

## **Why do we teach Maths in the way that we do?**

### **Coherent Lessons**

At Goat Lees Primary School, we teach Maths to ensure all children have the opportunity to achieve. We use a coherent approach to plan within, and across, a series of lessons. This means we build up to the learning intentions in small steps, ensuring all children have consolidated the step before moving on. We believe this helps to secure their understanding as there is little point continuing to build on shaky foundations.

### **No differentiation**

The decision to teach all children the same content seemed radical but is imperative to the ideology of Maths mastery. We do not want to pigeon-hole children with labels in Maths as there are so many aspects to excel at. A child less confident with fractions, may be confident when working with space or time. When lessons were differentiated, children were given a set piece of work and had little opportunity to access other tasks. With creating the learning journey in an incremental way, children are given the opportunity to plug any gaps they may have or simply revise previous learning before moving on to higher level concepts. We have found that due to this, reaching the learning intention is much more achievable for all as it is a series of small steps of learning rather than one huge jump.

For children that grasp concepts quickly, they are provided with greater depth challenges. These challenges unpick their learning by presenting questions in a different way that gives the children the opportunity to reason and problem solve and demonstrate their true understanding. We find these challenges important to ensure children are gaining a real depth of understanding about the topic and realise it is not just about knowing a method.

### **Blocking content**

Like many schools, we are now blocking the content of the Maths curriculum in all year groups. This decision was taken to reduce the time taken in recapping previous learning each time the topic was visited. We found that teaching in the previous way (revisiting a topic every three terms) meant that we would spend at least the first lesson of a topic each term recapping what we had taught previously. By blocking, it gives the children the opportunity to spend longer on a topic in one go. This means content is built on more easily as there hasn't been twelve weeks since they last learnt it. Within this time saved, the children have the opportunity to reason and problem solve the concepts ensuring a deeper, more secure understanding. The topics are revisited throughout the year within other topics where there are sensible links (money in decimals, adding in measurement, measurement conversions in fractions, etc). Where links in learning are more tenuous (shape, co-ordinates, etc.) starter tasks and early morning work questions are used to ensure that learning is retained.

### **CPA**

At Goat Lees Primary School, all children have access to manipulatives and are encouraged to use pictorial representations. At first these are important to gain understanding of a concept, but even when a child is confident with the abstract representation, there are still times when a pictorial representation can be useful. When tackling a difficult reasoning or problem solving question, using a bar model can be particularly helpful in illustrating what the question is asking you to do.