Numeracy and Math Skills in Children

Numeracy is the ability to understand numbers. Numeracy skills involve working with numbers, counting, solving number problems, measuring, sorting, noticing patterns, adding and subtracting numbers and more. We all need numeracy and math skills to do everyday things like:

- Solving problems: Which brand and size of canned beans is the least expensive?
- Analyzing and making sense of information: How many wins does my team need to get to the top of the competition?
- Understanding patterns: What number would the next house in this street be?
- Making choices: Which bike is the best value?

When it comes to children, their everyday experiences are full of learning opportunities to practice numeracy.

How Children Begin Learning Numeracy

Children start learning numeracy skills from the time they are born. This learning happens from seeing numeracy in action, especially in everyday play. For example, numeracy practice happens when you encourage your child to count fingers, toes, and toys or recognize numbers and shapes on objects like clocks and books. Numeracy is even in action when your child is deciding how many cookies they want.

As your child gets older, they learn more advanced numeracy and math skills, including size and measurement. You will notice this happening as they start to:

- Compare objects of different sizes – ‘big,’ ‘medium,’ and ‘small’
- Group things together and talk about same and different
- Use words to describe where things are – ‘over,’ ‘under,’ and ‘next to’

Additionally, when you talk with your child about math concepts during everyday activities, this can helps them understand how and why math is useful. For example, this happens when you point out:

- Big and small (size)
- High and low (height)
- Heavy and light (weight)
- Fast and slow (speed)
- Close and far (distance)
- First, second, and last (order)

Babies: tips for building numeracy skills

Babies loves to hear your voice and enjoy stories and songs with repetition, rhymes, and numbers. Some things you might already be doing or could start doing with your baby to build numeracy skills include:

- Reading stories with numbers – for example, ‘Goldilocks & the three bears’
- Playing counting games
- Singing number songs and rhymes
- Changing your tone of voice to describe concepts – for example, a big voice to describe something big, or a little voice to describe something little.
You can also talk about:
- Everyday activities – ‘Let’s put half of the bird seed here and half over there’ or ‘Let’s find matching socks’
- The environment – ‘Look at the little bird over there’ or ‘That’s a tall tree’
- Food – ‘Let’s have two pieces of banana’ or ‘How many cups do we need?’
- Time – ‘7 pm, time for bed’
- Shapes and patterns – ‘Let’s look for all the triangles’.

The best thing you can do is make these everyday numeracy activities and experiences playful and relaxed so that they are fun for your child(ren).

**Toddlers: tips for building numeracy skills**

Playing with your toddler helps them to develop communication, imagination and other skills that help him understand math concepts. Here are some ideas to help you and your child enjoy play together – and learn early math skills along the way!

**Ideas for Talking, Everyday Activities, and Play**

- Use math concepts to describe what you and your child are seeing and doing together. For example, ‘Look at the fast cars’ or ‘This bag is heavy.’
- Point out and name the numbers in your phone number and address.
- Make counting part of your everyday life. For example, count shells at the beach, fruit at the shop and trees on the street, or count toys with your child as he packs them away.
- When you are out and about, encourage your child to describe or compare shapes of leaves, colors of flowers or sizes of birds.
- Involve your child in cooking. Your child can help stir, pour, fill and mix. This helps your child become familiar with concepts like counting, measuring, adding and estimating.
- Go for a nature walk and let your child gather a mix of leaves, sticks, pebbles and other natural items. Your child can sort them into groups based on size, color, shape or what they do.
- Sing songs and read books that have numbers in them that repeat, rhyme and have rhythm. This will help your child understand patterns.
- Race toy cars and talk about which came first, second or third.
- Help your child to arrange her favorite toys in order from shortest to tallest.

Just remember, children learn best when they are interested in something. When your child is doing something they are particularly interested in – whether it involves dinosaurs, dolls, cars, building, insects, etc. – you can always find fun ways to use and explore math concepts while they play!

The Book Nook
- **Stack the Cats** by Susie Ghahremani
- **Cuento con Pablo** by Barbara DeRubertis
- **One Fox: a Counting Book Thriller** by Kate Read
- **Chicken Break!: a Counting Book** by Cate Berry

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References

The Why and What of Counting

Understanding Numbers and Counting Skills in Preschoolers

Developing early numeracy skills