

# Year 6 Did you Knows

Spring 1 2021-2022

# Mercenfeld Curriculum

This booklet will outline for you the units of work that your child will be covering in our wider curriculum this half term.

For each subject, you will find a Did You Know. These will show you the main elements of learning for your child.

We hope you find these useful to outline your child's learning this half term. The children will be familiar with these too so you will be able to share them together and talk about their learning at school.

More information about our curriculum can be found on the school's website.

## Polar exploration

Due to the harsh and inhospitable conditions, the polar regions were the last places on Earth to be explored. During the golden age of polar exploration, between 1898 and 1916, explorers searched for the Northwest Passage in the Arctic and raced to reach the South Pole in Antarctica. Three famous polar explorers were Robert Falcon Scott, Roald Amundsen and Ernest Shackleton.

### Robert Falcon Scott

Robert Falcon Scott (1868–1912) was a British explorer who led two expeditions to the Antarctic. His second expedition turned into a race to the South Pole that Scott's team lost, losing their lives in the attempt.



Image from: Wikimedia Commons/Public domain

### Roald Amundsen

Roald Amundsen (1872–1928) was a Norwegian explorer. He was the first to discover the Northwest Passage in the Arctic that joined the Atlantic Ocean to the Pacific Ocean. In 1911, he led a successful expedition to be the first to reach the South Pole, beating Scott's team.



Image from: Wikimedia Commons/Public domain

### Ernest Shackleton

Ernest Shackleton (1874–1922) was a British explorer who led an expedition to attempt to walk across Antarctica. However, his ship became stuck in sea ice and sank. Shackleton and his men managed to survive for 18 months before making their way to safety.



Image from: Wikimedia Commons/Public domain

## Titanic

The RMS *Titanic* sank on 15th April 1912. Four days after leaving Southampton, UK and just 300 miles from its destination of New York, USA, the lookout crew spotted an iceberg in the *Titanic's* path. The ship collided with the iceberg, damaging its hull. At 2:20am on 15th April, the *Titanic* began to sink. Although the crew sent distress signals, none of the ships who responded were able to reach the *Titanic* before she sank. It is estimated that 1500 people were killed and only 700 survived.



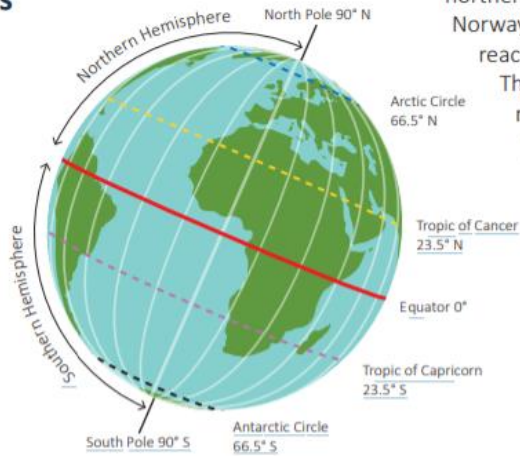
RMS Titanic

# Year 6 Geography – Frozen Kingdom

## Frozen Kingdoms

### The polar regions

The Earth has two polar regions: the Arctic Circle in the Northern Hemisphere and the Antarctic Circle in the Southern Hemisphere. Polar regions have long, cold winters and temperatures mostly below freezing. The weather can be very windy with little precipitation.



### Polar landscapes

Much of the polar regions is covered with snow and ice all year round. Polar landscape features include glaciers, ice fields and icebergs.

#### Glacier

Glaciers are slow-moving masses of flowing ice, formed by the compaction of snow. They can vary in depth from 50m to 1500m.



#### Ice field

Ice fields are large areas of connected glaciers covering flat areas, such as valleys and high plateaus. They are made from compressed and frozen snow.



#### Iceberg

Icebergs are chunks of ice that calve, or break off, from glaciers and ice sheets and float in the sea. Wind and water erode icebergs into sculptural shapes.



