Mathematics Intent, Implementation and Impact Statement

Intent

The mathematics curriculum at Old Park School has been designed to ensure that all pupils develop their skills in the fundamentals of mathematics, reasoning and problem solving with the appropriate subject specific knowledge, skills and understanding in line with their stage of development. The long-term sequence of learning is designed to offer a broad and balanced mathematics curriculum through coverage, experience and progression. All pupils are supported to develop firm foundations across the mathematical curriculum, progressing through appropriate sequences of learning which build upon prior knowledge as they move through their school life in preparation for adulthood.

Pupils develop their mathematical knowledge and understanding using the concrete, pictorial and abstract approach (CPA). Initially exploring physical objects using a multisensory approach, moving to pictorial representations then moving on to abstract concepts such as equations. They are encouraged to develop their communication skills and use and extend their vocabulary for mathematical elements that are pertinent to their own learning needs.

Implementation (Long-Term Sequence of Learning)

For our learners aged 4 - 16

The mathematics curriculum is written in consultation with and enhanced by the following:

Pre-subject specific	Pathway 1 Cognition curriculum Multi-sensory Foundations for Play, Learning and Life Pathway 2 My Thinking curriculum Learning to Play, Learn and Live	Willow Dene Pathway 1 Framework Development Matters Understanding the World: Birth to 3 Birth to 5 Matters EHCP Personal Provision Plans Engagement Model As above Willow Dene Pathway 2 Framework
Subject specific	Pathway 3 Roots	OPS Scales 5-9 Development Matters: Mathematics 3-4 year olds Skills, Concepts, Knowledge, Vocabulary linked to Maths Programmes of Study, National Curriculum England

		EHCP Personal Provision Plans Numicon Firm Foundations
Subject specific	Pathway 4 Shoots	OPS Scales 10-14 Development Matters: Mathematics Reception age students into KS1 expectations Skills, Concepts, Knowledge, Vocabulary linked to Maths Programmes of Study, National Curriculum England EHCP Personal Provision Plans Numicon Year 1 and Year 2 teacher handbooks
Subject specific	Pathway 5 Blossom	OPS Scales 15 KS1 into early KS2 expectations Skills, Concepts, Knowledge, Vocabulary linked to Maths Programmes of Study, National Curriculum England EHCP Personal Provision Plans Numicon Year 3 teacher handbook

Long Term Plan – Pathway 1 and Pathway 2

Pathway 1 Cognition Curriculum

	To be covered across the term:		
Autumn	Number	Measure	Geometry
Spring	Number	Measure	Geometry
Summer	Number	Measure	Geometry

For our Pathway 1 learners, maths is taught through their cognition sessions where they experience the prerequisite skills for number, measure and geometry. Within each termly theme, the pupils will cover each of the above areas as appropriate for their needs guided by the Willow Dene Pathway 1 framework and their personal EHCP targets. The learning is delivered in a multi-sensory approach allowing the pupils to be fully immersed in their learning. These skills are also covered in other areas of the curriculum to solidify our pupils' understanding and support application to real life.

Pathway 2 My Thinking Curriculum

For our Pathway 2 learners, maths is taught through their My Thinking sessions where they explore the prerequisite skills for number, geometry and measure as well as exploring and engaging with a range of Problem-Solving tasks to promote their independence and prepare them for formal learning. Within each termly theme, the pupils will cover each of the above areas as appropriate for their needs, guided by the Willow Dene Pathway 2 Framework and their personal EHCP targets. These skills are also covered in other areas of the curriculum to solidify our pupils' understanding and support application to real life.

Long Term Plan – Pathway 3

Week	To be covered across the term:			
Autumn	**Number: place value focus** Supported by activity Cards 1 - 5	**Measurement:** Length and Height	**Number: 4 operations focus** Supported by activity Cards 7-10	**Measurement:** Money and Time
Spring	**Number: place value focus** Supported by activity Cards 1 - 5	**Measurement:** Capacity, Volume and Time	**Number: 4 operations focus** Supported by activity Cards 11-14	**Geometry:** Properties of Shape
Summer	**Number: place value focus** Supported by activity Cards 1 - 5	**Measurement:** Mass and Weight	**Number: 4 operations focus** Supported by activity Cards 15-18	**Geometry:** Position and Direction

Teachers to adjust as needed to best suit the needs of their class ensuring full coverage is provided.

Long Term Plan – Pathway 4 and Pathway 5

Teachers to adjust as needed to best suit the needs of their class ensuring full coverage is provided.

