



Our Mathematics Curriculum



A Guide for Parents

Dear Parents/Carers,

You may be aware that a new National Curriculum is being taught in schools from September 2014. This means that children in Key Stages One and Two will be following a new maths curriculum. Please view the statutory guidance for each year group on our website in the section called:

"Statutory Guidance for New Maths Curriculum"

This will give you an overview into the maths taught for each year group and what is expected of your child within each year group.

Planning for Change!

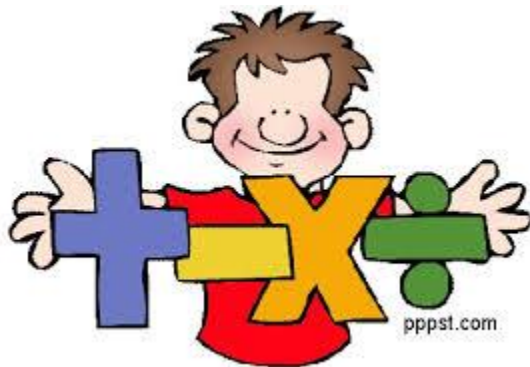
Here at Bournmoor Primary, we strive for the best for our children and we are committed to raising standards. Staff have taken part in various training sessions to support the delivery of the new curriculum which aims to ensure all pupils:

- *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.*

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on."

(Taken from the National Curriculum for Maths, DFE)



In response to the expectations of the new curriculum, progression grids have been produced, showing the next steps in each topic within the curriculum. These have then been used to create plans which provides a structure from Y1 to Y6 to ensure progression, continuity, and that the appropriate content is been covered in each year group. (See example below) Class teachers then plan weekly lesson to help children to achieve the objectives.

Example of a progression grid: *(please note that any gaps just mean there are no requirements for that section of the curriculum for that particular year group)*

| Number - Number and Place Value | | | | | | | |
|--|--|--|--|---|--|------------------------|---|
| | <u>Counting</u> | <u>Comparing Numbers</u> | <u>Identifying, representing, and estimating numbers</u> | <u>Reading and writing numbers</u> | <u>Understanding place value</u> | <u>Rounding</u> | <u>Problem solving</u> |
| Y1 | <ul style="list-style-type: none"> ▪ count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number ▪ count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens ▪ given a number, identify one more and one less | <ul style="list-style-type: none"> ▪ use the language of: equal to, more than, less than (fewer), most, least | <ul style="list-style-type: none"> ▪ identify and represent numbers using objects and pictorial representations including the number line | <ul style="list-style-type: none"> ▪ read and write numbers from 1 to 20 in numerals and words. | | | |
| Y2 | <ul style="list-style-type: none"> ▪ count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward | <ul style="list-style-type: none"> ▪ compare and order numbers from 0 up to 100; use <, > and = signs | <ul style="list-style-type: none"> ▪ identify, represent and estimate numbers using different representations, including the number line | <ul style="list-style-type: none"> ▪ read and write numbers to at least 100 in numerals and in words | <ul style="list-style-type: none"> ▪ recognise the place value of each digit in a two-digit number (tens, ones) | | <ul style="list-style-type: none"> ▪ use place value and number facts to solve problems |
| Y3 | <ul style="list-style-type: none"> ▪ count from 0 in multiples of 4, 8, 50 and 100; ▪ find 10 or 100 more or less than a given number | <ul style="list-style-type: none"> ▪ compare and order numbers up to 1000 | <ul style="list-style-type: none"> ▪ identify, represent and estimate numbers using different representations | <ul style="list-style-type: none"> ▪ read and write numbers up to 1000 in numerals and in words | <ul style="list-style-type: none"> ▪ recognise the place value of each digit in a three-digit number (hundreds, tens, ones) | | <ul style="list-style-type: none"> ▪ solve number problems and practical problems involving these ideas. |



Mental and written calculation

To ensure progression between key stages and year groups, we have a calculation policy in place which clearly identifies the progression of methods children are expected to use. (To view this please look at the document named Calculation Policy on our website).

To support staff, pupils and parents in knowing and understanding the methods we encourage, we also have a visual guide, which explains and shows examples of the different methods. Again this can be viewed in the document called Visual Calculation Guidance on our website.

Supporting mathematical development.

At Bournmoor Primary we have a variety of resources that support the mathematical development and mathematical thinking skills on a day to day basis. If needed, children have access to our "Maths toolkits". These consist of a variety of "tools" such as number lines, hundred squares, cubes, counters, bead strings to name a few. They are differentiated to suit each year group, groups of children and individuals.

We use a fun system of developing mental maths skills through the use of a programme called "Mathletics", which is computer based and very motivational for children! To supplement this, we have recently purchased "Rising Stars" mental maths programme which comprises of weekly tests, administered in a fun way to help children sharpen their mental maths skills and identify any areas that may need extra work.

Assessment of your child's ability in maths

You may be aware that as of September 2014, the Government have abolished the use of "levels" for assessment. Here at Bournmoor Primary we are developing our maths curriculum and working towards a **mastery curriculum** and that will support your child to **broaden** and **deepen** their mathematical knowledge, become confident and fluent in maths topics before accelerating them into new curriculum content.

