

# **The Vine Schools**

## **Maths Teaching and Learning Handbook**

### **Intent**

Our aim is for all children at The Vine Schools to be able to use their mathematical skills confidently throughout their lives, allowing them to think critically using their mathematical knowledge. They need to be confident in selecting appropriate and effective methods to solve mathematical problems in a variety of contexts. We want all children to enjoy mathematics and to experience success in the subject.

### **Rationale**

This will be achieved through the consistent application of guidance; a weekly diet that consists of teaching a skill and methods, varied fluency, reasoning and problem solving; a supportive lesson structure and learning environment that encourages meta cognition and self-regulation and teachers skilled assessment for learning.

### **Guidance**

All concepts are introduced with concrete resources for children to feel and manipulate as they develop their conceptual understanding. As this develops, the children then move towards the pictorial and abstract stages (written methods). It is important that children can continue to work interchangeably with concrete, pictorial and abstract to continually reinforce children's learning.

### **Place Value Guidance**

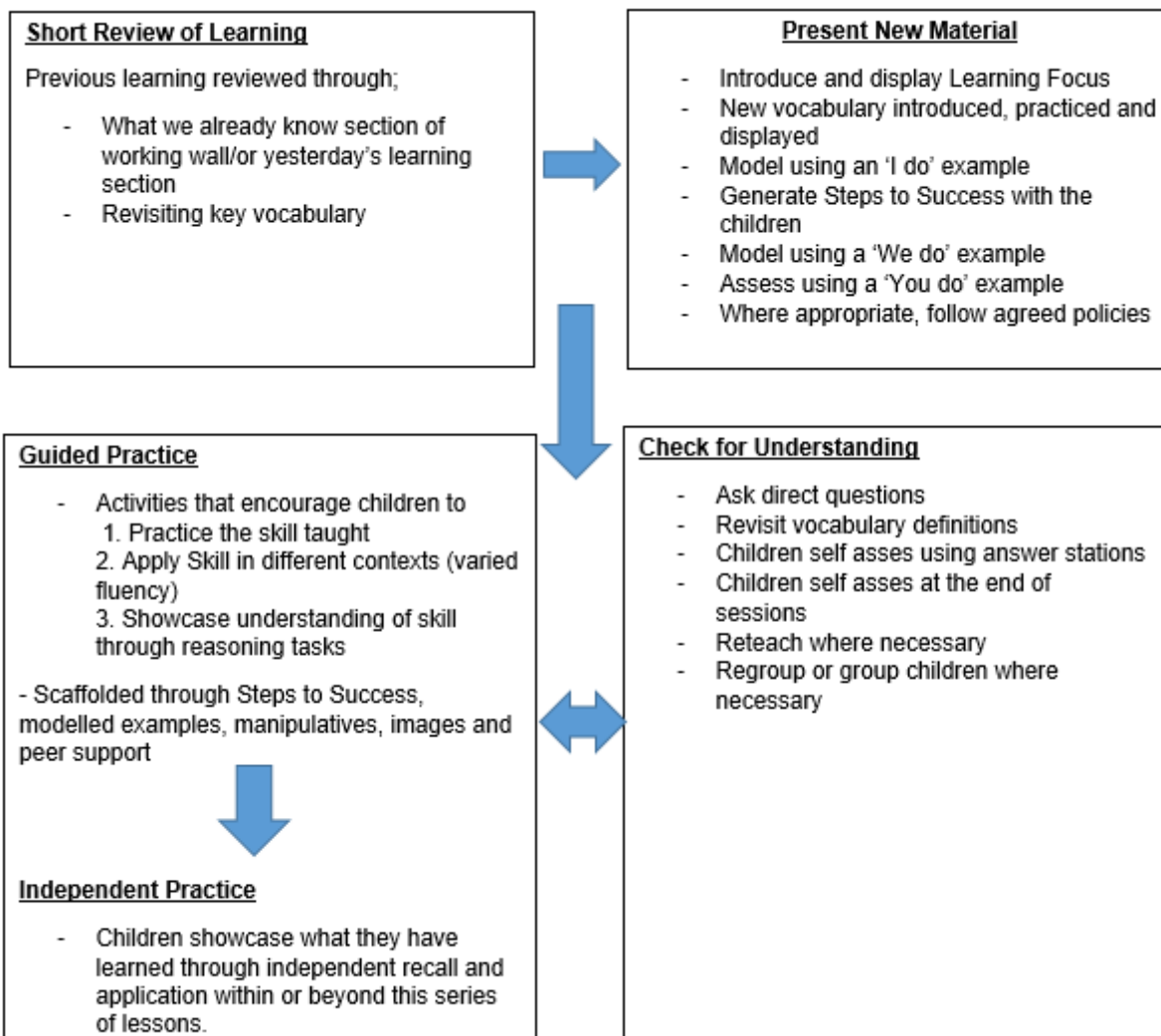
The Place Value Guidance is a progressive document that children work through at their own speed, only moving onto the next stage when the teacher has assessed that they are ready. Concrete resources used include; Numicon, Bead Strings, Base 10, Multilink and Place Value counters. All of these can be seen in the Place Value Policy below.

### **Calculation Guidance**

Calculation guidance include addition, subtraction, multiplication and division. They are progressive documents that children work through at their own speed, only moving onto the next stage when the teacher has assessed that they are ready. Concrete resources, as mentioned in the Place Value Policy, are incorporated into the Calculation guidance. All of these can be seen in the policies below.

### **Weekly Diet & Lesson Structure**

At The Vine Schools we believe that mathematical proficiency requires a focus on core knowledge and methods. When teaching these methods teachers must challenge the children through teaching with variation; this encourages children to practice the skill in a variety of different contexts (varied fluency). This will ensure children are able to carry out these methods accurately, flexibly and consistently. Children are then challenged to reason and problem solve within the area of maths. Because of these beliefs, all teachers plan a sequence of lessons that follow this structure;



## Learning Environment

In all classrooms there is a maths learning wall, maths equipment readily available and answer stations.

## Learning Walls

Learning walls grow as the learning progresses, with examples of learning going on the display as they happen. They show key vocabulary (for unit of work), today's learning and an example of what the children will be able to do after the teaching input.