Mathematics Policy AFNORTH

The policy is an overview of how the Mathematics curriculum will be delivered at AFNORTH School. and is set within the context of the National Curriculum vision, aims and policy on teaching and learning and assessment.

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

We aim to inspire all children to reach their full academic potential. In mathematics this means ensuring a curriculum that is fully inclusive of all children which enables them to:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. "

2014 National curriculum in England, pg. 99

Organziation:

At AFNORTH the curriculum is delivered through these Year groups:
Foundation Stage- Sunbeams & Reception
Key Stage 1 - Y1 and Y2
Lower Key Stage 2 - Y3 and Y4
Upper Key Stage 2 - Y5 and Y6

Resources:

Resources (especially math manipulatives) for the daily teaching of maths should be readily available and accessible to children in classrooms/learning areas. Where specific resources are required for teaching a topic, these can be found in the Maths resource room (A2.1.)

IT resources include: 2 class sets of IPADs , COWS (Computer on Wheels).

Planning:

Long term planning outlines the areas of mathematics to be taught during the term to ensure coverage of the National Curriculum. AFNORTH has adopted the use of White Rose Maths Hub Scheme for learning using this term by term planning resource. Some flexibility with the units may be needed to allow for cross curricular units that are more compatible (i.e. a science unit that requires measurement and/ or statistics).

Planning, where possible, should involve real life contexts for maths, where children are problem solving with a purpose in mind.

Learning Environments:

"Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas." 2014 National Curriculum, pg. 99

In **all** year groups there should be a **mathematics working wall** incorporating:

- Mathematical vocabulary on display so that children are enabled to articulate their understanding.
- Maths work on display to encourage a positive attitude and enthusiasm towards mathematics for all groups of children.

In addition, concrete and pictorial representations are used regularly to support children to grasp mathematical concepts.

Assessment:

Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. Future lesson design should depend on class success, evaluated through marking and observations made during the lesson.

Children should use self-assessment and peer-assessment against the learning objective and success criteria, giving them a sense of achievement. Children should know when they are meeting their targets and be involved in formulating their next steps.

Pupil's work should be marked in line with the ***Marking and Feedback Policy*** and teachers should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods.

Summative assessments (Maths Hubs) are completed once per term in order to provide further understanding of the level each child is working at and to inform a more rounded judgement of the class abilities. Results are recorded to identify gaps and target teaching to support misconceptions and provide further challenge.

Feedback and Presentation:

At AFNORTH, teaching staff have developed the following expectations for presentation and marking in mathematics.

- Use pencil only
- Number Date (DD/MM/YY)
- Appropriate size graph paper for developmental ability of child
- Only one number per box on page (when appropriate)
- Specific Learning targets will be recorded in student books
- Using "I can" statements in books to track student progress
- Incorporating time to enable students to respond to feedback regularly
- Using a standardised coding system: (see below)
    - T TA I (Teacher / Teacher assisted/ Independent)
    - Traffic Lights for student understanding
    - "Next Steps" using an image of stairs