Policy Statement for Maths

Approved by Staff: June 2018

Approved by Governors: Summer 18

To be reviewed: Summer 20

Subject Leader: Mrs Heley

Aims

The aim of this policy is:

- To explain how our maths teaching is aligned with the core values of Spixworth Infant School
- The role of Maths Mastery
- Roles and Responsibilities
- Lesson Structure Expectations
- Recording
- Monitoring and Feedback
- Assessment
- Governors
  Appendix

Our Core Philosophy

All of our teaching at Spixworth Infant School is inspired by our Core Values: Safety, Teamwork, Achievement, Respect and Stimulating.

How this applies to the teaching of mathematics:

At Spixworth Infants, we aim to contextualise our mathematics wherever possible, linking the skills with those needed to explore our whole school topics. We teach reflectively, planning a sequence of lessons which change daily and reflect the needs of the pupils. In it is in this way that we hope to support children's understanding of how mathematical skills play a role in the world around them, giving their learning purpose and meaning, making it **stimulating** for our learners to explore and master. By teaching reflectively, we support children's **achievement** and are able to support gaps in learning and correct misconceptions more quickly. We embed the idea of not knowing across our curriculum, establishing our school as a **safe** place to make mistakes.

We do not have set groupings in maths lessons, but rather continuously regroup children based on their needs and the desired outcomes of the task. It is in this way which we embed **teamwork** skills, allowing children to work collaboratively and foster an environment of **respect**, where children are never labelled.

At Spixworth we recognise maths as a vital part of the curriculum. It provides an essential set of skills to enable children to make greater sense of the world around them, both now and in the future.

Our aims in teaching mathematics are that all children will

- Enjoy the subject and study it will enthusiasm

- Understand the purpose behind core skills through contextualised experiences
- Apply these skills with confidence when problem solving, explain their thought process to others with reasoning and develop fluency to use these skills across the curriculum
- Achieve across the subject

Maths Mastery

Spixworth Infant school uses the values of Maths Mastery to support the learning of its pupils.

Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics.

• The large majority of pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention.

• Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons which are designed to meet the needs of the learners. (See Good Practice Appendix)

• Practice and consolidation play a central role. Our Long Term plan is designed to continuously revisit concepts in different contexts in order to support the mastery of concepts taught.

• Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up. Reasoning is recorded through pupil work as well as Tapestry.

The intention of these approaches is to provide all children with full access to the curriculum, enabling them to achieve confidence and competence – 'mastery' – in mathematics, rather than many failing to develop the maths skills they need for the future.

(*Mastery approaches to mathematics and the new national curriculum* - NCTEM, October 2014)

Roles and Responsibilities

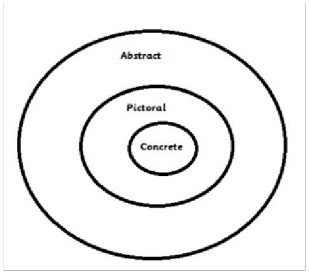
The **Head Teacher** will ensure that the legal requirements of the National Curriculum for Mathematics are met in the school. They will also support the teachers through curriculum leadership time, supported learning walks, book scrutiny and monitoring planning as needed.

The **Subject Leader** will ensure that the whole school approach is being embedded and that there is consistency and progression across Year Groups. In addition to this, they are expected to:

- Purchase, organise and maintain teaching resources (purchases to be approved by HT/Budget Committee)
- To organise or deliver training to support mathematics within the school
- Keep up to date with local and national initiatives by attending courses and network meetings.
- To provide guidance and support to colleagues to deliver the National Curriculum
- To encourage and support Maths in the wider curriculum and increase its profile with shareholders
- To monitor the quality of teaching and learning across the school
- To create, deliver and follow a Maths action plan which links to the current SIDP and informs future editions.
- To analyse data and use it to support future actions
- Encourage the use of ICT across the curriculum
- To report termly on the progress and actions within Maths (through reports to governors)

All staff are expected to ensure that mathematics teaching:

- Highlight contexts for mathematical skills; indoors or outside as appropriate.
- Provide support which promotes a positive attitude towards the subject
- Encourage pupils to use their initiative and find a method which works for them, giving them the support to ensure they are being systematic in the approach.
- Provide opportunities for pupils to engage with concepts as concrete, abstract and pictorial in a non-linear fashion (outlined below.)



Class teachers are expected to:

- Ensure that children meet the same mathematical concepts in a wide variety of contexts, ensuring they are real and meaningful to each cohort.
- Plan for learning opportunities which are as practical as possible, using tapestry to record events (there is no need to duplicate records in books.)

