



Birchfield
PRIMARY SCHOOL

Year 6 Curriculum Overview
Term 3.2

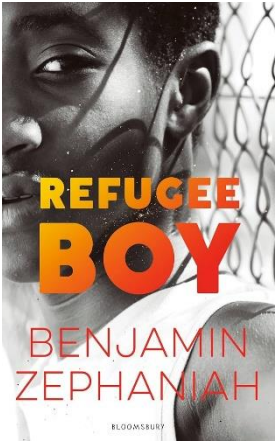
Teaching Team:
Mr. Chapman, Miss Shakespeare and Miss Fisher

SLT: Mr. Aldred

PE (Physical Education) Days: Tuesday

Homework: Every Tuesday and Friday

Please see below an overview of the main themes, knowledge and skills we will be covering this half term.

Enquiry Question	How has migration changed Britain
Significant People	Khudadad Khan, Noor Inayat Khan
Class Texts	<p>Refugee Boy – Benjamin Zephaniah</p> <p>Themes:</p> <ul style="list-style-type: none"> • Displacement • Belonging • Identity • Hope • Prejudice 
Reading	<p>Reading domain: 2b retrieve and record information / identify key details from fiction and non-fiction</p> <p>2d make inferences from the text / explain and justify inferences with evidence from the text</p> <p>2g identify / explain how meaning is enhanced through choice of words and phrases</p> <p>Test techniques:</p> <p>This half term, year 6 pupils will be developing their retrieval, inferential skills, the impact of</p>

	<p>selected vocabulary upon the reader, words in context and comparisons of texts. They will recap and recall their understanding of the literal and inferential. As we progress through the term, children will be exposed to a range of different texts and use the PEE method (point, evidence and explain) to structure their responses using evidence from the text to justify and support their response. Children will know how to find and copy words from various texts, using their prior knowledge as well as what they have read. Pupils will use clues in the text to decipher meaning of unfamiliar words and consider how they have been used.</p>
Writing	<p>This half term, children will focus on enhancing the quality of their writing. They will develop their editing skills by reviewing and refining their work—checking for accurate spelling, grammar, and punctuation. Once revised, they will produce a polished final version of their writing.</p>
Maths	<p>This half term, pupils will focus on geometry: properties of shape and position and direction and statistics – interpreting and drawing line graphs, pie charts and working out the mean average.</p>
History	<p>Pupils will be taught about the causes, events and consequences of the First and Second World Wars, the influence of new inventions on warfare, how life in Great Britain was affected and the legacy of the wars in the post-war period.</p>

Science	<p>During this unit of work, children will consolidate previous learning by exploring the way that light behaves, including light sources, reflection and shadows. Pupils will make predictions and investigate the relationship between light sources, objects and shadows and understand how the eye works. Children will extend their experience of light by looking at rainbows, prisms and bending light in water (although they don't need to explain why these phenomena occur at this stage).</p>
Mandarin	<p>Children will be learning about these topics, this half term:</p> <ul style="list-style-type: none"> • Visiting China • Family members • Famous places in China <p>as well as consolidating what they have previously learned.</p>
DT	<p>Pupils will explore how chefs promote healthy eating through ingredient choices and seasonal produce. They'll scale recipes using ratios, adapt them for taste and nutrition, and follow methods accurately. Cooking safely and hygienically, they'll evaluate their final dish, considering its quality, intended purpose, and possible improvements.</p>
Music	<p>This is a six-week unit of work. All the learning in this unit is focused around one song: Music and Me, focusing on inspirational women working in music, and part of Brighter Sound's pioneering gender equality initiative Both Sides Now.</p> <p>Throughout this unit, students will explore the concept of 'identity'.</p>

