



WENSLEY FOLD CE PRIMARY ACADEMY

MATHEMATICS POLICY

MISSION STATEMENT

The school values and recognises the uniqueness of each individual child and acknowledge their fundamental right to be educated to their full potential in a safe, secure and caring environment. The school, which has a Christian heritage, will, in partnership with parents and the extended community, aim to make each day count for all.

AIMS

The aims of mathematics are to develop:

- A positive attitude towards mathematics and an awareness of its fascination.
- An understanding of mathematics through a process of enquiry and experiment.
- Competence and confidence in mathematics knowledge, concepts and skills.
- An ability to solve problems, to reason to think logically, to work systematically and accurately.
- The ability to calculate accurately and efficiently, both mentally and with a pencil and paper, drawing on a range of strategies.
- An ability to communicate mathematics.
- An ability to use and apply mathematics across the curriculum and in real life

These aims are consistent with the school's aims and the Department for Education's National Curriculum for Mathematics

Mathematics comprises of Programmes of Study, which set out what pupils should be taught and which provides the basis for planning and teaching the mathematics curriculum.

Key Stage 1	Key Stage 2
Number	Number
Geometry and Measures	Geometry Measures and Statistics

The Mathematics Programme of Study describes types and range of performance that pupils working at a particular level should characteristically demonstrate. Our pupils will work at the levels appropriate to their ability. In teaching mathematics, children will have the opportunity to experience practical, investigative, oral, written and problem solving activities. They will have time to discuss their thinking with the teacher and fellow pupils. We believe that true understanding in mathematics stems from **appropriate practical experiences, handling concrete materials and discussion.**

Teaching the development of mathematical vocabulary is essential in this process and is highlighted in both the medium and short term planning. It has to be noted, that as EAL learners, the specific technical vocabulary of mathematics can bring its own difficulties in understanding. Teachers of mathematics must ensure that every effort needs to be made to help relate the vocabulary to mother tongue where possible, to include maths words in strategies such as word of the week, or part of words to learn in spelling, and also to make

the maths vocabulary a large part of the Pre Teach Vocabulary sessions. **Vocabulary for the week is to be displayed** this would make sense to be in the Maths area.

Lesson Structure

A daily mathematics lesson takes place in all classes from Year 1 to Year 6 a typical lesson comprises of the three part daily lesson:

Mental/oral session

Relevant feedback from marking when appropriate

Taught/ guided/ practical session

Plenary as and when appropriate eg mini plenaries – discussion to assess and move on to next step

Using and applying must be planned into the week in a meaningful and relevant way.

Learning Objectives

These should be displayed and shared any key words or difficult words in the objective should be highlighted and explained. There may be occasions when layered objectives may be considered (one for Maths Monitors and another, depending on differentiation)

Recording of Task:

Maths books are used from Early Years to Year 6.

May be practical with some note taking, or worked on white boards

Written (in pencil) in a squared maths book – Year 1

On A4 teacher prepared worksheets please date or leave space for the date and add the learning objective

KS1 sheets stored per half term in card document wallets.

KS2 sheets punched and stored in blue A4 spring file.

Children may work on computers /laptops/ipads

When appropriate children may use the left hand page of the maths book as a working out page.

Planning

Learning objectives follow the National Curriculum for Mathematics which are used in conjunction with half-termly maths plans – in the curriculum planning file in staff shared area.

Assessment

Use of year group expectations sheets to determine teacher assessments

Half- termly (Year6) / Termly PUMA maths tests to inform teacher assessment

KS2 - Analysis of individual responses through Questions for Learning

Group of at least 6 children who are 'off track' or at risk of becoming 'off track' (possible Maths Monitors – badges will be issued)

Analysis of issues from baselines to be recorded and returned to Maths Coordinator with assessment data

Analysis of issues identified from PUMA are addressed during Pupil Progress meetings with HT

The updated year group tracker is to be saved in staff shared Assessment area and recorded in green record book.

Guided Maths

Any group identified for additional support who work in a small group led by the teacher to improve their understanding. This group will change dependant on the topic being taught, identified and named in the Marking Feedback book.