To support this, we have developed an assessment system that will identify where your child's ability lays in terms of the year group objectives. They could be "pre-emerging" or "emerging" within a topic, indicating they may need extra work to achieve the expected outcomes for their year. They could also be working at an "expected level" or indeed "exceeding". Our grids support staff in identifying their abilities and the next steps they need to take to make good progress. (Please see example below)

Example of an assessment grid

| NUMBER: Number & Place Value | | | | | |
|------------------------------|--|---|--|---|---|
| Sub-Topic → COUNTING | | | | | |
| | Objectives | Pre emerging | emerging | expected | exceeding |
| Y1 | <p>count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p>count, read and write numbers to 100 in numerals;</p> <p>count in multiples of twos, fives and tens</p> <p>given a number, identify one more and one less</p> | <p>I can count along in ones to 20. (forwards and backwards)</p> <p>I can read numbers to 20.</p> <p>I can use objects to help me find the number that is 1 more / 1 less than.</p> <p>I can use objects to help me count in 2's</p> | <p>I can count along in ones to at least 30. (forwards and backwards)</p> <p>I can read and write some numbers (to 30).</p> <p>I can use a number line to help me find the number that is 1 more or 1 less than.</p> <p>I can use objects to help me count in 2's and 10's.</p> | <p>I can count to 100 forwards and backwards.</p> <p>I can read and write numbers to 100 (in numerals).</p> <p>I can say the number that is 1 more or 1 less than a given number.</p> <p>I can count in steps of 2, 5 and 10.</p> | <p>I can read and write numbers to 100 (in numerals and in words.</p> <p>I can say the number that is 10 more or 10 less than a given number</p> <p>I can count in steps of 2, 5 and 10 forwards and backwards.</p> <p>I can continue a number sequence increasing / decreasing in regular steps and find missing numbers in the sequence</p> |
| Y2 | <p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward</p> | <p>I can use objects and / or a number line to help me count in steps of 2 then 10 and 5,</p> <p>I can continue a number sequence increasing / decreasing in regular steps and find missing numbers in the sequence where the pattern is pointed out to me and with the support of a number line.</p> | <p>I can count aloud in 2's, 5's or 10's forwards.</p> <p>I can count in steps of 2 and 10 backwards.</p> <p>I can continue a number sequence increasing / decreasing in regular steps and find missing numbers in the sequence with the support of a number line.</p> | <p>I can count aloud in 2's,3's, 5's or 10's forwards and backwards.</p> <p>I can continue a number sequence increasing / decreasing in regular steps and find missing numbers in the sequence.</p> | <p>I can count aloud in 2's, 3's, 5', and 10's, confidently starting with any number forwards and backwards.</p> |
| Y3 | <p>count from 0 in multiples of 4, 8, 50 and 100;</p> <p>find 10 or 100 more or less than a given number</p> | <p>I can count aloud in 2's,3's, 5's or 10's forwards and backwards.</p> <p>I can find the number that is 10 more or less than a two digit number.</p> | <p>I can count aloud in 2's, 3's, 5', and 10's, confidently starting with any number forwards and backwards</p> <p>I can count in 4's using a numberline to support me.</p> <p>I can find the number that is 10 more or less than a two or three digit number.</p> | <p>I can count in multiples of 4, 8, 50 and 100 confidently.</p> <p>I can find 10 or 100 more or less of a given two or three digit number.</p> | <p>I can count in multiples of 4, 8, 50 and 100 confidently, forwards and backwards and starting at different numbers.</p> <p>I can find 10 or 100 more or less of a given two, three or four digit number.</p> |

The objectives are used to plan lessons for each year group and the appropriate level of working is then selected for group and individual pupils.

Children with special educational needs & disabilities (SEND) and gifted and talented pupils

If your child has been identified as having any special educational needs, their individual support plan shows any specific needs in maths. These are addressed with carefully planned and differentiated activities. Your child is supported with "tools", visual aids or by following objectives from other year groups to ensure they make progress in maths, and gain a good understanding of maths topics.

Similarly, gifted and talented children have their needs identified on an individual enhancement plan. When planning weekly lessons, their ability will be taken into account. They will be expected to apply maths skills in a range of contexts and demonstrate that they have a deep understanding of maths topics and how they interlink with each other. When this is evident, objectives from older year groups may be considered.



Supporting your child at home

Homework is sent home which is an indication of the maths topic that has been taught in school, or an identified need such as learning timetables for example. We encourage all children to complete homework tasks, and record it themselves in their homework book.

It is also important for children to realise that maths is an important part of everyday life. If you are out shopping for example, encourage them to look for prices of items and practise recognising numerals, older children could calculate how much two would cost, or estimate the cost of the whole shopping! All of these little experiences help children to develop mathematically.

Learning number facts such as number bonds, doubles, times tables etc help children to calculate more efficiently. If you have access to the internet it is a great source of mini games which motivate children and even not realise they are practising maths. Please see the "Maths Websites" section on our webpage. If you do not have internet access at home, number facts can be practised with simple games such as using playing cards to make pairs of 10 for example.

Please don't hesitate to contact our maths subject leader, Mrs Parks, if you would like help, support or advice with your child's maths homework and other ways to support at home.

So what about Early Years children?



Early Years children (children in their nursery or reception year), continue to follow their own curriculum. Assessment in reception is continuous and we have developed progression grids with the maths objectives required to ensure every child makes progress in their mathematical development from an early age.

Please also refer to the "Children with special educational needs & disabilities (SEND) and gifted and talented pupils" and "Supporting your child at home" sections above which would both apply to your child from the early years upwards.



Thank you for taking time to read this guidance and for your continued support. If you have any questions, please do not hesitate to contact our school and we will endeavour to answer any queries.

If you do not have access to our website to view the documents referred to in this guide, please contact the school so we can give you a paper copy.

Mrs Louise Parks,

(Maths Subject Leader, Bournmoor Primary School)