- Plan for learning which is differentiated by support given, not by learning objective. All children, unless directed by the SENDCO, should be given the opportunity to access age related expectations. Children who are working at greater depth should be working on mastery of the same concept within their Year group.
- Following discussion with SENDCO, direct effective use of intervention for specific pupils. Number Masters is the main intervention used for Maths.
- Tasks progression should be focused on using and applying for mastery of concepts and avoid “more of the same” extensions.
- Pupils are given mathematical teaching which matches their ability and stage of development.
- Schemes are to be used as pick and mix resources only, and planning should evolve daily to match the needs of your learners and show progression. Worksheets are rarely appropriate and therefore strongly discouraged.
- Planning should be structured by the long term plan to ensure adequate coverage.
- Children to work independently and collaboratively to suit the task, and class organisation and grouping should be fluid to match the learning and context.

Lesson Structure

Lessons should follow the Long Term plan for mathematics to ensure coverage across all areas outlined in the National Curriculum. Timetables should be flexible to reflect the needs of the learners and challenges should, unless outlined by the SENDCO, be matched to age related expectations. Where pupils are working below age related, a clear plan for rapid progress must be put into place. All children should have an opportunity to work both with an adult and independently throughout the week.

Lesson learning objectives should be progressive, smart and clear to assess. When applicable, they may highlight a particular resource or concept being taught.

All lessons should include a mental maths component and opportunities for directing, demonstrating, explaining, illustrating, questioning, consolidating, evaluating and summarising.

(appendix – Maths Good Practice)

(see Calculations Policy)

Where applicable, Spixworth aims to give children a varied mathematical experience which includes learning both in and out of the classroom. We are committed to using our outside environment to help providing stimulating learning opportunities to engage all different types of learners.

(see 8 week project)

Recording

Where applicable, children are to record in squared paper Mathematics books. This can include any cross curricular mathematical opportunities (e.g. data collection in science.) Children should be taught from Reception to record one digit/symbol per box and when ready, should be provided opportunities within the provision to access squared paper. Learning objectives should be typed in Sassoon Primary Infant Font, Point 12 and stuck at the top of the page. All work should be marked following the school marking policy. When practical work takes place, this may be recorded and assessed via Tapestry. Opportunities for reasoning should be recorded via Tapestry or where applicable, recorded in books by either the child or scribed. Where the next step for a problem is reasoning and recorded on Tapestry, these should be recorded on the work as a next step. In Year 2, children should begin to record the date independently.

Next steps should provide opportunities for children to respond, either by answering a problem or making a comment, E.g. Show me an example to prove even numbers can be divided by 2, rather than Next step- identifying even numbers. Pupil response should be done in purple pen (see marking policy)

All class teachers teach numeral formation via the same patter (see appendix)

Monitoring and Feedback

ARRANGEMENT FOR MONITORING AND EVALUATION

Monitoring and evaluation are a regular feature of good practice, and the expectation is that the Maths Lead is using learning walks and book scrutiny to inform progress and in line with the actions outlined in the action plan and SIDP. These will be fed back to all staff and individual staff as appropriate. These may be in conjunction with other staff including those from the junior school, where applicable.

Assessment

Spixworth Infant School uses the Assessment Sheets found in the Appendix (see Appendix) which help inform PITA assessment, used termly via Pupil Asset.

Reception

Observations and assessment for Mathematical development will fit under the guidelines laid out in the Foundation Stage policy. Reception children will have daily access to mathematical resources as part of their learning environment and undertake regular adult led mathematical activities. Tapestry will be used to record progress leading to Early Learning Goals.

Year 1

The expectation is that in Year 1, assessment sheets are used to inform planning and provide moderation evidence. Where applicable, grouping may be used to monitor groups of pupils. Where applicable, it may be useful to record individual pupils such as in the case of SEN or Pupil Premium. Evidence should be collated regularly and be available for moderation as needed. Where a child fits securely, evidence need only be collected for that level of development (working towards, at or greater depth.) Where a child is border line or the assessment is less secure, it is best practice to collect evidence for the level below.

Year 2

Due to the nature of Year 2, the expectation is that evidence collection is done for all pupils in Year 2 in line with End of Key Stage Assessments. Where a child fits securely, evidence need only be collected for that level of development (working towards, at or greater depth.) Where a child is border line or the assessment is less secure, it is advised to collect evidence for the level below. Evidence should be collated regularly and be available for moderation as needed and in line with assessment deadlines.

All Year groups are expected to participate in regular moderation, both informally during PPA sessions and more formally at school and cluster level.

Appendix-

Maths Good Practice

Year 1 assessment sheet

Year 2 assessment sheet

PITA descriptors

ICT resources (being built by staff)

Number Patter (Communication4all)