

ID

Spring 1: 2021- 2022

Year 5



Key Learning Area - SCIENCE

The children will learn all about how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. They will record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. As well, they will plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. This will take their fingerprints using ink or by lifting their latent prints and refer to picture cards showing the different fingerprint categories to classify each of their prints and find out which print types are the most common in their class. Finally, they will display the results using a suitable graphing method.

ENGLISH

In English we will be reading stories from the collection *The Adventures of Sherlock Holmes* by Arthur Conan Doyle. We will be writing a newspaper report focused on *The Speckled Band* (no spoilers, please...). This will look at all the features of a newspaper article with extra emphasis on the crime reporting aspects. Then, we shall be writing a creative narrative based on part of another Sherlock Holmes short story - *The Final Problem* - and the infamous *Reichenback Falls*.

MATHEMATICS

In Maths we will be learning about:

- Multiplication and Division—Multiplying and dividing a number up to 4-digits by a 1- or 2-digit number, interpret remainders and solve problems.
- Fractions—Find and use equivalent fractions, convert between improper and mixed fractions, compare and order fractions, understand fractions as divisions and use fractions to show remainders.

Geography

In Geography we will use an Ordnance Survey map to plot where we live. We will find out if we all live locally or whether some of us travel further, from other suburbs or communities. We will also use satellite imagery to look at a number of different geographical locations and environments. We will learn more closely about how to use the eight points of a compass, four and six-figure grid references, symbols and keys.

ART & DESIGN

In Art we will create a piece of artwork focussed on family resemblance. We will Splice a portrait photograph of ourselves alongside a sibling, parent or grandparent. This will improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials.

HISTORY/D&T

In History we will find out about two influential historical figures who brought about social reform.

In D&T we will create a 3-D version of their thumbprint by cutting and layering card, being carefully to form the contours of the whorls, loops or arches. We will also design and make or remodel a simple item of clothing that makes a statement about them.

RE

For our RE Week we will be considering the question "What does it mean to be a Muslim in Britain Today?" We will understand Muslim beliefs and how these guide their living. We will make connections between Muslim beliefs and ibadah and how they are put into practice. We will also make connections between what we have learnt and how they live; what we can learn from them.

PSHE

In PSHE we will be considering our *Dreams and Goals*. We will think about our own learning styles and our dreams to make the world a better place and make a difference.

In Financial Education we will be learning about protecting our money and personal information, including phishing and scams.

COMPUTING

In Computing we will be developing Excel spreadsheets linking to our topic work on Identity, which will look at different characteristic traits. Alongside this, we will continue to develop children's knowledge of E-Safety, and how to be safe on the internet and other connected devices that children have in their day to day lives.

MUSIC

In Music we will listen to our favourite song and express whether we like or dislike them. We will explain why we have chosen our particular track and describe how our choice makes us feel.

We will continue to appreciate and understand a wide range of high-quality music drawn from different traditions and from great composers through our daily Morning Music sessions.

PE

In PE we will be learning about all the skills used for Dance and Tag Rugby.

Dance will be split into sessions by using TOPS cards.

Tag Rugby will be split into the following sessions: ball control, passing, defending, rules and passing, and matches.

FRENCH

In French we will use *La Jolie Ronde* to learn the months through imitating pronunciation of sounds. We will also learn sports, hobbies and food vocabulary and numbers up to 50.

SMSC & VALUES

The values we will be covering are compassion, thankfulness and concentration. To develop our SMSC awareness we will consider these themes alongside our RE focus within RE Week. As well, these themes will be covered during collective worship using stories, role-play and guest visitors.

ID

Identity

Each human being has characteristics that make them who they are. These characteristics include physical appearance, personality, beliefs and opinions, likes and dislikes and hobbies. The different characteristics that a person has make up their identity. All people are unique.



No two people are the same

Genes and DNA

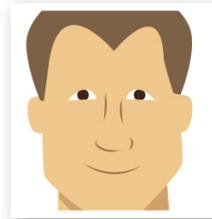
Some characteristics that make up a person's identity, such as their eye colour, are inherited from their parents. These characteristics are passed on by genes. Genes are made up of a chemical called DNA, which carries information that controls how living things look and develop. Genes are inherited from both parents, half from the mother and half from the father.

