

# Year 5 - Spring Term

## Science

**Properties and changes in materials: How do materials change?**

Children consolidate previous learning by revisiting the properties of solids, liquids and gases; learn to describe the properties of materials using scientific language; investigate which materials make the best thermal insulators; and which materials are magnetic. Children will be introduced to key scientific vocabulary to describe the properties of materials and investigate how to separate materials using these properties. They will be able to name separation methods and decide on the most efficient method for separating a mixture of materials.

**Forces: Are there different types of forces?**

Children consolidate and extend their knowledge of forces by naming individual forces. They will extend their knowledge of frictional forces and plan fair test investigations to discover which shoe has the greatest friction and which shapes offer the most water resistance. They will learn how forces can be helpful and unhelpful in various scenarios and identify the forces involved in each scenario. They will learn what a mechanism is and how pulleys, levers and gears are used to allow a smaller force to have a greater effect.

**History** Ancient Greece: What were the greatest achievements of Ancient Greece?

This unit looks at the Ancient Greeks and their achievements from around 3000 BCE to the reign of Alexander the Great around 330 BCE. The first focus is on the Minoans and how they began to trade in early Greece. The children will also think about and discuss how we know about the early Greeks, by looking at excavation evidence and what this tells them. Next, the focus is on life in Athens and Sparta, the Persian invasion and the impact this had on life in the city-states. Finally, children look at the leadership of Ancient Greece under the rule of King Philip II and then Alexander the Great. Children conclude their learning with a final response to the main historical enquiry, 'What were the greatest achievements of Ancient Greece?'

**Geography** How are mountains formed and what are their geographical features?

In this unit, children will recap the key human and physical features of their region in England. Children will compare the human and physical features of mountains, biomes, climate zones, vegetation belts, earthquakes and volcanoes around the world to their own region.

## English

**Kensuke's Kingdom**

To write an extended chapter for the story

**Cracking Contraptions**

Devise and write about your own cracking contraption to create a class Haynes Manual

**Rain Player**

To write an analytical essay about The Maya

**Poetry - The Highwayman**

To write an innovated poem based on 'The Highwayman.'

## PSHE

Keeping safe and managing risk: When things go wrong  
Mental health and emotional wellbeing: Dealing with feelings

## RE

What does it mean if Christians believe God is holy and loving?  
Why is the Torah so important to Jewish people?

## Computing

Programming: Selection in physical computing  
Data & Information: Flat-file databases  
Online safety: Protect your stuff & Respect each other

## Music

World music experiences  
The children will learn about the traditions of samba and famous groups of performers. The children will have the opportunity to experience playing samba instruments

## PE

Gymnastics, adventurous activities, tag rugby, & swimming

## French

Feeling unwell, at the doctors, where I live, countries and flags

## Maths

**Multiplication & Division:**

Multiply up to a 4-digit number by a 1-digit number  
Multiply a 2-digit and 3-digit number by a 2-digit number  
Multiply a 4-digit number by a 2-digit number  
Short division  
Divide a 4-digit number by a 1-digit number  
Divide with remainders  
Solve problems with multiplication and division

**Fractions:**

Multiply a unit and non-unit fraction by an integer  
Multiply a mixed number by an integer  
Calculate a fraction of a quantity  
Fraction of an amount  
Find the whole  
Use fractions as operators

**Decimals and percentages:**

Decimals up to 2 decimal places  
Equivalent fractions and decimals (tenths & hundredths)  
Thousandths as fractions and decimals  
Thousandths on a place value chart  
Order and compare decimals - up to 3 decimal places  
Round to the nearest whole number  
Round to 1 decimal place  
Percentages as fractions and decimals  
Equivalent fractions, decimals and percentages

**Perimeter and area:**

Perimeter of rectangles and polygons  
Area of rectangles and compound shapes  
Estimate area

**Statistics:**

Draw line graphs  
Read and interpret line graphs  
Read and interpret tables including two-way tables  
Read and interpret timetables

**Art** How realistic do portraits need to be?

Children will learn about the seven elements of art and portraiture. They will use measurements to create a face with realistic proportions. They will revise how to use watercolour paints. They will understand that art does not need to be realistic to be 'good'. They will encounter a range of portrait artists from across history and the world. They will create a self-portrait using a collage. They will develop their ability to evaluate their own work.

**DT** Design and make a marble run

In this unit, children will develop their understanding of more complex free standing structures and how they can be strengthened and reinforced. Children will gain knowledge and understanding about how to join and shape materials. Children will then apply these skills, using an iterative design process, to create their marble runs. Finally, children will test and evaluate their marble runs against design criteria.