PSHE	<p>What will change as we become more independent? Children will learn:</p> <ul style="list-style-type: none"> • That people have different kinds of relationships in their lives • How growing up and becoming more independent comes with increased opportunities and responsibilities • How friendships change as we grow and how to manage this
Computing	<p>This unit explores the concept of variables in programming through games in Scratch. First, learners find out what variables are and relate them to real-world examples of values that can be set and changed. Then they use variables to create a simulation of a scoreboard. In Lessons 2, 3, and 5, which follow the Use-Modify-Create model, learners experiment with variables in an existing project, then modify them, before they create their own project. In Lesson 4, learners focus on design. Finally, in Lesson 6, learners apply their knowledge of variables and design to improve their games in Scratch.</p>
RE (Religious Education)	<p>In RE, the disposition of appreciating beauty encourages pupils to recognise and value beauty in the world, nature, art, and human experience. It nurtures awe, wonder, and respect, helping children reflect on how beauty can inspire spiritual awareness and deepen their understanding of different beliefs and worldviews.</p>

	<p>Pupils will use their knowledge about Islamic festivals - Eid ul Fitr and Eid ul Adha and how people express their joy.</p> <p>Appreciating Beauty Considering The Lord's Prayer and how it helps Christians to worship God and in what ways it can be said to beautiful.</p>
PE	<p>Cricket Tennis</p>

Knowledge Organiser:

Reading

Summary

Refugee Boy explores The Impact of War on Individuals and Families through Alem and Mr. Kelo's struggles during the Eritrean-Ethiopian War. Alem experiences isolation, discrimination, and dehumanization due to the war and only begins to find healing because of the support of the good people around him.

refugee boy
benjamin
zephaniah



Key Words

Loss
Separation
Immigration
Refugee
Hope
Discrimination

Key Characters

1	Alem	Alem Kelo, the novel's protagonist, is a young Ethiopian boy who escapes violence in his homeland to seek refuge in England.
2	Kelo	Mr. Kelo is Alem's father.
3	Fitzgerald	Mr. and Mrs. Fitzgerald are Alem's foster parents in England.
4	Ruth	Ruth is Mr. and Mrs. Fitzgerald's daughter.
5	Sheila	Sheila, Alem's social worker, assists him in navigating the complex asylum-seeking process in England.
6	Mariam	Mariam, a woman from the refugee council, communicates with Alem in Ethiopian.
7	Pamela	Pamela, another woman from the refugee council, supports Alem in his quest for asylum and arranges a hearing to determine his status.
8	Robert	Robert, Alem's school friend, is known for his smoking habit and becomes an integral part of Alem's life in England.
9	Sweeney	Sweeney is a bully at Alem's care home.

Key Terminology - Term Definition

Refugee A person who has been forced to leave their country in order to escape war, persecution, or natural disaster.

Asylum The protection granted by a state to someone who has left their home country as a political refugee.

Identity The fact of being who or what a person or thing is.

Conflict A serious disagreement or argument, typically a protracted one.

Ally One that is associated with another as a helper; a person or group that provides assistance and support in an ongoing effort, activity, or struggle.

Barrister A person called to the bar and entitled to practise as an advocate, particularly in the higher courts.

Protest A statement or action expressing disapproval of or objection to something.

Writing

Spellings...I need to know some of these:			
accommodate	correspond	hindrance	recognise
accompany	criticise	individual	recommend
according	curiosity	interfere	relevant
achieve	definite	interrupt	restaurant
aggressive	desperate	language	rhyme
amateur	determined	leisure	rhythm
ancient	develop	lightning	sacrifice
apparent	dictionary	marvellous	secretary
appreciate	embarrass	mischievous	shoulder
attached	environment	muscle	sincere
available	equip(-ped)	necessary	sincerely
average	equipment	neighbour	soldier
awkward	especially	nuisance	stomach
bargain	exaggerate	occupy	sufficient
bruise	excellent	occur	suggest
category	existence	opportunity	symbol
committee	explanation	parliament	system
communicate	familiar	physical	temperature
community	foreign	prejudice	thorough
competition	forty	privilege	twelfth
conscience	frequently	profession	variety
conscious	government	programme	vegetable
controversy	guarantee	pronunciation	vehicle
convenience	harass	queue	yacht

Punctuation Reminders:	
A	Capital letters for sentences, initials and proper nouns.
.	Full stops
!	Exclamation marks for exclamations or surprise.
?	Question marks
'	Apostrophes for possession and missing letters.
,	Commas in lists, and to mark parenthesis, fronted adverbials and clauses.
...	Ellipsis to show a long pause for tension.
" "	Inverted commas for speech (Don't forget the commas too!).
-	Hyphen to connect words together.
-	Dashes to show longer pauses or parenthesis.
()	Brackets for parenthesis.