Resources

Found in Maths Resource Stockroom

Stored in numbered red boxes – must be returned by an adult after each session. A list of contents is displayed on the wall by the shelves. Please keep tidy!

Please inform the Maths Coordinator if any resources are broken, need replacing or updating.

RM:

Individual program – children work at own program throughout the week (see class timetable)

Accessible through the networked computers and children's iPads.

Progress graphs are available for the original RM

Mathletics:

Each child has their own log in.

This can be accessed at school or at home including via the iPads (Year1 start the process in the spring term, pupils achieving 500 points)

Teachers can set a task to be completed prior to the pupil engaging in the 'World Wide Timed Challenge'

Each challenge successfully completed results in a 'gold' bar if the task results in at least 90 points out of 100

Children must amass 1000 points from these bars to receive their bronze award; it is also a requirement for Golden Time entitlement.

Times Tables:

Weekly test in KS2 throughout the year (started in Year2 in Summer Term)

Each year group has 2 sets of 3 different test sheets – 100 questions per test (3 tests are multiplication and 3 are based on the related division facts) Year 6 also have a subtraction set.

Timed test - children complete as many as they can within ten minutes

Children cannot miss out a question – if there is a question omitted only questions answered to that point count towards their score

Personal targets set to improve score by 25 points

Those who beat their target receive a certificate in achievement assembly and a new target is agreed – office staff will produce the certificates of names provided by the class teacher

Once 100 correct answers has been achieved – a time target is set (but only if 100 correct answers are achieved each week)

During the Spring term a second set of tests (ABC) are introduced into the rotation – facts presented in the inverse

Record of results kept on a prepared grid stored at the back of the blue maths folder.

An iPad app 'Time Table Rock Star' is available to further reinforce time table facts and should be used especially in Year 3 in preparation for the on-line Tables Test.

Problem Solving

Include different types of problems (finding all possibilities/logic/puzzles and patterns) within maths topics being taught.

Teach necessary strategies

Give children opportunities to explore problem solving during, and part of, ongoing maths activities and not as isolated activity

Open ended tasks with multiple possible answers combined with higher order questioning challenge for more able children

Practical materials + adult support for less able children giving regular experience of dealing with problems and related strategies

Have working RUDELY poster and other mathematical posters visible

Remember to emphasise the – Estimate, Calculate, Check

R	Read the question carefully – at least twice
U	Underline the key words and numbers
D	Decide which operations you are going to use
E	Estimate your answer
L	Look back at what you have done so far
Y	You may start NOW!

Using and applying should be seen throughout the unit of work.

Bar Model, Part Part Whole, see-saw sum strategies to be used where appropriate.

Marking

To follow the marking policy.

Class issues noted in the Marking and Feedback book which can then addressed at the start of the next lesson. Individual issues/ errors/ misconceptions also noted in the Marking book and those children picked up as soon as possible after identification.

Calculators

Use from an early age – role play from Reception onwards.

Ensure children are familiar with function keys and reading the display particularly the fact that zero is not shown at the end, important in money ie: £1.5

Taught lessons important – don't assume children know how calculators operate.

Resources

There are multiple copies of INSPIRE textbooks which are a valuable resource. The books are there to be consulted. During planning it is worth taking a look at how INSPIRE cover a topic as it can often offer new and different approaches - well worth consideration.

INSPIRE need not lead our maths curriculum; it is a comprehensive addition to our extensive variety of resources.

White Rose Hub also have a wealth of materials which are very good at providing that level of challenge required at Greater Depth.

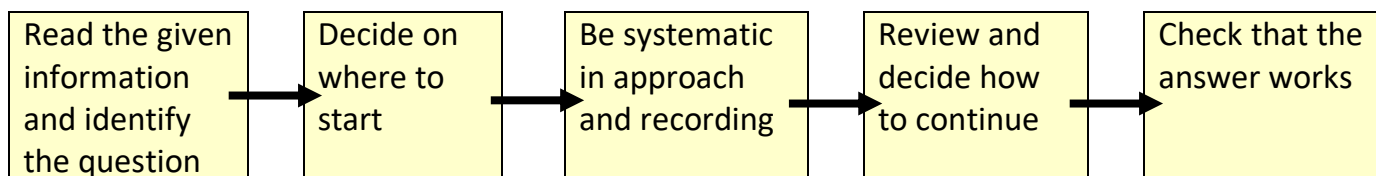
Obviously practical subjects will require practical apparatus: clocks for time telling, 2D and 3D shapes including nets; metre sticks, tape measures, trundle wheels when measuring; make sure that capacity gets covered more than once and not just left until the summer when it can be done outside- jugs, containers, scaled cylinders. If the thought of water being too messy is putting you off, try an alternative.

Don't forget resources like tracks, lines and grids, 100 squares, number lines, digit cards, arrow cards, washing lines and pegs, abacus are there to support children in their daily lessons as this supports visualisation.

Children with particular gaps in their mathematical knowledge may benefit from the extended additional support of particular pieces of apparatus as a bridge to visualisation.

Concrete apparatus is **vital to all stages** of learning remember to use – learning mats, times table key rings, slide grid for $\times/\div$ 10, 100, 1000, negative number lines,

Tackling a problem or puzzle:

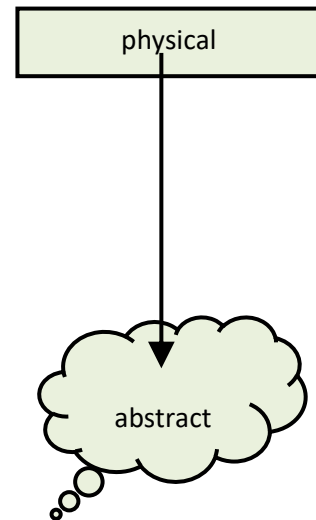
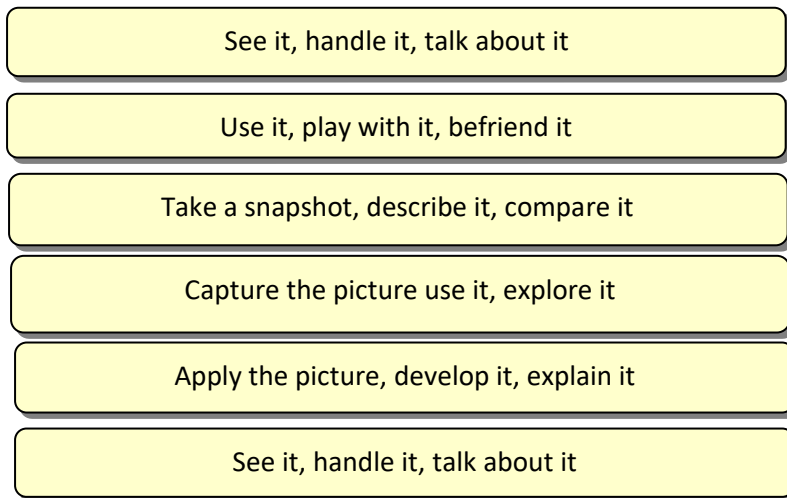


Numicon

Numicon is a maths resource to be used with children throughout the school. It provides a concrete and visual representation of number. Numicon sets will be kept in Reception, Year One and Year Two, with smaller kits available for use by the SSA (especially those children who have taken part in Numbers Count). The class teacher is responsible for the use and upkeep of the Numicon in their room, including those sets used by SSA's in their class. Each Numicon pack comes with a set of planned activities; it is the responsibility of the teacher to plan for the use of these activities NOT the SSA.

Most members of staff have undergone Numicon training but should ask either the Numeracy Co-ordinator or the Numbers Count teacher if they need further advice.

PROGRESSION IN VISUALISATION



REVIEW

The policy will be reviewed through and by consultation with staff, the Head teacher and governors.

Any amendments to the policy arising from the review procedure will go to consultation with staff and governors for discussion, approval and ratification.

E.Rae
Mathematics Co-ordinator
Updated 2019