colors. Describe and ask about properties of things and how they relate to each other.



2



Math Talk - Storytime

Use storytime to let your child see math as a pleasant time together.



Discuss things in the story. Point to a ball: "The ball is round and yellow. The wall

of this room is also yellow. Find something round in this room."



3



Math Talk - Cleaning Up

Properties and Categories: Where do the books go? Small things go in that box, big things go where there is space. Is that space big enough?



Relationships: That goes on top of, or under, that other thing. Flat things go under the round things.



4



Math Talk - Bedtime



Going to bed and getting up involve steps mostly done in order. Discuss the



steps and why some things need to be done before, or after, others.



5



Math Talk - Mealtime

Groceries and Meal Prep: Ask for



two onions (showing two fingers). Measure out liquids or powders.

Table setting and clearing: Set a table for 4 people by getting 4 of each thing. After eating, sort items by how they are cleaned and put away.



6



Math Talk - Swings

Count with your child on the swings. With each push, count "1, 2, 3, 4, 5." After your child learns how to count to 5, start counting down from 5 as well. Start or end at 0 sometimes.



7



Math Talk - Playtime

Playground: Look for shapes in the play structures. Count and compare the people, the swings, and steps.



Home: How high a tower can you build, and whose is higher? What are

the different shapes, sizes, colors, and textures of the play objects?



8



Math Talk - Out and About

If you see a purple car, point it out and count other purple cars. Compare sizes, shapes, and designs of buildings. Match a hexagon in a sign with others you see.



9



Math Talk - Shopping

Count items, or count how long the lines are and find the shortest one.



Point out the shapes of store items.

Describe locations and sizes – a small item is on top of a shelf; it is between or next to something.



10



Shapes Inside Shapes

Cut shape holes in a box and fit objects through them. Use colors to



outline the holes (e.g. red triangle) and name the shape when your child puts a toy through.



11



Shape Hunt

This is like *I Spy*.

Player 1: "I'm thinking of a big blue circle."

Player 2: "I see it! It's the clock!"



Take turns observing and finding. Start with shapes, add size and color, and then add shapes inside shapes.



12



Jigsaw Puzzle



Have your child paint or draw on a piece of cardboard or stiff paper. Cut the paper into large pieces. Jigsaw puzzle!



13

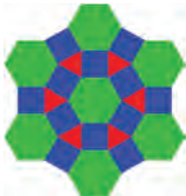


Colored Tilings

Use pattern blocks, or make "tiles" from stiff paper. Use a different color for each shape.

Name the shapes and colors as a pattern is made.

Point out tiled patterns in floors and walls you see.



1



Laundry Sorting



Practice with properties that make things the same or different. Sort by colors to be washed together. Sort by type (and size) when clean. Talk about why two similar socks make a pair. Which clothes are for older or younger people?



2



Object Hunt



Version 1: The Puzzler describes the object and the Guesser tries to find it.

Version 2: The Guesser asks yes/no questions and eventually guesses it. Practice with ideas such as color, size, weight, quantity, and relationships (inside, above, next to).



3



Patterns



Player 1: Make a pattern – challenge Player 2 to repeat it: step, clap, jump.

Player 2: Repeats and then adds to the pattern: step, clap, jump, slap. Create patterns involving sounds, shapes, movements, and other fun properties. Use patterns for secret codes to enter rooms.



4



Number Hunt



Pick a number, say 2. Make a treasure hunt to find all the ways 2 shows up around you. It may be a number on a wall or sign, or it may show up as two of something, such as two chairs or two dishes.



5



Number Gobbler



Make a triangle with food pieces as shown. Take turns rolling a die. When the die matches an untouched row, remove that row and eat it (yum) or put it in a pile. If piles are used, the player with the bigger pile wins!



6



One More One Less



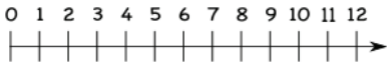
Ask "one more" and "one less" questions: "Would you like one more (or one less)?" Gradually, start adding in the current quantity. Count the number of items together, maybe 2 apple slices, and ask if your child would like one more or less.



7



Number Line On a Wall



Place a number line on the wall that starts at 0 and goes to at least 20 (pictured only goes to 12), with the numbers increasing as they go left to right. Use tick marks and easy to read numbers.



