



Maths Policy

INTEND

This policy is underpinned by the school's mission statement: Learning and Growing Together.

Rationale

Intent

Our intent at Lyng Primary, is to develop confidence, competence and a deep understanding in Maths for all pupils. We strive to create a culture that produces strong, secure learning with real progress. At Lyng, we take the mastery approach to Maths teaching by following the White Rose Maths motto of 'Everyone Can Do Maths: Everyone Can!' and the concept of I haven't got it.....YET! We aim to give all children the right guidance, support and resources so that they can become confident and competent mathematicians.

By embedding this approach across school, we are creating engaged, resilient and skilled mathematicians who thrive on the sense of a challenge. At Lyng, we recognise the importance of Maths in everyday life and how children need to understand how and when to use maths in the real world. Children regularly have the opportunity to take their maths learning outside the classroom (and school) to implement their skills into the world around them. This helps significantly when tackling number problems and maths concepts as well as contributing to becoming independent thinkers, reasoners and problem solvers.

At Lyng Primary, we follow the White Rose Scheme of work. This scheme maps out the maths topics throughout each year group into blocks. The White Rose Scheme shows clear progression between the year groups, but it is also a cumulative curriculum, meaning that once a topic is covered, it is revisited many times again in other contexts. Each block of knowledge is divided into small learning steps and together these small steps cover all the curriculum content the children need to learn. By learning Maths in small, related chunks, children will remember more. Children also take part in weekly retention quizzes (Flashback Fridays), which focuses on previous learning and topics, this also aids to our ideas of a cumulative curriculum.

Aims

In our teaching of mathematics at Lyng Primary School, the aim is for all pupils to have equality of opportunity. As a result of our Maths teaching at Lyng, you will see:

- children who have a love for Maths


- children who enjoy being challenged.
- lessons that use concrete manipulatives to show the structure behind the maths.
- confident children who are flexible with their approaches to different maths concepts.
- children who can confidently talk about their Maths work and explain their mathematical thinking.
- lessons that allow all children to progress by using an enabling and extending approach.
- lessons that show fluency, reasoning and problem-solving.

Objectives

- Ensure that all pupils follow a broad and balanced mathematics programme based on the requirements of the National Curriculum.
- To ensure that all pupils are provided with interesting and challenging tasks that enables them to achieve standards in line with their abilities and potential.
- To ensure that pupils can work individually, collaboratively in groups and within the whole class.
- To allow pupils to develop as independent learners, able to make decisions about their own work

Our Maths Curriculum is designed to allow pupils to develop the following key characteristics:







KS1




Maths

Dennis the Ant

As a Mathematician, I will aim to:

-  be confident with numbers.
-  use maths equipment practical.
-  try, try and try again to get the right answer.
-  answer in my head.
-  explain my answer through drawings or talking.
-  challenge myself.







KS2



Maths

Dennis the Ant

As a Mathematician, I will aim to:

-  Become confident with all aspects of maths by using equipment to help me
-  Demonstrate my reasoning skills
-  Learn times tables by heart
-  Problem Solve
-  Persevere and learn from mistakes
-  Explain my methods and answers

Strategies for the teaching and learning of mathematics at Lyng Primary School

Maths lessons at Lyng Primary focus on the three main elements to Maths in the National Curriculum.

- ❖ To be fluent
- ❖ To reason

❖ To problem solve

All children will become familiar to these three areas throughout the maths lessons by using the enabling and extending approach.

The majority of children at Lyng, are working on age-related content within their lessons and our live marking approach ensures children in need of extra guidance or support are quickly identified and a follow up intervention is put in place that day.

During our weekly lessons, arithmetic is also a strong focus. Mental Maths Monday is a weekly 30-minute lesson which focuses on a specific mental skill the children need to learn within their year group. The lesson is majority whiteboard work, which helps their speed and mental jotting skills. At the end of each lesson, an Mental arithmetic question is given to assess their understanding. Each strategy is revisited through our Flashback Friday quizzes.