### Arctic region

The Arctic region consists of the Arctic Ocean and the northern parts of Canada, Alaska, Russia, Finland, Sweden, Norway, Greenland and Iceland. Winter temperatures can reach  $-55^{\circ}\text{C}$  and summer temperatures can reach  $10^{\circ}\text{C}$ .

The Arctic region has a varied landscape including mountains, tundra and boreal forest. It is home to small populations of people and an amazing variety of plants and animals including the polar bear, Arctic fox, Arctic hare and walrus.



### Natural resources in the Arctic

Natural resources in the Arctic include oil, gas, minerals, metals, fish, wood and freshwater. Arctic inhabitants use the natural resources available for fuel, food and to sell to other countries. However, many of the resources have not yet been touched as they are difficult to extract, especially those that underneath the frozen waters of the Arctic Ocean.

### Indigenous peoples of the Arctic

The indigenous peoples of the Arctic have inhabited the area for thousands of years. In the past, they adapted to the cold, harsh conditions by hunting and eating animals native to the area, such as seals, whales and walrus, and using reindeer skins to keep warm. Many lived nomadic lifestyles, following reindeer herds. Today, many indigenous peoples live in permanent settlements and have a modern lifestyle, but some still follow the traditional way of life.

### Antarctic region

Antarctica is the world's fifth-largest continent and is covered in an ice sheet that is up to 4800m thick. It is the coldest, driest, highest and windiest continent on Earth. Temperatures can drop to  $-80^{\circ}\text{C}$ , there is little precipitation, and wind speeds can reach 80km per hour. There are only two native species of flowering plants in Antarctica, but there is a rich sea life, including the emperor penguin, humpback whale and leopard seal. No people live permanently in the Antarctic. However, scientists stay for part of the year to carry out research and tourists visit in the summer months to see the landscape and wildlife.

### Polar day and night

Due to the tilt of the Earth, the poles experience nearly 24 hours of daylight during the summer months. This is called polar day, or Midnight Sun. In the winter, the poles experience nearly 24 hours of darkness. This is called polar night.

### Climate change

Human activities such as burning fossil fuels and deforestation are releasing gases into the atmosphere that are causing the temperature of the Earth to rise and its climate to change. The Arctic landscape and wildlife are at risk due to this change. Scientists are concerned that the rising global temperature is causing the polar ice to melt. If the polar ice melts, sea levels and temperatures will rise, weather patterns will change and the polar regions will be damaged.

## Glossary

<b>Antarctic Circle</b>	An imaginary circle of latitude that lies 66.5° south of the equator. Everything south of this line is known as the Antarctic.
<b>Arctic Circle</b>	An imaginary circle of latitude that lies 66.5° north of the equator. Everything north of this line is known as the Arctic.
<b>boreal forest</b>	A large area of wetland covered in conifer trees. Boreal forests are found in countries that are in or near the Arctic Circle.
<b>climate</b>	The usual weather conditions that occur in a place over a long period.
<b>horizon</b>	The line where the sky appears to meet the Earth.
<b>indigenous</b>	Occurring naturally or originating in a particular place.
<b>native</b>	Referring to the animals and plants that occur naturally in a place.
<b>North Pole</b>	The most northern geographical point of the Earth.
<b>polar day</b>	Near constant daylight in the Arctic or Antarctic during the summer months when the Sun does not set below the horizon. Also known as Midnight Sun.

<b>polar night</b>	Near constant darkness in the Arctic or Antarctic during the winter months when the Sun does not rise above the horizon.
<b>precipitation</b>	Water that falls from clouds in the sky as rain, snow, hail or sleet.
<b>South Pole</b>	The most southern geographical point of the Earth.
<b>tundra</b>	An area of land where it is too cold for trees to grow and the ground below the surface is permanently frozen.

# Year 6 Science – Evolution & Inheritance



## Fossils

These can provide information about living things that inhabited the Earth millions of years ago.



## Living Things

Living things produce offspring of the same kind, but normally offspring vary and are **not** identical to their parents



## Inherited Traits

Eye colour is an example of an **inherited trait**, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.