Splendid Subordination!
Use these conjunctions in varied places in your multi-clause sentences:

if	because	as
before	after	until
unless	since	when

Can you use a subordinate clause in different places in your sentences?

Writing Mat Working towards Year 6

<p>Active and Passive</p> <p>Use active and passive sentences appropriately:</p> <p>Active: In front of millions of screaming fans, the star striker missed a vital penalty.</p> <p>Passive: In front of millions of screaming fans, a vital penalty was missed by the star striker.</p>	<p>Use a mixture of simple, compound and multi-clause sentences.</p> <p>Use a thesaurus to up-level your vocabulary choices.</p>
<p>Important Links!</p> <p>Link your sentences and paragraphs using adverbials:</p> <p>Time</p> <p>Subsequently, Later that day, Finally,</p> <p>Place</p> <p>Deep inside the forest, Below the sea,</p> <p>Frequency</p> <p>Occasionally, Often,</p> <p>Contrast/ Cause</p> <p>On the other hand, In contrast, As a result, Consequently,</p> <p>Manner/ Behaviour</p> <p>Breathing heavily, Waiting anxiously, Without warning, Suspecting the worst,</p>	<p>It's All Relative!</p> <p>Use a relative pronoun to add a relative clause.</p> <p>who, which, where, when, whose, that</p> <p>The Queen, who has reigned for 60 years, has four children.</p> <p>Hedgehogs eat garden snails, which is important within the food chain.</p> <p>The stench was so putrid that it made her eyes water.</p> <p>They had ventured deep into the forest where they began to feel uneasy.</p>

Important Links!
Link your sentences and paragraphs using adverbials:

Time
Subsequently, Later that day,
Place
Deep inside the forest, Below the sea,
Frequency
Occasionally, Often,
Contrast/ Cause
On the other hand, In contrast,
As a result, Consequently,
Manner/ Behaviour
Breathing heavily, Waiting anxiously, Without warning,

Creating Cohesion Top Tip: Not only can you use pronouns like he, she, it or they instead of repeating a name or names but how about other names or titles too? Here's some examples: the teacher, she, Mrs Smith, the lovely woman or the lady with the long hair.

Be a Punctuation Professional!

A	Capital letters for sentences, initials and proper nouns.
.	Full stops
!	Exclamation marks for exclamations or surprise.
?	Question marks
'	Apostrophes for possession and missing letters.
,	Commas in lists, and sentences.
...	Ellipsis to show a long pause for tension.
" "	Inverted commas for speech (Don't forget the commas too!).
-	Hyphens to connect words together.
-	Dashes to show longer pauses or parenthesis.
()	Brackets for extra information or asides.
:	Colon to separate clauses.
;	Semi colons to separate clauses.

Writing Mat
Expected Year 6

Perfect Parenthesis!
Use brackets, commas or dashes to punctuate extra information and asides:
The tomb of Tutankhamen (the Ancient Egyptian pharaoh) was discovered by Howard Carter.
The advancing alien, who was speaking a Martian language, looked dangerous.
The daffodils - my favourite sign of spring - swayed gently in the woodland breeze.

Use a thesaurus to look for more ambitious synonyms. Why use 'frightened' when you could use...
startled alarmed apprehensive
Or 'show' a character's feelings:
his breathing quickened her heart raced
sweat trickled gasping for air

