

Trailblazers



Recommended year group: Year 3

Theme focus: Geography & Design and Technology **Suggested term:** Autumn

Theme introduction:

Trailblazers is a theme that is focussed on learning about key inventions and explorers. Learning in this theme is focussed on geography and includes History, Art, Music and Design Technology. In Trailblazers, we look at significant people who have influenced part of our lives or the world. These people include The Wright Brothers, who patented the first aeroplane, Alexander Graham Bell who patented the telephone and Sir Tim Berners Lee who founded the World Wide Web. Pupils will also learn about those individuals who have challenged social injustice such as Mahatma Gandhi and Martin Luther king and those that have influenced our music choice such as Aretha Franklin and the sound of Rhythm and Blues.

Driving question:

How will you change the world?

Suggested switched on science unit

Forces and magnets: Pupils make a compass that is referred to when using positional language

Suggested switched on computing unit

We are bug fixers: Link can be to inventors etc – learning about innovation, including bug fixing

Linked reading texts:

The Paris Cat by Dianne Hofmeyr
Until I Met Dudley by Roger McGough
Marvellous Machines (What on Earth Books) by Chris Lloyd
Little People Big Dreams Alan Turing by Maria Isabel Sanchez
Explorers: Amazing Tales of the World's Greatest Adventures by Nellie Huang

Writing outcomes:

Adventure Story – A story of meeting Trailblazers based on *The Paris Cat*
Explanations – Explanation of their own invention based on 'How do planes stay in the air?' / 'How do large boats stay afloat?' in the style of 'Until I Met Dudley'

Curriculum coverage

Geography – The wider world, environment, direction

Art – Painting, evaluating and appreciating

History – Significant individuals, events and achievements

Music – Rhythm, notation

Design and Technology – Representing design ideas, evaluation: own products, existing product



Excite:

Create an interactive museum of inventions for the children to participate in.

Possible inventions could be:

Braille, Hula Hoop, Walkie Talkie, Telephone.

Explore:

Explore 1 – Aspirations

Explore 2 – Exploring the world

Explore 3 – Mount Everest

Explore 4 – The Wright brothers

Explore 5 – Amelia Earhart

Explore 6 – Inventors and inventions

Explore 7 – Alexander Graham Bell

Explore 8 – Sir Tim Berners-Lee

Explore 9 – Computer networks

Explore 10 – Social injustice

Explore 11 – Challenging social injustice

Explore 12 – Pablo Picasso

Explore 13 – Rhythm and blues

Explore 14 – Rhythm and blues – musical compositions

Theme essential vocabulary:

Trailblazers (and synonyms), ambition, aspiration, notation, eight compass points, points and direction, hemisphere, Tropic of Cancer, Tropic of Capricorn, equator, influence, justification, latitude, Prime Greenwich Meridian, Network (wired and wireless, WLAN, ELAN), World Wide Web, abstract, rhythm, longitude

Theme essential knowledge/concepts

1. Use the eight points of a compass.
2. Locate the Equator and the Tropics of Cancer and Capricorn on a world map.
3. Hemispheres and countries that are within the Northern and Southern Hemispheres.
4. Know the key countries of Europe, North America and South America.
5. Know that humans can have a negative impact on the physical environment.
6. Know that the Wright Brothers invented the aeroplane and the first successful flight was on 3rd December 1907, lasting 12 seconds.
7. Amelia Earhart was the first female pilot to cross the Atlantic Ocean, on 18th June 1928.
8. Alexander Graham Bell invented the telephone in 1876, James Watt redeveloped the steam engine in 1765, Thomas Edison invented the light bulb in 1879 and Karl Benz invented the car in 1886.
9. Appreciate that design ideas often get better incrementally, and that evaluation and adaptation is crucial.
10. Know that the Internet is a global computer network and is different from the World Wide Web.
11. Sir Tim Berners-Lee invented the World Wide Web in 1990.
12. Computer networks are devices connected to allow communication between them.
13. Know that computer networks can be both wired and wireless, and be able to give familiar examples.
14. Know who Picasso was and be able to discuss his cubist approach to portrait painting.
15. Know that Sir Edmund Hillary and Tenzing Norgay reached the summit of Mount Everest on 29th May 1953.



Excel:

- Labelled world map and directional awareness describing the position of counties/continents in relation to the UK and other key geographical features
- Teaching resources created for key inventors and inventions
- Pupils to create a factfile about Sir Tim Berners-Lee and his invention of the World Wide Web.
- Knowledge board created on social injustice trailblazers
- Rhythm and blues compositions

Exhibit:

Trailblazers exhibition. Pupils to create an exhibition of Trailblazers that families will be invited to. They will set up three areas:

- Trailblazing explorers
- Inventors and inventions that changed the world
- Artistic pioneers

Possible wider experiences:

Visit a science museum.

Pupils can visit the museum and have a look at past and possible future inventions. They can interact with machines and learn why and how they work.

Suggested places could be:

- Think tank museum in Birmingham
- The Science museum in London
- Science and industry museum in Manchester

Flipped learning opportunities:

1. Research key explorers, inventors/inventions and artists.
2. How do you access the Internet at home? How does it work?
3. Research periods where music has changed – who were the trailblazers behind the movement?

Family learning opportunity:

Become an inventor

Think of a problem that you are passionate about solving. This could be something that affects you or something that affects the wider world. Research the problem and think about how you might be able to help solve it. Come up with an invention to help solve the problem. An example might be litter on the streets. The solution might be a litter-picker robot. What features would the robot have? What should it be able to do? Design your invention and annotate the diagram to explain its features and your design choices.

Cultural awareness

Key piece of music

Jerry Goldsmith – ‘Explorers’ sound track
Aretha Franklin – ‘Respect’

Key piece of art

The South Pole monument in Oslo
Leonardo da Vinci - flying machines.

Key poem

Joyce Sidman - ‘Eureka!: Poems About Inventors’