## Breeding

The mating and production of offspring by animals

## Environment

The surrounding or conditions in which a person, animal or plant lives

## Inherit

To gain a quality or characteristic genetically from a parent or ancestor

## Fossil

The remains or impression of a prehistoric plant or animal embedded in rock and preserved

## Offspring

A person's child or children/ an animal's young

## Reproduction

The production of offspring by a sexual or asexual process

## Variation

A change or slight difference

## Adaptation

Living things are adapted to suit their environment in different ways

Adaptation can lead to evolution →



## Adaptive Traits

Its white fur enables it to camouflage in the snow.

## Evolution

The process by which living organisms have developed from earlier forms during the history of earth



# Year 6 Music – Theme & Variations (Pop Art)

## Year 6: Theme and variations (Pop Art)

### Musical form: Theme and variations

Theme and variations is a common musical structure, especially in classical music. The structure features a theme at the start of the piece, then once the theme has been played, the composer repeats it but with some form of variation. The theme is then played again but this time with a further variation.

### Vocabulary

#### Pop Art

An art movement from the 1950s where artists focused on common objects (comic books, tins of soup, teacups) and showed them in bold, bright colours.



**Pulse** - Pulse is a steady beat - the heartbeat of the music.

**Notation** - Written symbols to represent music.

**Diaphragm** - A dome shaped muscle beneath our lungs, which we use to control our breath when singing.

**Melody** - Notes of different pitches played in a sequence in order to create a tune.

**Phrase** - A short musical passage that makes sense on its own.

**Rhythm** - The pattern of long and short notes in music.

**3/4 time** - Commonly called 'waltz time' and only has 3 beats per bar.

**4/4 time** - Known as 'common time' and has 4 beats per bar.

**Orchestra** - A group of instruments that play together.



**Strings** - Instruments that are played by plucking or bowing strings.

**Woodwind** - Instruments that make sound by blowing air through a reed or small mouthpiece.

**Brass** - Instruments that are made of metal and the sound is made by blowing air through a cup-shaped mouthpiece.

**Percussion** - Instruments that are played by striking, beating or shaking the instrument.

### Kodaly rhythm names

TA = Crotchet    Tl-Tl = Quaver    SH = Crotchet rest    TWO = Minim



TIKI - TIKI      TI - TIKI      TIKI - TI

# Year 6 Art – Inuit

The Inuit are expert carvers. They carve things such as tools, weapons and animals. Common materials used are ivory, stone and wood.



walrus soapstone carving



owl carving

The Inuit are indigenous people who live in the Arctic region. Artwork made by the Inuit is inspired by animals, myths and legends.

In 1960, Inuit artist Kenojuak Ashevak made a print of an owl called *The Enchanted Owl*. The design became a commemorative stamp for Canada in 1970.



**Inuit printing**  
Printmaking is a more recent addition to Inuit art, starting in the late 1950s. At first, stonecuts were used to print images. Later, stencils were used.



stencilling

A stencil is a sheet of paper, card or plastic into which shapes and patterns are cut. Pain or ink is then applied over the cut out design to create an image in the surface below.



artist's impression of *The Enchanted Owl*



# Design & Technology – Engineer



Freestanding is defined as standing alone or on its own foundation, free of support or attachment.

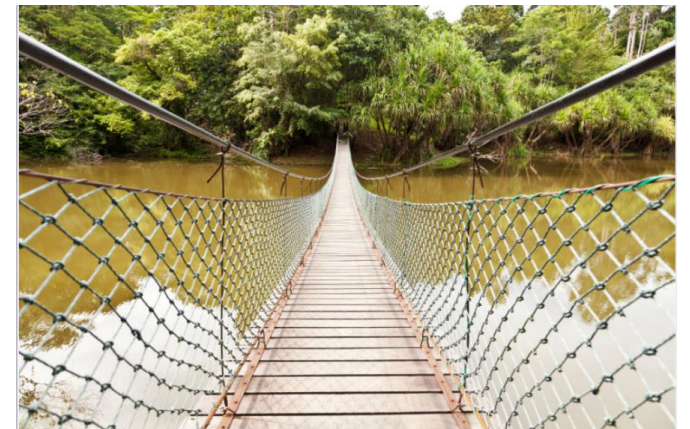
The flat surface of a bridge is called the deck. A smooth, flat deck allows wheeled vehicles to cross.

