EYFS

Maths Parent Workshop

Monday 3rd February 2025

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Hazelwood Maths Subject Leaders

Maths Vision at Hazelwood

AT HAZELWOOD SCHOOLS, WE BELIEVE THAT MATHS IS AN ESSENTIAL PART OF EVERYDAY LIFE. LEARNING IS, THEREFORE, FOCUSED ON CHILDREN SECURING A STRONG CONCEPTUAL UNDERSTANDING OF MATHS AND DEVELOPING THE SKILLS AND SELF-CONFIDENCE REQUIRED TO APPLY THEIR MATHEMATICAL KNOWLEDGE TO CREATIVELY SOLVE PROBLEMS.

Early Maths Problems…

Pay close attention to Hazel counting this pile of pennies.

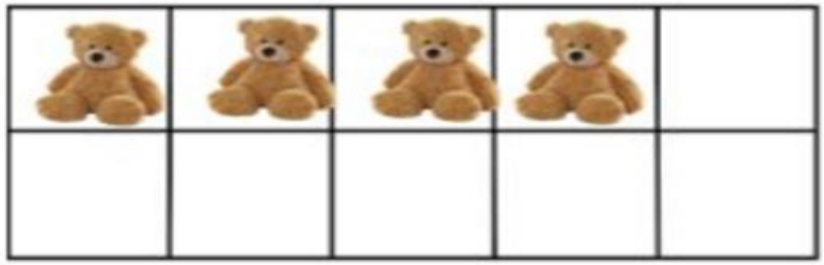
Can you note down what you see Hazel actually doing?

5 Counting Principles

1. **One-to-One Correspondence Principle**

Understanding that each object being counted must be given one count and only one count.

It is useful in the early stages for children to actually tag or move each item as it is counted.



5 Counting Principles

2. Stable Order Principle

Understanding that the counting sequence stays consistent. It is always 1, 2, 3, 4, 5, 6, 7, 8 etc., not 1, 2, 4, 5, 8.

5 Counting Principles

3. Cardinality Principle

Understanding that the last count of a group of objects represents how many are in the group.

5 Counting Principles

4. Abstract Principle

Understanding that it doesn't matter what you count, how we count stays the same.

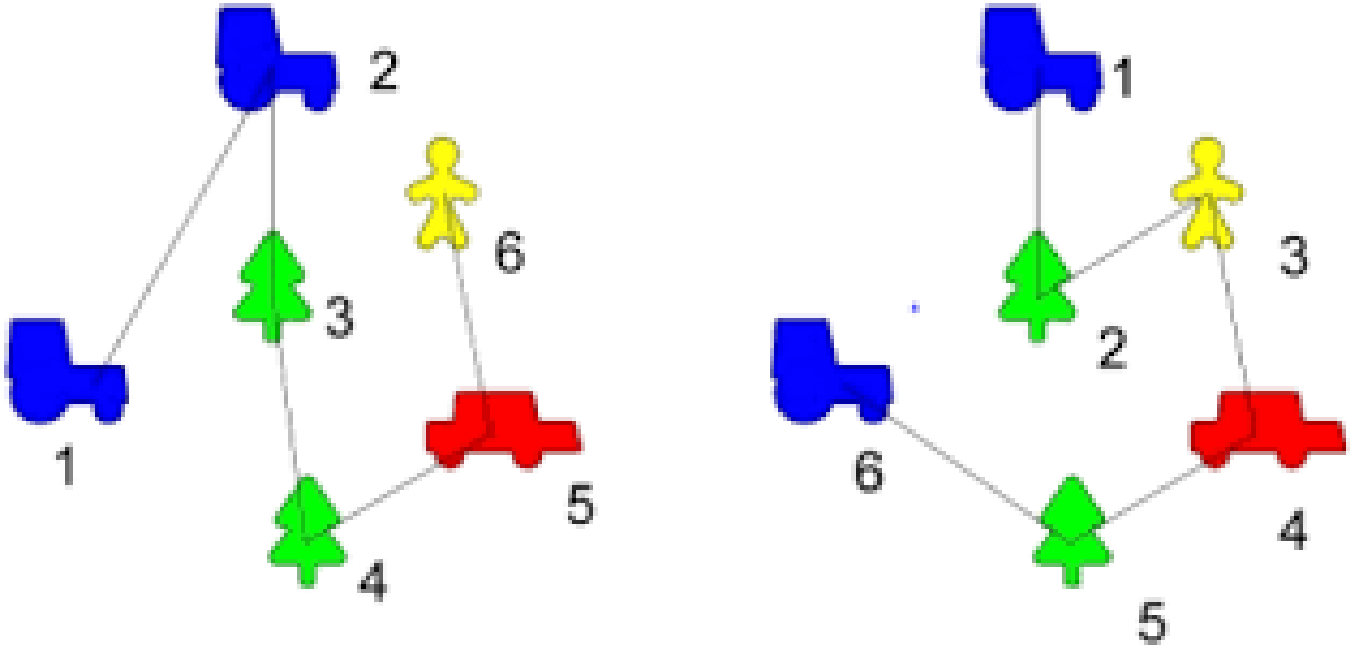
For example, any set of objects can be counted as a set, regardless of whether they are the same colour, shape, size, etc.

This can also include non-physical things such as sounds, imaginary objects, etc.

