St Luke's CE Primary

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Believe & Achieve
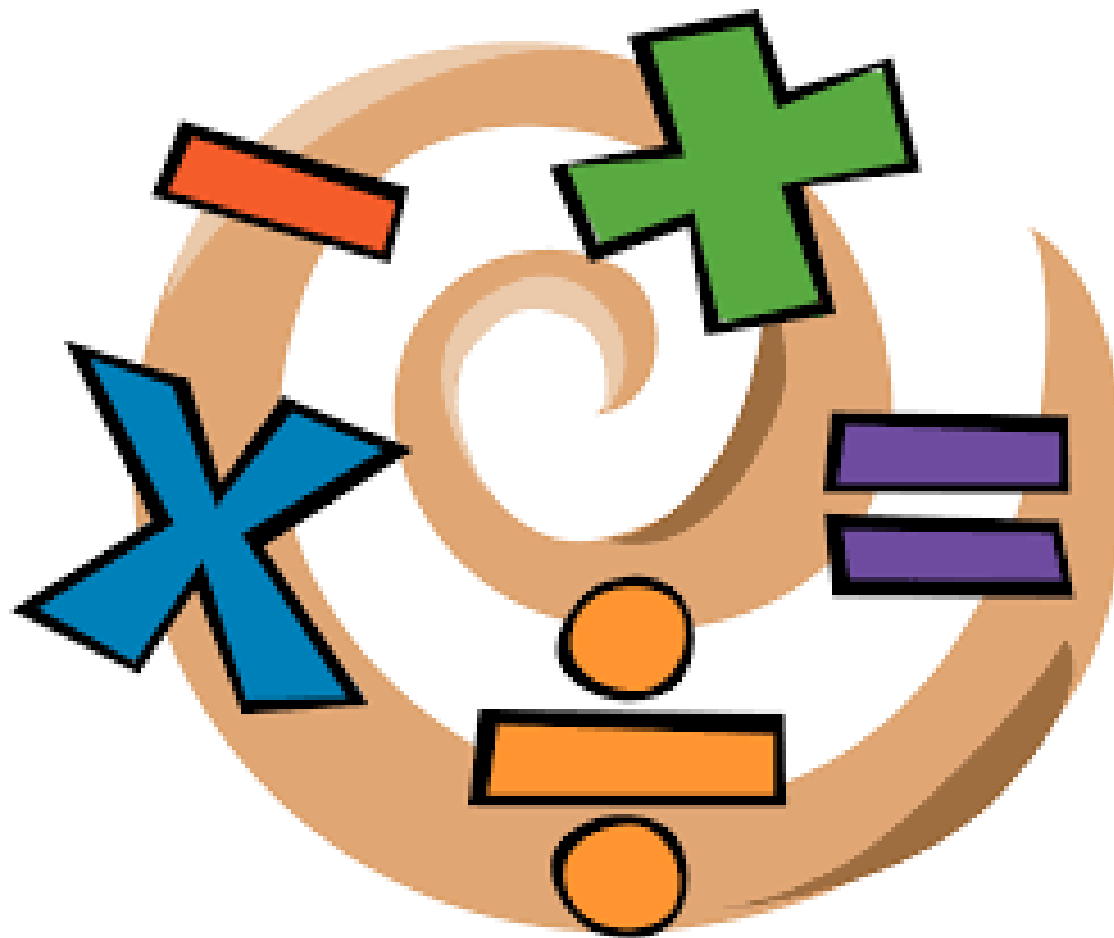
Characteristics of a Mathematician

At St Luke's CE Primary, we are mathematicians…

At St Luke's CE Primary School, we value Mathematics. We believe that everyone can learn Maths successfully. Maths is not just about rote-learning procedures and methods, but is instead about problem solving, thinking and discussing. Our Maths curriculum includes practice questions to help children develop fluent recall and develop their conceptual understanding. We develop a growth mindset to prompt, encourage and question children. Each lesson sparks curiosity, engages reasoning, secures understanding and ensures deepened learning for all. Children are encouraged to discover, share, think together, practice and reflect on their learning.

At St Luke's CE, we are Mathematicians. We…

- understand that Maths is a network of linked ideas. We can connect new mathematical thinking to what we already know and understand.
- use a toolkit that we can choose tools from to help us solve problems. Practising using these tools helps us become better mathematicians.
- understand that problem solving is an important part of Maths. We can use our understanding, skills and reasoning to help us work towards solutions.
- know that Maths is logical. We can convince ourselves that our thinking is correct and we can explain our reasoning to others.
- know that Maths makes sense and is worth spending time on. We can enjoy Maths and become better at it by persevering.

EYFS & Key Stage 1 – An Early Mathematician	Key Stage 2 - A Developed Mathematician
EYFS Begin to grow knowledge and skills through the concrete, pictorial and abstract approach to learning concepts with opportunities through direct teaching and continuous provision to develop fluency, problem solving and reasoning through: ❖Number and place value ❖ Addition and Subtraction ❖ Multiplication and Division ❖ Fractions ❖ Measurement ❖ Geometry **KS1** - Confidence and mental fluency with whole numbers, counting and place value. - Works with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. - Develops their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. - Describes and compares different quantities such as length, mass, capacity/volume, time and money. - Knows the number bonds to 20 and is precise in using and understanding place value. - Reads and spells mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.	**Lower Key Stage 1** - Fluent with whole numbers and the four operations, including number facts and the concept of place value. - Develops their ability to solve a range of problems, including with simple fractions and decimal place value. - Develops mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. - Uses measuring instruments with accuracy and make connections between measure and number. - Memorises their multiplication tables up to and including the 12-multiplication table and shows precision and fluency in their work. **Upper Key Stage 2** - Extends their understanding of the number system and place value to include larger integers. - Develops the connections between multiplication and division with fractions, decimals, percentages and ratio. - Develops their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. - Uses algebra as a means for solving a variety of problems. - Classifies shapes with increasingly complex geometric properties - Is fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.