A truss is made up of several beams connected in different ways. Engineers can build stronger bridges truss sections made from a number of beams. The decks of these bridges usually run on top of or through the trusses.



Pillars are used to make bridges which span bigger gaps.

Suspension bridges are different to other bridge designs. The deck hangs from cables attached to pillars and anchorage points on either side of the bridge.



# PSHCE – Managing Risk

We all need a support network of people who help us.  
These include: parents, friends, teachers and other trusted adults.

## Hazard

This describes how great the chance is of being harmed by a hazard.

## Risk

This describes the situation where an individual might be exposed to risk.

## Danger

This describes anything that can cause harm (such as fire, electricity, a chemical and so on).

### Social Risk

A social risk is a risk that could potentially harm friendships.

### Emotional Risk

You may choose to do something that could lead to you feeling feel mixed emotions.

### Physical Risk.

A risk you take may lead to you becoming physically hurt.

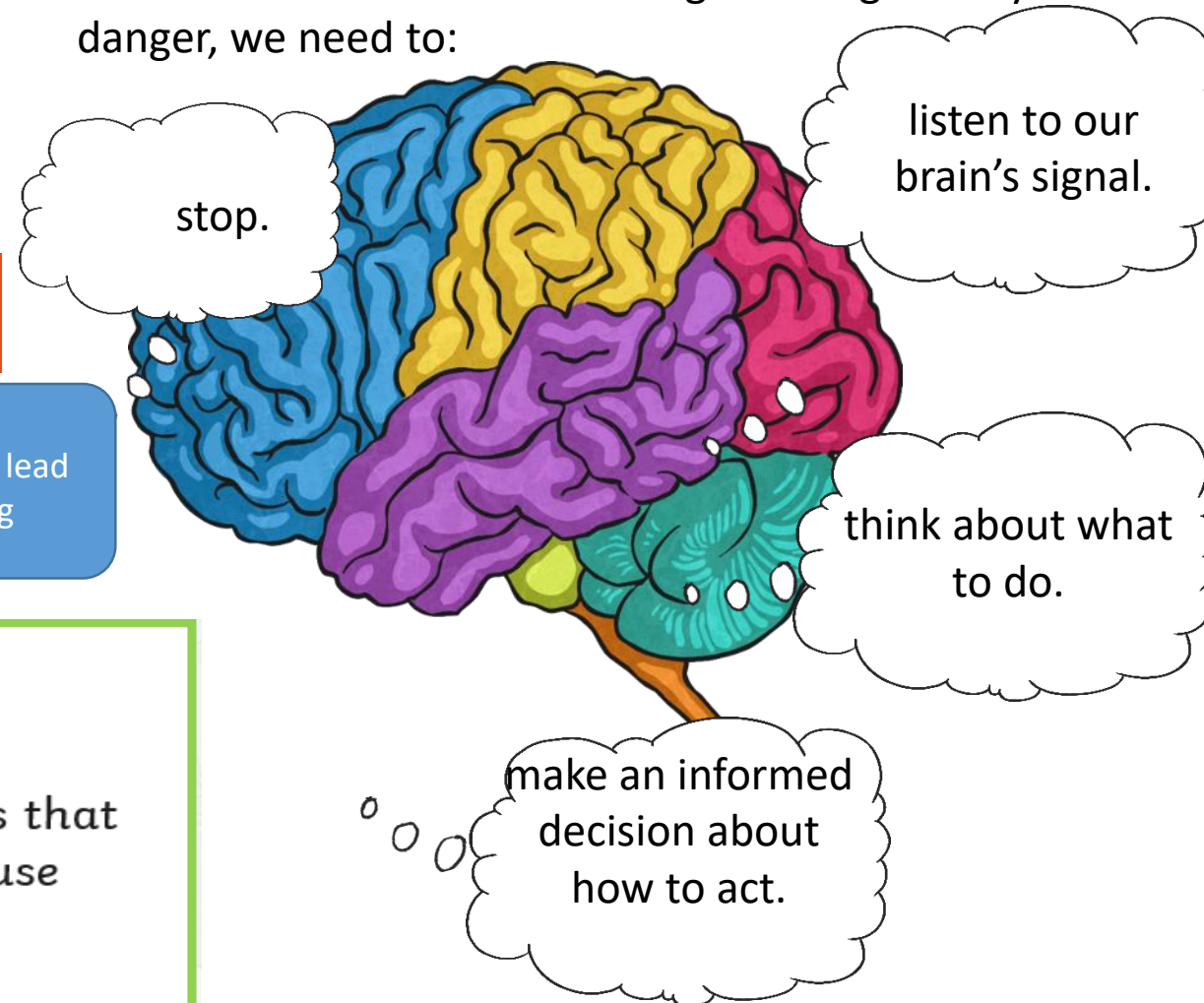
### Positive Risks

Some risks are not all bad and can have positive outcomes. Positive risks can be defined where the outcome is greater than the potential risks involved.

### Negative Risks

Negative risks are risks that dangerous and can cause harm.

When our amazing brain sends a warning signal, telling us that the situation doesn't feel right or might carry a risk of danger, we need to:

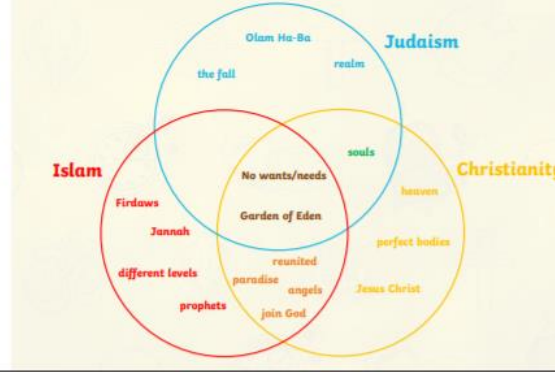


# Religious Education – Eternity

Key Vocabulary	
<b>Eternity</b>	Eternity means time that is infinite or does not end.
<b>Abrahamic religions</b>	The Abrahamic religions are: Christianity, Judaism and Islam. They all feature Abraham, an important person in the Bible, Tanakh and Q̣u'ran.