5 Counting Principles

5. Order Irrelevance

Knowledge that the order of items are counted in is irrelevant as long as every object in the set is given one count and only one count.



Early Learning Goals

By the end of Reception, the children will be assessed on the following goals:

Number

Children at the expected level of development will:

- 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

Children at the expected level of development will:

- 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.

What Maths Looks Like in EYFS

Maths is everywhere!

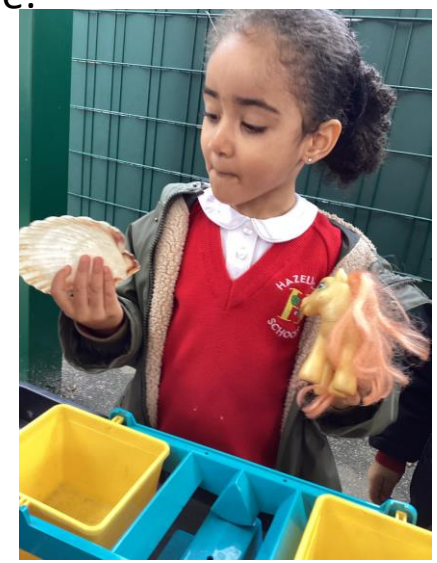
In Nursery, children practise and develop their skills through daily routines such as counting their fruit at snack time and changing the calendar alongside weekly adult led focuses.

Reception have a daily adult led carpet session. During these sessions, the children will complete activities which will lead to an adult led focus and optional Home Learning linked to that topic.

Our provision is changed daily to promote awe and wonder and enable to children to explore and learn through a variety of play and resources. You will find the children developing their maths skills independently within the provision. For example:

Role play

- Using 'real' items as part of play e.g. balance scales, clocks, egg timers.
- Recognising numerals in context e.g. on a telephone or a calendar.
- Use money in play.



What Maths Looks Like in EYFS

Play Dough

- Using language associated with shape as they manipulate dough.
- Talking about numbers and using in context e.g. adding candles to a birthday cake.
- Comparing shapes and sizes and making patterns.
- Comparing length and weight e.g. making a longer snake than the rolling pin.

Small World

- Using maths story books alongside supporting resources e.g. the very hungry caterpillar.
- Using a range of creature sets and sorting by species, size, markings/patterns, numbers in a set etc.
- Using numbers and numerals in context e.g. numbering vehicles and parking areas, creating tracks and road signs, making maps of zoo and numbering pens etc.

What Maths Looks Like in EYFS

Creative Area

- Making patterns by weaving, printing etc.
- Making their own 3D structures and showing understanding of shape e.g. using straws to create a pyramid shape.
- Using standard and non standard measures e.g. rulers, tape measures, pieces of string etc to measure the size of paper they need.

Water

- Sorting, counting and comparing objects e.g. finding items that float or sink.
- Exploring capacity e.g. counting how many pebbles were added to a small bucket of water before it spills out.
- Pouring water into a funnel to fill various containers.

The Role of the Adult

What is the role of the adults in the provision?

- Observing children and modelling mathematical language by commenting on and questioning children about how they select and arrange objects.
- Encourage children to describe their choices and explain their reasoning.
- Using prompts and questions to support children in making direct comparisons.
- Exploring different ways of partitioning by encouraging children to try alternative ways of organising small objects or models.
- Drawing children's attention to instances when you record pictures, tallies or numbers to keep track of a count.
- Encouraging children to describe patterns or numbers they have created.
- Using prompts and questions that encourage children to organise, count and compare objects and containers.
- Modelling the language of addition and subtraction and encouraging children to find totals.

Nursery Curriculum

Autumn Term

Counting

- count to 5 by rote using actions and songs

Cardinality

- Sense of one and two items.
- Noticing Number (Birthday number, house number)
- Count on fingers

Pattern

- Daily routines
- Noticing patterns and arranging things in patterns
- Colour sorting

Shape

- Selecting appropriate shapes for building and stacking
- Matching shapes

Spatial Awareness

- Insert puzzles

Spring Term

Counting

- 1:1: counting up to 3 objects
- Saying numbers in correct order when counting object. (Stable order)

Cardinality (How many?)

- Matching some numbers to qualities
- Talk about number in environment (at school and home)
- Representing number to 5 on fingers

Comparison

- Recognising when quantity is the same
- Identifying which group has more, same, less

Pattern

- Simple sequence of events. (first next)
- Simple repeating patterns

Measures

- Comparisons between objects relating to length, size, weight, capacity

Shape

- Talk about and explore 2D and3D shapes
- Spatial Awareness
- Positional language (linked to PE)
- Name some 2D shapes

Nursery Curriculum

Summer Term

Counting

- Count to 10 by rote using actions and songs
- 1:1: counting up to 5 objects
- count actions as well as objects up to 5

Cardinality (How many?)