8



Your Own Store

Create tags with small prices. Put the tags on things in your home



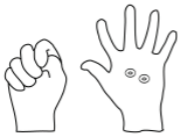
(toys, food, books, etc.). Give your child pretend paper money to spend. After a "purchase," have your child calculate how much money is left.



9



In the Other Hand



With a bowl of small items, have your child count out a few for you. Divide these

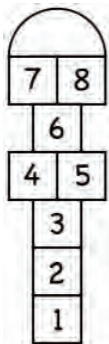
between your hands, and hold out one open hand. Your child counts the open hand and chooses a hand to keep - you get the other hand. When the bowl is empty, see who has more.



10



Hopscotch



Hopscotch is great as a number line and for emphasizing the order of numbers going forward and backward.

For younger children, relax many of the rules and replace hopping with stepping.



11



Going in Circles

Use a circle for a property such as: "has a hole" or "triangles."

Take some objects

and put those with that property inside the circle and everything else outside. When using 2 circles, make them overlap and choose properties so some things have both properties.



12



Same and Different



Pick two items that are somewhat similar. How are they the same? How are they different? For a spoon and a fork, they are similar because you eat with them. They are different because one is pointy and one is round.



13 One of These is not Like the Others

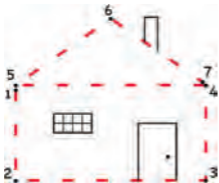


Use a set of four items where one is different. **The Challenge:** Identify the one not like the others and give a reason why. With these items, your child may choose the blue square because it's not red, or maybe the triangle because it isn't a square.



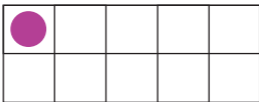
1

Connect the Dots

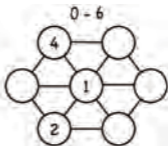
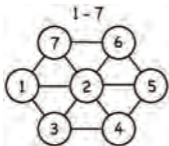


Complete drawings by connecting numbered dots.

Take a drawing, say of a house, replace some straight lines with numbered dots, and then connect the dots to recreate the original drawing.



2

Island Hopping
- Counting

Numbered islands (circles) are connected by bridges (lines). Find a path that connects the islands in order. To add challenge, leave out some of the numbers.

●	●			




3



String Number Line



Make a number line using a string. Use paper clips to attach numbers up to 10 along the string. Possible activities: 1) Switch two numbers and find the mistake. 2) Leave out a number and find the missing one.

4
●

Symmetric Shapes

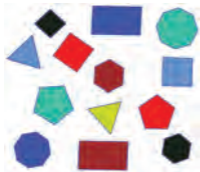


Fold a piece of paper once and cut it to make a design with a mirror image. Cut out faces, lamps, or shapes. Fold twice to create mirror image designs in two directions, such as flowers.



5
●

Shapes on the Floor



Take large shapes, such as the ones pictured, and put them on the floor.

Give your child some shape information (e.g. "it is four-sided") and challenge them to run to that shape, or shapes.

●	●	●	●	●

6

Memory Challenge

Place cards face down in a 3x3 grid; put the rest in a draw pile. Take turns flipping 2 cards. If the cards match, keep them, replace them



from draw pile, continue the turn. If not, flip the cards back, the turn ends. The player with the most cards wins.



7



Go Fish!



Deal 5 cards to everyone, the rest in a draw pile. A player chooses someone to ask for a match of one of their cards. If so, it is handed over. If not, they say "Go Fish!" and a card is picked from the draw pile. Matching pairs are put in "books." The most books wins.





Bingo with Cards

Players pick random cards to put face up in a 4x4 grid. Draw cards from the draw pile – each



player turns over at most one matching card. The first player with 4 cards in a row wins – “Bingo!”



9

Within One or Two



Split the face down cards between 2 players. Take turns putting a card face up on the middle pile. If the card is one more, same, or one less, than the previous card, the first to say it gets the whole pile. Variant: Yell when 2 cards add up to a target sum.



10



Invisible Add and Subtract



Count some things to put in a box, and ask your child to

put up that many fingers. Then, add (or remove) one or two objects to the box, and ask how many objects are now in the box. When this becomes too easy, add or remove more than two objects at a time.



11



Nim



Use a target, say 10. Let your child choose whether to go first. Starting at 0, each person adds 1 or 2 to the total.

Reaching the target wins.

Use subtraction starting at the target, subtracting 1 or 2 - reaching 0 wins.