<b>Soul</b>	The spiritual part of a human. It is separate to their body.

## Abrahamic religions

The **Abrahamic religions** believe that when a person dies, they will go to a special place. In Christianity, this is called heaven. In Judaism, it is known as Olam Ha-Ba (or Gan Eden) and in Islam, it is referred to as Jannah. There are lots of similarities in their beliefs with some key differences.



## Dharmic Religious Ideas on Eternity

Buddhists do not believe in a god; they believe that the ultimate goal is **nirvana**. It is not a place but is instead a state of non-existence. When someone reaches **nirvana**, their soul is in harmony with the universe and they would cease to exist.



After **emancipation** from **reincarnation**, Hindus believe that the atman (the **soul**) will become one with the god Brahma. This is called moksha.



In Sikhism, the word mukti involves becoming one with God. Sikhs believe that God does not have any particular form.



Activate Windows

## Abrahamic religions: Ideas on Eternity and Heaven

Some Christians believe that heaven is a physical place where they will go. Others believe that it is a state of being in the presence of God. The Bible tells us that heaven is where God lives with the angels and Jesus Christ.

Most Christians believe that the **soul** lives on after death and that in heaven, bodies are perfect and **eternally** free from old age, disease and illness.



Olam Ha-Ba is an important Jewish idea that refers to a heavenly realm where **souls** live on after physical death. It is linked to the Garden of Eden and Jewish people believe that all humans will return to the blissful existence that Adam and Eve experienced there (before the 'fall').



