Canadian Child Care Federation
Leaders in Early Learning

Ages & Stages of Numeracy Development

Newborn to 4 months old

- Can tell the difference between a picture of two dots and a picture of three dots.
- Can immediately "see" that there are two or three dots on a page, even though the ability to count is not yet developed.
- Shows surprise when a puppet jumps more times than they are used to seeing.

5 – 6 months old

- Can tell that a jar that is half full of juice is different from a jar that that is full
- Shows surprise at three toys when there are only supposed to be two toys.
- Can tell the difference between two large sets of toys if one of the sets is at least twice as large as the other; for example, can see that a set of 12 toys is different from a set of 24 toys.

9 – 12 months old

- Can tell the difference between two large sets of toys even if the sets are almost the same size; for example can see that a set of eight toys is different from a set of ten toys.

12 – 18 months old

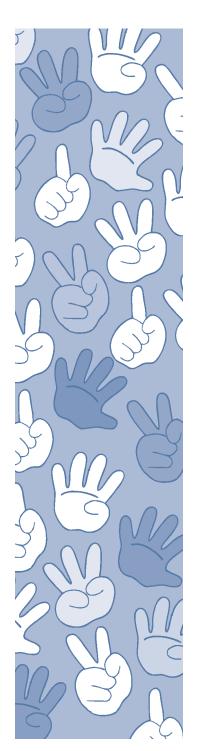- For small sets of blocks, can learn to pick the smaller of the two sets.

2 years old

- Can learn some number words.
- Knows that number words are important.
- Labels toys with number words.

2 – 3 years old

- Knows that when one candy is taken away from two candies, one candy is left.
- Knows that when one candy is added to two candies, there should be three candies altogether.
- Tries to count using number names even though the number names are often not in the correct order.
- Uses number words in the same order every time when counting objects, even though the number words are not necessarily in the correct order.
- Can learn to recite the number words 1 to 10.
- Can represent 1 and 2 with finger patterns.
- Can divide up eight toys between two children by using a "one-for-me, one-for-you" strategy.
- Learns to pick out the "first" and "last" person in a line.

3 – 4 years old

- When counting objects, knows that the last number word spoken answers the question "how many are there?"
- By the age of three and a half, reliably gives correct answers to addition and subtraction problems involving small quantities, for example 1 + 2 and 3 - 2, by using concrete objects

(manipulatives) or by pointing to a picture of the correct answer; for example, when given ▲ ▲ joined to ▲, can point to ▲ ▲ ▲.

- Knows that a pile of sand should look bigger when more sand has been added to it.
- Recognizes one-digit numbers.
- Can share ten toys equally among five children and knows that each child has an equal share.
- Can learn to count from 1 to 30.
- Measures length by directly comparing two objects, for example, "This book is as long as my arm."
- Represents 5 using a finger pattern.
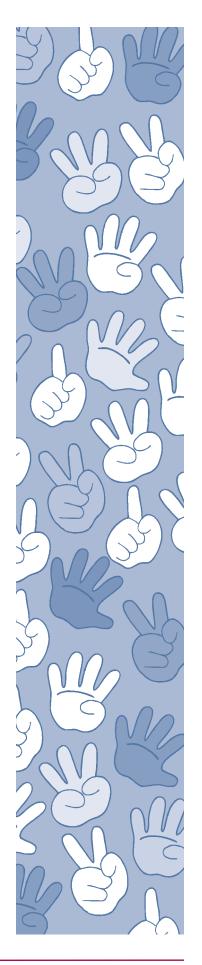
4 to 5 years old

- Learns to count backwards from 5.
- Understands and uses ordinal terms: "first," "second," "third," "fourth," and "fifth."
- Using manipulatives, can find the answer to simple addition and subtraction word problems that total up to 5, and later up to 10; for example, "I had three dolls and I got four more for my birthday. How many dolls do I have now?"
- Learns to count backwards from 10.
- Learns to skip counts by 10s (10, 20, 30...), and later by 5s and 2s.
- Can learn to write one-digit numerals.
- Can learn to start counting up from numbers other than one, for example, "7, 8, 9, 10."

5 – 6 years old

- Can divide up large sets (20 items and more) equally among five people.
- Knows what number comes next up to the number 9.
- Knows that the distance between two objects doesn't change unless the objects are moved.
- Can learn to count backwards from 20.
- Knows that if Mary is taller than Josie, and Josie is taller than Fred, then Mary is also taller than Fred.
- Knows that a bundle of ten popsicle sticks is the same as ten individual popsicle sticks.
- Compares the length of two objects using string.
- Represents up to 10 using finger patterns.
- Understands and uses the ordinal terms "first," "second," … up to "tenth."
- Knows the doubles up to 10, for example, 2 and 2 is 4, 3 and 3 is 6.
- Can learn to count up to 100.
- Recognizes that there are five toys in a set without counting them.
- Can learn to recognize patterns of up to ten items and connects the patterns with the quantity indicated, for example, ": : means there are 4 dots."
- Measures things using other objects placed end-to-end, for example, "My book is ten paperclips long."
- Names, discusses, and compares objects using words such as "taller," "shorter," "skinnier," "fatter," "wider," and "longer."
- Writes two-digit numerals.
- Reads number words up to 10, for example, can read "one," "two," and so on.
- Can learn to start the counting sequence from any number between 2 and 18, for example, "13, 14, 15, 16, 17,…"
- Understands that a bundle of 18 popsicle sticks is the same as a bundle of ten popsicle sticks plus eight individual popsicle sticks.
- Can label shares of 1/2, 1/3, 1/4, and 1/5 using the words "half," "third," "fourth," and "fifth."
- Can learn to measure length of objects using centimetres and metres.
- Using manipulatives, can create a straight road that is "just as far to walk" as a given road with a bend in it.
- Can divide up to 100 items equally among ten children.