- Subitise up to 3
- Match number 1-5 to quantities
- Knowing last number signify how many in a group

Comparison

- Using vocabulary more, less, fewer, the same

Pattern

- Correcting errors in simple patterns
- Recognising more complex patterns (AAB)

Measures

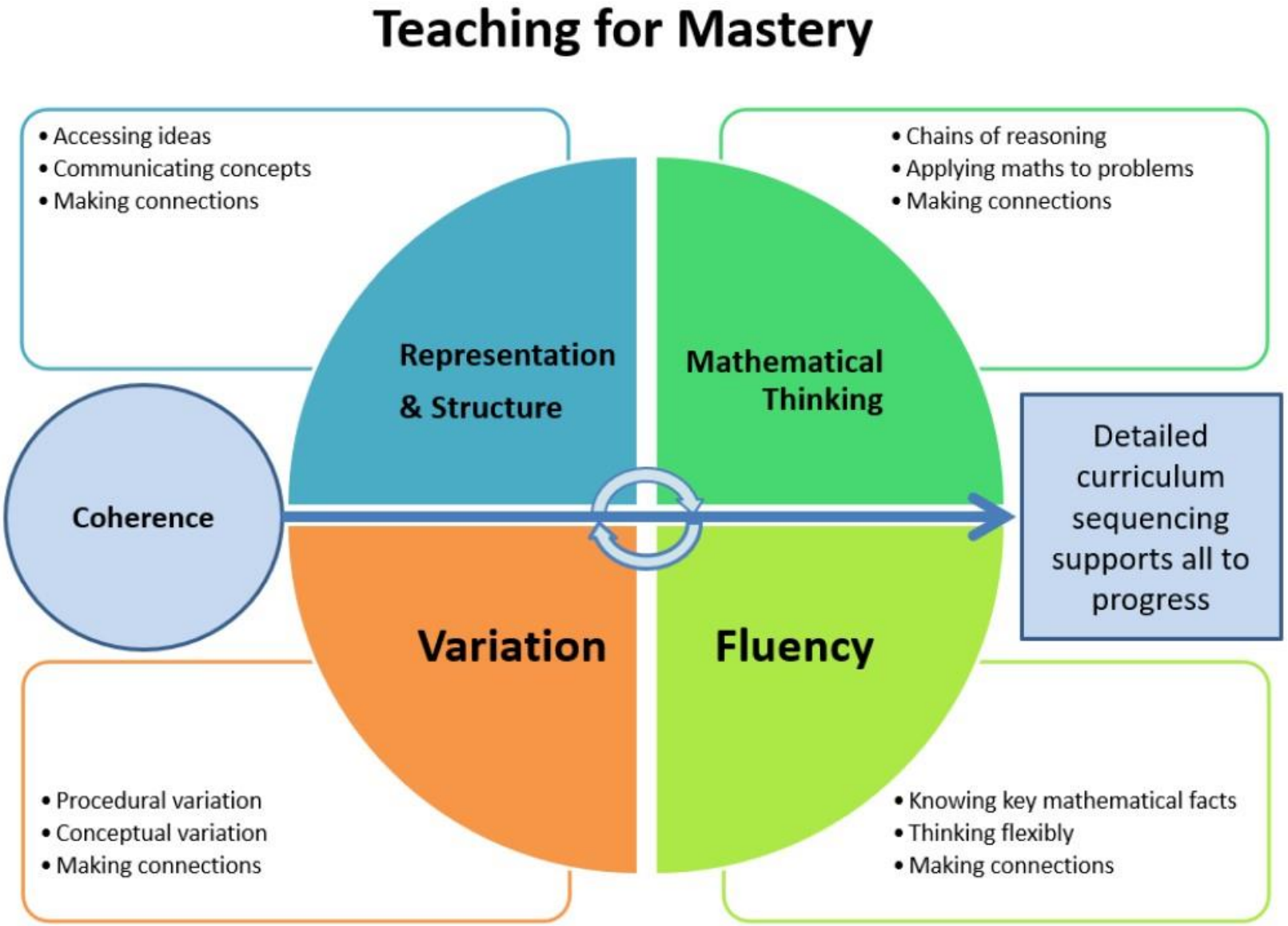
- Comparisons between objects rating to length, size, weight, capacity

Shape

- Using shapes appropriately in pictures
- Differences between shapes
- Name some 2D shapes

Reception Curriculum

Mastery for all



Metacognition

Examples of questions to promote metacognitive thinking include:

- How did you find out?
- Why do you think that?
- How do you know this?
- Can you show me?
- How do you prove this?
- Is there another way to solve this problem?

Metacognition is an important factor of mathematical problem solving. Metacognition is **the ability to monitor and control our own thoughts, how we approach the problem, how we choose the strategies to find a solution, or ask ourselves about the problem.**

Maths at Hazelwood

Concrete - Use of manipulatives to understand the concept.

Pictorial - A visual representation which cements understanding from the concrete phase.

Abstract - Written understanding of concepts.

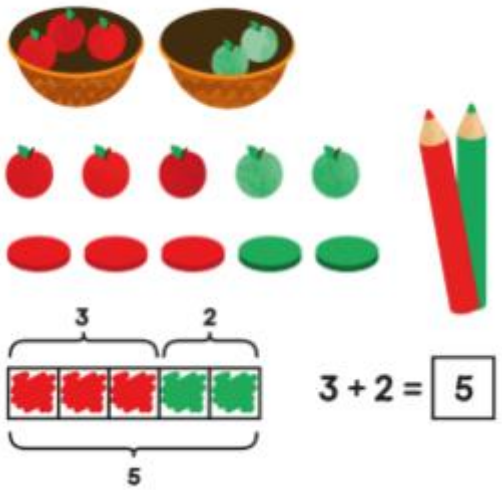
Concrete Learning

- Concrete is the “doing” stage. During this stage, students use concrete objects to model problems.