Inherited characteristics

Inherited characteristics include eye colour, hair colour, skin colour, freckles, dimples, earlobe attachment, tongue rolling and height. By inheriting characteristics from their parents, children usually look a little like their mother and father but are never identical to either parent. Conditions such as colour blindness or diabetes can also be inherited.



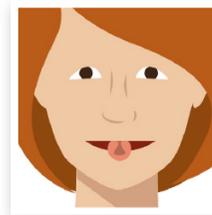
freckles



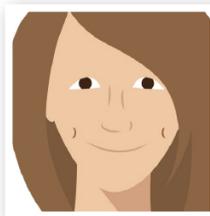
widow's peak



earlobe attachment



tongue rolling



dimples



cleft chin

Nature vs nurture debate

The nature vs nurture debate revolves around whether a person's behaviour is inherited through their genes (nature) or developed through their life experiences (nurture).

Nature

inherited characteristics

Nurture

childhood experiences
family relationships
friendships
culture
surroundings

Scientists and psychologists are still researching and debating whether nature or nurture has the greatest effect on human behaviour.

Fingerprints

Fingerprints are the marks made by the lines, known as friction ridges, on the underside tip of a finger or thumb. Fingerprints are unique to every person, even identical twins. There are three main fingerprint patterns: the loop, arch and whorl.



loop



arch



whorl

Fingerprints are left on every surface a person touches. The police collect fingerprints to identify criminals. Officers dust powder onto objects to reveal any fingerprints and compare them to the fingerprints of suspects.

Biometrics timeline

- 1686** Professor Marcello Malpighi discovers that fingerprints have whorl, loop and arch patterns.
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- 1858** William Herschel discovers that different people have different fingerprints.
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- 1879** Alphonse Bertillon creates a system of identification using body measurements, photographs and physical descriptions.
-
- 1880** Dr Henry Faulds describes how fingerprints could be used to identify criminals.
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- 1892** An Argentine police officer makes the first fingerprint identification at a crime scene.
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- 1901** The UK's Fingerprint Bureau is founded to hold a database of criminals' fingerprints.
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- 1903** The Bertillon system of identification collapses when two criminals are found to have the same measurements.
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- 1953** FH Adler writes that the markings of the iris in the eye are unique and could be used like fingerprints for identification.
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- 1984** Scientist Alec Jeffreys invents DNA fingerprinting when he discovers that each person has a unique pattern of DNA.
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- 1986** DNA fingerprinting is used as evidence in a criminal investigation for the first time.
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- 2013** Apple include fingerprint scanners into their mobile phones.
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- 2016** Iris recognition is added to some smartphones as a security measure.

Solving a crime

When a crime has been committed, the police use many different techniques to identify the criminal.

Physical evidence

Officers gather items such as belongings and clothing and seal them in plastic bags and boxes. The items are tested for fingerprints and DNA linked directly to the criminal.

Electrical Facial Identification Technique

An operator asks a witness to describe the criminal's face, hair, features and clothes. The operator makes an image of the criminal on a computer screen to use on posters and during TV appeals.

DNA fingerprinting

Officers collect human material such as hair, blood or saliva from a crime scene. Scientists analyse the DNA from the sample and compare it to the DNA of suspects.

Identity parade

The police place a suspect in a line-up with other people of a similar height, build and skin tone. Witnesses to the crime look at each person to identify the criminal.

Fingerprints

The police collect fingerprints from the crime scene and compare them to the fingerprints of suspects.



Glossary

- biometrics** The use of information about someone's body such as fingerprints, iris patterns or DNA profile to prove who they are.
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- characteristic** A quality or feature of a person that makes them identifiable.
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- DNA** Deoxyribonucleic acid. The chemical at the centre of the cells of living things that carry genetic information.
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- DNA fingerprinting** A technique used to identify a person using a sample of their DNA.
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- experience** An event that has happened that affects how a person feels and behaves.
-
- identical** Refers to two things or people that are exactly the same.
-
- inherit** To be born with a characteristic that has been passed on from a parent.
-
- nature vs nurture debate** The debate about whether aspects of behaviour are inherited (nature) or learned (nurture).
-
- opinion** A belief or thought about someone or something.
-
- personality** A combination of thoughts, feelings and behaviours that make a person different to others.
-
- suspect** A person who is believed to have committed a crime.
-
- witness** A person who sees an event happening, such as a crime.
-
- unique** The only one of its kind.