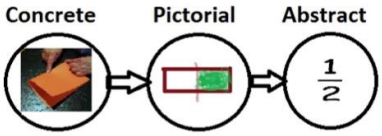
Maths at Meadow View

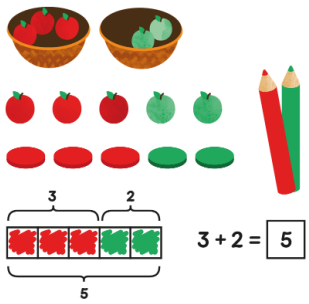
At Meadow View JMI School, we follow the principles of concrete, pictorial and abstract (CPA) learning as part of our Maths learning journey.



Concrete is the "doing" stage. During this stage, children use concrete objects to bring concepts to life by allowing children to experience and handle physical (concrete) objects. With the CPA framework, every abstract concept is first introduced using physical, interactive concrete materials. For example, if a problem involves adding pieces of fruit, children can first handle actual fruit. From there, they can progress to handling abstract counters or cubes, which represent the fruit.

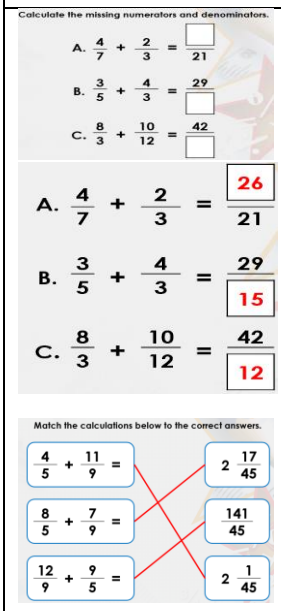
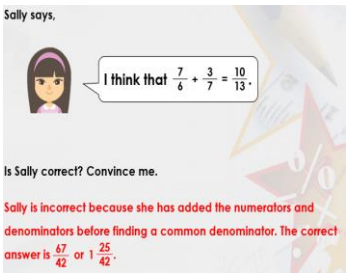
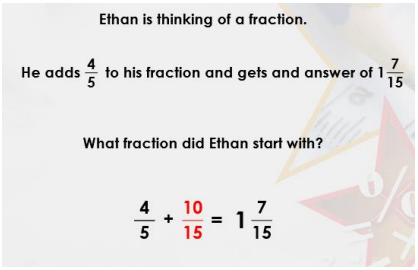
Pictorial is the "seeing" stage. Here, visual representations of concrete objects are used. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects. Building or drawing a model makes it easier for children to grasp difficult abstract concepts (for example, fractions).

Abstract is the "symbolic" stage, where children use abstract symbols to solve problems. Children will not progress to this stage until they have demonstrated that they have a solid understanding of the concrete and pictorial stages of the problem. The abstract stage involves the teacher introducing abstract concepts (for example, mathematical symbols). Children are introduced to the concept at a symbolic level, using only numbers, notation, and mathematical symbols (for example, +, –, x, /) to indicate addition, multiplication or division.



At Meadow View JMI School, we aim to ensure that all children become **fluent** in the fundamentals of Mathematics, through varied and frequent practice, so that pupils develop conceptual understanding. This helps them to develop their ability to recall and apply knowledge rapidly and accurately. We provide opportunities for children to **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. Children use the correct Mathematics vocabulary to explain their derived answer. In addition, the children try to **solve problems** by applying their mathematics knowledge to a variety of situations, involving real life contexts, persevering in seeking solutions.

Each Maths lesson is structured so that it begins with a '5 a day' starter, which focuses on fundamental arithmetic skills, and is followed be a component of fluency, reasoning and problem solving.

Below is an example of the 3 parts of the lesson focusing on adding fractions, in Year 6.

Varied fluency	Reasoning	Problem solving