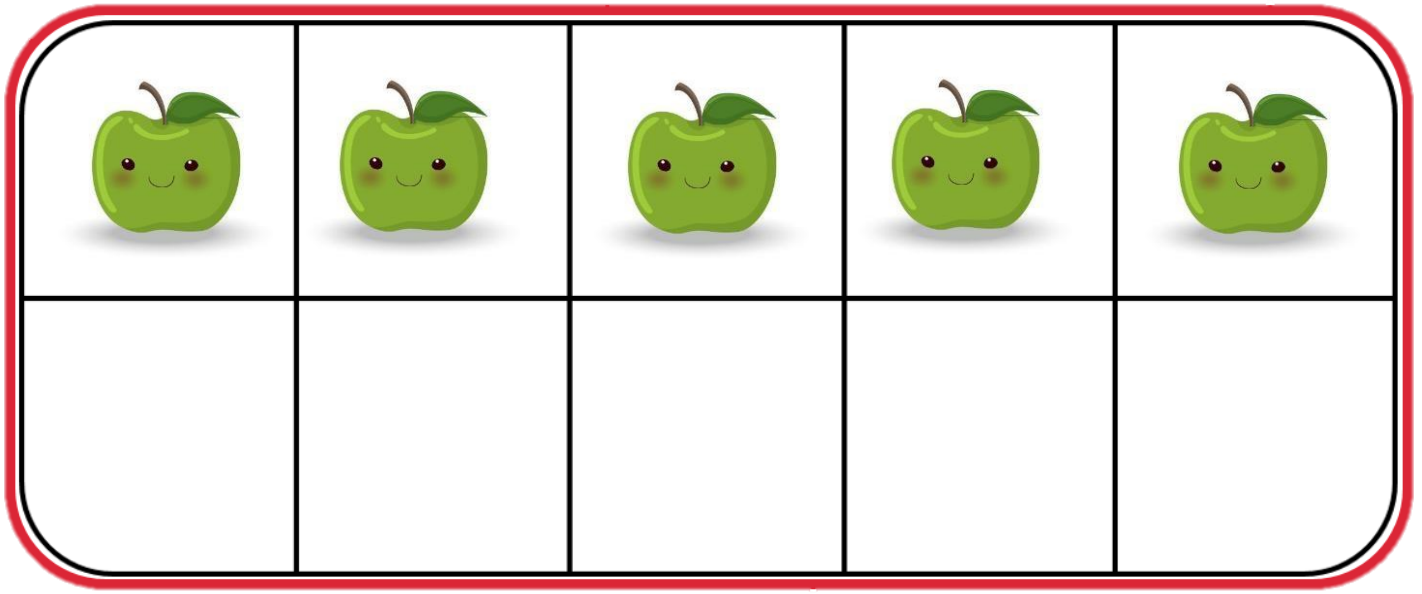
- With the CPA framework, every abstract concept is first introduced using physical, interactive concrete materials.

Pictorial Learning

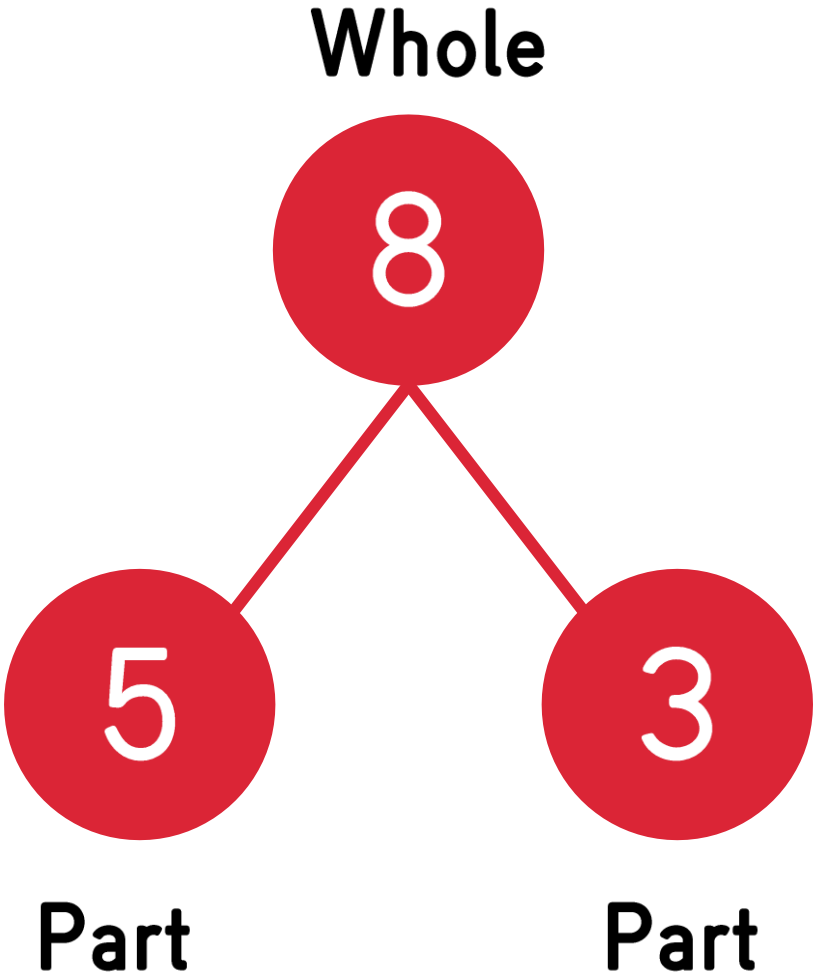
- The ‘seeing’ stage – images used to represent the objects.
- This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem.
- Building or drawing a model makes it easier for children to grasp difficult abstract concepts (for example, fractions). Simply put, it helps children visualise abstract problems and make them more accessible.