Jannah is an eternal place for Muslims, which is based on the Islamic idea of paradise. There are different levels of paradise. The highest one is the fir daws where the prophets and most truthful people live. The Q̣u'ran says that these people will be greeted by angels and will join their loved ones who have already passed away (if they have also entered Jannah). Everyone will be the same age and will not want anything (including food, water and shelter).



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Go to Settings to activate Windows

## Humanist Ideas about Eternity

**Humanists** do not believe that life is **eternal**. They think that everything comes to an end and that death is a natural part of life. They believe that we should come to terms with this so that meaning can be found in the life that people live. They believe that humans should make good choices without expecting rewards in another place.

ETERNITY

Buddhists, Hindus and Sikhs (**Dharmic religions**) all believe in the idea of **reincarnation**. Their ultimate goal is **emancipation** from the cycle of birth, death and **reincarnation**. This is achieved through gaining good karma by meditating and doing good deeds.

# French – Let's visit a French town.



Tu habites à Strasbourg.

You live in Strasbourg.



J'habite à Strasbourg.

I live in Strasbourg.



Il habite à Strasbourg.

He lives in Strasbourg.



Ils habitent à Strasbourg.

They live in Strasbourg.



Elles habitent à Strasbourg.

They live in Strasbourg.



Vous habitez à Strasbourg.

You live in Strasbourg.



Nous habitons à Strasbourg.

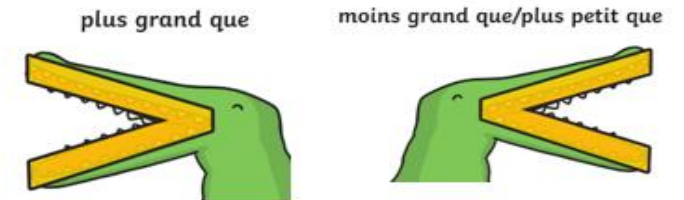
We live in Strasbourg.



Je vais à la / à l' / au **noun** pour **verb**.

e.g. Je vais à l'école pour apprendre.

Prepositions	
Remember the change for masculine/feminine	
à côté de _____	<b>beside</b>
à côté de l' _____	
à côté du _____	
en face de _____	<b>in front of</b>
en face de l' _____	
en face de la _____	



0 zéro	11 onze	30 trente
1 un	12 douze	40 quarante
2 deux	13 treize	50 cinquante
3 trois	14 quatorze	60 soixante
4 quatre	15 quinze	70 soixante-dix
5 cinq	16 seize	71 soixante-et-onze
6 six	17 dix-sept	80 quatre-vingts
7 sept	18 dix-huit	81 quatre-vingt-un
8 huit	19 dix-neuf	90 quatre-vingt-dix
9 neuf	20 vingt	96 quatre-vingt-seize
10 dix	21 vingt-et-un	100 cent
		200 deux-cents
		1000 mille





premier / première = first  
le premier garçon / la première fille  
(the 1st boy / the 1st girl)

dernier / dernière = last  
le dernier garçon / la dernière fille  
(the last boy / the last girl)

-ième = -nd/-rd/-th (ordinal number suffix)  
la deuxième chaise / le troisième vélo / la trente-huitième page  
(the 2nd chair / the 3rd bicycle / the 38th page)

