MATHEMATICS

AT



HAZEL LEYS ACADEMY



| VALUES | Each Other Each Other |
|--------------------|---|
| INTENT | At Hazel Leys Academy, we aim to provide all pupils with a well-sequenced, knowledge-rich curriculum, centered around a stimulating and inclusive educational environment in which everyone feels safe, respected, and supported to grow and develop to their full potential. Our school's vision is to ignite the spark of curiosity in every child. We want to make them excited about learning new things and discovering the world around them. We encourage them to aspire to great heights, to dream big and believe in themselves. With hard work and dedication, we believe they can achieve anything they set their minds to and become exceptional contributors to their communities. Together, we can ignite, aspire, and achieve amazing things! • Ignite. We ignite passions. • Aspire. We inspire aspirations. • Achieve. We achieve greatness. The principles of our knowledge-rich curriculum are: • Knowledge is valued and specified • Knowledge is taught to be remembered The content in our curriculum has been carefully chosen by subject experts and has been sequenced in a meaningful way that enables children to make connections and progress from unit to unit, term to term and year to year, supported by additional schemes of work such as Charanga, Purple Mash, Jigsaw and Primary Languages. |
| SKILLS FOR LIFE | Ine curriculum entitlement supports the development of individual essential skills for life through the Skills Builder aspects: 1. Listening 2. Speaking 3. Problem Solving 4. Creativity 5. Staying Positive 6. Aiming High 7. Leadership 8. Teamwork |

HAZEL LEYS ACADEMY CURRICULUM INTENT

OVERVIEW

At Hazel Leys we know that mathematics is an important creative discipline that helps us to understand and change the world. Maths is used in all aspects of our daily lives and we want our children to understand and be confident when using maths, such as interacting with technology or handling money. We want all pupils to experience the enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding. Our mathematics curriculum is developed around White Rose Maths which uses a pedagogical approach to enhance maths skills and problem-solving skills. The core of White Rose Maths is the maths mastery approach, which focuses on depth rather than acceleration, ensuring that key_concepts are fully grasped before moving on.

The maths mastery approach aims to:

- **Puts numbers first:** The approach puts number at the heart, because confidence with numbers is the first step to competency in the curriculum as a whole.
- Puts depth before breadth: To reinforce knowledge again and again.
- Encourages collaboration: To allow children to progress through the curriculum as a group, supporting each other as they learn.
- Focuses on fluency, reasoning and problem solving: Giving the children the skills they need to become competent mathematicians.

By adopting the mastery method we are centering our mathematics curriculum on the idea that learning maths should be fun and enjoyable. It focuses on developing deep understanding rather than memorisation. This means that it helps children develop self-belief, persistence, and resilience.

INTENT

At Hazel Leys, we know that maths is a significant part of children's education, which is why we use the White Rose Maths approach to make teaching mathematics easier and more effective. Our curriculum is designed to provide students with a solid foundation in mathematics. They will gain a deep understanding of mathematics and enjoy solving mathematical problems. As the curriculum puts a significant emphasis on mathematical skills, curriculum content is well sequenced in order to promote a depth of understanding. The resources used in all lessons are well suited to curriculum integration and pupils are able to show deeper understanding of concepts through problem-solving questions that are designed to extend pupils abilities.

The curriculum is not just about teaching maths, it is about developing mathematical thinking skills. The aim of our curriculum is to ensure that students are able to think mathematically and solve problems with confidence. Through the White Rose Mastery approach, our Maths curriculum is delivered so that all children, regardless of their starting point, will maximise their academic achievement and leave Hazel Leys with an appreciation and enthusiasm for Maths, resulting in a lifelong positive relationship with numbers.

IMPLEMENTATION

At Hazel Leys, the implementation of the maths curriculum provides for gradual progression in between concepts and year groups. Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. Teachers follow the White Rose Maths Hub materials; however, they adapt the curriculum to reflect the needs to their class which will differ between each cohort. At Hazel Leys, we employ a variety of teaching styles and opportunities for children to learn and develop their mathematical skills and competencies, both individually and collaboratively. The main aim of all lessons is to develop

children's knowledge, understanding and skills, applying these to a variety of contexts. Our maths lesson follows a 6 part sequence, which includes reviewing concepts previously taught, children orally rehearsing key vocabulary, teaching new concepts, addressing misconceptions, independent work and a plenary. By using this structure, the children have plenty of opportunities to show their understanding on mathematical concepts and work in a variety of ways to truly master the curriculum. Opportunities for challenge are provided through out "Step for Depth" aspect of the lesson, where children are able to stretch their skills through reasoning and problem solving tasks. Every lesson has plenty of opportunities for children to engage in high quality discussions about maths with teachers using these conversations to extend explanations and challenge the children's thinking.

One of the key elements in lessons throughout the school should be on developing the children's calculation strategies which include written calculations and mental strategies as laid out in the calculation policy for addition, subtraction, multiplication, and division. Staff also understand that sometimes children find their own efficient methods along the way.

