

# **THIRSK COMMUNITY PRIMARY SCHOOL**

## **MATHEMATICS POLICY STATEMENT**

Thirsk Community Primary School advocates a whole school approach to the teaching of mathematics.

### **The Nature of Mathematics**

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.  
(Curriculum 2014)

### **Aims**

The mathematics curriculum aims to ensure that all pupils:

- develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time
- 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

### **National Curriculum**

Nursery & Reception follow the Early Years Foundation Stage for Maths. This is split into two strands, Number and Shape, Space and Measure. Our core provision has mathematical resources threaded throughout it, which is available for children to access everyday.

Our school policy meets the requirements of the National Curriculum (2014) for KS1 and 2.

The content follows the programmes of study and activities planned are varied and differentiated where appropriate.

### **Children's activities and Classroom organisation**

#### **Planning :**

Early Years Foundation Stage

Nursery and Reception enhances their core provision according to 'next steps' and need, using termly assessments to do this. Sometimes, teachers may feel that a particular skill or fact needs to be directly taught. In these instances they plan an adult directed task and complete maths based activities in small groups.

KS1 and 2 use the White Rose Hub medium term planning as a basis for each year groups' overall plan. This ensures both coverage and progression throughout the school.

Individual units will be planned using the schools' agreed planning format and will follow the agreed learning journey.

- Introduce Big Investigation
- Conceptual Understanding
- Fluency
- Reasoning and problem solving activities
- Solve Big Investigation

The organisation should include:

Direct teaching with clear learning objective and success criteria

Individual challenges

Group and paired activities

Agreed common policies are followed to teach particular operations and processes:

- all mathematics work is completed in pencil
- squared books/paper are used in number work
- appropriate practical apparatus available to the children at all times
- place value understanding is seen as being of paramount importance
- calculation methods are those detailed in the appendix of Curriculum 2014

### **Marking Policy**

Children should feel their work is valued and therefore marked regularly, before the next session.

Marking work with the child present is preferable when possible.

Errors should be acknowledged with a pink spot/highlight. Children are expected to correct these.

Green highlighter used to acknowledge good work.

Children and staff should use the agreed self-assessment grid daily.

### **Recording**

We aim to help children develop the confidence to talk about their mathematics, and be able to explain HOW and WHY they have arrived at a particular answer.

Children are encouraged to record their work in a variety of ways, not just as 'sums'. Pictorial recording is encouraged where appropriate.

Investigative work and open-ended activities give children opportunities to express their feelings orally, diagrammatically or through writing about "their method" of solving a problem.

Importance is placed on good presentation, whatever form of recording work is being used.

Mental and oral work are important at all stages of mathematical learning.

Written recording is expected in both KS1 and KS2 but should not come too soon. It is not necessarily a sign of a child's progress.

### **Cross Curricular Links**

Where appropriate cross curricular links with Maths are to be encouraged. Measurement or Pattern occur in Science, Technology, Geography and Art activities. Physical Education and Drama work contain many opportunities for practical number work. Understanding number underpins many Musical activities whilst chronology is an important concept in History.

### **Assessment**

On-going assessment is necessary to determine a child's readiness to progress.

We continually assess our children informally by observing them performing routine tasks and intervene where necessary to support or challenge children's development. This is an integral part of the educational process. Although much of our assessment is done by gradual build-up of teacher observations and collection of evidence, there will be occasions when specific tasks are set to assess a particular skill or concept.

APP sheets are attached to each child's maths book which the teacher completes (dated) as objectives are met. This supports the teacher's professional judgement.

EYFS- Use Objective Led observations in our core provision. These state the current level of development each child is working at and what their next step is.

Year 1- Daily Teacher Assessments.

Year 2 - complete End of Key stage tests.

Year 3 - 5 complete formal maths test termly to support teacher assessment.

Year 6 - complete formal maths test termly to support teacher assessment.

- KS2 SAT's o give a national picture.

We use the End of Year Key Objectives to assist in the making of summary judgements about pupils' achievement as a basis for reporting at the end of each Key Stage.

