LEOMINSTER PRIMARY SCHOOL

MATHS POLICY AND GUIDELINES

All children have a statutory entitlement to access the Programmes of Study for mathematics as set out in the National Curriculum. The National Curriculum aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics
- **reason mathematically**
- can **solve problems**

Leominster Primary School has embraced the new Curriculum and its aims. We seek to develop, broaden and deepen the children's skills in order that learners are confident mathematicians, deriving enjoyment and satisfaction from their achievements and recognising the relevance of the subject in everyday life. Our commitment to prioritise these vital life skills is reflected in our timetable, which provides:

For Key Stage 2:

Years 3, 4, 5:

- Daily 50 minute maths lessons
- Additional Big Maths sessions (Monday to Wednesday 20 minutes, Thursday 40 minutes)

Year 6

- Daily maths lessons, lasting 1 hour and 10 minutes and encompassing core maths activities followed by the main lesson.

For KS1:

Year 1 & 2:

- Daily 50 minute maths lessons
- Additional 20 minute Big Maths sessions

We value highly the process of self-evaluation to ensure that our procedures are having a positive impact and are continually reviewing and amending our approaches in response to a schedule of lesson observations, pupil work evaluation and feedback meetings with teaching staff.

INCLUSION AND EQUAL OPPORTUNITIES

Positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics. This policy is in line with the school's 'Racial Equality' policy. The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons.
Lessons involving lots of visual, aural and kinaesthetic elements will benefit all children including those for whom English is an additional language (EAL).
Differentiated questions are used in lessons to help children and planned support from Teaching Assistants and other adults.

CURRICULUM

Foundation Stage

The programme of study for the Foundation stage is set out in the EYFS Framework. Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shape, spaces and measures.

Key Stages 1 and 2

The knowledge, skills and understanding are set out in the National Curriculum Programmes of Study which have been adopted by the school. The objectives for mathematics are organised by year group and by curricular area, covering the age related expectations of pupil performance. The areas are:

- Number – number and place value
- Number - addition and subtraction
- Number – multiplication and division
- Number - fractions
- Measurement
- Geometry - properties of shapes
- Geometry - position and direction
- Statistics (Year 2 onwards)

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly are to be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

LEARNING ENVIRONMENT

At Leominster Primary School, we aim to provide a mathematically stimulating environment. Each classroom has a mathematics working wall which outlines examples and resources to support concept development for current objectives. In every classroom, concrete apparatus (Numicon, Base 10, etc) and other resources such as number lines, hundred square, place value charts and multiplication squares are displayed as appropriate and used as resources for whole class or individual work. The children are free to choose which resources they use, as well as being directed towards them.

TEACHING AND LEARNING

BIG MATHS

In order to be fluent mathematicians, pupils need to build a working knowledge of the number system, of mathematical facts, including number bonds and multiplication tables, and of calculation methods.
At Leominster Primary School, we follow the **Big Maths** programme to teach and assess these core areas of mathematics. Each twenty minute session includes counting, knowledge and rapid recall of mathematical facts ('Learn Its'), recognition and use of linked facts ('It's Nothing New'), and mental and written methods of calculation. Learning Objectives are drawn directly from the National Curriculum programmes of study. Staff have received training and the required resources. Big Maths online is used to assess, plan and deliver a rigorous and structured programme. At present, groupings from Years 1 to 5 are based on prior attainment and there is flexibility within this to allow for movement between groups according to individual attainment or need. Reception pupils are not grouped but work in mixed classes.

NB In 2016/17, Year 6 will not follow the newly-introduced Big Maths programme. Instead, Year 6 teachers will plan daily core maths activities designed to address the particular needs of their classes.

DAILY MATHS LESSON

The main daily maths lesson is based around the concrete, pictorial, abstract approach of the OUP Numicon programme. From January 2017, the school has decided to block the learning objectives, taken from the National Curriculum, rather than following the spiral curriculum approach of the original programme. This is so that each the links between objectives can be fully exploited in order to promote the depth of understanding that the curriculum demands. The blocked unit overviews were put in place in January 2017 and are available in the Numicon section of the Maths folder in Common Staff. The overviews will be amended and updated in preparation for the 2017-18 academic year.

When planning a unit of work, teachers are guided by the teaching activities detailed in the Numicon handbooks for each year group, and plan to implement those activities which are appropriate to the needs of their class. Planning is usually undertaken by year group teams and presented in the school's planning format, which is again available in Common Staff.

NB Again, in 2016/17, Year 6 will not adopt the Numicon programme as the basis of their activities. Instead, objectives will be blocked appropriately for each class and class teachers will select from a range of materials, including past SATs questions (using TestBase), when planning and delivering lessons.

LEARNING OBJECTIVE

It is crucial that all participators of any lesson are clear about what is being **learnt** in each session. (As opposed to what is being **done**.)
The learning objective of each Maths lesson must be displayed consistently on each IWB page during the lesson and will often be transferred to the class working wall to demonstrate learning progression.

