

EYFS curriculum planning for progression of mathematical development

<u>Nursery 1</u>	Nursery 2	Reception
Throughout the year from entering	Autumn	Autumn

Children will be taught and supported in their own play and in some group work to:

Number

- Count to 10 by rote (37-45)
- Begin to touch count up-to 3 objects saying a number name for each one (55-62)
- Begin to show amounts with fingers up to 5 one by one **grow me 3 fingers 123** (37-45) with adult support
- Begins to give small amounts from a larger group (up to 2) when asked e.g 'can you give me 1 penny please?' (55-62)
- Say which group has 'one' and which has 'lots' (30-36)
- Use number names in play and with an adult in every-day situations e.g counting the fruit (37-45)
- Look for numerals in the environment (46-54)
- Begins to realise that anything can be counted such as jumps, claps (46-54)
- Sing number songs, and using props notice that an amount changes when something is taken away or added (30-36)

Vocabulary to be used by adults -number names, more, lots, a little, how many, none, all gone,

Shape, space and measures

- Match objects to pictures or shapes as part of tidying up in the areas of continuous provision (30-36)
- Understand words used to describe sizes such as **big, little, tall, short, long, thin, thick, empty, full, wide, narrow** (30-36)
- Understand words used to talk about shapes -**round, big, like a door, pointed, curved, straight, circle, square, triangle, rectangle** (37-45)
- Understand words used to describe time - **snack time, today, tomorrow, day, night, home time, minutes, o'clock** (30-36)
- To sort objects in a range of ways- colour, size, type, shapes (30-36) **Can you find all the yellow bears? big bears? Horses?**

If children are in Nursery 1 for more than two terms consider starting the N2 curriculum if needed

Children will be taught and supported in their own play and in some group work to:

Number

For children who enter in September

- Count to 10 by rote (37-45)
- Begin to touch count up-to 3 objects saying a number name for each one (55-62)
- Recognise numerals of personal significance e.g own age, door number (55-62)
- Begin to show amounts with fingers one by one **grow me 3 fingers-123** (37-45) with adult support
- Begins to give small amounts from a larger group (up to 2) when asked e.g 'can you give me 1 penny please?' (55-62)
- Say which group has 'one' and which has 'lots' (30-36)
- Use number names in play and with an adult in every-day situations e.g counting the fruit (37-45)
- Look for numerals in the environment (46-54)
- Realise that anything can be counted such as jumps, claps
- Sing number songs, and using props notice that an amount changes when something is taken away or added (30-36)

In addition for children who have been in N1:

Explore counting objects in different ways- in a line, in a group, by moving.

- Touch count up-to 4 objects saying a number name for each one (55-62)
- Recognise numerals 1-3 (55-62)
- Compare two groups and say when they have the same e.g dice, dominoes (46-54)
- Begin to compare two groups and say which has more (63-70)
- Give up to 3 objects from a larger set (55-62)
- Begin to count beyond 10 with adult support (55-62)
- Show amounts with fingers up to 5 **grow me 3** (37-45)

Shape, space and measures

For children

- Begin to name and find a **triangle, circle, rectangle, square** (46-54)
- Sort objects by size - **long/short, tall/short, heavy/light**, (55-62)
- Notice and identify shapes in the environment(37-45)
- Begin to learn the names of the **days of the week, today, weekend**, as part of Daily Dashboard (55-62)
- Use and understand positional language - **in, on, under, next to** (46-54)
- Understand and begin to use words to describe sizes such as **big, little, tall, short, long, thin, thick, empty, full, wide, narrow** (46-54)
- Understand and begin to use words to talk about shapes -

Children will be taught and supported in their own play and in group work to:

Number

Some children may need to continue working on the N2 Summer curriculum

Daily Dashboard - Time table before, after
Days of the week days of the week, weekend, today, morning, afternoon

