



GOSDEN HOUSE SCHOOL ACCESSIBILITY PLAN

Gosden House School recognises and values the contributions that parents, carers, governors and other members of the community can make. We will endeavour to encourage the wider community to understand the aims and vision of the school and to involve them wherever possible.

- **Provision of information in other formats** - We will endeavour, wherever possible, to provide information in alternative formats when required or requested. Examples of this are by using email, royal mail, enlarged print versions, audio tapes, translations, symbolled text. Adequate prior notice would be required through the school office.
- **Accessibility to premises** - To continue to ensure that the school building and grounds are accessible to the extended school community, pupils, staff, governors, parents and community members as far as reasonably possible.

MATHEMATICS POLICY

Date and author of original policy	Julie Clarke / Hayley Butcher Sept 2019
Review Author & Date	Julie Clarke / Hayley Butcher October 2021
Next review date	October 2022
Date approved and signed in governing body meeting	N/A

INTRODUCTION

This policy outlines the purpose, nature and management of the mathematics taught and learnt in our school.

Gosden House uses a variety of approaches in supporting the teaching and learning of mathematics, including Numicon. This is a multi-sensory approach to children's mathematical learning that focuses on three essential elements; doing mathematics, communicating mathematically and exploring relationships to enable generalisation. We aim to facilitate learners' understanding and enjoyment of mathematics through using visual imagery to support comprehension of abstract number ideas.

Numicon, was introduced as an approach to teaching at Gosden House School, in September 2017, following extensive training for all teachers and support staff. Regular training updates are provided on an on-going basis for staff and each class has appropriate resources.

The implementation of this policy is the responsibility of all teaching staff.

RATIONALE

Mathematics is essential in everything we construct, everything we calculate and almost every problem that we have to solve in our everyday lives. The early concepts of Mathematics grow out of concrete and practical experience. As a school, we are aiming for learners to develop the flexibility and fluency required for confidence in mathematical literacy, so that learning is functional and contributes to their daily success. This aim demands learners are enabled to make connections between learning experiences, supporting later problem solving and independence.

AIMS

Through the Mathematics curriculum, adapted from the National Curriculum, we aim to ensure:

- Learners are taught the key content, in a creative, cross-curricular way with significant practical activity, allowing children to work at a level appropriate to their ability rather than their age, to improve outcomes and raise standards of achievement.
- Learners develop the flexibility and fluency required for confidence in mathematical literacy, so that learning is functional and contributes to their daily success. Children's future chances of adult independence rely on their ability to use mathematics for modern life.
- Learners are encouraged to develop the use of mathematical language and use talk to support thinking mathematically, recognising the importance of dialogue, between both pupils and teachers and between peers, in making meaning.
- Learners are provided with opportunities to generalise learning across the curriculum.
- Learners have the opportunity to use concrete images and structured apparatus to help discover patterns and make generalisations, of often-abstract concepts, supporting development of conceptual understanding alongside procedural competence.

- Learners have the confidence and opportunity to discuss and reflect on what they have learned.
- Learners are able to explore their own ideas freely, enjoy their learning and celebrate their progress.

PRINCIPLES

The principles guiding teaching and learning of Mathematics at Gosden House are:

- Mathematics is accessible for all pupils regardless of gender, race, cultural and social background
- All pupils have the opportunity to succeed through a personalised approach, whatever their individual needs, building the self-belief necessary to achieve in the face of challenge or difficulty.
- Action, imagery and conversation are implicit in 'learning to do mathematics'.
- Staff have high expectations and provide opportunities for all pupils to progress
- Informal and formal assessment of pupils allows individual targets to be set, ensuring emergent skills are developed

STRATEGIES FOR TEACHING

A variety of teaching styles and approaches are used which ensure:

- Mathematical targets are broken down into small achievable steps
- Teaching and learning is organised in one to one, pairs, small group or whole class lessons, responding to the needs of the learners.
- Teaching and learning activities are differentiated and individualized, through provision of diverse resources, contexts and teaching approaches. Opportunities are provided for learners to construct their own learning through discovery and collaborative projects.
- Use of visual resources and Makaton support comprehension of language in the mathematics classroom.
- Use of ICT supports independent learning activity, of particular importance within the Secondary school.

Development within the Primary school

Early Years Foundation Stage and Key Stage1

The focus on teaching and learning Mathematics within the Foundation Stage is on giving opportunities for learners to gain an understanding of key mathematical concepts in the first years of school, through play and structured teaching. Brain research suggests that direct action, physical

and intellectual engagement with experiences, in addition to problem solving and repetition, ensures that synapses – our brain's wiring – become stronger (Bruce 2004).