Five and Ten Frames



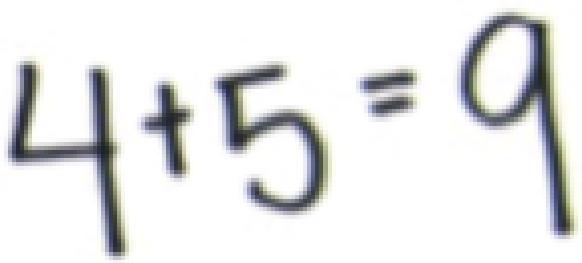
Part-Part-Whole



Abstract Learning

- The ‘abstract’ stage – symbols and numbers are used to model the problem or calculation.

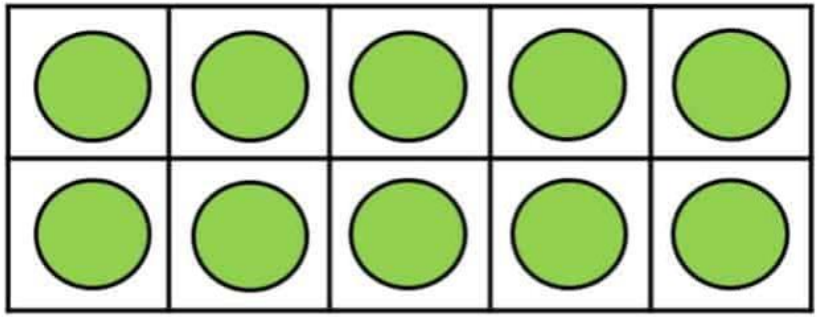
- The teacher uses operation symbols (+ and –) to indicate addition or subtraction.

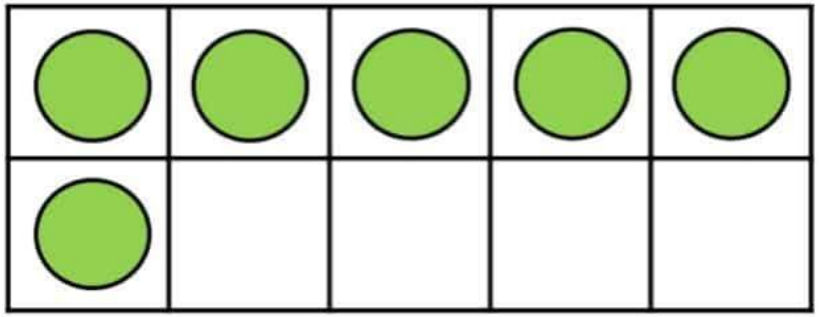


Concrete, Abstract and Pictorial

Although we've presented CPA as three distinct stages, it is important to go back and forth between each stage to reinforce concepts.

