



Wibsey Primary School

Maths Policy

Rationale

Wibsey Primary School has been fully engaged with the new Mathematics Curriculum since September 2014. Children have embraced the new approach to deepening their understanding of maths. Our belief is that mathematics needs to be creative and inspiring in order to nurture future mathematicians.

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It is a core subject with a range of cross-curricular links and we expect teachers to capitalise on opportunities from other subjects to rehearse skills in a context. From Autumn 2015, we implemented a learning continuum style of teaching. The benefits to this approach are:

- learning is personalised for each pupil
- daily interventions are used to address misconceptions
- challenge/small groupings

Aims

The national curriculum for mathematics aims to ensure that all pupils:

- Become **fluent** in the fundamentals of mathematics, including the varied and regular practice of increasingly complex problems over time.
- **Reason mathematically** by following a line of enquiry, understanding relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The Early Years Foundation Stage Curriculum feeds into the new National Curriculum for mathematics. It is good practice to make use of cross curricular links to enable children to use their learning in a real life context. Therefore pupils should be given plenty of opportunities within sessions to use and apply the mathematical skills and concepts they have learned.

Purpose

The purpose of this policy is to ensure that all staff are able to implement the teaching of maths to a high standard in order for our pupils to achieve their full potential.

Our objectives in the teaching of mathematics are:

- To promote enjoyment of learning through practical activity, exploration and discussion using manipulatives (such as Numicon)
- To develop confidence and competence with numbers and the number system through Key Instant Recall Facts (KIRFS)
- To develop their conceptual understanding in order to solve problems through decision-making and reasoning, in a range of contexts through Higher Order Thinking tasks

- To help children understand the importance of mathematics in everyday life through cross-curricular links

The calculation policy has been created, for staff, to provide continuity throughout the school with all four operations, which in turn will facilitate measured progress for children in school. By using the Bloom's Taxonomy model, we are able to see children progress through gaining a deeper understanding.

Planning

Environment

Each classroom displays the Bloom's Taxonomy language (remember, understand, apply, analyse, evaluate and create) to model the learning journey of higher order thinking. Pupil's work should be displayed alongside to show the progression of each unit of work.

In addition to this, the KIRFs for each half term should be on display to support learning at home.

Gifted and talented

Blooms Taxonomy- HOT tasks/challenges

After the current year objectives are achieved (in each topic), children are challenged in several ways to deepen their understanding. Firstly, higher order thinking tasks (HOTS) are used frequently to provide the learning in a different context and stretch pupils' understanding. Alongside this, fluency, reasoning and problem-solving activities are created at mastery level to set appropriate challenge. The higher end of Bloom's (analyse, evaluate and create) provides an important framework for teachers to promote higher order thinking skills. By providing a hierarchy of levels, this taxonomy can assist teachers in designing performance tasks, crafting questions for conferring with pupils and providing feedback on pupils work.

Learning continuum

The learning continuum is all inclusive. A pre-skills assessment takes place prior to every unit of work, which assesses the whole range of the national curriculum (on that topic) from years 1 to the specific year group. From this, children will receive differentiated inputs, grouped depending on where their current knowledge lies on the continuum. This allows teachers to fill the gaps of knowledge and misconceptions, whilst teaching the current year group curriculum.

Structure – this is based on an example of three groups in one class.

- Pre-input tasks to be completed whilst the teacher delivers one input to the first group
- After this, group one would be settled at their work area and begin their independent/collaborative task
- Group two would then work with the teacher to receive their input
- Settling the second group is essential to support the learning
- It is imperative for the teacher to check on the progress of the first group, before delivering the final differentiated input to the third group
- This group would be settled (as with previous groups) and the teacher would then check the progress of group two
- The learning cycle would be repeated if deemed necessary to consolidate and further deepen learning
- The role of the associate staff is to support individuals/groups of pupils, under the direction of the class teacher
- Intervention at point of need takes place to address misconceptions and/or support pupil's understanding

Assessment

Children are assessed on an on-going basis, which informs the end of unit assessment. Teacher assessment is submitted each half-term to be collated, analysed and shared with governors/whole school.

Computing

We have invested in an online resource, *Mathletics*, in order to aid the delivery of the maths curriculum both in school and at home. Pupils each have their independent login to access a variety of online tasks, activities and games. Children can compete against other children in their class, school and across the world in order to win point. If children reach a certain amount of points in a week (1000) they will be awarded a certificate which is printed out and presented to the child.

As a school, we should provide all children with the opportunity to access the resource through the use of ICT, either in class or as a part of a Mathletics club offered by each year group. Homework is also set using Mathletics in order to engage the children, whether this is set online or a printable worksheet is used for children without access to the internet at home.

Partnership with parents

Parental engagement is a powerful lever for raising achievement. At Wibsey Primary School, we value working in partnership with parents/carers to support pupils' learning. Over each academic year, we provide opportunities for parental involvement through mathematical workshops, a regularly updated website and the opportunity to borrow/purchase from our three Numicon Libraries (Foundation, KS1 and KS2).

Agreed by Governors	Full Governors	
	Finance and General Purposes	
Date:	Teaching and Learning	X
Chair of Committee	Lisa Knowles	
Written	January 2017	
Review	January 2020	