As well as our weekly arithmetic lesson, children from Year 2 – Year 6 also take part in BEAT the CLOCK times table challenges. This is a strategy we introduced to help support our children’s rapid recall of their times tables. We give the children up to 72 times table questions on a weekly basis and the results are recorded via a spreadsheet. This enables teachers to identify children who are struggling on different times tables and therefore immediate interventions can be put in place. Our subscription to TTRS (Times Table Rock Stars) also supports our children’s rapid recall as teachers set weekly times table battles as well as termly year group battles which engages and encourages children to learn their tables through speed and ‘Rock Star Status’.

Throughout our maths lessons, we use a concrete-pictorial approach to guide children through their understanding of mathematical processes. The idea behind this is that the children need to see the structure behind the maths and using a range of concrete manipulatives allows the children to see this. Times tables is an intricate part to Maths.

Early Years Foundation Stage

Children in Nursery and Reception plan and deliver sessions in line with ‘Development Matters,’ following the developmental age bands as guidance and working towards the Early Learning Goals (GLD), The Early Years’ curriculum is linked broadly to themes and to the children’s interests.

The children learn through whole class teaching and small group activities. The activities are differentiated by ability; according to statements within the age bands and working towards the E.L.G statements. Mathematical Development is approached through a variety of activities including; stories, songs, games and imaginative play. Children also develop mathematical skills through child-initiated play where adults link learning and extend their play. Activities at the beginning of the year are mainly practical based and recording is carried out using photographic evidence and a combination of incidental and long observations.

As the year progresses, more advanced elements of mathematics are taught that continue to be matched to the children’s abilities. Teacher led activities are carried out in small groups on a daily basis.

Over the course of Nursery and Reception the following skills will be developed:

- Appropriate mathematical language.
- Making comparisons
- Sorting
- Understanding one to one correspondence
- Conversation of number
- Recognition of numbers (up to 20)
- Writing numbers correctly (up to 20)
- Basic use of estimation
- Naming and describing basic 2D and 3D shapes
- Copying and recognising patterns
- Early use of conventional time units
- Early use of non-standard and standard measures
- Early use of appropriate IT
- Addition and subtraction
- Doubling and halving
- Money
- Counting in 2s, 5s and 10s.

Key Stage 1 and Key Stage 2

Children are in mixed ability classes for all their maths lessons. Lessons are planned for using the White Rose Scheme. At Lyng, we are following the CPA approach so lessons consist of planned CONCRETE task (manipulatives), PICTORIAL formations (drawings) and ABSTRACT work (numbers/digits).

Children also have an extra 30 minute maths session on a Monday morning which is a focused arithmetic session (mental maths Mondays). In this lesson children can practise number bonds, times tables, number facts, written methods, percentages, etc.

Planning

- Medium term plans – each year group will be given an overview of the units to be covered each term and the approximate length of time spent on each unit from the White Rose Scheme of work. However, we scaffold our learning to the needs of our learners so this is a guideline and staff make their own judgements if more/less time is needed.
- Weekly Smartboards are created to help the maths learning journey. Manipulatives are planned and used to support our CPA approach.
- The Maths subject leader will monitor the planning on specific Monday afternoons alongside a selection of books.

Resources and manipulatives

Resources and manipulatives play a huge part during maths lessons at Lyng. They are overseen by the mathematics lead. The role of the Maths subject leader is to support the Maths curriculum. Resources and manipulatives are stored in the classrooms with a small amount of equipment stored centrally (year 5 middle area). The subject leader will complete an audit of resources at the start of each academic year. Standards funding for training is also available to support the CPD of all staff.

Marking

Marking will be carried out daily and in accordance with the school's marking policy (live marking is expected in maths lessons).

EYFS Assessment

Children are assessed throughout the year during child initiated and teacher directed activities following early year's assessment policy.

KS2 and KS2 Assessment

Children are assessed termly through the White Rose scheme. They complete a COLD assessment at the start of each term and then complete the same assessment at the end of each term once all the teaching and learning has taken place, better known as a HOT assessment. The progress from the COLD to HOT is monitored and analysed. This feeds into the school's assessment system which gives each child an overall academic level.

