

## DT- Mechanical, Electrical Systems and ICT/3D

Children will:

**Design and make a light source suitable for the WW1 trenches**  
**Create a 3D trench using a variety of materials**

Design Process Skills:

- Make a collection of light sources and evaluate what works and why.
- Research needs of the user in World War
- Investigate the key events in the invention of the flash light/torch and the individuals behind the invention
- Investigate similar products to the one to be made to give starting points for the design
- Develop more than one design or adaptation of an initial design
- Plan a sequence of actions to make a product
- Record the plan by drawing using annotated sketches
- Construction: Incorporate a circuit into a model - incorporate bulb or buzzer
- Use mechanical systems such as gears, pulleys, levers and linkages.
- Consider and explain how the finished product could be improved
- Discuss how well the finished product meets the design needs of the user

3D/structure Skills:

- Create shell or frame structures.
- Strengthen frames and make structures more stable by giving them a wide base.
- Plan, design and make models from observation or imagination.

**Vocabulary:** electrical systems, switches, bulbs and buzzers

**Linked designer/inventors:** Conrad Hubert, Humphrey Davy

## PSHE – Relationships

- Families and friendships- Positive friendships, including online.

**Vocabulary-** Families, friendships, positive, negative, online, internet, safety, strategies, support, relationships, lonely, alone, excluded, feelings, communicate, respect, devices, differences, similarities, risks, managing, worried.

- Safe Relationships Responding to hurtful behaviour; managing confidentiality; recognising risks online

**Vocabulary-** Responding, behaviours, changes, hurtful, confidentiality, risks, online, differentiate, teasing, hurtful, bullying, differences, similarities, dares, pressure, confidence, secrets, harmful, pretending, concerns, reporting, worried, uncomfortable, help, support.

- Respecting ourselves and others. Respecting differences and similarities; discussing difference sensitively.

**Vocabulary-** Respect, differences, similarities, sensitively, recognise, gender, faith, race, shared values, likes, dislikes, aspirations, importance, awareness, including, vocabulary.

## Science

### Teeth and Eating

Children will:

- Identify the different types of teeth in humans and their simple functions
- Identify and describe functions of the basic parts of the digestive system in humans (mouth, tongue, teeth, oesophagus, stomach, small and large intestine)

Skills/working scientifically:

- Compare the teeth of carnivores and herbivores.
- Suggest reasons for the differences.
- Find out what damages teeth and how to look after them.

Vocabulary: mouth, tongue, teeth, oesophagus, stomach, small intestine, large intestine, nutrients, absorb, canine, incisor, molar producer, consumer, apex predator

### States of Matter including changes of state and the water cycle

Children will:

- Compare and group materials together according to whether they are solids, liquids or gases
- Observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens in degrees Celsius (OC)
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
- Explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape, liquids form a pool not a pile, gases escape from an unsealed container)
- Observe water as a solid, a liquid and a gas and note the changes to water when it is heated or cooled.

Skills/working scientifically:

- Grouping and classifying a variety of different materials
- Exploring the Effect of temperature on substances such as chocolate, butter, cream (chocolate crispy cakes, ice-cream)
- Researching the temperature at which materials change state (when iron melts, oxygen condenses into a liquid)
- Observing and recording evaporation over a period of time

Vocabulary: solid, liquid, gas, evaporation, condensation, particle, temperature, freezing, heating

**Scientist Study – William Thompson – Physicist**

# MTP's Year 4 Autumn Term

## Art – Drawing/Painting

Children will:

**Create their own paintings inspired by Claude Monet's Poppy fields at Argenteuil**

Drawing Skills:

- Observation of the art work and develop questions in sketchbook/journals
- Explore Impressionism – role and purpose of the artist
- Draw flowers using a selection of drawing implements and grades of pencil and create tone/texture
- Begin to show an awareness of objects having a third dimension.
- Mix and use tints and shades to further develop the colour palette e.g. draw in charcoal and annotate their feelings. Add chalk to the charcoal as a tint and annotate

Painting Skills:

- Experiment with different effects and textures – washes and thickening paint to create the effect/texture of poppies in the Impressionist style
- Work on a range of scales e.g. thin brush on small paper/round paper/shaped paper/coloured paper
- Mix colours and know which primary colours and make secondary colours/tones and use more specific colour language e.g. bright pink – crimson etc.
- Use more specific colour language linked to WW1 to describe the palette of colour created through colour mixing. Record/annotate in sketch book
- Choose a style that they have worked on to create their own poppy fields artwork for a display
- Compare ideas, methods and approaches in their own and others' work and say what they think and feel about them. Choose a child to envy their technique used to other groups.

