



Early Maths

WITH NATASHA CRABBE

Introduction

What is this workshop going to cover?

- ❖ **Maths in the EYFS**
- ❖ **Concrete/ Pictorial / Abstract**
- ❖ **Maths lesson demonstration**
- ❖ **How to support your child at home**

All about you and maths!

- ❖ **What do you think about maths?**
- ❖ **What is your experience or view of maths?**
- ❖ **How does maths make you feel?**
- ❖ **Do you consider yourself a confident mathematician? If not why?**
- ❖ **Do you think the way you were taught maths affects how you feel about it?**



Mathematics Curriculum Map: Reception

Mastery

Autumn	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	
	Early mathematical experiences				Pattern and early number		Numbers within 6		Addition and subtraction within 6		Measures	Shape and sorting
	<ul style="list-style-type: none">•Classifying objects based on one attribute•Matching equal and unequal sets•Comparing objects and sets•Ordering objects and sets				<ul style="list-style-type: none">•Recognise, describe, copy and extend colour and size patterns•Count and represent the numbers 1 to 3•Estimate and check by counting		<ul style="list-style-type: none">•Count up to six objects.•One more or one fewer•Order numbers 1 – 6•Conservation of numbers within six		<ul style="list-style-type: none">•Explore zero•Explore addition and subtraction		<ul style="list-style-type: none">•Estimate, order compare, discuss and explore capacity, weight and lengths	<ul style="list-style-type: none">•Describe, and sort 3-D shapes•Describe position accurately

Spring	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 8	Week 9
	Numbers within 10		Calendar and time	Addition and subtraction within 10	Grouping and sharing		Number patterns within 15		Doubling and halving	Shape and pattern
	<ul style="list-style-type: none">•Count up to ten objects•Represent, order and explore numbers to ten•One more or fewer, one greater or less		<ul style="list-style-type: none">•Days of the week, seasons•Sequence daily events	<ul style="list-style-type: none">•Explore addition as counting on and subtraction as taking away	<ul style="list-style-type: none">•Counting and sharing in equal groups•Grouping into fives and tens•Relationship between grouping and sharing		<ul style="list-style-type: none">•Count up to 15 objects and recognise different representations•Order and explore number patterns to 15•One more or fewer		<ul style="list-style-type: none">•Doubling and halving•Relationship between doubling and halving	<ul style="list-style-type: none">•Describe and sort 2-D and 3-D shapes•Recognise, complete and create patterns

Summer	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
	Securing addition and subtraction facts		Number patterns within 20		Number patterns beyond 20		Money	Measures		Exploration of patterns within number
	<ul style="list-style-type: none">•Commutativity•Explore addition and subtraction•Compare two amounts		<ul style="list-style-type: none">•Count up to 10 and beyond with objects•Represent, compare and explore numbers to 20•One more or fewer		<ul style="list-style-type: none">•One more one less•Estimate and count•Grouping and sharing		<ul style="list-style-type: none">•Coin recognition and values•Combinations to total 20p•Change from 10p	<ul style="list-style-type: none">•Describe capacities•Compare volumes•Compare weights•Estimate, compare and order lengths		<ul style="list-style-type: none">•Explore numbers and strategies•Recognise and extend patterns•Apply number, shape and measures knowledge•Count forwards and backwards



The Dimensions of Depth - Conceptual Understanding, Language and Communication and Mathematical Thinking - underpin all aspects of the curriculum; problem solving is at the heart and is embedded in all units.

Maths – Early Learning Goals (end of reception)

Mathematics

Number ELG

Have a deep understanding of number to 10, including the composition of each number;

Subitise (recognise quantities without counting) up to 5;

Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG

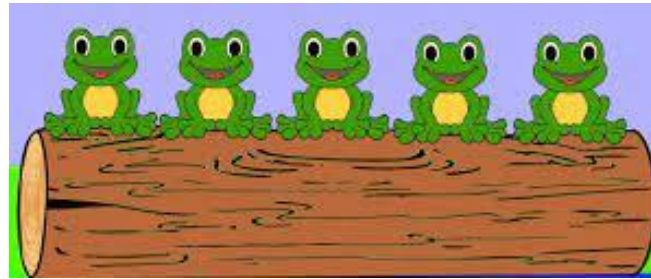
Verbally count beyond 20, recognising the pattern of the counting system;

Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;

Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Maths -Early mathematical experiences of number -nursery rhymes

Can you guess the nursery rhyme that matches the picture below?



