Mathematics at Fryent Primary School.

Aims and Objectives.

At Fryent Primary School children are taught using the Mathematics Mastery approach in Early Years, KS1 and lower KS2. The Mathematics Mastery curriculum is cumulative; each school year begins with a focus on the concepts and skills that have the most connections, and this concept is then applied and connected throughout the school year to consolidate learning. This gives pupils the opportunity to 'master maths' by using previous learning throughout the school year, children are able to develop mathematical fluency and conceptual understanding. Each year's curriculum includes all of the National Curriculum objectives for that year, plus a small number from the year above – usually from number – where these will help pupils make connections with their learning.

The principal focus of mathematics teaching in Upper Key Stage 2 is to ensure that pupils build on the solid foundations of teaching in the years below, to extend their understanding of the number system, enabling them to further reason, apply and develop their use of calculation, number, measurement, pattern, shape and space. This is explored through varied and more challenging activities that allow students to enjoy mathematics, practise and talk confidently about their learning. Pupils are exposed to increasingly complex properties of numbers and arithmetic, and are able to solve problems demanding efficient written and mental methods of calculation.

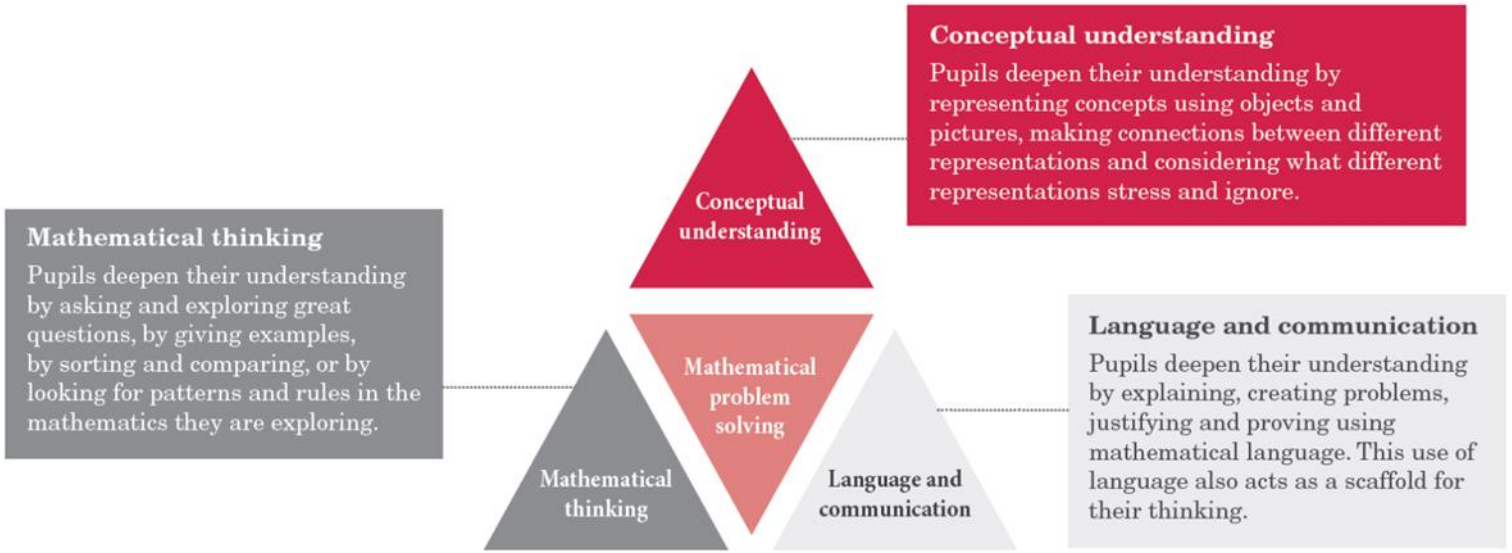
We aim to develop:

1. An enjoyment and curiosity of mathematics and for children to feel confident to become successful.
2. Positive attitudes, confidence and competence by matching the task to the child.
3. A confidence to communicate ideas both in written form and orally.
4. Independent and collaborative ways of working, encouraging children to share ideas and solve problems together.
5. A wide range of mathematical vocabulary modelled and used in the classroom environment.
6. The children's ability to recall mental facts accurately and quickly and using effective written calculation methods.
7. Children's logical thinking, reasoning skills and ability to problem solve, as transferable life skills.
8. Enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
9. The ability to solve problems through decision-making and reasoning in a range of contexts.
10. Challenge through high expectations and focussed, differentiated learning.

Maths Mastery in Years 1 – 4

The maths mastery approach is built upon 3 key concepts:

1. Conceptual understanding
2. Language and communication
3. Mathematical thinking



A Maths Mastery Parent Support Leaflet can be found here.

Upper Key Stage 2

The principal focus of mathematics teaching in upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop 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. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number.

Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell and pronounce mathematical vocabulary correctly.

Children need to be taught and encouraged to use the following processes in deciding what approach they will take to a calculation, to ensure they select the most appropriate method for the numbers involved.
The National Curriculum Objectves for Years 5 and 6 are taught using a mastery approach, where, at each stage of learning, pupils are able to demonstrate a deep, conceptual understanding of the topic and can build on this over time. Mastery is achieved through exploration, clarification, practise and application over time. The journey towards mastery is a long term goal and is not about just being able to memorise key facts and procedures. Pupils should be able to select which mathematical approach is most effective in different scenarios.

Year 5 Parent Support Leaflet can be found here.

Year 6 Parent Support Leaflet can be found here.

Below are some suggested websites which can be used at home to support maths learning.

1. Video to support in learning multiplication tables:
   (a) https://www.youtube.com/watch?v=EgjCLhoI9Mk;

2. Maths Games:
   (a) https://www.topmarks.co.uk/maths-games/7-11-years/times-tables
   (b) http://www.primaryhomeworkhelp.co.uk/maths/timestable/interactive.htm
   (c) http://www.coolmath-games.com/

3. Questions / Arithmetic / Written Methods:
   (a) http://www.primaryworksheets.co.uk/
   (b) http://www.primaryhomeworkhelp.co.uk/maths/worksheets/index.html
   (c) http://www.mental-arithmetic.co.uk

Should you have any further questions, please feel free to contact your child's class teacher.