Daily Assessment

In the short term, teachers will carry out continuous assessment of children's progress in all aspects of the Maths Curriculum. The temperature is taken at the start of every maths lesson and the end. Children and teachers alike can see how much progress has been through the temperature and imindtae intervention can take place. Teachers also develop the use of peer and self-assessment with systems such as WWW (what went well) and EBI (even better if) against the WALT and Success Criteria.

Assessment and Moderation

Children's progress in Maths is assessed through success criteria in lessons with the progress against these informing the feedback of that child's work. In addition to this at the end of every term the class teacher is expected to upload judgements of their progress and attainment to the SIMS tracker. Progress and retention of knowledge is monitored through regular quizzing and revisiting skills and vocabulary through the word wallets in every classroom.

Children are assessed as one of the following:

Code	Meaning	Support
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U	Unable to assess	Not sufficient evidence to make a judgement.
E	Emerging	Heavily scaffolded – accessing the objective with resources.
D	Developing	Uses age appropriate scaffolding.
S	Secure	Independent application.
M	Mastered	Application outside the lesson independently.

Moderation of Maths work occurs on a termly basis.

Topic Mathematics Links

Learning skills may be developed across the curriculum. Examples include measuring in technology, charts and graphs in science and geography, time and dates in history, patterns in art, music and dance, scoring and counting in physical education. Skills such as listening, speaking, interpreting and questioning, hypothesising, etc will be integrated into the daily mathematics lesson.

This helps to expand and consolidate mathematical concepts and using maths in a purposeful way in everyday contexts and helps the children to realise that mathematics is important in the real world.

Teachers are expected to teach 2 cross curricular maths lessons per term. This will be monitored by the Maths co-ordinator.

Homework

Weekly homework is set via Mirodo in accordance with Lyng Primary School’s home learning policy. Home learning activities may include:

- Learning of multiplication tables
- Pre learning for upcoming topics
- Post learning to support retention of learning covered in class
- Extra practice of calculations taught during the week.

Dennis the ant is our Maths expert



As chosen by the School Council, Dennis the spider is our expert in all things maths. Our Lyng Learning Animals allow the children to access learning in a fun and engaging manner.

Role of The Maths Subject leader

To plan for and sustain development and improvement in the teaching of learning of mathematics.

- Lead/organise staff development
- Ensure continuity and progression through monitoring of planning, book, and lessons.
- Support the development of record keeping, assessment and target setting systems in mathematics.
- Disseminate good practice.
- Analyse data from termly assessments and highlight no progress or slow movers for intervention.
- Monitor, order and organise maths resources.
- Keep up to date with developments in maths. Disseminate to others.
- Inform Headteacher and Maths link governor of issues affecting mathematics within the school.

Equal Opportunities

There is a school equal opportunities policy, which is applied to mathematics. Teaching materials are chosen to reflect the cultural and ethnic diversity of our society. At Lyng Primary School we try to avoid stereotyping through gender or race. Pupil's performance is monitored to ensure that no group of pupils is disadvantaged. In lessons, the full participation of both girls and boys is encouraged and care is taken to ensure that the emphasis on whole class teaching does not disadvantage any gender.

Health and Safety

In line with the schools health and safety policy, children are instructed in the use of all equipment. If children are working outside the classroom they are supervised, especially during cooking and more practical activities. Children will be taught how to use potentially dangerous equipment in a sensible manner e.g. scissors, pair of compasses, weights.

Parental Involvement

A leaflet has been completed to support the calculations policy and will be reviewed. The parents are informed of the targets at parent's evening. Where appropriate, open meetings are planned to encourage parents to learn the methods of calculations used in mathematics lessons at Lyng. The Maths leader will host maths sessions for parents throughout the year to explain the Written Methods and expectations in maths for the three phases. Year 1 and 2, Year 3 and 4 and Year 5 and 6.

Monitoring and Evaluation

Staff will review this policy and the Full Governing Body will be informed.

The Headteacher reporting to the full Governing Body will evaluate progress.

Reviewed November: _____

Next Review Date: _____