12



War - Comparing

Split face down cards between 2 players. Flip over the top cards - the larger card wins.



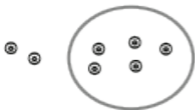
If the cards match, flip over the next cards and the winner gets all four. The player with the most cards wins.
Variation: the smaller card wins.



13



Fitting In



Give your child some small objects, say seven,

and count them together. Pick another number, say five. Ask your child to take five objects from the seven, if possible. Sometimes, to keep things lively, ask for numbers that are too big.



1



Smallest Single Number



Each player silently chooses a number. Counting starts at 1.

With each new number, anyone with that number raises a hand. If there is more than one hand, they are "out" and the counting continues. If only one hand is raised, they win!



2



I'm Thinking of a Number



The Puzzler: "I'm thinking of a number (6) from 0 to 8."

The Questioner: "How does your number compare to 3?" The Puzzler says: "My number is larger than 3 (or smaller than or equal to)."

The challenge: Discover the number in as few turns as possible.



3



Flash Numbers



Practice quantities by flashing a ten frame drawing to

identify. Or, show fingers on your hands and have your child recognize the total. When two hands are needed, one hand should have 5 fingers raised, as in a ten frame.



4



What's Missing?



Suppose you have 6 raisins. Unwatched, cover 2 of them. When your child looks, count the 4 visible raisins and ask how many are covered. Find the difference of 4 and 6 either by counting forward from 4 or backward from 6.

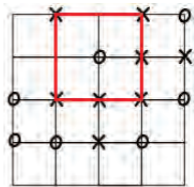


5



Finding Squares

Make a 5x5 grid. Take turns putting tokens on points where the lines cross. Get 4 tokens



on the corners of a square of any size to win. After your child gets better, allow squares with diagonal sides.



6

■ Connect the Dots - String Art



Make drawings by connecting dots with the same number along



opposite sides of an angle. Or, put some dots, say 8, evenly spaced on a circle. Create patterns by connecting the dots in order, or connecting every second dot, or every third dot.



7



Bag Stories



You and your child each have a bag. One person creates a story: "Your bag has 3 raisins and I have one more. How many do I have?" Over time, make these more elaborate.

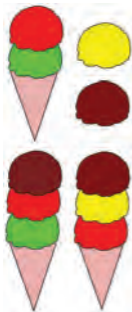
Example: "I have 2 fewer cookies than you. Together we have 6. How many cookies do I have?"



8



Math Stories



Stories add interest to calculations. **Example:** My two friends and I are having ice cream. I give each friend one more scoop than I get. If there are ten scoops of ice cream, how many scoops can I have?



9



In-Between Game



Each player gets 20 tokens. Deal 2 cards face up and 1 face down to one player. This player bets 0 to 3 tokens that the third card is between the others. If right, the player gets those tokens from the other player. If wrong, that many are given away.



10



Estimation Game



See who can make the best estimate for the size of a group, such as a group of people standing in a line.

Force yourselves to make a fast estimate so no one does any counting. Then count to see who is closest.



11



Counter-examples

Make statements that others show are wrong.

Type 1: Something is always true.
Example: All bikes have two wheels.

Type 2: Statements of the form "If ____, then ____." Example: If a person is taller, then they are older.



12



Codebreaker

3	2	1
1	3	1
4	5	4
2	3	2
1	3	2
3	2	1

The Puzzler creates a code, say "321," using numbers from 1 to 5. The Breaker makes a guess and the Puzzler says how close it is.

If the guess is 131, the Puzzler says "one spot is correct, one has the correct number in a wrong place." Play until the code is broken.



13



8 Sliding Puzzle



Put pieces of paper numbered from 1 to 8 on a 3x3 grid. A piece may be moved into an adjoining empty space. **Challenge:** Get the pieces in order. Create these puzzles by moving backwards from the answer.



Joker

Why did the two 4's skip lunch? ...
because they already 8.

Why did 2 and 0 break up? ...
because some one came between them.

Joker

Joker

What did 0 say to the 8? ...
nice belt!

Why are obtuse angles so depressed? ...
because they're never right.

Joker

Early Family Math

EFM Stages 1 and 2

Enjoy these fun math activities together during your child's first four years. This material progresses from clubs to diamonds to hearts to spades. For much more early family math fun, go to www.EarlyFamilyMath.org.

www.EarlyFamilyMath.org/deck-family-1-2-geometric

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