SCIENCE

Physics
To understand electrical circuits
- **Sc10 M2a** Identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery.
- **Sc10 M2b** Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
- **Sc10 M2c** Recognise some common conductors and insulators and associate metals with being good conductors.

To investigate sound and hearing
- **Sc9 M2a** Identify how sounds are made, associating some of them with something vibrating.
- **Sc9 M2a** Recognise that sounds get fainter as the distance from the sound's source increases.

ART

To develop ideas
AD1 M2e -Comment on art work using visual language.
To master techniques
-**AD2 M2b** Ensure work is precise.
-**AD2 M2a** Use hatching and cross hatching to show tone and textures.
AD2 M2a Create and combine shapes to create recognisable forms [e.g.] shapes made from nets or solid materials.]
-**AD2 M2d** Add materials to provide interesting detail.
To take inspiration from the greats [classic and modern]
- **AD3 M2b** Create original pieces that are influenced by studies of others.

DESIGN & TECHNOLOGY

To master practical skills
- **DT1 M2a** Choose suitable techniques to construct products or to repair items. (junk model inventions)
- **DT1 M2d** Select appropriate joining technique.
- **DT1 M2c** Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material [such as slots or cut outs]

To master practical skills [food]
- **DT1 M2c** Follow a recipe
- **DT1 M2d** Assemble or cook ingredients [controlling the temperature of the oven or hob, if cooking].
- **DT1 M2a** Prepare ingredients hygienically using appropriate utensils.

PSHE

SPR1 - Core value: Truth
- To consider and evaluate different viewpoints, attending to and building on the contributions of others.
BRIGHT: Improving
SEAL – Going for goals
- To decide on a realistic goal for themselves and plan steps they will need to take to achieve their goal. (focus on IMPROVING).
PSHE:
- To explore what positively and negatively affects their physical, mental and emotional health.
SPR2 - Core value: Freedom
- To articulate and justify answers, arguments and opinions.
BRIGHT: Gifted
SEAL - Good to be me
- To discuss personal GIFTS and how people have different strengths.
PSHE:
- To recognise that they may experience conflicting emotions and when they might need to listen to, or overcome these.

Spring 1&2 – Keep it Private

- To recognise the kind of information that is private and understand that they should never give out private information on the Internet.
- To learn to create effective user names that protect their private information
Safe searching
- Understand the function of keywords and keyword searches
- Learn a step-by-step procedure for selecting suitable keywords
- Apply their chosen keywords to find the information they are looking for on the Internet
https://www.youtube.com/watch?v=dR6YAZ54D2Q
https://www.youtube.com/watch?v=r-ntiZg1Fas

HISTORY

To build an overview of world history
- **H2 M2a** Describe changes that have happened in the locality of the school throughout history.
- + history of technological development
To investigate and interpret the past
- **H2 M2e** Suggest causes and consequences of some of the main events and changes in history.
- **H1 M2a** Use evidence to ask questions and find answers to questions about the past.
To understand chronology
-**H3 M2b** Understand the concept of change over time, representing this along with evidence, on a time line.
-**H3 M2c** Use dates and terms to describe events.

Computing

Heath Robinson inspired machines- Use Scratch to create a Spinning Boots machine

C1 To code (using Scratch):

- **C1 M1a** Control motion by specifying the number of steps to travel, direction and turn
- **C1 M2f** Use IF THEN conditions to control events and objects
- **C1 M2h** Use variables to store a value
- **C1 M2c** Create and edit sounds. Control when they are heard, their volume, their duration and rests

RE DISCOVER

JUDAISM (Y4spr1)
How important is it for Jewish people to do what God asks them to do?
Do religious people lead better lives?
Is religion the most important influence and inspiration in everyone's life?

CHRISTIANITY (Y4spr2)
Is forgiveness always possible?
Do religious people lead better lives?
Do all religious beliefs influence people to behave well towards others?

Seeking Enquiry - Topic Questions
Do we need to a cure for all disease?
What would you invent if you could invent anything?
What is the best invention ever?
Are there things that should not be invented?

ENGLISH

Adventure stories, explanations, performance poetry
World Book day
Operation Gadget Man
Play Scripts – Lower Junior Showcase
Biography - Inventors

MUSIC

Ukulele – composition, reading notation, performing

Electronic music – vocabulary, genre impact, instrumentation

P.E

Gymnastics – balancing, rolls, jumps, travelling, using equipment

Dance – choreography, definition, performing

Gadgets & Gizmos

Topic Overview

This topic focuses on how modern technology and everyday objects have changed over time from pre-computer to today The topic aids an understanding of chronology as well as how technology has affected the lives of people throughout history. We will examine various artefacts from different time periods, looking at how they were made and how they were used. We will look at the lives of key figures, writing both diaries and letters to further our understanding of the impact of new inventions. Linked to the topic this term is science as we will investigate both sound and electricity. We will finish by applying what we have learnt to designing our own piece of 'technology' and creating a piece of art in the style of Heath Robinson.

Big Questions

How does technology impact our daily lives?

How has technology changed in this millennium?

How do you think technology will change in the future?

Vocabulary

Chronology – the arrangement of data or events in the order in which they happened

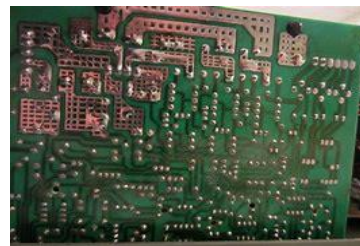**Technology –** machinery and equipment developed from the application of scientific knowledge.

Gadgets – a small mechanical or electronic device or tool, especially an ingenious or novel one.

Gizmos – a slang term for gadget.

Heath Robinson – an English cartoonist, illustrator and artist, best known for drawings of machines.
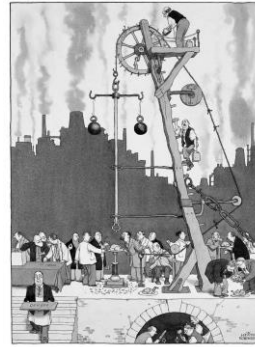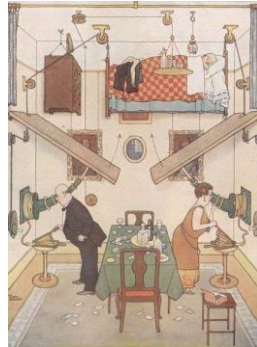
images

2001 – iPod invented

2003 - Toyota's Hybrid Car is introduced in Japan.

2004 - Intel Express Chipsets are invented to provide built-in sound and video for the PC.

2005 - YouTube invented

2005 – Sun roofs invented

2006 - Tesla Motors invents the Tesla Roadster 100

2006 - Aqua Sciences invents, 'The Rainmaker', which harvests drinking water out of the air.

2007 – iPhone invented

2008 – Fibre optic broadband released

2008 – Spotify rolled out

2009 – Dyson bladeless fan

2010 – Apple iPad invented

2010 – Instagram released

2012 – Oculus Rift (VR headset) released

2012 – Google Maps available

2013 – PS4 and Xbox One released

2017 – Nintendo Switch released