



## **Year 5 Curriculum Plan**

## Academic Year 2023-2024





#### Place Value

The students will develop their understanding and represent numbers to 1,000,000. Study roman numerals, partition numbers, compare, order and round to the nearest.

#### Addition and subtraction

The students will learn formal methods for adding and subtraction 4-digit numbers with exchange. Mental strategies, inverse operations as well as multi-step problems, comparing calculations and finding missing numbers.

#### Multiplication and division A

The students will develop their understanding of multiplication by 10 100 1000 and learn to multiply three numbers. Studying multiples and common multiples, factors and common factors, as well as prime, square and cubed numbers.

#### Fractions A

Finding fractions and their equivalents – unit and non-unit fractions. Converting improper and mix number fractions. Compare and order fractions and use addition and subtraction with fractions.

### Multiplication and division B

Multiply a multiple digit number to another multiple digit number, solving problems using multiplication, effective division strategies including short division, dividing with remainders and problem solving.

#### Fractions B

Multiplying unit and non-unit fractions by an integer. Students will study fractions of a quantity and fractions of amounts. Find the whole as well as using fractions as operators.

#### **Decimals and Percentages**

Students will study decimals to the thousandth. Thousandths as decimals and as fractions as well as recognising the thousandth on a place value chart. Order and compare decimals and round to the nearest unit and whole number. Students will also understand percentages, percentages as fractions and percentages as decimals and find equivalents of fractions decimals and percentages.

#### Perimeter and Area

Perimeter of rectangles, rectilinear shapes and polygons. Area of rectangles and compound shapes as well as learning the ability to estimate area.

#### Statistics

Drawing, reading and interpreting line graphs. Reading and interpreting tables, as well as two-way tables and timetables.

Understand and use degrees. Classify and estimate angles as well as measuring angles up to 360 degrees. Students will draw lines and angles accurately and be able to calculate angles around a point. Lengths and angles in shapes as well as regular and irregular polygons and even 3D shapes.

#### Position and direction

Read, plot and problem solve coordinates. Translation and translating coordinates, lines of symmetry and reflection in horizontal and vertical lines.

#### **Decimals**

Addition and subjections of decimals within and across 1. add and subject decimals with the same and different number of decimal places. Students will study effective strategies when adding and subtracting decimals. Decimal sequences, multiplying and dividing decimals by 10 100 and 1000 as well as missing values.

#### **Negative Numbers**

Understanding negative numbers and counting through zero in 1 and multiples. Compare and order negative numbers as well as finding the difference through problem solving misconceptions.

#### **Converting Units**

Millimetres and millilitres, Convert units of length, convert between metric and imperial units, convert units of time and calculate with timetables.

#### Volume

Cubic centimetres, compare and estimate volume and capacity.





a	
ŭ	
Ē	
~	
.≝	
<u></u>	

### **Properties and their materials**

This 'Properties and Changes of Materials' unit will include learning about different materials, their uses and their properties. The students will work scientifically and collaboratively to investigate the best thermal insulator to make a lunch box, making predictions and forming conclusions.

#### **Earth and Space**

This unit is the only Astronomy related science unit in the primary science curriculum. The aim is to give students a basic overview of Earth and its place in our Solar System. They will be able to describe the Sun, Earth and Moon, name the planets in the solar system independently, distinguish between heliocentric and geocentric ideas of planetary movement and scientifically distinguish between day and night.

#### **Forces**

This 'Forces' unit will include types of forces such as gravity, friction, water resistance and air resistance. Students will also learn about the use of mechanisms such as levers, gears and pulleys. Students will find out about Isaac Newton, understand air resistance and friction as well as participate in challenges to design the best parachute.

#### Living things and their habitats

This 'Living Things and Their Habitats' unit will include the process of reproduction and the life cycles of plants, mammals, amphibians, insects and birds. The students will explore reproduction in different plants, including different methods of pollination and asexual reproduction. They will explore metamorphosis in insects and amphibians, comparing their different life cycles.

#### Skills Based Science review of:

Fair testing

**Identifying variables** 

Planning, conducting and observing tests as well as correctly recording/ interpreting DATA using charts and tables. Pulleys, leavers and gears and forces.

# Topic

#### The Romans

Students will find facts about Ancient and Modern Rome. They will explore the different Roman leaders and Gods, discovering historical facts and beliefs. They will also learn about Roman inventions and find out about the downfall of the Roman empire.

#### **Natural Disasters**

Students will learn about Pompeii and Herculaneum, they will find out about volcanoes, plate tectonics and research the ring of fire and earthquakes. Students will also conduct an independent line of inquiry finding out about Tsunamis and an extra natural disaster-culminating in a presentation display.

#### The Vikings

This topic will see students ask many questions and use a range of resources to answer historical questions, such as-Who were the Vikings? What did they eat? Where did they live? Within the Vikings topic students will learn key facts and research the impact of this period on Britain's settlement.

#### Water, Rivers and Coasts

Students will research and identify the features of rivers' upper, middle and lower course.

They will understand the process of the water cycle, locate important rivers around the world and understand the effects of erosion and deposition. Furthermore, they will identify the key features of coastlines.

#### Rainforests

Students will identify regions of the world where tropical rainforests are located and identify key rainforests on different continents. They will identify the different layers of the rainforests and investigate and describe the climate needed for tropical rainforest eco-systems to thrive. Within this topic students will be able to enjoy researching about a chosen rainforest animal and understand what is meant by the term 'indigenous'.

#### The Maya

In completing this topic students will discover facts about The Maya civilization. They will understand the religious beliefs of The Maya people and know how and when they worshipped. Through research and discussions children will find out about some of the main Gods and what they represented to the people.