# Year 6 PE – Dodgeball

## Key Vocabulary

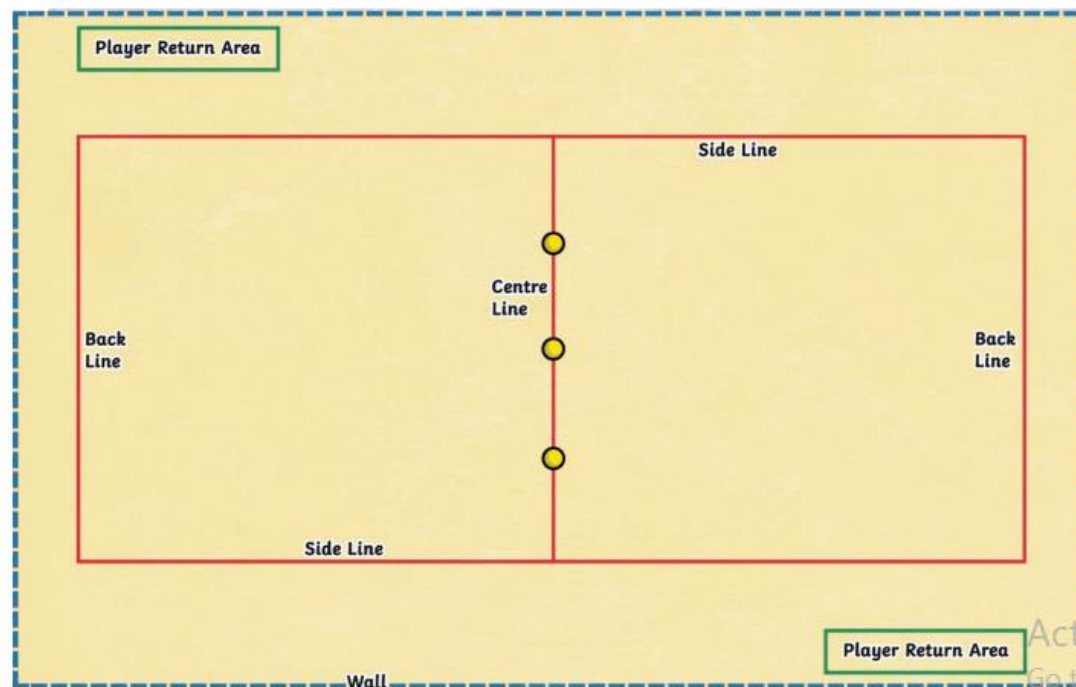
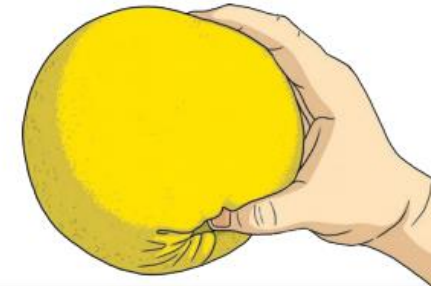
<p><b>block</b></p>	<p>You can use a ball you are holding to <b>block</b> a ball thrown at you. However, if you drop the ball you are holding, you are out.</p>	
<p><b>catch</b></p>	<p>If you make a <b>catch</b>, then the player who threw it is out and one of your teammates can return to the game.</p>	
<p><b>dodge</b></p>	<p>There are many different types of <b>dodges</b> used in dodgeball. The simple dodge involves changing direction quickly while you are moving.</p>	
<p><b>duck</b></p>	<p>This is a type of dodge that involves stooping down by bending your knees so that you are in a squatting position.</p>	

## Invasion Game

Dodgeball is an invasion game played between two teams. It involves the teams throwing balls at their opponents while dodging the balls that are thrown back at them.

A game is won by getting more or all members of the opposite team out.

Dodgeball is played with a foam ball on a rectangular court, similar in size to a badminton court.



# Physical Education – Netball



Bb	
<b>bounce pass*</b>	Passing the ball by bouncing it on the ground to another player.
Cc	
<b>Centre (C)*</b>	This is one of the positions on a High 5 Netball team. The Centre is allowed to go in all thirds but not the shooting circles. Their role on the court is to take the centre pass and to link the defence and the attack.
<b>centre pass</b>	A centre pass occurs at the beginning of each quarter and after a goal has been scored. It is taken by the Centre from the centre circle.
<b>Centre Pass Marker (CPM)*</b>	Centre Pass Marker keeps a note of whose centre pass it is and indicates to the umpire after each goal is scored and at the beginning of each quarter.
<b>chest pass*</b>	A pass from your chest to the receiver's chest using two hands.
<b>contact</b>	Netball is a non-contact sport. However, in a game of netball, opposing players will often come into physical contact with each other. Provided the players do not interfere with each other's play or use their bodies to gain an unfair advantage, it is deemed acceptable and play can continue. 'Contact' occurs when a player's actions interfere with an opponent's play - whether these are accidental or deliberate.