Maths

For children to have a true understanding of a mathematical concepts, there are three phases they need to master.

Concrete



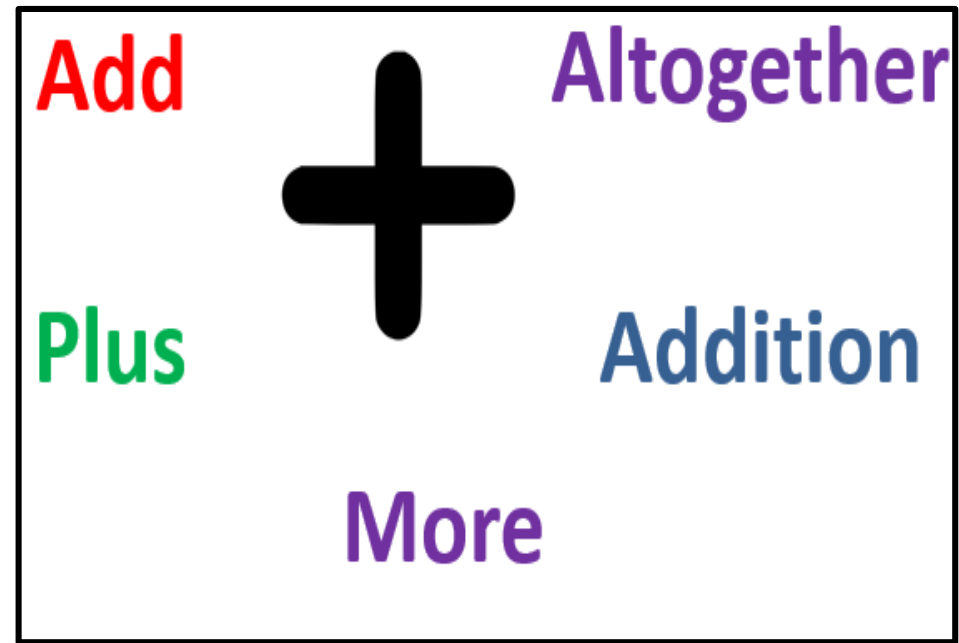
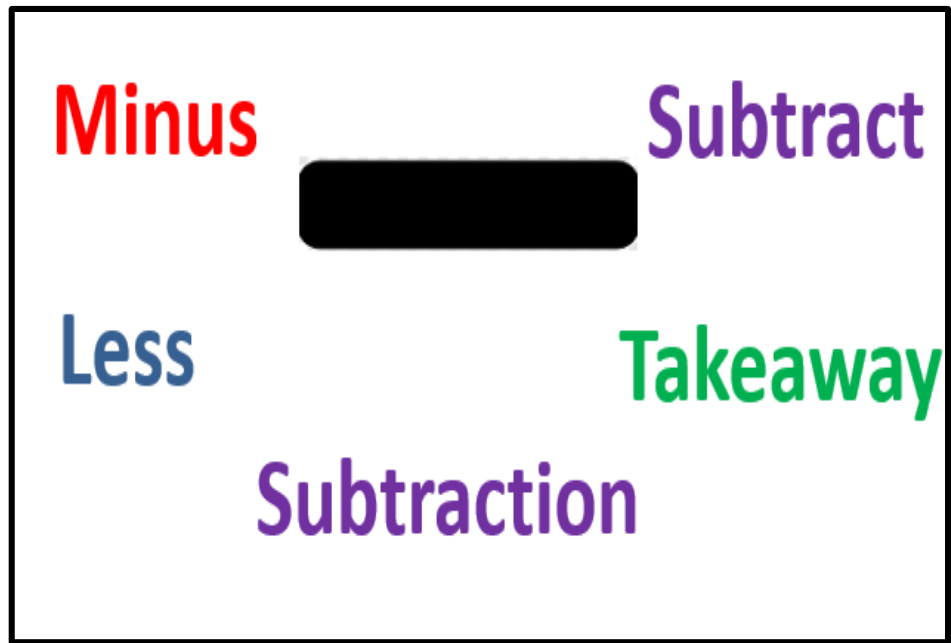
Pictorial



Abstract

3

Use mathematical language and encourage full sentence responses.



