# **Arithmetic Policy**



## What are our aims for arithmetic lessons?

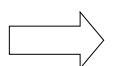
Pupils will:

- Develop their declarative and procedural mathematical skills explicitly in arithmetic sessions
- Deepen their understanding of core concepts through a mastery approach to arithmetic
- Be challenged through the use of reasoning and problem solving
- Develop transferrable skills that pupils can apply across all aspects of mathematics
- Improve rapid recall/efficiency of known facts and methods

## How are we going to achieve these aims?

#### Arithmetic test

This is to assess knowledge and give us a platform to plan a sequence of learning.
Pupils will be assessed on their POS



#### Fluency development

Pupils to use concrete equipment to build up their basic fluency skills or extend using reasoning/problem solving.



### Deepening understanding

All pupils will move to pictorial/abstract reasoning and problem solving.
These can be differentiated to the ability of your pupils.



# Example arithmetic cycle:

Week 1	Arithmetic test	<ul> <li>Marked and discussed together as a class</li> <li>AfL used to identify a skill/method to develop</li> </ul>
Week 2	Teach and fluency	- Skill/method is taught and fluency tasks are completed
Week 3	Reasoning and problem solving Or/ Additional fluency	<ul> <li>Learning is deepened through reasoning and problem solving</li> <li>If pupils struggle with the concept, continue with fluency activities rather than push on</li> </ul>
Week 4	Reasoning and problem solving	<ul> <li>Further deepening of understanding is pushed in confident pupils</li> <li>Less confident pupils have the opportunity to access reasoning</li> </ul>
Week 5	Arithmetic test	<ul> <li>Marked by staff/pupils</li> <li>AfL used to identify a skill/method to develop for the next arithmetic cycle</li> </ul>

- Arithmetic assessments will be carried out every 4-5 weeks.
- There will be a balance of self-marking and adult marking of arithmetic tests. This provides an opportunity to discuss methods with pupils during self-marking sessions.
- TTRS, One Minute Maths and Numbots will be used from Years 1-6 as a tool for promoting rapid recall of times tables and their related division facts (scores are not required to be recorded by staff on a weekly basis).
- KIRFs overview document to be used as a focus for the instant recall facts to be practised alongside the skill selected for the cycle.
- Times tables assessments to be carried out at the end of each half term.
- Areas where your class have struggled become the focus of the next 3-4 weeks of arithmetic lessons.
- Staff to use AfL to decide if consecutive arithmetic lessons would help transfer learning to long term memory.
- Begin with the four operations and the associated formal methods to be taken from the Calculation Policy.
- Lessons will focus on building fluency knowledge first, which may need activities to involve concrete resources as the first building blocks to aid understanding of formal methods.
- The focus of these sessions is to build proficiency with the formal methods.
- When pupils are comfortable with using the formal methods, they should be challenged with reasoning and problem-solving tasks to deepen their understanding.
- Staff use their judgement on which activities are recorded in books and which are completed using

whiteboards, practically or outside.

Teaching will be tailored specifically to the needs of the pupils using AfL

# How will we measure our success?

- Are the arithmetic test scores for your pupils improving?
- Do the pupils feel more confident in arithmetic lessons?
- Are the pupils able to recall maths facts quicker and with greater accuracy?
- Are the pupils able to transfer their basic skills in arithmetic to maths lessons?
- Do the pupils use the formal methods taught in arithmetic lessons?

Last updated: October 2024 Lewis Smith