Year 2
Maths Workshop

Addition Skills

January 2025

AIMS

MAIN POINTS COVERED

- To introduce more complex methods used in Year Two for teaching addition and subtraction.
- To provide ideas and resources for supporting your child in using these methods.
- To give an opportunity for using these methods to support your child.

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 to be able to use and apply their knowledge creatively in different situations.

- Therefore, it isn't enough for children to simply be able to follow a process to solve a question, they need to understand what they are doing to be able to reason and solve problems.

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 +,-,x,÷

Known as the "symbolic" stage

Marcy Bernethy
SADDLE UP FOR 2ND GRADE

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

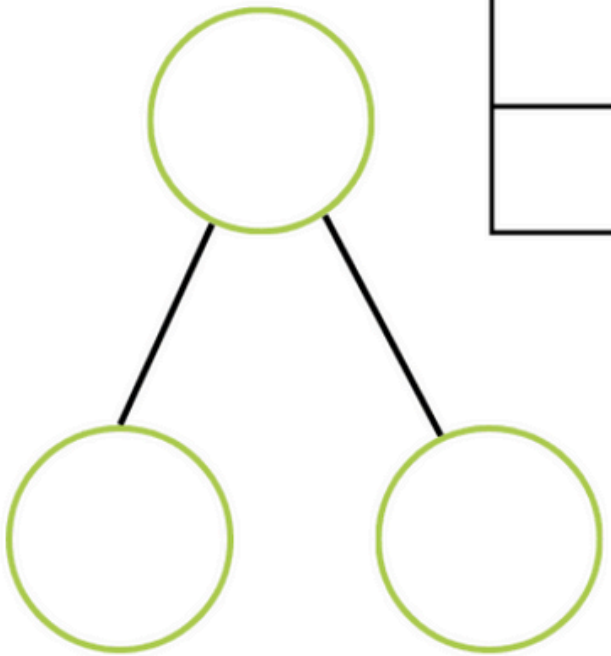
- The pictorial stage is where children use diagrams, pictures, and other visual aides to represent mathematical concepts and help solve problems.

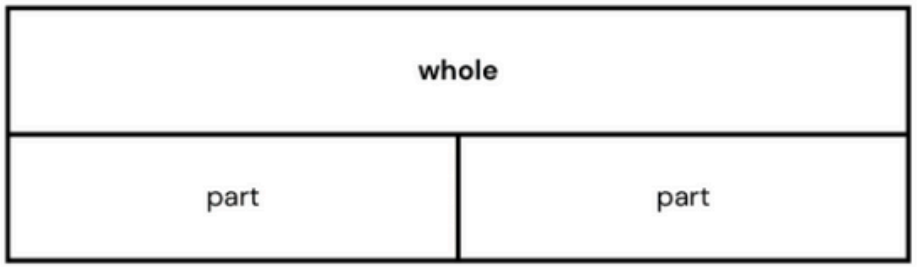
- It allows students to see the concepts in a different way and make connections between the concrete manipulatives and the abstract mathematical symbols.

- 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

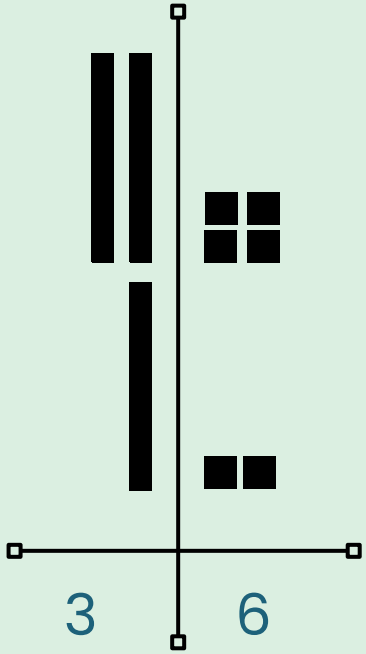
Involves solving math problems using numbers and mental math.

$3 + 8 =$

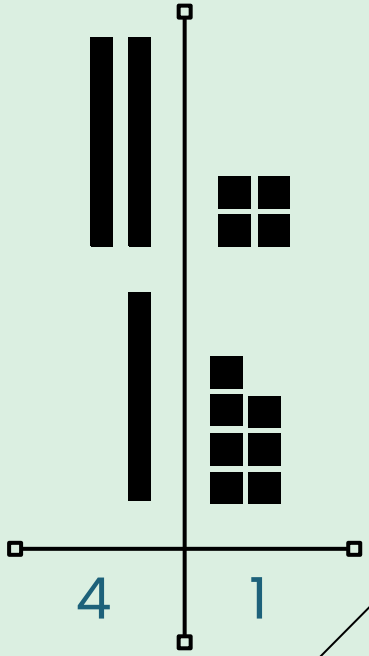
$12 - 7 =$

PICTORIAL STAGE

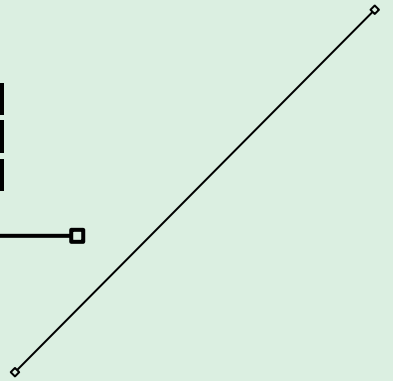
24 + 12 =



24 + 17 =

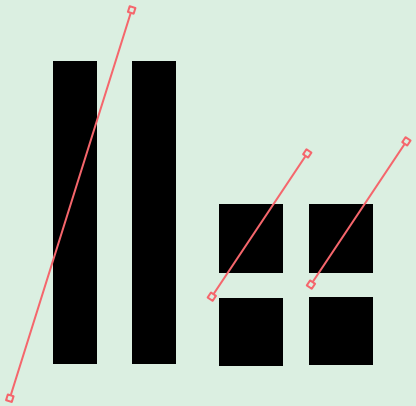


4 + 7 = 11



PICTORIAL STAGE

24 - 12 =



TODAY'S ACTIVITIES

RACE TO £1

- Take it in turns to roll the die.
- Look at the table on the sheet and pick up the relevant coin that matches the number you rolled.
- Place your coin on the game board and add them up as you go.
- The first person to reach £1 (100p) is the winner.

THE COIN COLLECTOR

- Begin on the start and take turns to roll the dice then move that number of spaces.
- Say and collect the coin for the space you land on.
- Miss a turn if you take the wrong coin.
- The winner is the first player to collect a set of all six coins and put them in order of value from least to most.

ROLLING IN TREASURE

- Roll the dice and move your counter that nunber of spaces.
- Collect any money you land on and put it in your piggy bank.
- When all players reach 'finish', the player with the most money is the winner.

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 - 'exhange' 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.

THANK YOU

HAVE FUN!