Gg	
<b>Goal Attack (GA)*</b>	This is one of the positions on a High 5 Netball team. Their role on the court is to work with GS to score goals. The GA is allowed to go in their own shooting third, shooting circle and centre third but not in the end third. Only the GA and GS can score goals and must be standing within the shooting circle.
<b>Goal Defence (GD)*</b>	This is one of the positions on a High 5 Netball team. Their role on the court is to work with the GK to prevent the GA and GS from scoring goals.  The GD is allowed to go in their opponents' shooting third, shooting circle and centre third but not in the end third.
<b>Goal Keeper (GK)*</b>	This is one of the positions on a High 5 Netball team. Their role on the court is to work with the GD to prevent the GA and GS from scoring goals. The GK is allowed to go in their opponents' shooting third, shooting circle and centre third but not in the end third team.
<b>Goal Shooter (GS)*</b>	This is one of the positions on a High 5 Netball team. Their role on the court is to score goals and to work in and around the circle with the GA. The GS is allowed to go in their own shooting third, shooting circle and centre third but not in the end third. Only the GS and GA can score goals and must be standing within the shooting circle.

# Year 6 ICT – Data Handling 2

## Big data 2

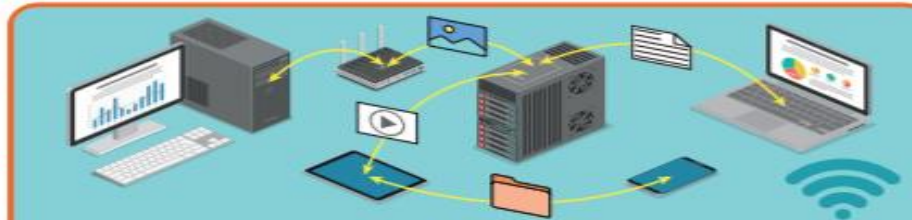
Big data	Massive deposits of information that continue to be collected through the internet, used by data analysts to investigate, analyse and determine ways to improve businesses.
Bluetooth	Device to device connectivity, for example sharing images between two smart phones.
Corrupt data	When data becomes unstable, unusable, unreadable from either transfer or storage.
Digital revolution	An era beginning in the 1980s, when technology began to develop from using analog to digital technologies. It is sometimes known as the Third Industrial Revolution.
GPS	Global Positioning System, designed to monitor satellite data to determine your position on Earth, for example in a car sat nav system.
Infrared waves	The red section of the electromagnetic spectrum, which is invisible to the eye but can transmit small amounts of data.
Internet of Things (IoT)	A network of smart devices around a building that collect, monitor and distribute data to work harmoniously together.
QR code	Quick Response code. Is presented in a similar way to a bar code and when scanned, can take you to a specific website or provide information.
RFID	Radio Frequency Identification is a device that uses radio signals to check where something or someone is.
SIM	Subscriber Identity Module. A SIM card includes a chip that stores a unique IMSI (International mobile subscriber identity) to enable you to register your mobile phone number.
Computer simulation	Computer generated imitation of something such as a program test or product prototype.
Smart school/city	A school or city, which uses IoT technology to monitor and react to events, so that they can operate in a more interactive way, in real time.

### What does 100mb look like (approximately)?

- > Four hours browsing the internet
- > One 30 minute episode on TV
- > Send 3,000 emails, without attachments
- > One hour on interactive online maps
- > 30 minutes on a video call
- > Listen to 25 music tracks
- > Stream six four-minute videos
- > Send 3,000 instant messages



## Key facts



There are various methods of wireless data transfer. Examples of these are:

### Machine-readable (visual) codes:



### Wireless radio communication methods:

