



Maths Policy

Beaufort Primary School 2015



INTRODUCTION

The policy is based on the 2015 expectations and aims of the 'New Curriculum' for Mathematics and the Early Years' Development Matters' EYFS document. This ensures continuity and progression in the learning and teaching of mathematics. This policy has been drawn up by the mathematics leader, shared and discussed with all staff and has the full agreement of the Governing Body.

The New Curriculum for Mathematics aims to ensure that all pupils:

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

EARLY YEARS

- Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years 'Development Matters' EYFS document. All children are given ample opportunity to develop their understanding of mathematics. Lessons in the Early Years aim to do this through varied activities that allow children to use, enjoy, explore, practise and talk confidently about mathematics. Children are assessed on entry and findings inform both planning and individual 'next steps' for learning.

Spoken Language

The National Curriculum for Mathematics reflects the importance of spoken language in pupils' development across the whole curriculum- cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers will ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

PLANNING, LEARNING AND TEACHING (Years 1 to 6)

- Planning at Beaufort allows for the three aims of knowledge, reasoning and problem solving to be incorporated in every lesson. Real life connections and a clear reason for learning- including where necessary, the outside environment will be planned for.
- Staff are to use the Abacus whole school planning format. The Abacus scheme has been updated in line with the 2015 Curriculum. However staff are to annotate and adapt planning where appropriate so that the learning of all abilities is met and learning is consolidated.
- Starter tasks and Independent tasks will be differentiated where possible for Blue (ensuring challenge), Green / Orange and Red learners. Such tasks will be designed to test application of and retention of knowledge and will have a problem solving context. TA support must be explicit in the planning as well as provision for focus children / groups as identified in PPM meetings.
- Key teaching Questions will be highlighted in planning. Questions will be continuously adapted by the teacher and support staff based on assessment for learning. Reference to the school's calculations policy and mental calculations policy should always be made.
- Plans should be annotated and, if necessary, evaluated to comment on pupils' progress throughout each weekly unit.
- **Mental maths** should be incorporated in all maths lessons. Teachers should make reference to the school's 'mental skills progression' scheme of work that is in line with the New Curriculum. Pupils will have regular arithmetic assessments to test application of knowledge and identify gaps in knowledge.
- At Beaufort we believe that it is important to plan for mathematical opportunities within other subjects. The school has a 'Cross curricular overview' that highlights how Maths is embedded within the broader curriculum.
- At Beaufort we will plan for whole school themed weeks such as 'Enterprise day.' These weeks provide pupils with the opportunity to see maths working in a purposeful and real life context.

Main Teaching:

- ★ Learning tasks will be differentiated to challenge and support as appropriate the range of target groups in specific maths groups.
- ★ Mini- plenaries will be used during lessons to ensure and develop children's understanding further. Final Plenaries will be planned for and used effectively to consolidate, assess and take learning forward.
- ★ Calculations Policy—teachers will follow the school's 2015 Calculations Policy and where possible move children to the contracted written methods swiftly.
- ★ ICT will be used where appropriate in whole class teaching to engage and extend learning in mathematics. Calculators should not be used as a substitute for good written and mental arithmetic. They should therefore only be introduced near the end of KS2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure.

Problem Solving / Investigations:

Maths classes will focus on one area of problem solving per half term. This will ensure a broad and balanced curriculum is delivered and children are given opportunities to think laterally and work with more abstract numerical qualities.

DIFFERENTIATION/ SUPPORT (including provision for SEN&D, G&T, PP)

- Children are grouped in school according to ability. SEN&D children who require targeted support will work in smaller groups with a higher staff ratio.
- Planning will build on prior learning and allow for the consolidation of skills through layered targets.
- Teachers will use a range of practical- real life resources to engage and support pupils at all stages of learning.
- Pupils will work at the appropriate stages within the National Standards. Those pupils who are exceeding the National Standards will follow the 'Exceeding' programme of study.
- The progress of Pupil Premium pupils are prioritised within Pupil Progress meetings. Appropriate targets/ actions are set and progress towards intended outcomes monitored.

PRESENTATION

- ★ Children will use pencil throughout school. Books vary in cm square sizes as appropriate to year groups.
- ★ The short date will be written and where appropriate (KS2 only) a concise title / learning question / learning objective will be written and underlined.
- ★ Teachers must provide a constant model - supporting and reinforcing digit formation and levels of presentation.
- ★ Children should not write out questions in their books, however should put their answers back into the worded problem where appropriate to show their understanding of how to use and apply their knowledge.
- ★ Termly layered Targets will be provided: explicit teaching to these targets will be planned for. Children's understanding of their targets should be gauged when each target is introduced.

