



36 months *to* 48 months

NUMBER SENSE

How are children learning about numbers?

Introduction

What are preschool children learning about numbers?

Young children begin to practice the skills needed for arithmetic and math long before they enter elementary school. Most of these skills are developed through their self-initiated play with materials and through simple interactions with adults.

- Young children learn counting skills through everyday interactions such as putting plates on the table, counting their fingers to tell you how old they are, and counting the number of apples needed so each child can have one.
- Children usually learn how to say “1-2-3-4-5” (sometimes putting the numbers in different order) before they know that each number represents something. For example, they might have three strawberries and count them “1-2-3-4-5,” because they don’t know that each strawberry gets only one number. As a child begins to get this concept, you might see her lining up all the animals and giving each one a leaf to eat. Eventually, they learn that if you are counting something each object gets one number.
- Young children are also beginning to understand the ideas of “more” and “less” and will notice if someone has more cookies than they do, but they don’t clearly understand quantity. If they have one cookie and their friend has one cookie cut into two pieces, they might think that their friend has more cookies. Their ideas about “more” and “less” help them learn to compare more than two things. As they get more experience, they will be able to sort three sticks from shortest to longest or three balls from smallest to biggest.



- At around four years old, children may be able to count to 10, but may miss some of the numbers (for example., “1-2-3-5-7-8-10”).
- They may recognize a written number. For example, they might point to a street sign and say, “That’s a number 4—just like I am 4.”
- They can also look at a small number of things and know how many there are without counting: “He has three cars and I only have one!”
- At four years, children can usually count up to five objects, pointing at each when they say the number.
- Four-year-olds can often tell you which is more just by looking. If their friends have six blocks and they have two, they can let you know that their friend has more than they do.
- They can predict that if there is a group of dolls in the bed and one gets taken away, there will be fewer dolls in the bed. Similarly, if they put two groups of things together (combining their crackers and their friend’s crackers), they know that now they have more.
- At four years old, children can do very simple adding and subtracting. If they have four apple slices and they eat one, they can tell you that now they have three—without counting. If they have a train that is four cars long and they add one, they can tell you that there are five cars now.



Tips for families to help children in understanding numbers:

Many of the things that families do naturally with children help them to develop their math and number skills. There are many opportunities in our everyday lives where adults are counting things and children are practicing numbers in their play. Here are some suggestions of things families can do:

- Count out loud, so your children can hear the sequence of numbers and notice how often you use counting in your day. When children learn from you how numbers are useful in everyday life, their interest in numbers grows.

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- Count the kisses you give your child, count the trees outside your home, or count the number of times the dog barks.
- Point to things as you count them so that children can see how each number you say represents one object.
- Ask your child to guess or predict how many things there are and then count them together: "How many buses will come by before our bus gets here?"
- Children will make lots of mistakes when they are learning about numbers. Without saying that they are "wrong," you can gently suggest that we count again together. Or you can say, "You counted 5 ducks and I only see 4." Children are naturally interested in imitating you to learn about things like numbers. Over time, they will say things the way you do and "self-correct" to be more like you.

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- Shopping, cooking and eating provide many opportunities for counting:
 - "Shall we get four ears of corn or five? Can you count them for me as I put them in the bag?"



- “If we get two bananas and you eat one in the car, how many will be left?”
- “I think I’ll get the bigger bag of tortillas, because we have all our cousins coming for dinner. Can you reach the bigger one for me?”
- “We have three bags of groceries. Do you think they will all fit in our car?”
- “How many bags would you like to carry in and how many shall I carry?”
- “Can you put the bananas on this plate and the plums in this bowl?”
- “We need three pieces of bread. Can you get them out of the bag?”
- These conversations about numbers should be fun. If your child seems stressed or doesn’t want to do these games, you can wait and try again later or try a different game.

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