

## Class 5: 2015-16 Spring Outline

### Science: Earth & Space

Pupils will be introduced to a model of the Sun and Earth that enables them to explain day and night. They will learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). They should understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones).

Pupils will find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.

Pupils will work scientifically by: comparing the time of day at different places on the Earth through internet links and direct communication; creating simple models of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.

Pupils will be taught to:

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night.

### Science: Forces

Pupils will explore falling objects and raise questions about the effects of air resistance. They will explore the effects of air resistance by observing how different objects such as parachutes and sycamore seeds fall. They will experience forces that make things begin to move, get faster or slow down. Pupils will explore the effects of friction on movement and find out how it slows or stops moving objects, for example by observing the effects of a brake on a bicycle wheel. Pupils will find out how scientists such as Galileo Galilei and Isaac Newton helped to develop the theory of gravitation.

Pupils will work scientifically by: exploring falling paper cones or cup-cake cases, and designing and making a variety of parachutes and carrying out fair tests to determine which designs are the most effective. They will explore resistance in water by making and testing boats of different shapes. They will design and make artefacts that use simple levers, pulleys, gears and/or springs and explore their effects.

Pupils will be taught to:

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- understand that force and motion can be transferred through

## Geography: World & Contrasting Culture of China

Pupils will be taught to:

- Location the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities
- identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones
- understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America

Through a study of China to understand:

- climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes.
- human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.

## RE: Faith in Action

Explore various aspects of making a commitment; seek out the religious commitment that often goes hand in hand with the admission of belief. Look at the way commitments can affect and shape lives, guiding the activities of both groups and like-minded individuals.

- Values & Commitments explore commitment as demonstrated in the lives and work of significant people of faith explore why and how people of faith commit to causes
- Beliefs, Teachings & Sources find out about the ways in which the writers of some religious texts were influenced

## Art and Design:

- To create a sketch book of ideas and observations
- Improve mastery of art and design techniques using a variety of materials
- To learn about great artists, architects and designers.

## Design and Technology: Cooking and nutrition

- Understand and apply the principles of a healthy and varied diet
- Prepare and cook savoury food using a wok
- Understand the variety of ingredients and where they are sourced, caught and processed

### MFL: Spanish

Spanish will provide an appropriate balance of spoken and written language, but will focus on practical communication.

Pupils will be taught to:

- listen attentively to spoken language and show understanding by joining in and responding.
- explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words.
- begin to ask and answer questions; express opinions and respond to those of others.
- speak in sentences, using familiar vocabulary, phrases and basic language structures
- develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases

### Music: Brass

Through the wider opportunities for brass children will:

- Pupils will be taught to sing and play musically with increasing confidence and control. They will develop an understanding of musical composition, organising and manipulating ideas within musical structures and reproducing sounds from aural memory.
- play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
- use and understand some musical notations

### Physical Education: Games and Gymnastics

Pupils will continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They will communicate, collaborate and compete with each other. They will develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.

Pupils will be taught to:

- play competitive games, modified where appropriate and apply basic principles suitable for attacking and defending.
- develop flexibility, strength, technique, control and balance in gymnastics using a range of movement patterns comparing their performances with previous ones and demonstrate improvement.