**Vocabulary:** observational, lines, marks, form, shape, tone, texture, colour, media, primary/secondary, specific colour names

**Linked Artists:** Claude Monet, Van Gogh (Sunflowers)

## Computing

Children will follow the Purple Mash scheme of work coding and spreadsheets topics.

Skills:

- To use sequence, selection and repetition in programs.
- To use logical reasoning to explain how some simple algorithms work.
- To use a variety of software to present data.

Online Safety – Self-Image and Identity, Online Relationships (Educated for a Connected World – see progression within document) column 5

Children will:

- 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
- Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help
- 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
- Present ideas and information orally to a range of audiences
- Read carefully and show understanding of words, phrases and simple writing
- Appreciate stories, songs, poems and rhymes in the language
- Broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
- Write phrases from memory and adapt these to create new sentences, to express ideas clearly
- Describe people, places, things and actions orally and in writing

More able:

- Understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English

Half Term 1 – Phonetics 2 (C) & Presenting Myself

Half Term 2 – Family (i)

**Children will understand the Locational knowledge of the UK – counties and cities countrywide**

- Can we identify and locate our home county and other counties within easy reach of our school's position?
- What are the major cities of the UK and where are they located?
- Can we identify and locate two geographical regions of the UK? – Snowdonia and The Fens
- What are the main human and physical characteristics of the regions we have identified?
- How have the human and physical characteristics of the geographical regions changed over time?

Skills:

**Mapping**

- Use a wider range of maps (including digital)
- Use maps at more than one scale
- Recognise patterns on maps and begin to explain what they show
- Use the index and contents page of atlases
- Recognise some standard OS symbols
- Make simple scale drawings
- Use a scale bar to calculate some distances
- Relate measurements on large scale maps to measurements outside

**Fieldwork**

- Use the 8 points of a compass

**Enquiry and Investigation**

- Show increasing empathy and describe similarities as well as differences

**Use of ICT/technology**

- Use the zoom facility on digital maps to locate places at different scales
- Add a range of text and annotations to digital maps to explain features and places
- View a range of satellite images
- Make use of geography in the news – online reports and websites.

**Vocabulary**

Region, Snowdonia, The Fens, London, Birmingham, Cardiff, Edinburgh, Manchester, Leeds, Belfast, Liverpool, Sheffield, Bristol, Glasgow, Leicester, Stoke on Trent, 8 points of the compass, Ordnance Survey map, Ordnance, Survey symbol, landscape, features, rainfall, mountain, scale, scale bar

- Pre-teach vocabulary
- Be able to place World War 1 on a chronological framework and make connections to the history previously studied

Use an artefact led enquiry to understand:

- the causes of the War
- life on the frontline – the soldiers, trenches and battlefields,
- propaganda posters and their purpose
- exploring the home front including the impact the war had on women and children
- How we remember the dead of the First World War today.
- A study of famous individuals during WW1: Edith Cavell, Jack Cornwell, Lord Kitchener, Sergeant Stubby, Sir Douglas Haig

**Black British History – Walter Tull**

Skills:

**Chronology**

Place events into different periods using the appropriate historical terminology e.g. decade, century, AD,

**Communication**

Discuss some of the connections between local, regional, national and international history

Talk and write about historical events and changes by selecting and organising historical information and dates

Discuss historical issues and change

**Events, People and Change**

A study or theme in British History that extends pupils' chronological knowledge beyond 1066 (WW1)

**Enquiry, Interpretation and Using Sources**

Recognise why some events happened and what happened as a result. Ask questions such as, 'Why did..?' 'What were the effects..?'

Describe some of the different ways the past can be represented e.g. through artists' pictures, museum displays, films and written sources.

Identify historically significant people and events in different situations

**Vocabulary:** decade, century, AD, BC, primary source, primary evidence, secondary source, secondary evidence, political, propaganda, cause, consequence, government, artefact

Children will:

- Understand some of the key elements of music: pulse, beat, rhythm, tempo, dynamics, texture and timbre
- Sing a variety of songs and play the ukulele musically with increasing confidence, control, accuracy, fluency and expression.
- Listen and appreciate a variety of composers e.g. Chopin, Haydn, Beethoven, Mozart, Ravel
- Have an interesting fact about one classical composer
- Begin to understand the staff and musical notation
- Begin to develop an understanding of the history of music
- Perform a concert on stage, on an instrument in front of a live audience
- Compose music for film
- Listen to detail – Creating Graphic scores to represent ideas.

Skills

- Listening
- Composing
- Creativity
- Performing
- Confidence
- Understanding musical pulse

Vocabulary

Musical texture, dynamics, timbre, expression, notation, graphic score, Haydn, Beethoven, Mozart, Ravel

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