



**Willow Class**  
**Mr Brown**  
**Curriculum Information**  
**Spring 2020**

### Physical Education

The children will be learning and performing gymnastics key steps on Monday afternoons and on Thursday mornings the children will be working through a variety of outdoor adventurous activities which will help the children develop communication and cooperation skills. After half term, the units will be Dance on a Monday and a range of striking and fielding activities on a Thursday.

### Knowledge and understanding of the world

Through our topic sessions the following questions (and many more) will be answered...

Why did people in the past believe Earth is flat? What scientific evidence did people apply in order to disprove that the Earth is not flat? What are the names of other planets in our solar system? What is the order of the planets from the sun? What specific features do they have to help us recognise them? How do planets order the sun? What is heliocentric and geocentric planetary movement and which scientists believed in them? Why do we get night and day? Why does night and day occur at different times in different places on Earth? What were the key dates in the race for space? What does it take to become an astronaut? What does an astronaut do in outer space? What happened when we landed on the moon? What other key roles are there in order send people to space? How significant was Tim Peake for British space travel? Why did we send Curiosity to Mars? What are the current and future missions into space? In Science during the first term, the children will identify and explain the different forces acting on objects, identifying pushes and pulls, explain Isaac Newton's role in developing the theory of gravity, measure forces using a Newton meter, explain how air resistance affects moving objects, explain the effects of water resistance and streamlining, explain how friction can be both helpful and a hindrance. In the second half term, we will learn about sound where the children will think about how sounds are made, how we are able to hear sounds, what is pitch and volume and what patterns are there based on the object that produced the sound.

### Maths

We shall start the New Year by completing the fractions unit of work where we shall compare and order fractions, adding, subtracting and multiplying fractions, finding fractions of amounts and using fractions as operators. Following this, we shall complete written method calculations for multiplication and division and then work towards answering a range of questions on perimeter and area and units of measurement. We will then conclude the term by drawing links between decimals, fractions and percentages. Throughout the term, the children will continue to be taught a variety of strategies that will challenge them appropriately where they will complete a range of fluency, problem solving and reasoning activities. We will also place an emphasis on the speed of mental maths facts, particularly times tables.

## This term's topic is:

### Earth and Space

### Creative development

In Music, the children will use the planets and other related words as a stimulus while developing space, spatial awareness, distance and silence in their music compositions. They will perform and compose more complex music, being able to perform without stopping and understand better how to improve this as well as adding harmony parts.

In Art term pupils will make clay sculptures inspired by the Indus Valley clay toys. They will then look at Hubble space photos as inspiration toward drawing planets. They will learn to use oil pastel and chalks to create three dimensional planets with a particular focus on tone and form.

In Computing we will learn about the Mars Rover, exploring how and why it transfers data. We will understand how messages can be sent through binary code, how it is used to programme the Mars Rover, how to calculate binary addition and represent it as text. Later in the term we shall understand how computers work (RAM and ROM) in relation to Mars Rover instructions and then use online 3D design software to design new tyres for the Mars Rover.

### Personal and Social Development

In RE we shall be studying Islam where we will learn about the main beliefs, special places and festivals, holy books and what symbols are particular for this religion and the meaning behind them.

In PSHE the children will learn working together skills such as communication which will be followed by discussions on financial capabilities such as managing money, saving, making choices on wants and needs and essentials and desires.

### English

This term we will be reading 'The Jamie Drake Equation' by Christopher Edge and then later in the term we will be reading 'Cosmic' by Frank Cottrell Boyce. Both these texts lend themselves to our topic with plenty of references to Earth and Space which should really help inspire everyone's creative writing. We will also complete work on 'Curiosity: The Story of a Mars Rover' by Markus Motum which is a lovely picture book from the perspective of curiosity as it explores the red planet. Over the term, the children will have lots of opportunities to engage in drama type activities such as hot seating and role playing, writing diary entries, recounts, newspapers, letters, descriptions and improving atmosphere in the children's writing. We will continue to embed grammatical skills as well as promoting legible and fluent handwriting, more challenging spellings and encouraging exciting vocabulary choices.