

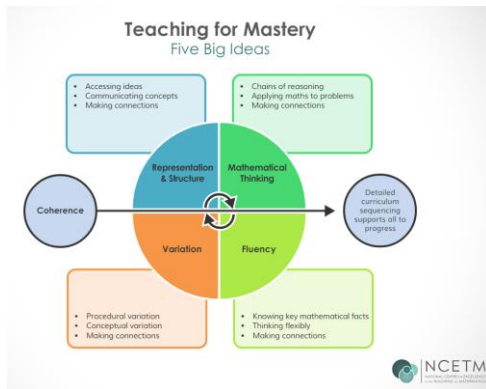
## Our teaching approach to Mathematics.

### Intent

*At Banks Lane Junior School we intend for our pupils to leave us in year 6, ready for the next stage of their learning with a secure knowledge and understanding of mental and written methods of arithmetic and apply this when solving problems and reasoning mathematically.*

#### 1. The Curriculum: What do we teach, when and how?

At Banks Lane we use The White Rose scheme to cover the key concepts laid out by the National Curriculum, which is in line with the Infant school. These areas include Number, Measurement, Geometry, Statistics, Ratio and Proportion and Algebra. As part of our curriculum, teaching aims to develop all children's mathematical understanding at the same pace.



We teach arithmetic lessons separately to enable our children to have regular practice of these specific skills to aid retention. We focus on both written and mental calculations to support the children with becoming confident mathematicians.

Arithmetic lessons are taught four days a week. On the fifth day we support our children to carry out a timed arithmetic paper. Targets are set from these assessments and are then sent home to parents to support their child on one specific skill each week. Teachers will be working with focus groups during these lessons to support the children with these targets.

Fluency, reasoning and problem solving for all areas of the National Curriculum are taught in our main maths lessons which are taught four days a week.

#### Support Task/Independent Task

Occasionally there is a need to support a child with a task that is focused on a previous learning or use of more concrete/pictorial methods to support children to access age related expectations (ARE). Teachers use a separate task for this child or group of children to support them.

#### Mastery Challenge

For most lessons, children will have access to a task focused on deepening learning. This does not come from the next year group's curriculum but is designed to challenge them.

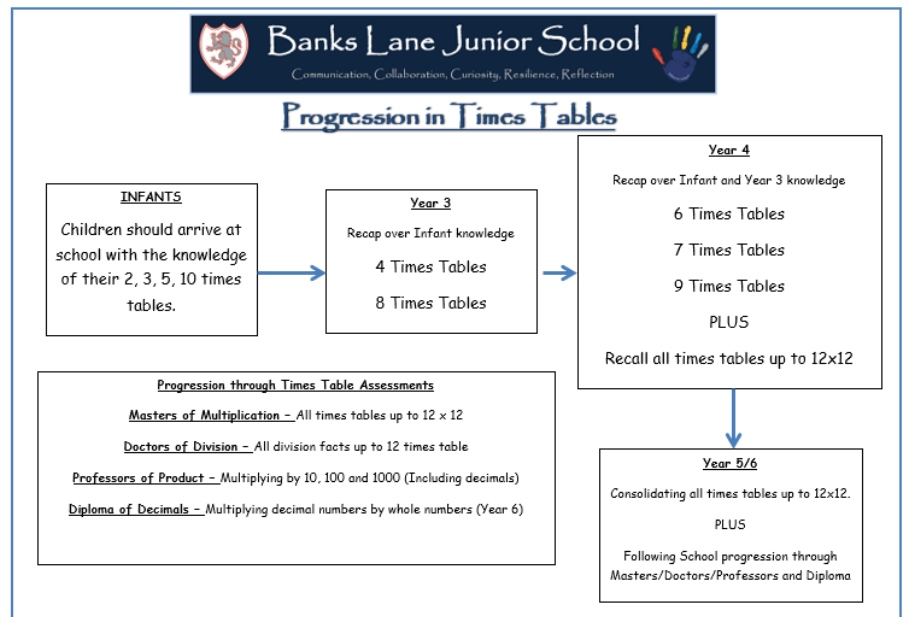
Year 6 Arithmetic Skills		Achieved		
		Target (T)	Seen Once	Seen Twice
<b>Addition and Subtraction</b>				
Consolidate previous year groups expectations during 'Can You Still?' sessions				
<b>Multiplication and Division</b>				
I can multiply numbers up to 4 digits by a two-digit whole number method of long multiplication.				
I can multiply 1 digit numbers with 2d.p. by whole numbers e.g. $2.45 \times 9$				
I can divide numbers up to 4 digits by a two-digit number using the formal written method of short division.				
I can use long division to divide 4 digits by 2 digits				
I can use BODMAS				
<b>Fractions, Decimals and Percentages</b>				
I can add and subtract fractions with different denominators and mixed numbers				
I can divide fractions by whole numbers				
I can multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ]				
I can multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places				
I can find any percentage of an amount e.g. 72% of 360				
<b>Mental and Times Tables Facts</b>				
I can perform mental calculations, including with mixed operations and large number				
I can multiply one-digit numbers with up to two decimal places by whole numbers. e.g. $0.07 \times 2$				

## Times Tables

At the end of Year 4, children will take part in the multiplication tables check (MTC). This is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics.