Children will investigate and build learning and understanding of early, crucial concepts, essential to the development of later mathematical competence including;

- Attributes - including size, shape and colour
- Categories - classifying (sorting or grouping) items based on a single or several attributes.
- Sequences and patterns
- Comparisons – understanding comparative concepts, including quantity, size, order and position.
- Learning number words- a list of words that must be kept in the correct order
- Learning numerals- learning to link spoken number words to written numerals

Key Stage 2

In developing early number and calculation skills, learners will encounter teaching and learning activities designed to establish a secure foundation in basic, essential procedures and concepts, including:

- Linking quantities to numbers- learning that number words and numerals represent quantities
- Learning all the stages in developing secure counting skills
- Learning "how many"- that we count to find out how many items we have and that when we count all of the items the last number word we say tells us how many
- Learning the cardinal principle - learning to give a smaller quantity from a bigger set
- Learning ordinality - that each number's position in the counting sequence is fixed and that each next number is one more equal unit
- Recognising the relative sizes of and relationship between numbers - for example, that 9 is bigger than 5 and that 4 is twice as big as 2
- Learning quantity words and concepts and applying them to numbers - understanding the words used for the comparisons of sets - for example, same/different, more/less, bigger/smaller
- Understanding approaches to calculating and recording addition and subtraction

Specific teaching and learning of additional topics in mathematics will support pupils to develop skills and understanding in a variety of concepts, including:

- Daily routines and time
- Money exchange and the value of coins.
- Awareness of similarities and differences within areas of geometry and measure.

Key Stage 3

Within KS3 learners continue to develop and embed early number and calculation skills. They will encounter teaching and learning activities designed to establish a secure understanding of the value of number, the four basic operations, in addition to measurement, geometry and statistics. KS3 looks at combining number skills and knowledge with life skills and the practical elements needed in day-to-day life. There is a heavy focus on both money and time. The curriculum includes:

- Linking quantities to numbers- learning that number words and numerals represent quantities
- Learning all the stages in developing secure counting skills: forwards, backwards and skip counting
- Using dienes and other resources to understand the value of place value in number
- Recognising the relative value of and relationship between numbers of varying value
- Learning quantity words and concepts and applying them to numbers - understanding the words used for the comparisons of sets - for example, same/different, more/less, bigger/smaller
- Understanding approaches to calculating and recording addition and subtraction
- Learning what the language in questions mean, in relation to which operation, e.g. altogether means the total so you will either add or multiply, less means subtract etc.
- Understanding time and timetables
- Understanding different shapes and how they relate
- Understanding basic statistics and read / create graphs and complete surveys

Specific teaching and learning of additional topics in mathematics will support pupils to develop skills and understanding of a variety of concepts, including:

- Daily and weekly routines, times, reading different timetables etc
- Money exchange and the value of coins, notes and calculating change
- Awareness of similarities and differences in shape, space and measures
- Understanding and purpose of graphs and tables

Key Stage 4

Key Stage 4 follows the Edexcel Functional Skills curriculum, predominantly at the Entry Level stages, however some pupils work up to level 1 (low level GCSE equivalent). We focus teaching around skills that will benefit our Gosden Graduates, in all aspects of life. The curriculum focuses on functional application of skills and understanding, with all pupils given the opportunity to take exams in both Year 10 and Year 11 or earlier if appropriate. Students have the opportunity to leave us with both recognised maths qualifications at their appropriate level, in addition to the relevant life skills to use maths in their day-to-day life.

The curriculum includes:

- Practical applications of number including fractions, rounding, money, percentages and number facts.
- Handling data including surveys, tally charts, graphs, spreadsheets, organising by category and reading different information sources such as prices in a holiday brochure or on a menu.
- Measure and geometry including weight, money, time and space.

PLANNING, RECORDING AND ASSESSMENT

Teachers will be responsible for:

- Medium term planning that is adapted and differentiated.

- Targeted lesson activities that clearly demonstrate individualisation for a range of abilities.
- Annotations and evidence gathering of pupil learning, including the use of Evisense.
- On-going formative assessment of pupils' learning, used to inform next steps and planning, to include pupil self-assessment.
- Baseline sampling to determine starting points and progress tracking.
- End of year summative assessment, where appropriate, to supplement evidence gathered through formative assessment.
- Report on progress in parent meetings, Annual Reviews.
- Use agreed procedures for recording attainment (B squared).
- On-going moderation of assessment - both internally and through staff attending meetings with colleagues from schools across the county

In Key Stage 4, teachers will be responsible for all of the above in addition to:

- Delivering a Functional Skills curriculum, providing the opportunity to submit an examination entry at least once a year at their level of study.
- Regular Exam Technique Practice
- Communicate regularly with parents/carers regarding the level their child is working at within the Edexcel curriculum and how to support at home.