### **Records**

On-going records are compiled during KS 1 and KS 2

Records of individual pupils' achievements and progress are kept through:

- Maths APP Record Sheet
- Pupil's work books - moderated work and assessed APP levels
- Retained test materials and summative tests

### **Reporting**

Parents are informed of children's progress in mathematics through:

- Informal discussions
- Parental consultation evenings
- Annual reports

### **Staffing**

Mathematics Co-ordinator KS2 Mrs C Entwistle

Mathematics co-ordinator KS1 Miss E Cullis

Mathematics Governor Mr K Wood

As a part of the whole school approach, all staff are involved in planning and teaching mathematics. Each teacher has the responsibility for planning and teaching mathematics within their own class.

### **Resources**

A range of practical resources is readily available to the children

e.g. Numicon, Multilink cubes, Counting aids, Multibase apparatus , computers and calculators are used as tools to encourage and develop mental agility, spatial awareness and data handling skills.

Day-to-Day resources are available in classrooms but some items are stored centrally and updated as necessary by the Mathematics Co-ordinator.

The school does not use a published mathematics scheme.

Resources from a selection of sources are used for reinforcement including:

- White rose Hub
- AET maths
- Target maths
- Testbase

- Kangaroo maths
- Doodle maths
- Sumdog

### **Working wall**

All classrooms have a mathematics working wall to record and support the children's learning journey. This is always on a blue background to promote continuity through the school.

The working wall will include the following headings

- Conceptual Understanding
- Fluency
- Reasoning
- Problem solving
- Stickability
- Vocabulary

The working wall will include concrete, pictorial and abstract examples of work and will detail the Learning Objectives being studied and necessary Success Criteria.

### **Liaison**

The Mathematics co-ordinators attend regular LEA and Cluster Maths groups and feed back to the rest of school. Both Mathematics co-ordinators are involved in a Teachers Research Group supported by the Archimedes Maths Hub.

Regular liaison between this school and the local comprehensive school takes place.

Transfer information is provided in respect of all Year 6 children at the end of KS 2 (aptitude for mathematics, strengths, weaknesses, special needs).

### **Equal Opportunities**

Children progress at different rates but it is important not to impose a false ceiling on their possible achievement. Most children are able to access the main curriculum with appropriate resources and support. We advocate a 'keep up' not 'catch up' approach where misconceptions are identified and addressed quickly so gaps do not form. However, it is important to plan differentiated work for groups/individuals to support identified need where appropriate.

Equal opportunities are provided for boys and girls, advantaged and dis-advantaged children in all mathematical activities.

### **Monitoring**

Ongoing monitoring and evaluation is undertaken informally by the Headteacher, Deputy Headteacher, Curriculum co-ordinators, SMT, Maths Governor and through Key stage and full staff meetings.

The Headteacher and Deputy Headteacher conduct formal lesson observations to assess the teaching of mathematics regularly.

Books are sampled termly by the mathematics co-ordinators and findings reported to the Headteacher.

Regular book moderation is held in staff meetings.

Planning is scrutinised termly by the mathematics co-ordinators.

Progress data is reviewed termly by the Head teacher with each teacher.

### **Evaluation**

This document will be reviewed periodically and the content updated in the light of current developments and new legislation.

Formal reviews are linked with a rolling programme for curriculum development in which Mathematics is considered twice every three years.

## **Safety**

As in all areas of the curriculum, the safety of the children is paramount at all times. Correct handling of all mathematical apparatus/equipment will be taught/encouraged throughout KS 1 and KS 2. Children will never be sent outside the school grounds unsupervised.

Updated Jan 2018



## MATHS QUESTIONNAIRE

1. What do you consider to be the school's present strengths/weaknesses in the teaching of (and provision for) MATHS?

2. What do you consider to be the priorities for future development? (list in order of priority)

3. If **you** were the school's Maths Co-ordinator what lines of action would you take to address the priorities in (2)?

4. What strengths/qualities/experiences could you offer towards the role of the School's Maths Co-ordinator?

\_\_\_\_\_ Signed

\_\_\_\_\_ Date