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What's in a number? Plenty! The word number may mean a quantity or an amount (how many, or how much), but it can also refer to number words—like “two, three” or “dozen”—or other symbols like the numerals 2 or 25. Although they help us know and talk about how many or how much, numbers support much more than counting. Numbers can refer to how long, how tall, in what order, at what time, and how fast and how slow things are, concepts that we encounter every day.

We can express numbers in different ways. Numbers help us describe exactly how many items are in a set, like “four books,” and when we describe how much there is of something, numbers may refer to containers, like “one cup of water” or “two buckets of sand.” We use numbers to describe parts of things like “six pieces of the puzzle,” or proportions, like “there are two times as many dogs as cats,” or “we ate half of the berries.” We use numbers to describe the order of events (“first, put on your socks, second, put on your shoes”), and to label the position of people (“Anna is second in line”) or things like grocery store aisles, books on library shelves, and houses on a street.

Why Is Learning About Numbers Important?

Understanding what numbers are is important because we all use numbers when we compare, order, look for, measure, add or subtract, solve problems or answer all kinds of questions. When children start kindergarten with an understanding of what numbers are and how to use them, their number knowledge becomes a foundation for learning math. Number skills help even adults, at work and at home, such as when making decisions or plans about their finances or home improvement projects (like installing carpet or painting a room). Children and adults use their number skills daily to enjoy hobbies, games, sports, and activities like building, shopping, cooking, and chores.

What Do Children and Adults Need to Know About Numbers?

Adults need to know that number words can be confusing for children because we use numbers in many different ways. Think of all the ways a child may hear the word for “5” being used. Here are some examples: “1, 2, 3, 4, 5...” “I’ll be home at 5 o’clock,” “Jose is 5 years old,” “Please wait 5 minutes,” “Our address is 5 Maple Drive,” “the cat weighs 5 pounds,” and “one dollar is more than 5 cents.” Children eventually understand that numbers are used in these different ways. But first, they notice quantity and amounts, learn the correct sequence of number words, and learn to name the symbols for those

words (symbols like 1, 2, 3) before they learn what number words mean. These examples show concrete, visible, or measurable ways to use numbers. Numbers also refer to more abstract concepts, like time (one minute, two days, three weeks, two years), which may be more difficult for children to understand. Children need to learn that numbers are useful, such as when numbers are used for measuring or adding.

How Can We Support Children’s Development of Number Knowledge and Skills?

Be a number detective: Find numbers and ways to use them, and help your child find them, too.

How and when do children learn all there is to know about numbers? Adults who engage with young children can expect that this learning begins early in life, because even infants notice amounts. Adults can expect this learning to take time, and should know that it is worth the effort to spend time talking about and using numbers meaningfully.

Adults can help Infants, toddlers, and young children learn about number words, number symbols, and what numbers mean by talking about numbers throughout the day at home, in the neighborhood, at stores, and at the bus stop. Even if children don’t yet know what numbers mean, they learn from hearing adults talk about numbers.

Adults need to know that they themselves are actually good at using numbers—they use numbers all day long without even noticing! Adults use numbers when they plan their schedules, make decisions about what to pack for lunch or how much to buy at the deli or grocer, and figure out how much time they need to get their children ready for bedtime. When adults believe that numbers are useful, they communicate that belief to their children.

Here are suggestions for things to do that promote children’s number skills:

Babies and Toddlers

- Identify amounts: Point out amounts of things on the pages of books while looking at the books together, and mention if the amounts are increasing or decreasing.
- Use your words: Speak about numbers to start building a number vocabulary.
- Count aloud instead of silently when your child is near – for example, count how many fingers and toes your baby has, how many times you roll the ball back and

forth to your toddler, how many spoonfuls of food you are feeding your child, how many toy cars or blocks your child lined up or stacked.

Preschoolers and Older Children

- Be a number detective: Find numbers in all these places:
 - In nature: “See the ladybug’s spots? How many spots are there?”
 - In your neighborhood: “The stop sign has eight sides. That shape is called an octagon.”
 - In your home while cooking, setting the table, cleaning up, or playing with blocks.
 - Anywhere you spend time together!
- Count with your child –especially when counting is meaningful. Count the number of stairs you climb, bus stops you pass, forks and spoons you need to set the table, and cups of water you add to make oatmeal.
- Compare quantities or amounts with your child: For example, say, “You have two pieces of pizza, and I have one. You have one more piece than I have.”
- Help your child build a number vocabulary. This is not limited to the numbers 1, 2, 3, and so forth, but also includes words that convey amounts (**some, a lot, a few, more**).
- Use number words to talk about order: For example, say, “We are third in line. That person left, so now we are second in line. When one more person leaves, we’ll be first in line! That’s when it will be our turn.”

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