At the beginning of the lesson, teachers must share and fully discuss the learning objective and its vocabulary. The learning objective should then be frequently revisited and understanding of it checked throughout the session.

SUCCESS CRITERIA

Teachers should provide the children with 3 success criteria for each learning objective, during maths lessons. These provide a scaffold to support understanding of a process or concept. It is also appropriate develop success criteria with the children as part of a lesson, particularly where the learning in investigative.

ELICITATION

An activity will usually be given to assess individual understanding of the area of maths being taught. This can be prior to the lesson, or as part of the lesson. The purpose of elicitation is to identify groupings so that teaching input can be focussed appropriately, identifying any gaps in prior learning and ensuring children are challenged appropriately. Elicitation questions should offer different levels of challenge, including opportunities to demonstrate ability to reason within the objective. Assessment at this stage will also be supplemented by questioning and discussion.

PUPIL ACTIVITIES

Pupil activities will be designed to deepen and broaden understanding of the objective. Teachers endeavour to design activities which provide:

- movement from concrete to abstract through pictorial (C-P-A)
- problem solving to challenge thinking
- individual, paired, group and whole class learning and discussions
- purposeful, but not repetitive, practise where time is given to apply their learning
- open and closed tasks
- a range of methods of calculating e.g. mental, pencil & paper and using a calculator
- variation of tasks around the objective
- opportunities for reasoning at all stages of attainment

MARKING AND FEEDBACK

At Leominster Primary School, we believe that our pupils' efforts should be valued and rewarded. This is partly achieved through the knowledge that their work will regularly and promptly be carefully considered, in terms of what has been achieved along with clear guidance as to how their learning can be reinforced or further developed, and that this will be communicated clearly back to them.
In line with our commitment to clarity of learning, feedback will be led by the Learning Objective of the lesson. It is vital that the children are fully aware of the criteria their work will be marked against and this should always be made clear throughout the lesson.

Crucially, pupils will be given regular opportunities, and will be expected, to reflect upon, to respond to and act upon feedback given.

It is important that our policy and practice remain focused on the purpose and the desired outcomes of effective feedback, which are:

- To highlight and celebrate success
- To generate improvement

- To model and guide pupils towards self-evaluation
- To identify and tackle misconceptions
- To identify and support next steps in learning
- To establish high expectations
- To give pupils opportunities to act upon feedback
- To allow the pupils a chance to re-try or demonstrate their level of understanding
- To motivate pupils to strive to reach their full potential
- To raise children's own awareness of their strengths and areas for development

The guidelines for marking are set out in the summary below.

Marking Policy Summary – Maths

Book entries

- KS1 : **3 out of 5** per week
- KS2 : **3 out of 5** per week

Marking

- **Red** pen
- ***Tick*** *to identify* ***correct answers***
- ***Dot*** *to identify* ***incorrect answers***
- **C** (up to a maximum of 3) to show where corrections are required
- ***Write P, W or D after LO*** *to indicate the* ***activity*** *the child has* ***undertaken: P****reparing for the objective;* ***W****orking within the objective;* ***D****eepening the objective.*
- ***Use P, W or D to indicate also where child has moved from one activity to another as a result of formative assessment within the lesson***
- If child is **supported** during lesson, show with **S where support has taken place**
- When **80% of work** completed is **correct** show with **'LO met'** at the end of work to show intended learning has been achieved
- If **LO not met,** a **visual support (scaffolding)** must be given which is an example followed by a question the child can complete:

→ 2.16 **=** 2 wholes + 1/10 + 6/100

You try: 3.27 =

- Comment on presentation when appropriate
- House points can be given for accurate, well presented work and effort.

Corrections

- To be completed during **5 minutes** at the **start of lesson** or during independent activities
- Corrections and target examples to be completed in **green**
- Corrections should be checked by teacher and either ticked or initialled

Development Activities

On-going formative assessment during the lesson should ensure that children make progress. This will usually involve movement through activities. Where a child has completed only the within

task and been successful on three occasions, they are to be given a **development target** short task which broadens and deepens their learning. This could be the D task from that day. If a child has been successful in P tasks, then they could be given an activity from the day's W task.

Development tasks should, by their nature, broaden and deepen learning so it is not expected that a child undertaking these D activities should be given additional tasks. Care should be taken to ensure that the development tasks are challenging and include exploration.

- If giving a development task, Write **'D'** to indicate this followed by the task or question.

Appendix: Year 6

Core Maths

A learning objective is not recorded for the Year 6 core practice (a regular feature of maths lessons). This is because there may not be a common focus since the practice is designed to give the children experience of varied arithmetic questions and to reinforce understanding in readiness for the SATs arithmetic paper. However, 'LO met' will still be used as a marking response where the teacher is satisfied that the practice has been understood. Where a judgement of 'LO met' cannot be made, the child will receive immediate focussed verbal input and practice within the lesson.

The same method of feedback applies to lessons where test questions have been used to deepen understanding and prepare the children to solve reasoning problems.

This policy will be reviewed regularly.

Mathematics Coordinators: James Grant and Amanda Brookes
Date of last review: January 2017
Date of next review: January 2018