



## Maths Policy 2018-2019

Here at Lyndhurst Junior School Academy, we believe a high quality Maths education provides foundation for understanding the world, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity for the subject.

### Aims and Objectives

At Lyndhurst Junior School Academy, the curriculum for Maths aims to ensure that all pupils:

- 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.

Pupils are encouraged to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

### Mathematics Planning

Lyndhurst Junior School Academy follows the National Curriculum and long term planning in Year 3, 4 and 5 has been adapted from the White Rose Scheme to fit in with our termly assessments. Within each year group, a detailed, structured curriculum is mapped out across all phases, ensuring continuity and supporting transition. Each learning objective is planned and taught in small, carefully sequenced steps. Fundamental skills and knowledge are secured first. This often entails focusing on curriculum content in considerable depth at early stages. Year 6 adapt the National Curriculum to fit the needs of the individuals.

Each year group will work together along with the support of the Maths Leader (if required) to compose the weekly teaching sequence for the delivery of maths. A copy of the detailed smartboards are then submitted into a planning folder within each year group so that the Maths Leader is able to monitor and provide both formal and informal feedback if needed. A copy of the Big Maths planning should also be included on a weekly basis as well.

### Teaching and Learning Style

Lyndhurst Junior School uses a variety of teaching and learning styles in mathematics lessons. Our principle aim is to develop pupil's knowledge, skills, understanding and enthusiasm in mathematics. We do this through a daily lesson that begins with a 20 minute Big Maths starter followed by an hour lesson which starts with a whole-class input, guided work and then independent activities. Each lesson is based on the Mastery curriculum and includes the five core areas of teaching (Fluency, Cohesion, Reasoning, Variation and Problem Solving).



## Teaching Resources

A coherent programme of high quality curriculum materials is used to support classroom teaching. Concrete and pictorial representations of mathematics are chosen carefully to help build procedural and conceptual knowledge together. Equipment has been brought for all classes for pupils to use and tasks are structured with great care to build deep conceptual knowledge alongside developing procedural fluency. The focus is on the development of deep structural knowledge and the ability to make connections. Making connections in mathematics deepens knowledge of concepts and procedures and ensures what is learnt is sustained over time.

Teaching is not taught through textbooks, however the use of 'Maths No Problem' and 'White Rose – Small Steps' have helped with the planning of units. Worksheets for lessons have been carefully created to ensure that progression is taking place within a lesson. Worksheets will be tailored to include a variety of representations needed to introduce and explore a concept effectively and also set out related teacher explanations and questions to pupils before moving on with less scaffolding and support. Teachers are clear that their role is to teach in a precise way which makes it possible for all pupils to engage successfully with tasks at the expected level of challenge. Pupils all start of the same tasks and engage in common discussions. Concepts are often explored together to make mathematical relationships explicit and strengthen pupils' understanding of mathematical connectivity. Precise questioning during lessons ensures that pupils develop fluent technical proficiency and think deeply about the underpinning mathematical concepts.

Whilst taking a mastery approach, differentiation occurs in the support and intervention provided to different pupils, not in the topics taught, particularly at earlier stages. There is no differentiation in content taught, but the questioning and scaffolding individual pupils receive in class as they work through problems will differ, with higher attainers challenged through more rigorous questioning and applying their knowledge to demanding problems which deepen their knowledge of the same content. Pupils are encouraged to reason more in lessons and explain through verbal and written explanations of how they know something. Pupils' difficulties and misconceptions are identified through immediate formative assessment and addressed with rapid intervention – commonly through individual or small group support in the lesson. Teaching Assistants are deployed to support targeted children within the classroom.

## Maths Assessment

We assess children's work in mathematics on a daily basis. We use this to help us adjust our daily planning as and when required. At the end of each unit of work, we also undertake a block assessment which helps to inform the teachers' planning. Each term, the pupils are tested using the White Rose Hub assessments. A mark is given along with a threshold to assess where the children are at and to also measure progress against school and national targets. These tests have been carefully chosen to match the timing of the curriculum being taught. Every pupil will undertake the correct test for their Year Group. The only exception being if a pupil is being taught a different curriculum then they would take the appropriate assessment for them.

In Year 6, we use past SAT's papers and pupils will complete mock SATs assessments in November and February before completing the real paper in May.



## Maths Homework

At Lyndhurst, our aim is for children to become fluent with number facts. Mathematical reasoning and problem solving cannot happen until children are secure with how numbers work. We want children to have fun whilst learning these facts and we encourage parents to help with this too.

Following parental consultation, the Maths homework has been revised in line with the new mastery curriculum, with a particular focus on fluency and recall. Children are asked to practise their 'Learn Its' at least 4 times a week ready for testing back in school using Big Maths challenges.

## Monitoring and Review

Monitoring of the standards of pupils work and the quality of teaching in Maths is the responsibility of the Maths Leader and the SLT team. Coaching is undertaken by SLT across the school whereby the teaching and learning and books are looked at during this time. Book scrutinies across the whole school are also undertaken on a termly basis.

The work of the Maths Leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, providing a strategic lead and direction for the subject within the school. A Maths working party was set up at the end of last term with representations of teachers from across each year group. This supports the teaching of Maths.

The Maths Leader has also undertaken a PD Lead qualification with the NCETM and from September will support three other schools with their Maths teaching through the NCETM Teacher Research group. They are also part of the Portsmouth Network where they attend meetings with other schools in the area to keep up to date with the current developments in Maths. There will also be two other Teachers from the school who will be involved in a TRG research group to improve their subject knowledge of Maths mastery to help disseminate any relevant information throughout the school.