

Themed:

This term, we will be learning about significant inventions throughout history.

Using a range of sources, we will:

- Study important inventions throughout history and the impact that they had on society - with a particular focus on transport, communication and medicine.
- Learn about important inventors and the work that they did.
- Learn about current inventions and how inventions might develop in the future.
- Investigate how the inventions of canals and the railway led to the development and growth of Old Harlow.
- Continue to develop skills of historical enquiry and chronological understanding by ordering significant inventions on a timeline.

We will also be doing an in depth study of Baghdad AD 900, which will include learning about how the city had a major influence on early discoveries and inventions.

Writing:

Throughout the theme we will write:

- A newspaper report based on the first flight.
- A non-chronological report based on Baghdad
- A short biography on a famous inventor.

Key Texts:

- *'Inventors who changed the World'*
- *'The Story of inventions'*
- *'1000 Inventions and discoveries'*

Our focus author this term is:

Sally Gardener.

Science:

Properties and changes of materials:

As well as working scientifically, we will also:

- Revise features of solids, liquids and gasses.
- Identify thermal and electrical conductors and insulators.
- Investigate the processes used to separate materials.
- Learn about reversible and irreversible changes.

Forces:

As well as working scientifically, we will also:

- Identify and explain the different forces acting on objects.
- Learn about Newton's role in discovering gravity.
- Recognise how mechanisms work and design our own mechanism to achieve a specific purpose.
- Accurately measure an objects weight and mass
- Explore Galileo's 'Tower of Pisa' experiment into gravity and air resistance.

Cross-Curricular Maths:

During our themed lessons we will include learning about the invention of money and different currencies and how these have developed over time.

We will also look at how mathematics was used in the development of some inventions such as computer games.

RE

We will be learning about the key influencers and the founders of different religions (e.g. Muhammad, Moses, Jesus, Buddha, Nanak and Isaiah) and the life changing experiences which shaped their lives and led to the formation of religions we are familiar with today.

Inventions and Developments

Key Vocabulary:

Innovation
Development
Perseverance
Adaptation
Creativity
Patent
Breakthrough
Devise
Pioneering
Designing

Global Learning:

We will find out about how modern inventions have improved the lives of people in developing countries. Specifically, we will learn about the impact of the 'hippo water roller'.

MFL:

We will be learning key phrases in Mandarin led by a specialist teacher from the Essex - Jiangsu Centre for Chinese Studies.

Events:

We are in the process of organising a visit to the Science Museum.

Gardening and Outdoor Learning:

We will be spending time taking care of our vegetable plot and planting seeds for winter vegetables. As well as this we will plant winter bulbs.

Music:

We will be developing out performance skills by learning to sing songs in two parts, maintaining a part in a round and performing on a range of instruments, playing with dynamics and at different tempos. We will also compose by creating our own simple song which reflects the meaning of the words.

Two songs we will learn are:

- *'World without the Wheel'*
- *'Switching it on'*

Computing:

Through the following topics we will learn to:

Multi-media:

- Use Hopscotch to create complex games.
- Create a controlled sprite with different behaviours.
- Use copying to create multiple characters.

Online Safety:

- Be aware of the different forms of technology that can be used to access the Internet and communicate with others.
- We will explore the concept of copyright and the associated laws.

Cloud Computing:

- Use cloud computing to save files.
- Upload/download files to the cloud on different devices.

PE:

Tag-Rugby:

The children will take part in tag-rugby sessions whereby they will develop their passing/marking skills, positional awareness and tactics.

Dance:

The children will learn about the history and movements associated with haka. They will then use improvisation and creative skills to develop their own versions of haka to represent a sport of their choice.

PSHCE

We will learn about:

- Bacteria and viruses and how to reduce their spread.
- Peer pressure and strategies to deal with this.
- What is meant by the term 'habit' and why habits can be hard to change.
- How commonly available substances and drugs (including alcohol and tobacco) could damage health and safety.

Art

Printing:

We will experiment with creating prints using a variety of everyday objects and items found in nature. We will also design our own inventions and use polystyrene to make prints that include overlays.

Our focus artist will be: *Frank Stella*.

DT

We will be investigating electrical systems and will design, make and evaluate an alarm/security system.