Parent Activities





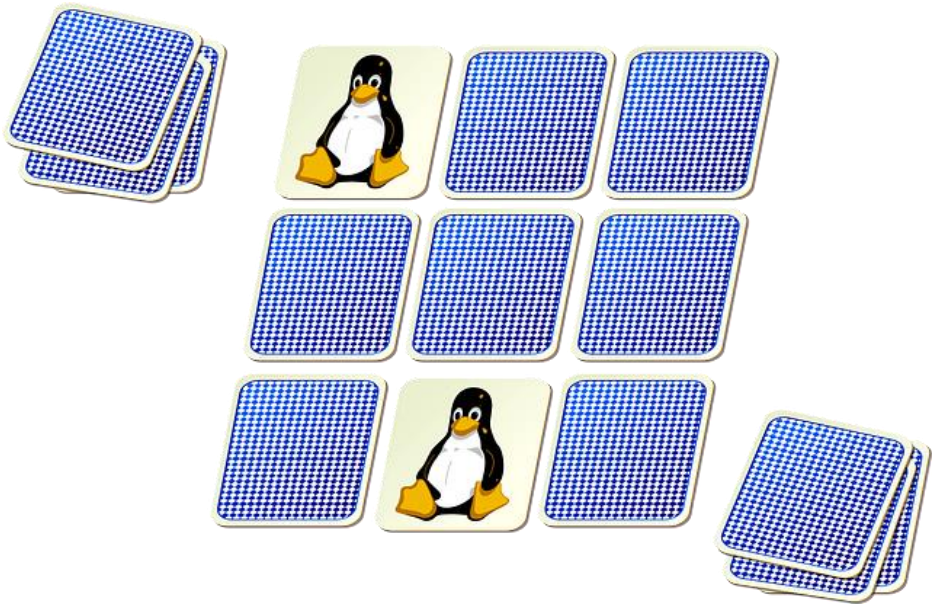
Counting On

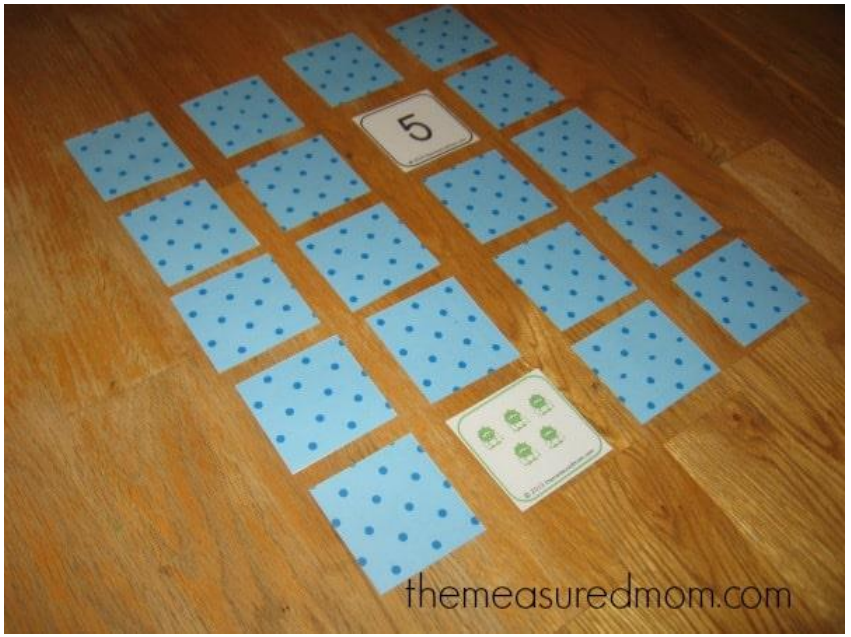
Using a dice and two tens frames, take it in turns to roll and place that many counters in your tens frame. The first to fill up their tens frame wins.

Parent Activities

Pairs

Place the cards face down. Each player takes it in turns to turn over two cards. If the cards match, that player keeps the cards. The player with the most cards at the end, wins.





Parent Activities

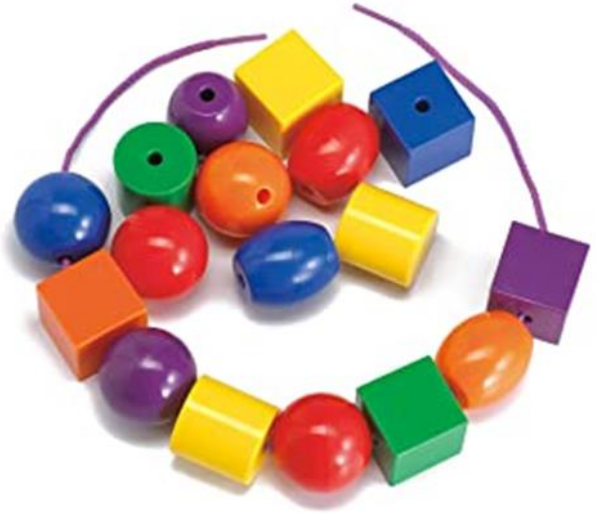
Making Repeating Patterns

Can you make a repeating pattern using the shapes or beads?

Which colours have you used?

Which shapes have you used?

What do you think will come next in my pattern?