Spellings... I need to know all of these:

accommodate	correspond	hindrance	recognise
accompany	criticise	individual	recommend
according	curiosity	interfere	relevant
achieve	definite	interrupt	restaurant
aggressive	desperate	language	rhyme
amateur	determined	leisure	rhythm
ancient	develop	lightning	sacrifice
apparent	dictionary	marvellous	secretary
appreciate	embarrass	mischievous	shoulder
attached	environment	muscle	sincere
available	equip(-ped)	necessary	sincerely
average	equipment	neighbour	soldier
awkward	especially	nuisance	stomach
bargain	exaggerate	occupy	sufficient
bruise	excellent	occur	suggest
category	existence	opportunity	symbol
committee	explanation	parliament	system
communicate	familiar	physical	temperature
community	foreign	prejudice	thorough
competition	forty	privilege	twelfth
conscience	frequently	profession	variety
conscious	government	programme	vegetable
controversy	guarantee	pronunciation	vehicle
convenience	harass	queue	yacht

Active and Passive
Use active and passive sentences appropriately:
Active: In front of millions of screaming fans, the star striker missed a vital penalty.
Passive: In front of millions of screaming fans, a vital penalty was missed by the star striker.

Check for:
- cohesive links
- consistent tense and person
- genre features
- subject/verb agreement
- layout devices
- paragraphs with

Splendid Subordination!
Use these conjunctions in varied places in your multi-clause sentences:
if because as
before after until
unless since when

Writing Mat
Greater Depth Year 6

Spellings... I need to know all of these:

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Punctuation Reminders:
A . ! ? ' , " " () ... : ; -
Use a full range of punctuation.

Check for:
- consistent tense and person
- subject/verb agreement
- paragraphs with cohesive links
- genre features
- layout devices
- pronouns/ nouns for cohesion

Active and Passive
Use active and passive sentences appropriately:
Active: In front of millions of screaming fans, the star striker missed a vital penalty.
Passive: In front of millions of screaming fans, a vital penalty was missed by the star striker.

Create a Mood!
Where appropriate, in formal writing, use the subjunctive mood:
If I were The Queen, ...
Were there to be a change in my circumstances...

Splendid Subordination!
Use these conjunctions in varied places in your multi-clause sentences:
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before after until
unless since when

Use a thesaurus to look for more ambitious synonyms. Why use 'frightened' when you could use...
startled alarmed apprehensive
Or 'show' a character's feelings:
his breathing quickened her heart raced
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Perfect Parenthesis!
Use brackets, commas or dashes to punctuate extra information and asides:
The tomb of Tutankhamen (the Ancient Egyptian pharaoh) was discovered by Howard Carter.
The advancing alien, who was speaking a Martian language, looked dangerous.
The daffodils - my favourite sign of spring - swayed gently in the woodland breeze.

Be a Punctuation Professional!
Use semi colons, colons and dashes to mark independent clauses:
It felt like forever- the longest six weeks holiday of all time.
Jack's eyes slowly opened; there was no one to be seen.
They all knew his secret: he was a specialist secret agent.

Important Links!
Link your sentences and paragraphs using adverbials:
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History

Britain at War

What is war?

War is a period of intentional actions, including armed fighting, between two or more countries or groups to force the enemy to adhere to their will.

First World War 1914–1918

Timeline of events

August 1914	Britain declares war on Germany
October 1914	First Battle of Ypres
Jan–Feb 1915	Ottoman Empire attacks Suez Canal
February 1915	Gallipoli Campaign begins
May 1915	Italy joins the Allied Powers
Feb–Dec 1916	Battle of Verdun
June–Sept 1916	Brusilov Offensive
July–Nov 1916	Battle of the Somme
April 1917	United States joins the Allied Powers
November 1918	Germany surrenders and the war ends

Causes of the war

There were several long-term causes of the First World War.

- Countries had previously made alliances because war seemed likely. Britain had signed a treaty to protect Belgium and was allied with France and Russia. Germany, Austria-Hungary and Italy were allies.
- Germany had an imperialist desire to conquer other countries.
- Countries including Germany, France, Russia and Britain practised militarism, growing their armies and developing weaponry.
- Nationalism was widespread in Europe, and the leading powers each believed their country was superior.

The short-term trigger was the assassination of Archduke Franz Ferdinand by a Serbian Nationalist on 28th June 1914. This resulted in Austria-Hungary declaring war on Serbia.

