

# ***Year 2***

# ***Maths Workshop***

Addition Skills

October 2025

# ***AIMS***

## ***MAIN POINTS COVERED***

- To introduce the resources used in Year 2 for teaching number and calculation.
- To introduce some of the concepts involved in addition and subtraction.
- To give ideas for supporting your child to develop their mathematical understanding.

# BACKGROUND

- The Mathematics curriculum has three main aims:
- For children to become **fluent**, to be able to **reason mathematically** and to **solve problems**.
- In order to do this, children need firm foundations in their understanding of number if they are to be able to apply their knowledge flexibly.
- They need to be secure using concrete resources before they move on to more representational or abstract methods.

# ***THE CPA APPROACH***

## ***CONCRETE, PICTORIAL AND ABSTRACT***

- The CPA method is used to move children through 3 learning stages as they work towards maths mastery: Concrete, Pictorial and Abstract (also known as scaffolding).
- It helps the children to master maths concepts easily and efficiently, while grasping the WHY and the HOW.

# The CPA Approach

## FOR TEACHING MATH

### Concrete

Use of physical objects or manipulatives

Hands on approach to help meet different learning styles

Known as the "doing" stage.

### Pictorial

Drawings or visual representations

No longer needs physical objects to problem solve but benefit from visuals.

Known as the "seeing" stage"

### Abstract

Involves solving problems using only numbers

Mathematical symbols are used to solve such as  $+$ ,  $-$ ,  $\times$ ,  $\div$

Known as the "symbolic" stage

# ***THE CONCRETE STAGE***

- In this stage, children use physical objects or manipulatives, such as cubes, numicon or base ten blocks, to represent mathematical concepts and problem-solve.
- This allows children to see and physically touch the concepts they are learning, making them more concrete and tangible.
- Concrete learning is so crucial for understanding mathematical concepts, especially more challenging ones like addition with regrouping.

# Concrete Learning

The use of physical objects and manipulatives are used to problem solve.

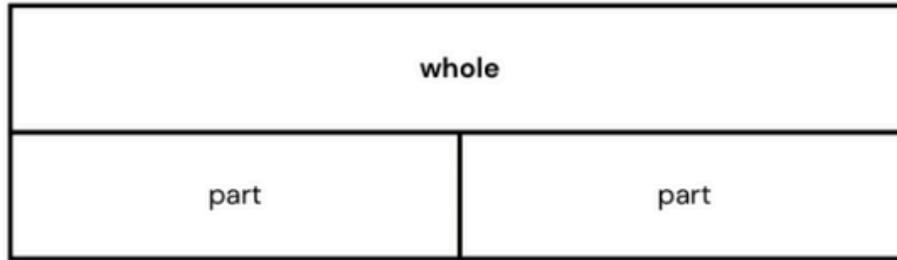
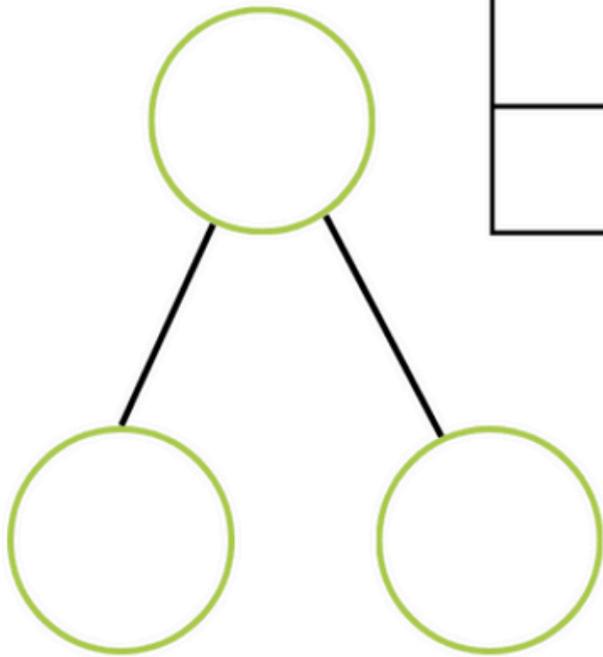


# ***THE PICTORIAL STAGE***

- The pictorial stage is where children use diagrams, pictures, and other visual aides to represent mathematical concepts and help solve problems.
- It allows students to see the concepts in a different way and make connections between the concrete manipulatives and the abstract mathematical symbols.
- Pictorial learning is important because the ability to draw pictures to represent problems with pencil and paper is a tool that children will always have access to, whereas they won't always have access to manipulatives and concrete objects.

# Pictorial Learning

The use of drawings and visual representations to solve mathematical problems.



# ***THE ABSTRACT STAGE***

- The abstract stage is where children work with mathematical symbols and equations, with no concrete object or picture.
- Abstract learning is more mental math.
- By this point, children have a strong foundation in the mathematical concepts and are able to understand and apply the abstract symbols and equations effectively.

# Abstract Learning

Involves solving math problems using numbers and mental math.

$$3 + 8 =$$

$$12 - 7 =$$

# TODAY'S ACTIVITIES

## THE EXCHANGE GAME

- Player 1 rolls the die and picks up that many dienes/counters - place them on the board under the 'ones' section.
- Player 2 rolls the die and has their go (placing theirs on their own board).
- Player 1 rolls again and play repeats.
- Once you have placed more than 10 dienes on your board - 'exchange' 10 of them for a ten rod/counter and place that in the tens column.
- Continue to take turns to roll and play until someone reaches the number 30 (or above).

## ADDITION WAR GAME

- Both players draw 2 cards. The first card is the tens digit and the second is the ones digit (e.g. 4 and a 7 make 47).
- Players put their two-digit number down on the table.
- Both players draw one more card to create a one digit number. (e.g. 6).
- Each player quickly adds their two numbers together (e.g.  $47 + 6 = 53$ )
- The player with the greater sum wins all four cards. The game continues until all cards are gone, and the player with the most cards wins the game.

## RACE TO 50/100 GAME

- Players start with a score of 20.
- Player 1 rolls the die and adds the rolled number to their running total (e.g.  $20 + 7 = 27$ )
- Player 2 rolls the die and adds the rolled number to their own running total.
- Player 1 rolls again and adds to their new current total (e.g.  $27 + 4 = 31$ )
- Continue playing until the first player reaches 50 or 100 (or close to it) to win!

# TODAY'S ACTIVITIES

## RAINBOW NUMBER BONDS

- Cut out the cloud shape.
- Pick up some rainbow coloured strips.
- On each strip write down one number bond to 100 (e.g.  $10 + 90 = 100$ )
- Stick the strip to the cloud.
- Continue until you have got a rainbow attached to the bottom of the cloud.



## MATHOPOLY GAME

- Place your counters on the start position.
- Player 1 rolls the die and answers the question they land on. If they get it correct add the points received to their scoreboard.
- Player 2 has their turn doing the same.
- If you land on a Chance or a challenge square pick up a chance/challenge card and do as it says.
- Continue playing until the first player reaches 50 points.



***THANK YOU***

***HAVE FUN!***

