The Hive: Maths Functional Skills Learning Map

- TERM 1 -

Using Number and the Number System

Students will look in detail at **Place value**; the foundation of the decimal system, which allows students to partition and perform mental calculations with confidence. This key understanding underpins **Addition and Subtraction, Multiplication and Division** and **Rounding to estimate answers**; a way of simplifying numbers to make them easier to understand.

We will also discuss **Time** and how understanding the connections between different units of time are used to solve problems.

Students will learn to work with **Fractions**, which link closely to place value, help us simplify numbers and better understand division.

Finally, mental arithmetic skills will be applied to help student understand how **Linear Sequences** are formed and develop.

Units covered this term:
- Place value
- Addition and subtraction
- Multiplication and division
- Time
- Rounding and estimation
- Fractions
- Calculate with decimals
- Linear sequences

Additional Content - Level 1 and 2

In addition to the above, students studying level 1 and 2 will use their formal and mental arithmetic skills to calculate with **Negative Numbers**.

We will look at the **Order of Operations** and its impact on calculations and work with **Inverse operations** as an introduction to solving equations.

thermometer

LINKS TO PRIOR LEARNING

The focus of this unit is to build on foundations laid at KS2. Place value will be revisited explicitly as it is a key component skill used in other areas of maths in KS3 and KS4.

- TERM 2 -

Measures, Shape and Space

We will revisit values of coins, using our place value and arithmetic skills to solve **Money** problems. Students will also focus on **Time** and how to read both analogue and digital time, using their knowledge of units to solve problems. Students will become confident in **Units of Measure** identifying and converting between them.

By looking at **Symmetry** in a broader context, students can see the interconnectedness of mathematics with other branches of knowledge. We will focus on **2D Shapes**, which is key for future Maths learning; including developing our understanding of **3D Shapes**, which students will be able to describe and classify with new mathematical language.

Students will develop the language to describe amounts of **Angles and Turns**, building on knowledge of direction from KS2.

Units covered this term:
- Money
- Time
- Units of measure
- Symmetry
- 2D shapes
- 3D shapes
- Angles and turns

Additional Content - Level 1 and 2

In addition to the above, students will apply their understanding of ratio and proportion to **Maps and Scales**. Reading a map is not only an essential skill for Mathematics but is also helpful in a read world context.

We will also add further depth to the reading and plotting of **Coordinates** by combining the characteristics of 2D shapes and understanding negative coordinates.

old kitchen scales

LINKS TO PRIOR LEARNING

This unit builds on the skills covered in unit one, using mental arithmetic skills to solve problems and convert between units of measure, find equivalence, and find and use ratio.

- TERM 3 -

Handling data

Students will build on KS2 teaching of charts and graphs; using their arithmetic skills to interpret information from a range of graphs, including **Bar Charts** and **Line Graphs**.

We begin to look at **Algebra**, formalising students understanding of operations and sequencing to help write and solve equations.

Students will apply and further practice their arithmetic skills from unit 1 to solve problems involving **Area and Perimeter** and to find **Equivalence and Ratio**.

Units covered this term:
- Represent information
- Bar charts
- Two way tables
- Line graphs
- Algebra
- Area and perimeter
- Equivalence and ratio

Additional content - Level 1 and 2

Half term three is all about practice and application of the key skills covered previously. For example, students will apply their knowledge of place value and fractions to find **Percentages**. Key multiplication and division skills help us **Find Equivalence** and therefore **Calculate with Fractions** and discuss **Probability** as a fraction, decimal and a percentage.

Coordinates and KS2 handling data skills will combine to represent and interpret Scatter graphs.

We will use pictorial representations to develop understanding of **Ratio** and how the understanding of division and equivalence can be applied to solve a range of ratio problems.

LINKS TO PRIOR LEARNING

Combination of skills covered in previous units, use of pictorial bar method to depict sharing ratios and percentages as an amount "out of 100".