Numeral recognition - match a group of objects to the numeral 1-5 then 1-10 using numeral dice in games; matching numerals with varied groups of things,using 'tidy-up labels' on containers and checking that nothing is missing, reading number books

Counts an irregular arrangement of up to ten, then 20 objects (Cardinality)

counting things of different sizes - this helps children to focus on the numerosity of the count

- counting things that can't be seen, such as sounds, actions, words
 - counting things that cannot be moved, such as pictures on a screen, birds at the bird table, faces on a shape.
- using dot cards, dominoes and dice as part of a game, including irregularly arranged dots (e.g. stuck on)
- playing hidden object games where objects are revealed for a few seconds; for example, small toys hidden under bowl - shuffle them, lift the bowl briefly and ask how many there were
 - 'all at once fingers' - show me four fingers.

Number formation 1 -10

Uses the language of 'more' and 'fewer' to compare two sets of objects. (cardinality)

collections for children to sort and compare, which include objects which are identical, and which include objects of different kinds or sizes

- collections with a large number of things, and collections with a small number of things.

Collections should also offer challenges, such as including more small things and fewer large things, to draw attention to the numerosity of the comparison, i.e. the number of things, not the size of them.

Children need the opportunity to see that groups could consist of equal numbers of things. Children can check that groups are equal, by matching objects on a one-to one basis. Ensuring that when providing groups to compare, there are some that have an equal amount

- asking children to convert two unequal groups into two that have the same number, e.g. 'There are 6 apples in one bag and 2 in another bag; can we make the bags equal for the two hungry horses?'

Daily Dashboard - Snack table - which fruit will you have? Which was

Spring

Children will be taught and supported in their own play and in group work to:

Number

Explore counting objects in different ways- in a line, in a group, by moving, without moving.

- Touch count up-to 5 objects saying a number name for each one (55-62)
- count to 5 with fingers one by one **can you grow me 5 fingers?**(37-45)
- Compare two groups and say when they have the same e.g dice, dominoes
- Compare two groups and say which has more (
- Give up to 4 objects from a larger set (55-62)
- Begin to count beyond 10 with adult support (55-62)
- Count actions (55-62)
- Recognise numerals 1-5 (55-62)
- Begin to match numerals to amounts 1-5 (55-62)
- Begin to subitise with amounts up to 4 (55-62)

Shape, space and measures

- Name and find a **triangle, circle, rectangle, square** (46-54)
- Sort objects by size - **long/short, tall/short, heavy/light** (55-62)
- Notice and identify shapes in the environment 46-54)
- Begin to learn the names of the **days of the week, weekend, today, yesterday**, as part of Daily Dashboard (55-62)
- Understand and use some words to describe position - **in, on, under, next to, behind** (46-54)
- Understand and use some words to describe and compare sizes such as **big, little, tall, short, long, thin, thick, empty, full, wide, narrow** (55-62)
- Understand and use some words to talk about shapes -, **pointed, curved, straight, circle, square, triangle, rectangle** (46-54)
- Understand and use some words to describe time - **snack time, day, night, home time, minutes, o'clock** (55-62)

Spring

Writing numbers from memory up to 10.

Daily Dashboard: Add o'clock times to morning and Lunch time and hometime

Recognise and Form Numerals to 10 from memory.

Continue to: Count an irregular arrangement of up to ten, then 20 objects (Cardinality) Finds the total number of items in two groups by counting all of them. (Cardinality) Says the number that is one more than a given number, up to 20 (Comparison)

Uses the language of 'more' and 'fewer' to compare two sets of objects.

Comparison: Comparing numbers and reasoning.

explaining unfair sharing - 'This one has more because it has 5 and that one only has 3'

comparing numbers that are far apart, near to, and next to each other

In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. Composition

Children need opportunities to see small numbers within a larger collection. 'Number talks' allow children to discuss what they see. For instance, with giant ladybirds: 'There are 5 spots altogether. I can see 4 and 1, I can see 3 and 2, and I can see 1 and 1 and 1 and 1.' Encourage exploration of all the ways that 'five' can be and look. Discuss how many different parts they can find to make the whole. Encourage making arrangements to 10.

