The Mathematics curriculum

This booklet is designed to help you to understand some of the key milestones for each year group. Further detailed information about how we specifically teach these areas is contained within our calculation policy which is available on our school website. Go to:

CURRICULUM > THE CORE SUBJECTS > MATHS

There is a separate calculation policy for each of the four operations (addition, subtraction, multiplication and division).

We have also included our 'Models and Images' policies on the website so that you can see the types of jottings and pictures the children experience throughout the school.

If, at any time, you have any questions with regards to our mathematics curriculum, then please contact your child's class teacher. Alternatively, you can email Mr Jensen at ajensen@chaddlewoodschool.org.uk

High Achievers

Please note that, if your child is achieving well, rather than moving on to the following year group's work our school encourages more in-depth and investigative work to allow a greater mastery and understanding of concepts and ideas. We appreciate your help in consolidating your child's understanding rather than moving quickly to the next year group's objectives.

Mathematics in Year 1

As children begin Year 1, our school will naturally work to build on the learning that takes place in Foundation. Here are some of the main things your child will be taught during their time in Year 1.

During Key Stage 1, there is a big focus on developing basic number skills. That means securing a good understanding of place value, and recognising number bonds to 20. Practising these skills frequently will help children's mathematical thinking throughout school.

Number and Place Value

Place value is central to mathematics. Recognising that the digit '5' in the number 54 has a different value from the number 5 or the '5' in 504 is an important step in mathematical understanding.

- Count, both forwards and backwards, from any number, including past 100
- Read and write numbers up to 100 as digits
- Count in 2s, 5s and 10s
- Find 'one more' or 'one less' than a number
- Use mathematical language such as 'more', 'less', 'most', 'least' and 'equal'

Calculations

- Use the +, -- and = symbols to write and understand simple number calculations
- Add and subtract one- and two-digit numbers, up to 20
- Solve missing number problems, such as 10 - ? = 6
- Begin to use simple multiplication by organising and counting objects

Fractions

- Understand ¼ and ½ to explain parts of an object or number of objects

Measurements

- Use practical apparatus to explore different lengths, weights and volumes
- Use language such as 'heavier', 'shorter' and 'empty' to compare things they have measured
- Recognise the different coins and notes of British currency
- Use language of time, such as 'yesterday', 'before', days of the week and months of the year
- Tell the time to the hour and half-hour, including drawing clock faces

Shape

- Recognise and name some common 2-d shapes, such as squares, rectangles and triangles
- Recognise and name some common 3-d shapes, such as cubes, cuboids and spheres
- Describe movements, including quarter turns

Mathematics in Year 2

Number bonds are essential to the understanding of maths. Children in Year 2 learn their number bonds to 20, that is being able to quickly recall the total of any two numbers up to 20, e.g. 5 + 9 = 14, rather than having to count on to find the answer.

At the end of Year 2, all children will sit the National Curriculum Tests for Key Stage 1. This will include a short arithmetic test of 15 questions, and a second paper of broader mathematics which will last around 35 minutes.

Number and Place Value

- Recognise place value in two-digit numbers, e.g. knowing that the 1 in 17 represents 10
- Read and write numbers up to 100 as words
- Count in 2s, 3s and 5s
- Compare and order numbers up to 100
- Use the < and > symbols to represent the relative size of numbers

Calculations

- Recall number bonds up to 20 fluently
- Add and subtract numbers mentally and using objects, including two-digit numbers
- Show that adding two numbers can be done in any order, but subtracting cannot
- Recognise that addition and subtraction are inverse operations
- Learn the multiplication and division facts for the 2x, 5x and 10x tables
- Show that multiplying two numbers can be done in any order, but dividing cannot
- Solve problems using the x and ÷ symbols

Fractions

- Find 1/4, 2/4 and 3/4 of an object or set of objects
- Find the answer to simple fraction problems, such as finding ½ of 6

Measurements

- Use standard units to measure length (centimetres and metres), mass (grams and kilograms), temperature (degrees Celsius) and capacity (millilitres and litres)
- Use the £ and p symbols for money amounts
- Combine numbers of coins to make a given value, for example to make 62 pence
- Tell the time to the nearest five minutes on an analogue clock
- Know the number of minutes in an hour and hours in a day

Shape

- Identify the number of sides and a line of symmetry on 2D shapes
- Identify the number of faces, edges and vertices on 3D shapes
- Use mathematical language to describe position and direction, including rotations and turns

Graphs and Data

- Construct and understand simple graphs such as bar charts and pictograms

How can I help my child?

- Please use the calculation policy on our website if you are unsure about the methods that your child will use in school. You may be very surprised about how similar these are to when you were at school!

- Please also refer to our 'Models and Images' policies. These break down the concepts that your child will be exposed to even further. So, if they are having a few difficulties with their homework, please take a look to see how we model this in school for them.

- Practising 'key facts' little and often is essential in helping your child to become s confident, efficient mathematician. By 'key fact' we mean things like times tables and number bonds (pairs of numbers which total 10 or 20). Much like getting your child to be able to write their name without having to think about it, if your child instantly knows their key facts they are then able to effectively solve more complex, multi-step problems as they progress through school. Unfortunately we can't tell you the best way to reinforce these key facts with your child because everyone learns in different ways.

However, your child may…

- Love times table songs (such as the 'Bees Knees' times table songs or the 'Times Table Toons' on Youtube)

- Enjoy practicing them on a computer (for example through the use of Numbots or 'Hit the Button' (www.topmarks.co.uk/maths-games/hit-the-button)

- Like 'lift the flap' times table books which are widely available (Mr. Jensen's current favourite is the 'Pull-the-tab Times Tables Book' by Vivian Head)

- Love playing games to practise their key facts. For example, you can easily set up a game involving two dice (such as 'bingo', with you and your child having to multiply together the two numbers that are thrown before marking off this answer on a scorecard).

- Websites such as Sumdog, Times Tables Rockstars (TTRS) and Abacus are also other brilliant ways of practising the content for your child's year group in a very rewarding way. Have you noticed that we also mention our highest TTRS achievers in our weekly newsletter?

- Please see either your child's class teacher or Mr. Jensen if you have any queries about the expectations for your child. We'll do our best to help!