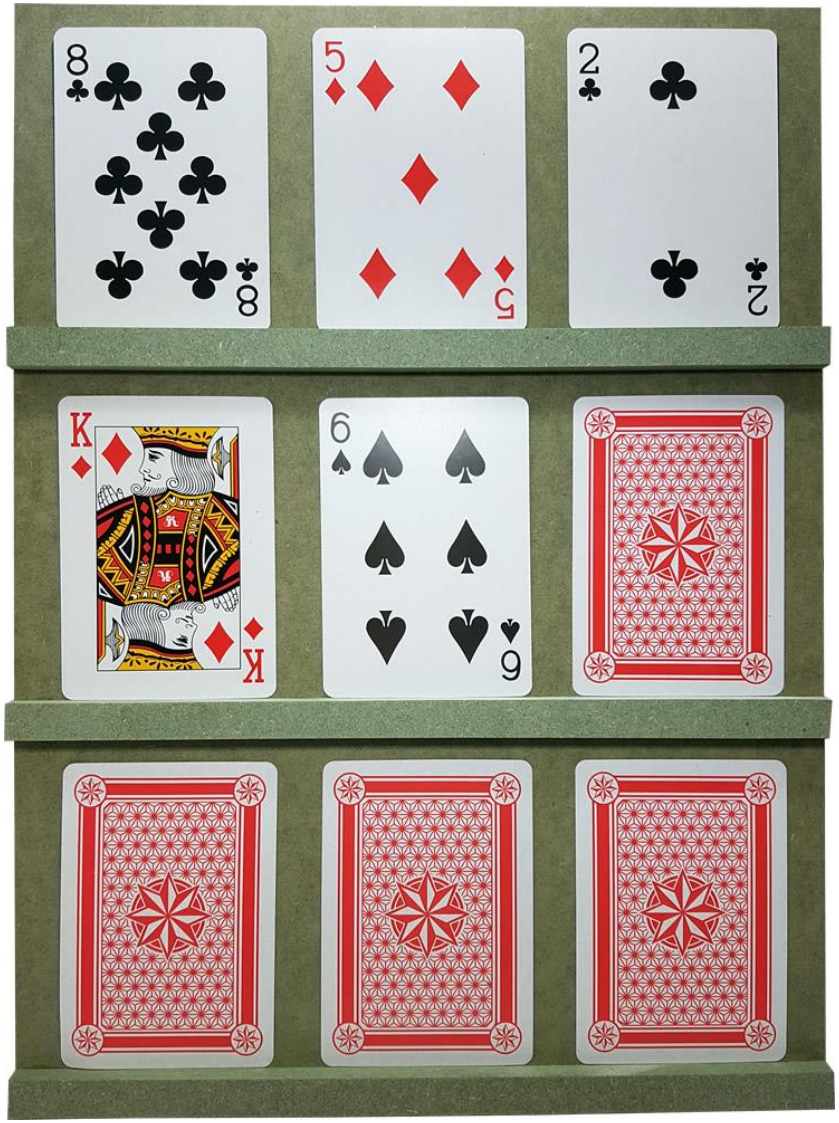
Parent Activities

Sorting

Sort these bears by colour, then sort them by size.

As an extra challenge, see how many bears each player can move from one bowl to another in 1 minute.

Parent Activities



Place one card down, the next player guesses if the next card will be higher or lower than the previous card.

Parent Activities

Teddy Bear Picnic

Give each toy a number of biscuits. Discuss with your child who has more or less.

Do they have the same?

How can you tell?

Parent Activities

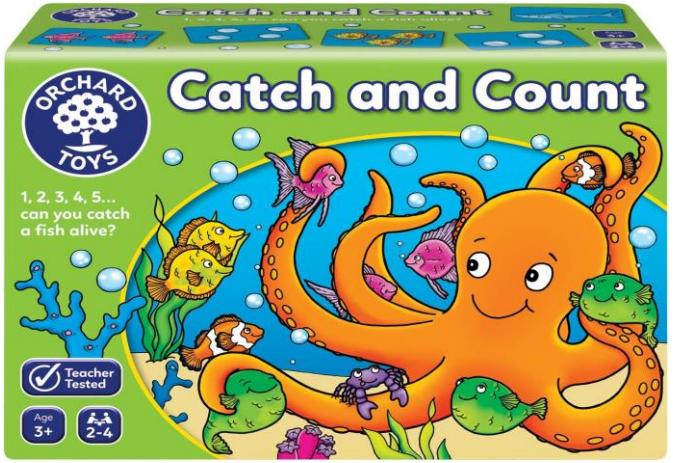
Board Games

Snakes and Ladders -

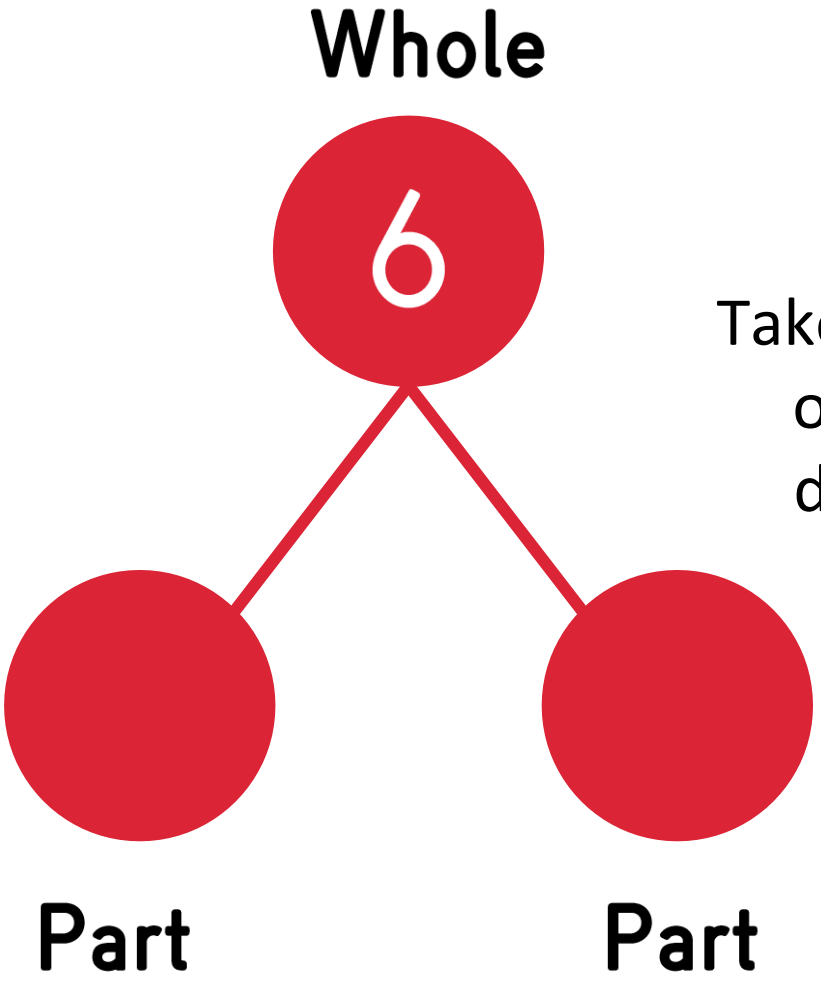
Players take it in turns to roll the dice and move their counters the matching number of places. The first player to reach the end wins.

