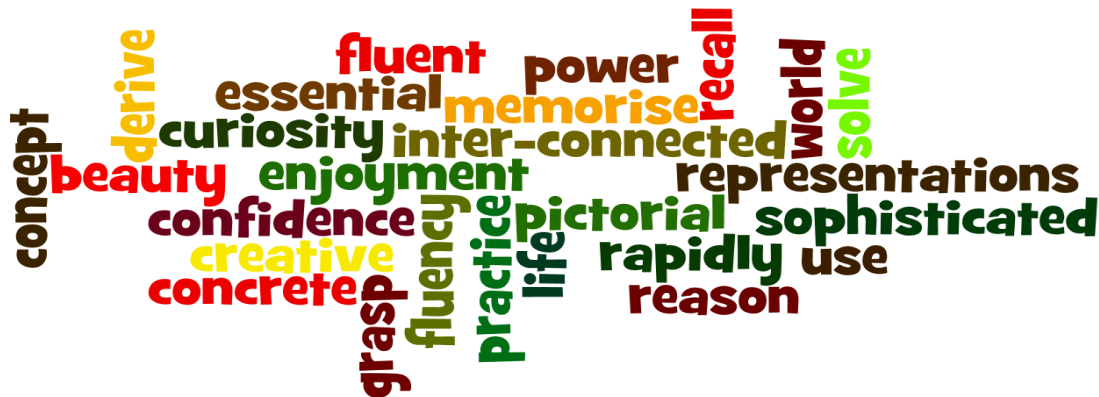Thinking is at the heart of Mathematics and therefore should be at the heart of mathematical teaching and learning.

Aims of today

- To get an insight into how Maths is taught at Daresbury.

- To take away some ideas to support your children at home.

- To take part in a variety of maths activities.

The New Maths Curriculum

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.

Children should:

- 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.

- **Solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
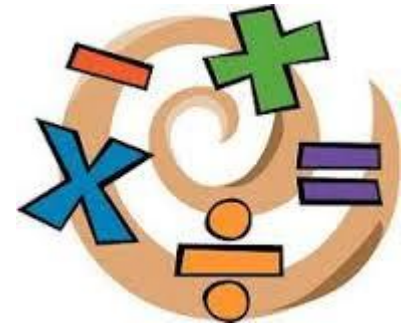
Place Value

- Place value is at the heart of the number system. All digits have a value and a secure understanding of this will enable children to use and understand different calculation methods.

Multiplication

What does the National Curriculum say?

By the end of year 5, children must be able to:

- Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers

- Solve problems involving multiplication.

By the end of year 6, children must be able to:

- Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
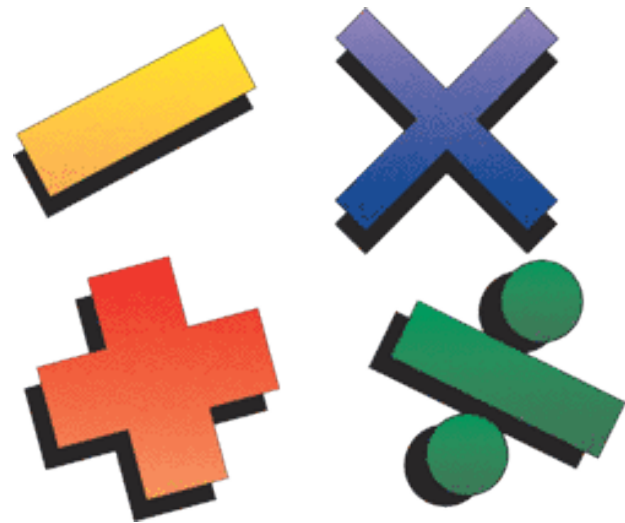
Methods for Multiplication

- Short method

3462 x 6 =

4572 x 0.7 =

- Long method

5496 x 43 =

4532 x 4.6 =

Have a go on your whiteboards

- Use the short method to answer the following:

- 6785 x 7 =

- 9432 x 6 =

- 2987 x 0.4 =

- Use the long method to answer the following:

- 3476 x 34 =

- 6512 x 56 =

- 5454 x 5.4 =

Division

What does the National Curriculum say?

By the end of year 5, children must be able to:

- Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context

By the end of year 6, children must be able to:

- Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context

- Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context

Methods for Division

- Chunking method

832 ÷ 26 =

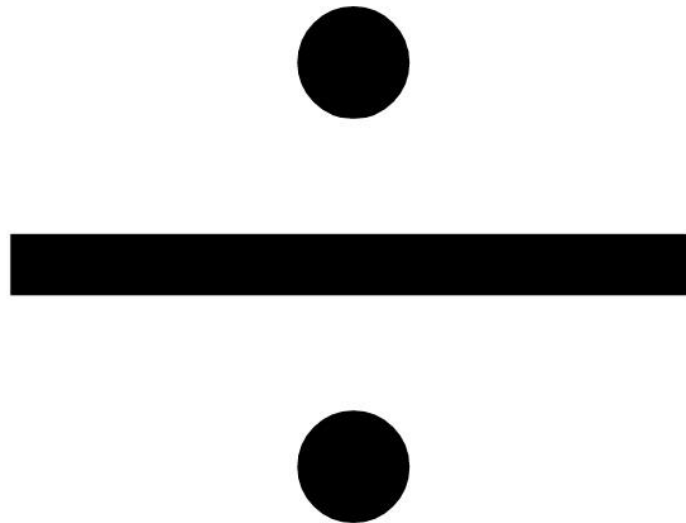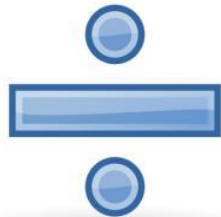- Short division

3282 ÷ 6 =

5242 ÷ 3 =

Long division

3640 ÷ 15 =

Have a go on your whiteboards

- Use the chunking method to answer the following:
- $1092 \div 26 =$

- Use the short method to answer the following:
- $1701 \div 7 =$

- Use the short method to answer the following, showing the remainder as a number, fraction and decimal:
- $2547 \div 6 =$

- Use the long method to answer the following;
- $5859 \div 21 =$

Problem Solving and Reasoning

- Once children are fluent in the methods they must then start to **reason mathematically** and **solve problems.**

- On your tables are the objectives for Multiplication and Division for years 5 and 6, with fluency, reasoning and problem solving questions on.
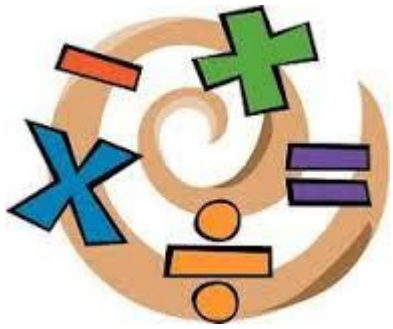
Thank you for attending the multiplication and division workshop!