We use a variety of strategies to help support the children learn their times tables. These may include:

- Displays in the classroom
- Homework set specifically targeting times tables
- Times Tables Quizzes
- 5-minute times tables starters at the start of maths lessons.
- Times tables linked into arithmetic sessions
- Times Table and division support sheets
- Times Table Intervention to support children who are finding them challenging
- Short afternoon activities based on times tables



Children are offered the use of Times Tables Rock Stars to support their learning at home. They also have access to MyMaths. Teachers will set lessons and tasks linked to objectives taught in school to practice further at home.



## **2. SEND and inclusion and adaptive practice**

Adaptive teaching should be used to meet the needs of all learners. This is done primarily through support, not through providing them with tasks.

We want all of our learners to be part of our Maths and Arithmetic sessions. As in all subjects, teachers work hard to remove barriers to learning. Some examples of how we achieve this in maths are:

- Targeted questioning and support with learning tasks
- Whole Class Questions allow all pupils to access age related expectation and see good examples modelled by teachers
- Focus groups for children who need support, moving on to independent learning throughout the lesson
- Steps to Success are visible for the lesson being taught
- Maths vocabulary is displayed to help support with verbal and written answers
- Use of resources to support learning e.g. base 10, Numicon, place value counters
- Dyslexia friendly font used and white backgrounds for interactive whiteboards are avoided
- Clear lesson structure, steps are broken down into small manageable chunks
- Use of timers
- Collaborative learning opportunities such as talk partners
- Writing slopes, pencil grips, left handed pens are available for those who need them
- Modelling how to complete tasks are displayed in the classroom

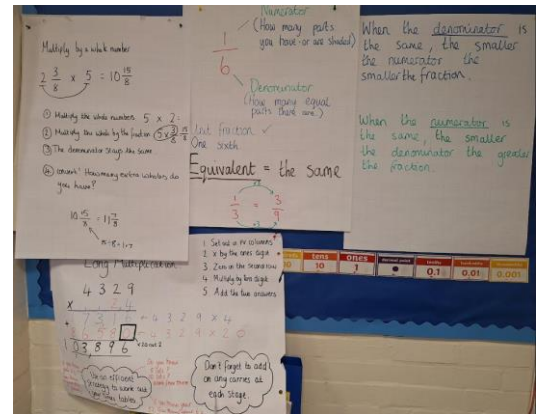
### 3. What would you see in the classroom?

Whilst each classroom is naturally different, there are clear consistencies across the school and year groups. Every classroom features a maths 'working wall' where vocabulary is displayed and referred to in order to revisit and review.

Teachers use 'working big' to model steps to success (STS) and model how to correctly present and answer questions. These STS will often be generated with the children in the lesson. This is displayed on our working wall to refer back to.

In the classroom, you will see success as well as failure, and the children gain important skills of how making mistakes allows us to learn and learn

more meaningfully. Our learning power 'Resilient Ruby' supports us with this concept. We aim for all our pupils to have a growth mindset and we create a positive culture of error in all classes, where pupils are encouraged to 'have a go.'



We often use mixed ability seating which can support children with additional needs. Teachers use focus groups which are ability specific for part of the lesson to support pupils.

### 4. Assessment: How do we know how the children are doing? How do they know?

Every day our teachers are assessing the pupils' knowledge and understanding of the mathematical objectives through the use of focus groups, mini plenaries, verbal feedback in lessons and questioning the pupils as they teach.

We expect our teachers to mark all work before the next lesson to inform next steps and know who needs further support. We encourage teachers to mark in the lesson and give immediate verbal feedback. This often has the most impact on a child's learning as they can address the error straight away.

We use termly assessments in maths for both arithmetic and reasoning, as well as practice SATs papers in Year 6.

### 5. How does our mathematics Lead monitor, evaluate, and improve the teaching of maths across our school?

Leaders attend local authority network days where sharing of 'best practice' is brought back to school in order to ensure the quality first teaching of maths. Our Maths Lead is part of the North West Maths Hub, where maths leads throughout the authority meet together to share good practice. Leaders regularly visit lessons to ensure a consistency of approach across the school.



### 6. Cross curricular links, enrichment and the community.



We have a term of weekly maths mornings where we invite our community to share our pupils' experiences of maths in the classroom. In year 5, the children take part in an enterprise day to raise money for Children in Need. The children have the opportunity to use maths in a real-life situation as well as making many cross curricular links such as DT projects, letter writing and PSHE.