MARKING

- At Beaufort we believe it's not just about giving ticks and totalling marks - the focus should be on the problem and not the success rate. Correct answers should receive a tick whilst incorrect answers a dot.
- At Beaufort we understand that compelling, varied questioning promotes more interesting responses from the children where the process of learning can be clearly assessed and thus the quality of marking is improved.
- In general some marking can be done by the children during the lesson - discussion is most important and whether they now understand the problem and not whether it was right or wrong! Peer marking should play an important role in self- evaluation.

- At Beaufort we believe written feedback should simply identify the misconception - where appropriate give the child a similar problem to solve (correction). As a school we have agreed to use the 'PEQ' system i.e. **PRAISE - IDENTIFY ERROR** with example of correct method followed by a **QUESTION**. When appropriate children should answer the question and respond to teacher's comments. Quality marking should take place at least once a week not at the end of the unit of work as then it's too late.
- If the misconception was not picked up during the lesson - teachers should use it as a learning opportunity in the next lesson. Misconceptions should inform planning as well as teaching.
- As a school we acknowledge that you can't write detailed responses for every piece of work - however time should be put aside to reflect on work and identify next steps for learning as well as look for common misconceptions.

ASSESSMENT:

- ★ In-school day to day formative assessment should be an integral part of teaching and learning. It allows teachers to understand pupil performance on a continuing basis. It enables teachers to identify when pupils are struggling, when they have consolidated learning and when they are ready to progress. In this way, it supports teachers to provide appropriate support or extension as necessary. It also enables teachers to evaluate their own teaching of particular topics or concepts and to plan future lessons accordingly.
- ★ Pupils are assessed against the National Standards as part of the New Curriculum. The school has established a grading system so that pupils work at their appropriate learning. These include Pupils working towards, emerging, developing, secure or exceeding the National Standards.
- ★ Teachers highlight the coverage against the National Standards to ensure a broad and balanced curriculum. Those pupils failing to achieve the objectives are initialled against the target so that they can receive extra support/intervention.
- ★ Half termly assessments help validate teacher judgements and identify gaps in knowledge/understanding (for all pupils.)
- ★ Teachers collect 6 pieces of work for 6 pupils per term(2 top, 2 middle, 2 bottom) Evidence from books/assessments/mental warm-ups/warm-up problems and questions/ investigations are used to establish a judgement.
- ★ 3 group layered targets are established at the end of each half term and placed in the front of books to cater for the different coloured ability groups. Planning is adapted to prioritise those target areas
- ★ We believe that the children must be aware of their layered targets - understand what they mean and know that they are there to help them move their learning on.
- ★ Teachers will informally assess how children have progressed in each layered target area.
- ★ Formal summative assessments will be administered at the end of the year to validate and provide evidence for teachers' judgements of where a child is working. Whilst marking these tests, teachers should be planning for next steps in learning based on the generic strengths and weaknesses coming out of the analysis of these tests.
- ★ Data will be used to inform individual pupil tracking systems and will also feed into termly Pupil Progress meetings.

- ★ Staff will be asked to talk through their maths group of pupils during **transition** time so as to ensure the following teacher is aware of key strengths and weaker areas. There will also be reference made to where a group of children is in their understanding relating to the calculation policy.

PARENTS

Involving parents in mathematical learning is very important so they have a shared understanding of what we are striving to achieve in school. Workshops are organised to inform parents of the latest calculation strategies along with the new requirements of the National Curriculum. This means they will be aware of what mental and written calculation strategies we use as a school and so can support with homework and be more involved in the learning process. Information on the school's website is also provided to inform and develop parental knowledge.

Mathematics homework is sent out from each group on a fortnightly basis.

Monitoring & Evaluation:

The Curriculum Team responsible for mathematics together with members of SLT will undertake regular:

- ★ Learning Conversations with children
- ★ Planning Scrutiny
- ★ Book Scrutiny
- ★ Conversations with staff, parents and governors as appropriate
- ★ Analysis of data

This will be done in order to monitor and evaluate the progression and consistency of the teaching and learning of mathematics within school.

Governors will be informed as to the standards of mathematics and related issues through sub committee meetings.

Review date: December 2016