



**AFNORTH International School
British Section**

Mathematics Policy

This policy is set within the context of the National Curriculum vision, aims and policy on teaching, learning and assessment.

THE NATIONAL CURRICULUM STATES

“Mathematics is a creative and highly interconnected 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
- **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

INTENT:

At AFNORTH International School we view mathematics as 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, and a sense of enjoyment and curiosity about the subject.

Our intent is to provide children with a mathematics curriculum that will allow them to become confident individuals through developing their mathematical skills to their full potential. We also aim to present maths as a challenging, exciting, creative and relevant subject in order to promote a positive and confident attitude.

IMPLEMENTATION:

Sunbeams & Reception - Early counting skills occur daily through play and daily activities including songs and rhymes. These skills are expanded across the setting through the children’s independent choices and weekly challenges. These explore areas such as matching and sorting, ordering, shape recognition, counting and number sequencing, pattern recognition, measurements and time. We aim to make as much of this teaching a part of everyday routine including counting pieces of fruit and cups at snack time, cutting cakes and pizzas we have made in the mud kitchen into halves and quarters, completing tricky jigsaws and making our own pictures from a variety of shapes and objects in the workshop! By relating these simple activities to our everyday life, children come naturally to an understanding of early maths concepts.

Year 1 to 6

At AIS, we are committed to providing a motivating, challenging and comprehensive maths curriculum that is accessible to all and links the use of mathematics across a range of subjects, adding meaning to the learning of maths. Our whole school approach to the teaching and learning of maths is based on the Schemes of Learning from White Rose Maths (WRM) which includes Foundation Stage.

- Planning is based on Schemes of Learning from WRM and enhanced by a wide range of resources. This ensures a progressive and thorough curriculum in every year group. Teachers know which objectives must be taught and assessed in each year group and can follow progressive small steps to ensure pupils have a comprehensive understanding of maths.
- Long term planning outlines the areas of mathematics to be taught during the term to ensure coverage of the National Curriculum. Some flexibility with the units may be needed to allow for cross curricular units that are more compatible (e.g. 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.
- WRM promotes kinaesthetic learning to ensure children acquire fluency of skills by introducing concepts in a practical/concrete way to progress to pictorial then abstract (C-P-A).
- WRM planning is taught in blocks. Objectives for each block are shared and discussed with the children during the block. This ensures children know their learning targets.
- Differentiated learning is provided through a selection of tasks to consolidate fluency, use skills to solve problems or use and reasoning skills to solve higher-level challenge problems. Teachers use their professional judgement to determine the activities, timing and organisation in each lesson in order to suit the teaching objectives and ensure children understand each small step.
- For pupils with SEN or EAL, the curriculum may be adapted further to support their individual needs.
- The National Curriculum for mathematics reflects the importance of spoken language in a pupil's development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. Children need to learn to explain their thinking clearly and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.
- We promote the use of mathematical vocabulary through 'maths talk' and encourage children to explain their thinking. Mathematical vocabulary is on display so that children are assisted in articulating their understanding.
- 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 and technology is also utilised.

IMPACT:

Assessment on learning occurs throughout the entire maths lesson, enabling teachers/Learning Support Assistants to adapt their teaching/input to meet the individual needs of the children. 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 intention, giving them a sense of achievement. Children should know when they are meeting their objectives and be involved in formulating their next steps.

Pupil's work should be marked in line with the 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 (WRM) are completed once per term, with the exception of when statutory assessments take place, in order to provide further understanding of the level each child is working at and to inform a rounded judgement of the class/child's abilities. Results are recorded to identify gaps and targeted teaching is used to support misconceptions and provide further challenge.