One more/less than _____ is _____

Maths Lesson demonstration

- ❖ Counting accurately forwards and backwards – one more and 1 less
- ❖ Number bonds
- ❖ Sorting objects into groups
- ❖ Creating patterns
- ❖ Matching quantities to numerals
- ❖ Sharing
- ❖ Doubling and halving
- ❖ Part part whole model
- ❖ Addition and subtraction
- ❖ Measure – size, capacity, weight, height, length
- ❖ 2D and 3D shapes
- ❖ Money
- ❖ Time
- ❖ Positional language

What is on top of the house?

What can you see at the bottom of the drain?

What is behind the playing children?

Are the fish swimming over or under the bridge?

Does the bridge go over or under the stream?

Is the window above or below the roof?

What is in the plant pot?

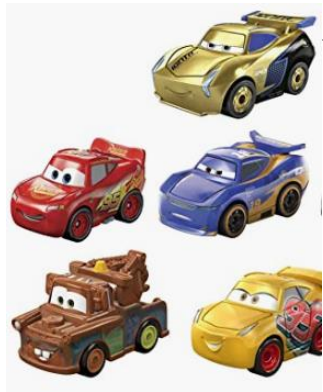
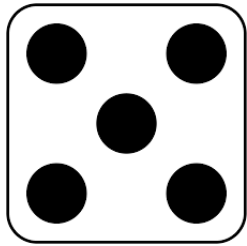
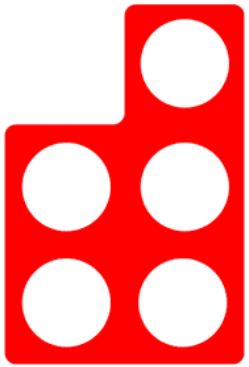
How many people are on the bridge?



The story of 5.

How many 5's can you see? How many ways can you make 5?

0 1 2 3 4 5



Mathematical opportunities are all around us!



What can you do to support your child at home ?

Counting:

- ❖ Practise counting in ones, forwards and backwards to twenty. Sing counting songs and rhymes.
- ❖ Ask children to help set the table or sort the washing- can they match the pairs of socks, count in 2s, tell you if there is an odd/ even number?
- ❖ • Look for things to count when you're out- how many cars/ birds/ dogs can you count? I spy games are great for this.
- ❖ How many odd or even numbers can you see? How do you know?
- ❖ • Go on a treasure hunt: Can you find 5 flowers/ 7 twigs/ 10 leaves

Games:

- ❖ • Play board and dice games, snap, pairs, dominoes, hopscotch, skittles. Jigsaw puzzles are great for spatial awareness and fine motor skills.

What can you do to support your child at home ?

- ❖ Point out patterns in everyday situations e.g. tablecloth, wallpaper, books. Create your own with objects, paint, stickers or Lego.
- ❖ Demonstrate the language for shape, position and measures e.g. sphere, inside, under, shortest, heavy.
- ❖ Use mathematical names for shapes and encourage children to talk about the shapes that they see.
- ❖ Encourage your child to use the correct terms early on- tall, short, narrow, wide, thick, thin etc...

Time:

- ❖ Look at clocks, point out the time throughout the day, think about calendars and dates. Days of the week and months of the year.

What can you do to support your child at home ?

Money:

- ❖ Begin to recognise and sort coins, practise counting it in the shops or as part of role-play with real coins at home.

Sharing books:

- ❖ Talk about the number, position and shape of things in the pictures.

Cooking:

- ❖ Encourage children to help in the kitchen by weighing, comparing ingredients using heavier and lighter, measuring liquids.

Sharing:

- ❖ Help children to understand that one thing can be shared into a number of pieces e.g. pizza, cake. They are usually quick to tell you if it is the same size, smaller or bigger!

Questions



Useful links

<https://teachers.thenational.academy/key-stages/early-years-foundation-stage>

<https://www.arkcurriculumplus.org.uk/cms/assets/files/mathematics-mastery-pri-curriculum-maps-r-y6.pdf>

<https://nrich.maths.org/9412>

<https://www.ncetm.org.uk/in-the-classroom/>

<https://www.topmarks.co.uk/maths-games/5-7-years/counting>

<https://www.bbc.co.uk/cbeebies/topics/numeracy>

<http://www.ictgames.com/resources.html>

<https://www.unicef.org/parenting/child-development/how-introduce-maths-your-toddler>