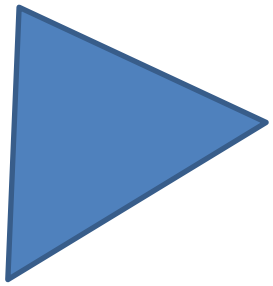
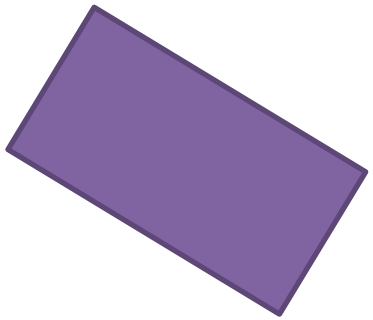


Mathematics in Reception

What and how we teach your child.

The Early Learning Goals

At the end of the Reception year, children are assessed against a set of statements. These are called the Early Learning Goals. Below are the ELGs for Mathematics.

Numbers

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Shape, space and measure

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Throughout the year we take stepping stones towards these goals.

Play is the highest form of research

Albert Einstein

How we teach Mathematics.

Maths is taught in a purposeful, practical way and children will use play and exploration to acquire mathematical skills. A large majority of mathematical work is practical and learning will happen in many different contexts around the classroom and outside.

Children will learn maths during adult-led carpet sessions, adult-guided activities and in independent play.

We use a variety of resources to teach Mathematics in Reception. The next slides show some of the resources we have available and how they may be used throughout the year to build up key mathematical concepts.

Counting Objects.

There are a wide range of counting objects available, such as counters, animals and natural materials which the children use in various ways such as...

Counting how many objects they have

Adding two sets of objects together

Taking away objects

Finding one more and one less.

Number Tracks.

Number tracks are a very useful tool.

They can be used to...

-Point to the correct numeral to match the correct number of objects.

-Add two numbers together by counting on from the biggest number.

-Take-away two numbers by counting backwards.

-Find the number one more/one less.

-Order numbers.

Numicon.

Numicon is a great tool to help children learn a variety of maths concepts.

Each numeral has a corresponding Numicon shape. Numicon allows children to explore a number of different concepts.

The next few slides shows different ways that we might use Numicon throughout the year.

Objective

Recognising Numerals.

(40-60 months to ELG's)

Print your numicon shape in playdough, can you find the right shape?

Challenge: Can you make a number bigger than 10?

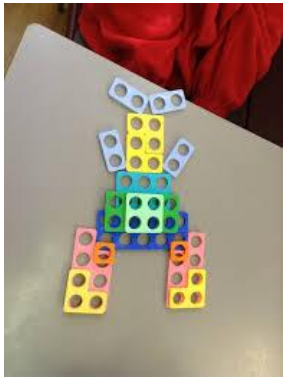
Objective

Recognising Numerals.

(40-60 months)

Act 1: Make your numicon picture on the baseboard - Put the numbers with it.

Challenge: Can you make your own picture? What did you use?



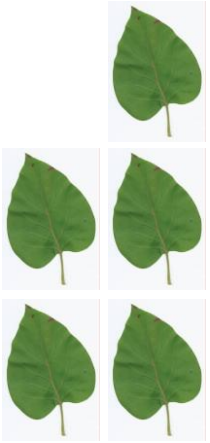
Objective

Counting.

(40-60 months—ELGs)

Act 1: Roll the dice. Can you make the numicon shape using natural resources?

Challenge: Can you make a number bigger than 10?



Objective

Ordering numbers.

(ELGs)

Can you order the numicon shapes?

Challenge: Can you make the numbers 11—20 and put them in order?

Objective

Adding.

(40-60 months—ELGs)

Roll the dice twice and find the numicon shapes and objects. How many do you have altogether?

Challenge: Put the biggest number in your head, and count on the smaller number.

Objective

Problem Solving

(ELGs & Exceeding)

How many ways can you make the number 5? Can you build a tower to find out?

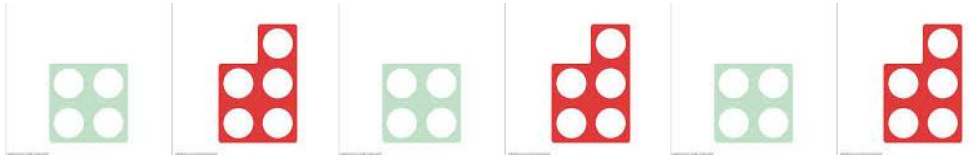
Challenge: Can you draw a picture or write a number sentence to show what you have done?

Objective

Patterns

(40-60m. ELGs & Exceeding)

Can you make a repeating pattern with your numicon shapes?



Challenge: Can you make a pattern that goes up in 2's?

Other Resources

As children learn best through exploration and play, number can be taught in any context, using any resource. It might be in imaginative play, counting out the plates, or working out how many strawberries we need if everyone needs two each.

Outdoors, children could spot door numbers, make numbers using natural materials, or add up all of their finds.

The important thing to remember is that at this stage, maths is learnt by doing. Children need a wide range of concrete, practical experiences involving number to build their skills upon.

The possibilities for learning are endless!

Shape, Space and Measures

As in number, children learn about shape, space and measures primarily through play and investigation.

Planned opportunities are set up throughout the year to encourage the children to explore mathematical concepts. These opportunities are provided through provision, the activities we put out, and through adult-led and adult-guided whole class and group activities.

Examples of activities in which children investigate SSM.

-Construction activities. Which tower is taller/shorter? Which shapes have been used, which shapes can you see? Which brick is heavier?

-Roleplay. What time does the cafe open? How much does it cost to go to the vet? Who has the biggest plate of food?

-Sand/Water area. How many cups of sand does this container hold? Can I make a container half-full of water?

Examples of activities in which children investigate SSM.

-Creative. Which shapes have I used to make my junk modelling? What shapes do I need to draw a person? Can I make a repeating pattern in my picture?

-Outdoors. How long is the longest twig I can find? How many footsteps wide is that puddle? How many circles can I find in the environment?

-Small World. Where is the pirate? Behind the palm tree? In front of the palm tree? Can you build a lion's cave using cubes? Which animal is tallest/shortest/fattest/thinnest?