



KINDERGARTEN- Helping your Kindergarten child at home with Mathematics

This guide can help carers and parents support their Kindergarten child at home with the learning area of mathematics.

Number and Algebra

Representing whole numbers

Representing whole numbers focuses on:

- how whole numbers show quantity
- reading and representing numerals to at least 20.

You can help your Kindergarten child at home by:

- helping them represent numbers from 0 to 10 with words, numerals and finger patterns. For example, the number 5 would be represented as 'five', 5 and 'five fingers on a hand'
- using household items to represent numbers 0 to 20. For example, counting out 15 pegs, 9 pencils, 11 marbles or 5 lollies
- counting objects you see while you are out walking. For example, you might count how many dogs you see, fence palings or flowers on a plant
- counting backwards by ones when your child is confident counting forwards. Practise the 'Rocket ship countdown 10–1 Blast-off'
- using dice in board games to identify the number pattern
- playing a game of Bingo with the numbers 1 to 20
- playing Snap with a deck of cards
- identifying numbers on coins or letterboxes.

Combining and separating quantities

Combining and separating quantities focuses on:

- addition and subtraction
- number pairs which make 10.

You can help your Kindergarten child at home by:

- playing adding and subtracting board games such as Snakes and Ladders
- using a deck of playing cards to add two number cards together from the same suit. For example, 4 hearts added to 3 hearts is 7 hearts. Count all the hearts by ones, from one, to begin. Alternatively, start the count from the largest number, as in 4 + 3, 7
- using Lego pieces to model addition and subtraction. For example, start with 5 blue Lego pieces connected. Now connect 4 more red Lego pieces. How many are there altogether? Now take 2 red Lego pieces away. How

many are left?

- playing Ten Pin Bowling with toilet rolls and a tennis ball for a subtraction game. Count how many pins have fallen down and how many are left standing
- getting to know number bonds, or 'friends of 10', which are number pairs which add together to make 10. These number pairs are *1 and 9, 2 and 8, 3 and 7, 4 and 6, 5 and 5*.

Forming Groups

Forming Groups focuses on:

- forming groups through sharing and counting objects
- making and continuing patterns which repeat.

You can help your Kindergarten child at home by:

- teaching them to share cutlery for each place when setting the table
- sharing a packet of lollies equally between siblings or family members by repeatedly giving each person one in the same order until the packet is empty. Discuss what it would be fair to do if there are leftover lollies
- identifying and discussing patterns in and around your home such as lounge or curtain material colours or shapes. For example, *blue square – yellow circle, blue square – yellow circle, blue square – yellow circle*
- singing songs, making dances and readings books with repeating, rhyming or rhythmic numbers
- making patterns from objects in nature. Start with a repeating pattern of 2, then 3 and then 4. For example, *leaf – rock – leaf – rock – leaf – rock* (repeating pattern of 2). Also, *flower – stick – rock – flower – stick – rock – flower – stick – rock* (repeating pattern of 3).

Measurement and Space

Geometric measure

Geometric measure focuses on:

- position and direction
- measuring length.

You can help your Kindergarten child at home by:

- reading *Going on a bear Hunt* by Michael Rosen. Act out the positional language or sing the song using the actions
- playing time-measured or distance-measured races using toy cars, marbles or paper aeroplanes. Use the language of *1st, 2nd* and *3rd* to describe their positions at the end of the race
- singing, dancing and playing left and right games and songs. For example, singing and dancing The Hokey Pokey
- comparing lengths of socks from toe to top while matching pairs from the washing pile.

Two-dimensional spatial structure

2D spatial structure focuses on:

- recognising, representing and describing common 2D shapes
- describing and comparing area.

You can help your Kindergarten child at home by:

- identifying shapes such as circles, triangles, rectangles and squares around your home
- using digital technology and word-processing applications to make a variety of 2D shapes on the computer
- using pop sticks to make a variety of 2D shapes on flat surfaces
- using flattened playdough with cookie cutters in a variety of 2D shapes
- designing 2D shape picture collages
- collecting a variety of leaves and comparing their area by placing one on top of the other to see which takes up the more/less surface space
- investigating a collection of different coins to see which uses the greatest/smallest area by stacking them.

Three-dimensional spatial structure

3D spatial structure focuses on:

- recognising, representing and describing common 3D shapes
- describing and comparing volume.

You can help your Kindergarten child at home by:

- using and discussing different measuring containers when cooking, gardening or filling baths, buckets or cups. Refer to containers as being full, empty or half full.
- comparing the capacity of 2 different containers by pouring their contents, such as sand, water or rice, into 2 containers that are identical
- stacking blocks or other items into different spaces to compare capacity
- comparing and discussing the capacity of tall/narrow with short/wide containers and how their appearance might be misleading when estimating how much they can hold.

Non-spatial measures

Non-spatial measures focuses on:

- describing and comparing the masses of objects
- sequencing events and reading the hour time on clocks.

You can help your Kindergarten child at home by:

- comparing masses of objects around the house by hefting one in each hand (hefting means to hold or lift something to estimate its weight)
- naming the days of the week and months of the year. Contextualise times of the year using special celebrations such as birthdays or cultural events
- looking at the phases of the moon and the position of the sun

- involving them with weekly routines for school and home life. For example, Library day at school is Thursday, it's PE uniform day on Monday and our family goes to Nanna's house for lunch every Sunday
- referring to an analog wall clock in your house for hour time events. For example: The long hand is on the 12 and the short hand is on the 5. It must be five o'clock: time to watch our favourite show on TV.

Statistics and probability

Data

Data focuses on:

- collecting data and making meaning from a data display.

You can help your Kindergarten child at home by:

- collecting data together about something that you both find interesting. For example, what kinds of pets are most popular with your extended family or friends?
- designing a simple data display from blocks, pegs or counters to represent the data gathered. For example, 5 blocks mean there are 5 dogs, 3 blocks for 3 cats, 1 block for a rabbit and 6 blocks for 6 birds
- asking questions to understand and make meaning from your data display. For example, What pet was the most popular? and What pet was the least popular?