Catch and Count -

Players take it in turns to spin the octopus spinner to see how many fish they can catch. The player at the end with the most fish wins.



Parent Activities



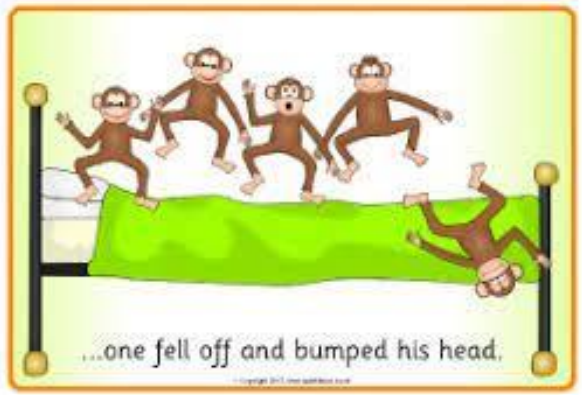
Part-Part-Whole

Take 6 coloured counters. Throw them on your table and create as many different number bond diagrams.

Parent Activities - Rhymes

As the children get a little older, introduce some rhymes that use numbers 1-3, or 1-5:

- Five Little Speckled Frogs
- Five Aliens in a Flying Saucer
- Five Little Monkeys Jumping on the Bed
- Five in a Bed (increase to 10 as children develop)



Additional Maths Activities

- Number and Shape Hunt
- Missing Numbers
- Spot the Difference
- Comparing - More/Less, Bigger/Smaller
- True or False
- Odd One Out
- Calendar and Days of the Week

How Can You Support at Home

Numberblocks

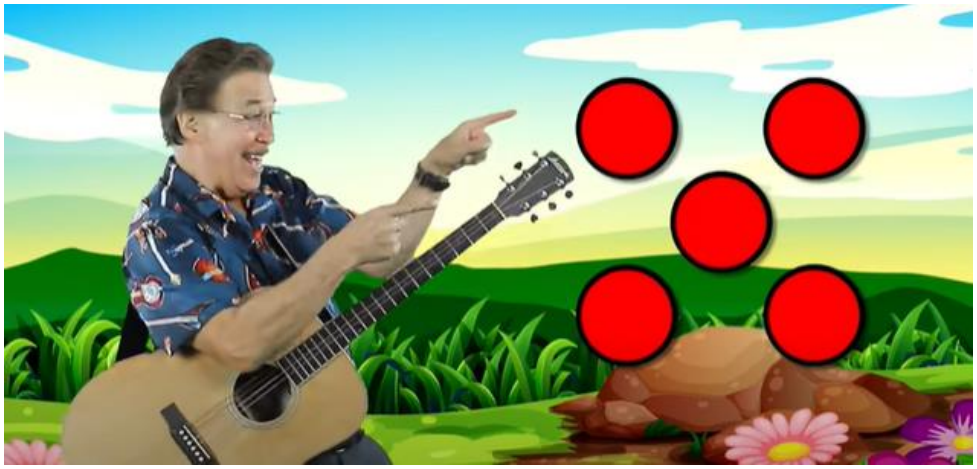
Numberblocks is a pre-school BBC television series aimed at introducing children to early number and can really help support early mathematical learning.

1-Minute White Rose App

1-Minute Maths is a free app aimed at EYFS and KS1 children to help build greater confidence with their number and fluency skills. The app aims to support children in recognising a small number of items without counting them (subitising) and the four calculations of addition, subtraction, multiplication and division.

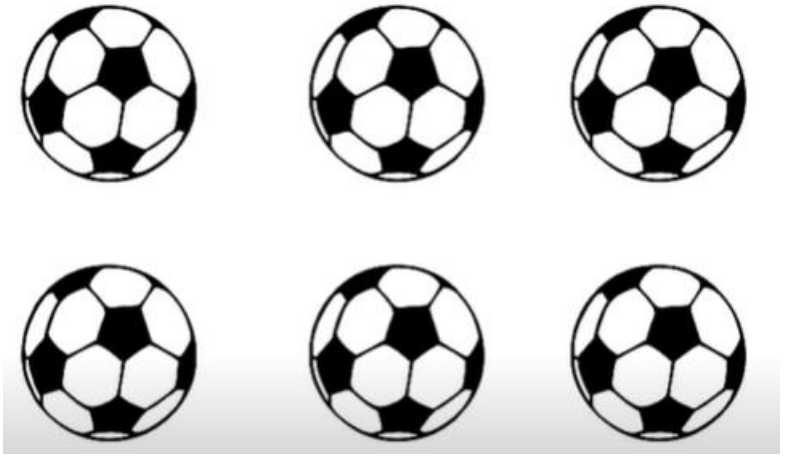
How Can You Support at Home

Subitising is when you are able to look at a group of objects and realise how many there are without counting.



Jack Hartmann videos and songs to support understanding on Youtube.

Activities and videos to support fluency when subitising



Thank you very much for listening!