Volunteers

Britain needed millions of men to join the army. The government launched a recruitment campaign that enlisted over 2.7 million men during the war. Britain's colonies also sent 2.5 million men to fight. Men joined the army for various reasons, such as wanting to defend their country or succumbing to peer pressure.

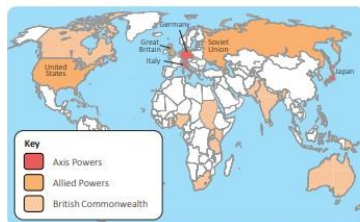
Causes of the war

The Treaty of Versailles had devastated Germany. By the 1930s, unemployment and poverty in Germany were widespread. Adolf Hitler became Germany's leader in 1934 and claimed his Nazi Party would restore German pride and save the economy. He then invaded the surrounding countries. Britain and France tried appeasement rather than challenging this expansion. On 1st September 1939, German forces invaded Poland. Britain and France declared war on Germany.



Warring nations

The major nations involved in the Second World War were the Axis Powers (Germany, Italy and Japan) and the Allied Powers (Great Britain, the Soviet Union and the United States). Germany was led by the fascist dictator Adolf Hitler, who wanted to expand German territory and create a pure German race. At the start of the war, Britain's prime minister was Neville Chamberlain. Winston Churchill replaced him in May 1940.



Preparation for war

Britain had learned lessons from the First World War. Barrage balloons were placed over London to stop low-flying bombers. Gas masks were issued to the civilian population, and bomb shelters were built. Blackouts were compulsory, and children were evacuated from cities. Conscription was introduced to increase numbers in the army. Food rationing began and ration cards were issued.

Warring nations

At the start of the war, the warring nations divided into two opposing groups. The Central Powers (Germany, Austria-Hungary and the Ottoman Empire) were on one side. The Allied Powers (Great Britain, France and Russia) were on the other. The Central Powers were geographically surrounded by the Allied Powers and had to fight on several fronts.



Start of the First World War

In August 1914, German troops invaded Belgium. Allied forces pushed the German army back to north-west France, where both sides dug defensive trenches. This Western Front stretched from the English Channel to Switzerland. The German military also fought Russian forces on the Eastern Front, dividing their troops. With a stalemate in Europe, the Allies attacked the Ottoman Empire at Gallipoli in April 1915 to try to take the capital, Constantinople. The Allies were defeated and suffered heavy casualties.

Trench warfare

On the battlefield, soldiers faced firepower from machine guns and artillery. Both sides dug networks of trenches to escape shells and bullets. Trenches were cold and muddy and often infested with rats. Diseases spread quickly, and food was poor. Trench warfare took a considerable toll on soldiers' physical and mental health.



Weapons and technology

During the First World War, new weapons and technology were developed.

- Machine guns and heavy artillery bombarded the enemy.
- Armoured tanks countered the firepower of the front line.
- Poisonous gas was used to kill and injure enemy soldiers.
- Planes were mounted with machine guns and used for bombing.
- Warships fought at sea, and radio communication was used.

Weapons and technology

The Second World War was the most technologically advanced war in history, with many new weapons and technological innovations.

- Radar used radio waves to detect enemy positions.
- Codebreakers developed machines to intercept and decode enemy messages.
- The bouncing bomb was used to destroy German dams.
- German engineers made rocket missiles that damaged British cities.
- A new lightweight fighter plane, the Supermarine Spitfire, was developed.
- The United States used the atomic bomb on Japan.

Battle of Britain

The Battle of Britain took place in the skies above Britain from July to October 1940. Adolf Hitler was planning a land attack on Britain but first had to control the skies to prevent British air attacks. The superior British planes and their organised air-defence system overcame the German Luftwaffe. This was a turning point in the war as Adolf Hitler could not continue with his land invasion plan.



Civilian life

Civilians in Britain had to cope with frightening air raids and bombing in cities. Finding their way during the blackout was difficult and dangerous. Children were separated from their families in the evacuation, and many women joined the Women's Land Army or worked in factories. Rationing became normal, and people found ingenious ways to make food and clothing last longer.