To support us in delivering a high quality, knowledge rich maths curriculum we consistently use the Concrete, Pictorial, Abstract (CPA) approach to help pupils understand mathematics and to make connections between different representations. We have a range of mathematical resources in classrooms including Numicon, Base10 and counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial) prior to moving to abstract questions. Abstract maths relies on the children understanding a concept thoroughly and being able to use their knowledge and understanding to answer and solve maths without equipment or images. Representations used in lessons expose the mathematical structure being taught, the aim being that students can do the maths without recourse to the representation. In lessons concepts are represented in more than one way to draw attention to the critical aspects and to develop deep and holistic understanding.

Children who not making the required progress are given extra support through intervention sessions and support in class in order to meet our INTENT of developing pupils. Staff also provide feedback during the lesson on children's learning and achievement in line with our feedback policy.

EYFS

Through the maths provision in the Early Years classrooms, the children are able to engage with a wide range of mathematical concepts in a variety of ways. For instance, measuring could be applied to the water area, small world area, creative area etc. The children are supported through continuous provision to discuss concepts and are challenged using questioning. Staff will also use real life problems to ensure children link their learning in the classroom to the real world.

Alongside this, the children will take part in daily adult directed class work. This is usually done as a whole class in reception and key worker groups in nursery. During these sessions, children learn how numbers are represented in different ways and direct teaching is used in reception to teach the children early maths skills such as addition, subtraction, sharing and shape work. Staff will also use songs and nursery rhymes with mathematical elements to engage children. The children in reception follow the White Rose curriculum to ensure a solid foundation of number work and patterns before finishing the Early Years curriculum.

Every unit of work covers all of the Early Learning Goals (ELG's) within the Early Years Framework. With children having opportunities to return to skills in order to develop mastery within maths.

IMPACT

The impact of this curriculum design will lead to progress across key stages relative to a child's individual starting point and their progression of maths skills. The impact of our mathematics curriculum is measured in a variety of ways:

- Annual reporting of standards across the curriculum.
- Marking of work in books.
- A reflection on standards achieved against the planned outcomes.
- Monitoring and evaluation of the subject throughout the year
- Pupil discussions about their learning, which includes discussion of their thoughts, ideas, processing and evaluation of their mathematical knowledge.

The maths lead has a clear role and overall responsibility for the progress of all children in maths throughout school. Working with SLT, key data is analysed and regular feedback is provided and discussed at pupil achievement meetings to inform on progress and future actions In order for this to happen, the Mathematics lead, the Headteacher and the Senior Leadership Team take responsibility for the monitoring of the mathematics curriculum and the standards achieved by the children. The subject lead will monitor for appropriate pitch and progression at least once every half term.

By end of the maths curriculum at Hazel Leys, our children will:

- Enjoy mathematics and develop a sense of curiosity about the subject with a clear understanding.
- Have a positive 'can do' attitude and promote the fact that 'We can all do maths!'
- Have a secure and deep understanding of mathematical concepts.
- Know mistakes and misconceptions are considered an essential part of
- Be challenged and explore their mathematics more deeply.

CURRICULUM COVERAGE - OVERVIEW

| | | | Auti | umn 1 | | Autumn 2 | | | | | | |
|-----------|----------------------------|----------------------------|---|---|---|---|---|--|--|--|------------------------------------|---|
| Reception | Baseline | Baseline | Baseline | Match, Sort and compare | Match, Sort and compare | Talk about measure and pattern | Talk about measure and pattern | lt's Me 1, 2, 3 | lt's Me 1, 2, 3 | 1, 2, 3, 4, 5 | 1, 2, 3, 4, 5 | Circle, Triangles and 4 sided shapes |
| Year 1 | Place Value (within 10) | Place Value (within 10) | Place Value (within 10) | Place Value (within 10) | Place Value | Addition and Subtraction (within 10) | Addition and Subtraction (within 10) | Addition and Subtraction (within 10) | Addition and Subtraction (within 10) | Addition and Subtraction (within 10) | Geometry | Consolidation |
| Year 2 | Place Value | Place Value | Place Value | Place Value | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Shape | Shape | Shape |
| Year 3 | Place Value | Place Value | Place Value | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Multiplicatio n and Division | Multiplicatio n and Division | Multiplicatio n and Division | Multiplicatio n and Division |
| Year 4 | Place Value | Place Value | Place Value | Place Value | Addition and Subtraction | Addition and Subtraction | Addition and Subtraction | Area | Multiplicatio n and Division | Multiplicatio n and Division | Multiplicatio n and Division | Consolidation |
| Year 5 | Place Value | Place Value | Place Value | Addition and Subtraction | Addition and Subtraction | Multiplicatio n and Division | Multiplicatio n and Division | Multiplicatio n and Division | Fractions | Fractions | Fractions | Fractions |
| Year 6 | Place Value | Place Value | Addition, Subtraction, Multiplicatio n and Division | Fractions | Fractions | Fractions | Fractions | Converting Units |