Week	To be covered across the term:			
Autumn	**Number and Place Value** (Supported by Numicon – Securing Foundations / Getting Started)	**Length and Height** (Supported by Numicon – Measurement)	**Number and Geometry** (Supported by Numicon – Calculating, Pattern and Algebra & Geometry)	**Money and Time** (Supported by Numicon – Measurement)
Spring	**Number and Place Value** (Supported by Numicon – Numbers and the Number System)	**Capacity, Volume and Time** (Supported by Numicon – Measurement)	**Number and Geometry** (Supported by Numicon – Calculating, Pattern and Algebra & Geometry)	**Statistics**
Summer	**Number and Place Value** (Supported by Numicon – Numbers and the Number System)	**Mass and Weight** (Supported by Numicon – Measurement)	**Number and Geometry** (Supported by Numicon – Calculating, Pattern and Algebra & Geometry)	**Position and Direction** (Supported by Numicon – Geometry)

Pathways 3 – 5 Maths Curriculum

For our Pathway 3, 4 and 5 learners, maths will be taught in discrete sessions covering the long-term plan outlined above with the Old Park Scales being used to inform the specific learning outcomes for each pupil. The teachers of our Pathway 3 to 5 pupils will use a range of resources to inform their planning, including Numicon. These concepts are also covered in other areas of the curriculum to solidify our pupils' understanding and support application to real life.

For our learners 16- 19:

Our Post 16 learners identified as Pathways 1 and 2 are following units from the ASDAN Sensory programme (Cognition Module).

Our Pathway 3 learners will complete maths-focused ASDAN life skills challenges (2 identified challenges per year)

Pathway 4 learners are working towards a joint Entry Level certificate in English and Maths.

For further information, please see our Intent, Implementation and Impact document for Accreditation.

Impact

Education Health Care Plans

There are clear links that impact across all four areas of the EHCP within mathematics.

- **Communication**: using preferred modes of communication to use, understand and explain mathematical vocabulary, concepts, reasoning and problem solving.

- **Cognition and Learning**: developing mathematical knowledge, skills, understanding and problem solving across the curriculum and in real-life situations. Developing use of mathematical equipment, recording methods and use of technology.

- **Social, Emotional and Mental Health**: using mathematical knowledge, skills and understanding to promote participation within a community in a range of real-life situations linked to handling money, telling the time, sequencing of events, sharing and recognising and using language related to days, months, dates etc.

- **Sensory and Physical:** using senses for handling and exploring objects and using mathematical equipment. Using mathematical knowledge, skills and understanding to develop gross, fine motor and self-help skills within measurement and geometry.

Pre-Subject Specific Learners

Pre-subject specific learners develop their knowledge, skills and understanding of mathematics through our Cognition curriculum and our My Thinking curriculum for our Pathway 1 and 2 learners respectively. Pre-subject specific learners work at the earliest levels of cognitive development and

access a multisensory and practical approach to early mathematics. We use the five areas of the Engagement Model; exploration, realisation, anticipation, persistence and initiation to identify linear and lateral progress of knowledge, skills and concepts. We use Willow Dene assessment frameworks for pre-subject specific learners.

Subject Specific Learners

Subject specific learners develop their knowledge, skills and understanding of mathematics through discrete termly topics which offers a broad and balanced curriculum. They are supported to make connections across mathematical ideas to develop fluency, reasoning and problem solving and to apply their mathematical knowledge to other subjects. Pathway 3 learners (previously P4 – P8) develop early knowledge, skills and understanding before progressing into more formal study of the subject for our Pathway 4 learners (National Curriculum KS1 outcomes). A small percentage of our pupils move onto Pathway 5 (National Curriculum Year 3 outcomes). We use subject specific scales to assess progress for subject specific learners.

Preparation for Adulthood

During an Old Park School stakeholder consultation on Post 19 hopes and aspirations across all pathways, a variety of responses were received. The following are addressed through the maths curriculum:

- To learn and apply functional maths skills.
- Take part in thinking and problem- solving skills.
- To have the confidence to use and apply their skills and knowledge in different settings.
- To have the desire to continue to learn, want to investigate and find out new and different things.
- Solve problems and implement skills in real life contexts.
- Demonstrate resilience.
- To understand the concepts of time including ‘now’ and ‘next’
- Money - to understand the options I can and cannot afford.
- To use numbers in practical situations.

Students in the 16-19 stage will also take part in and achieve accredited maths units as part of their ASDAN or Pearson Functional Skills qualifications.