Children need opportunities to partition a number of things into two groups, and to recognise that those groups can be recombined to make the same total. Encourage children to say the whole number that the 'parts' make altogether. exploring songs; for example, 'Five Currant Buns' - show that the whole is still five, but some are in the shop and some have been taken away; check throughout that there are still five currant buns

Children need opportunities to explore a range of ways to partition a whole number. The emphasis here is on identifying the pairs of numbers that make a total. Children can do this in two ways - physically separating a group, or constructing a group from two kinds of things. Eg: Numicon towers: layering up Numicon pieces of the same total • putting things into two containers in different ways • making a number with two different kinds of things. For example, make a fruit skewer with five pieces of fruit, using bowls of bananas/strawberries to choose from; then ask the children to describe how they have made theirs. They should compare it with a partner's: 'What is the same about your skewers? What is different?'

Estimates how many objects they can see and checks by counting

Summer

Children will be taught and supported in their own play and in group work to:

Number

Explore counting objects in different ways- in a line, in a group, by moving, without touching

- Compare two groups and say when they have the same e.g dice, dominoes
- Compare two groups and say which has more
- Count out up to 6 objects from a larger set (55-62)
- Begin to count beyond 10 (55-62)
- Count actions (55-62)
- Recognise numerals 1-5, begin to recognise 6-10 (55-62)
- Begin to match numerals to amounts 1-6 (55-62)
- Begin to subitise with amounts above 4 (55-62)
- Begin to record amounts with simple marks (46-54)
- Begin to count to 10 objects (55-62)
- Show amounts with fingers up to 5 (55-62)

Shape, space and measures

- Name and find a **triangle, circle, rectangle, square** (46-54)
- Sort objects by size - **long/short, tall/short, heavy/light**, (55-62)
- begin to use money in play - **pennies, how much, cost** (55-62)
- Begin to learn the names of the **days of the week, weekend, today, tomorrow, yesterday** as part of Daily Dashboard (55-62)
- Understand and use with increasing accuracy positional language - **in, on, under, next to, behind, in front of, between** (46-54)
- Use and understand words to describe and compare sizes such as **big, little, tall, short, long, thin, thick, empty, full, wide, narrow** (55-62)
- Begin to name 3D shapes-**cube, cuboid, cylinder, cone**
- Understand and use words to talk about shapes - **curved, flat, straight, edge, pointy corner** (46-54)
- Understand and use words to describe time - **snack time, day, night, home time, minutes, o'clock** (55-62)

Summer

In readiness for Year One some children will begin to work independently of the adult

Recognise numerals 1 -20

Order numbers to 20

Say which number is one more or one less than a given number to 20

Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.

Bonds to 10

Children need opportunities to say how many are hidden in a known number of things. For example: 'Five toys go into a tent, then two come out. How many are left in the tent?' The child should respond that there are still three toys in the tent.

They solve problems, including doubling, halving and sharing

SSM

Positional language

position: 'in', 'on', 'under'

direction: 'up', 'down', 'across'.

Stories - bear hunt, Rosie's walk, snail trail

Children also need opportunities to use terms which are relative to the viewpoint:

'in front of', 'behind', 'forwards', 'backward's ('left' and 'right' to be used later on as ideas develop).

Drawing maps - simple landmarks - outdoor area/construction/ sand

Exceeding:

Children estimate a number of objects and check quantities by counting up to 20.

They solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups

Children need opportunities to explore the different ways that numbers can be partitioned, i.e. into more than two groups.

Situations to promote this include increasing the number of pots to put a given amount into, e.g. planting ten seeds into three or more pots.

role play, e.g. in a toy shop, ten toys need arranging onto the three shelves. How will you organise them?

- having more than two places to sort things into in any given context, e.g. arranging characters in small-world play in different locations