| | | | Spri | | Spri | ng 2 | | | | |
|-----------|----------------------------|----------------------------|--------------------------------|--|--|--|--------------------------------|----------------------------|----------------------|--------------------------------------|
| Reception | Alive in 5 | Alive in 5 | Mass and Capacity | Growing 6, 7, 8 | Growing 6, 7, 8 | Height, Length and Time | Height, Length and Time | Building 9 and 10 | Building 9 and 10 | Building 9 and 10 |
| Year 1 | Place Value (within 20) | Place Value (within 20) | Place Value (within 20) | Addition and Subtraction (within 20) | Addition and Subtraction (within 20) | Addition and Subtraction (within 20) | Place Value (within 50) | Place Value (within 50) | Length and Height | Length and Height |
| Year 2 | Money | Money | Multiplication and Division | Multiplication and Division | Multiplication and Division | Multiplication and Division | Multiplication and Division | Length and Height | Length and Height | Mass, Capacity and Temperature |

| Year 3 | Multiplication and Division | Multiplication and Division | Multiplication and Division | Length and Perimeter | Length and Perimeter | Length and Perimeter | Fractions | Fractions | Fractions | Mass and Capacity |
|--------|--------------------------------|--------------------------------|--------------------------------|-------------------------|-------------------------|-----------------------------|--|--|-------------------------------|-------------------------------|
| Year 4 | Multiplication and Division | Multiplication and Division | Multiplication and Division | Length and Perimeter | Length and Perimeter | Fractions | Fractions | Fractions | Fractions | Decimals |
| Year 5 | Multiplication and Division | Multiplication and Division | Multiplication and Division | Fractions | Fractions | Decimals and Percentages | Decimals and Percentages | Decimals and Percentages | Perimeter and Area | Perimeter and Area |
| Year 6 | Ratio | Ratio | Algebra | Algebra | Decimals | Decimals | Fraction, Decimals and Percentages | Fraction, Decimals and Percentages | Area, Perimeter and Volume | Area, Perimeter and Volume |

| | | | Sum | mer 1 | | | | Sum | mer 2 | | | |
|--------------------------------|---|--------------------------------------|------------------------------------|------------------------------------|------------------------------------|--|--|---|---|---|---|---|
| Reception | Explore 3D Shapes | Explore 3D Shapes | To 20 and Beyond | To 20 and Beyond | How Many Now? | Manipulate, Compose and Decompose | Manipulate, Compose and Decompose | Sharing and Grouping | Sharing and Grouping | Visualise, Build and Map | Visualise, Build and Map | Make Connections |
| Year 1 | Mass and Volume | Mass and Volume | Multiplicatio n and Division | Multiplicatio n and Division | Multiplicatio n and Division | Fractions | Fractions | Geometry | Place Value (within 100) | Place Value (within 100) | Money | Time |
| Year 2 | Mass, Capacity and Temperature | Mass, Capacity and Temperature | Fractions | Fractions | Fractions | Time | Time | Time | Statistics | Statistics | Statistics | Position and Direction |
| Year 3 | Mass and Capacity | Fractions | Fractions | Money | Money | Time | Time | Time | Shape | Shape | Statistics | Statistics |
| Year 4 | Decimals | Decimals | Decimals | Money | Money | Time | Time | Consolidatio n | Shape | Shape | Statistics | Position and Direction |
| Year 5 | Statistics | Statistics | Shape | Shape | Position and Direction | Position and Direction | Decimals | Decimals | Negative Numbers | Converting Units | Converting Units | Volume |
| Year 6 | Statistics | Statistics | Shape | Shape | SATS | Shape | Position and Direction | Consolidatio n and Problem Solving |
| SEND – S • Break • Adult | SEND – Strategies for supporting accessEnd• Break down learning – now/thenEdd• Adult support – start off then independent (where possible)cla | | | | | | | its are anoth | er opportun | ity for Art to | take place o | outside of the |

| • | Images to | support |
|---|-----------|---------|
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- Specific simple instructions
- Adaptive teaching
- Re-capping within lessons for all or groups of pupils
- Mixed ability groups
- Definitions revisit
- 6 part lesson
- Knowledge focused approach

- Local jobs using art (nails, make up etc.)
- Visits to Art Gallery
- Lemonpop Academy
- Art competitions in house teams
- Art Day

| SUBJECT LEADERSHIP AND DEVELOPMENT | | | | | | |
|--|--|--|--|--|--|--|
| Subject Strengths Pupil enjoyment of maths lessons Collaborative approach to the planning – LTP/MTP with all staff Clear sequence of learning in planning Staff engagement with White Rose Hub | Areas to Develop To continue to develop the 6 part lesson approach To enhance CPA approach across the whole school To improve times tables knowledge for all pupils | | | | | |
| Monitoring T1 Focus – MTPs - Book monitoring T2 Focus – Connections – CTs discussions – Books/pupil voice T3 Focus – SL discussions with CTs - Book monitoring | CPD Sequence of learning – Development of LTPs and MTPs – identifying and addressing gaps SL curriculum monitoring CPD Staff to observe each other to develop all aspects of the maths curriculum | | | | | |