End of the Second World War

The Second World War ended on 2nd September 1945, when Japan formally surrendered. Many factors brought about the end of the war. The Allied Powers' D-Day invasion, on 6th June 1944, resulted in Allied troops liberating Paris and Brussels. The Battle of the Bulge failed to break the Allied line. Adolf Hitler realised Germany had lost the war and committed suicide on 30th April 1945. The war against Japan ended after the United States dropped atomic bombs on the Japanese cities of Hiroshima and Nagasaki.

Life on the home front

Life changed for people in Britain. Food was scarce. Rationing was introduced towards the end of the war, leading to long queues at shops, hoarding, protests and strikes. People were worried about their safety as Zeppelins, and later German Gotha planes, carried out air raids over cities. Women took on roles traditionally done by men, such as working in factories or on the land.



End of the First World War

The First World War ended on 11th November 1918, when Germany surrendered. Several factors brought about the Allied Powers' victory, including the United States declaring war on Germany after German submarines sank American ships. In 1919, the Treaty of Versailles held Germany responsible for the war and ordered Germany to pay vast amounts in reparations. The devastation this caused to Germany played a part in the outbreak of the Second World War.

Second World War 1939–1945

Timeline of events

September 1939	Germany invades Poland and Poland surrenders
April 1940	Germany invades neutral Norway
May 1940	Germany takes control of Luxembourg, Belgium and the Netherlands
May–June 1940	Germany invades France and Operation Dynamo rescues Allied soldiers from Dunkirk
June 1940	France surrenders to Germany
July–Oct 1940	Battle of Britain
December 1941	Japan attacks Pearl Harbor and the United States enters the war
July 1943	Allied forces invade Italy and Italy later surrenders
June 1944	D-Day
May 1945	Germany surrenders (VE Day)
Aug–Sept 1945	The United States drops atomic bombs on Japan, Japan surrenders and the war ends

Post-war world

After the Second World War, the Allied Powers split Germany into West and East Germany. International agreements were signed to ban chemical weapons, torture and genocide. The Universal Declaration of Human Rights was approved, which still forms the basis of international human rights law. The welfare state and National Health Service were created in Britain. Many of the war's technological innovations were redeveloped for civilians.

Remembrance

Remembrance is the act of remembering and honouring the people who died as a result of conflict. The poppy is a symbol of remembrance after poppies grew on the Western Front battlefields. Memorials, monuments and war cemeteries all serve to remind us of the sacrifice made by millions of people.



Glossary

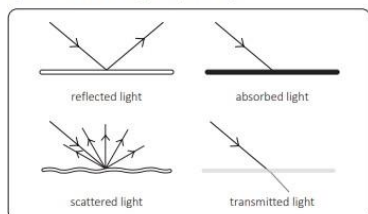
alliance	A group of countries who have agreed to work together because of shared aims.
appeasement	Giving the opposing side something they have demanded to prevent further disagreement.
colony	A nation controlled by another country.
conscription	Forcing people by law to join the armed services.
imperialist	A supporter of a system in which a country rules another country, sometimes having used force to gain control.
genocide	The deliberate killing of large numbers of people from a particular nation or ethnic group, with the aim of destroying that nation or group.
militarism	The belief that it is necessary to have strong armed forces to win political or economic advantages.
reparation	Payment for harm or damage.
stalemate	A situation in which neither side can get an advantage, and no action can be taken.

Science

Light Theory

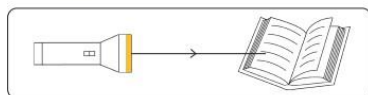
Light sources

A light source is something that produces light. This can be a natural source, such as the Sun or a glow worm, or an artificial source, such as a light bulb or candle. Most objects do not produce light. Instead, they either reflect, absorb or scatter the light given out by a light source. Light can also travel through transparent objects.

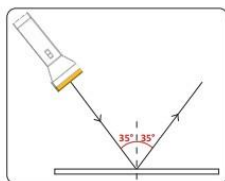


How does light travel?

Light is a form of energy that travels as waves in straight lines. In diagrams, light waves are drawn as straight lines with arrowheads that show the direction of travel.

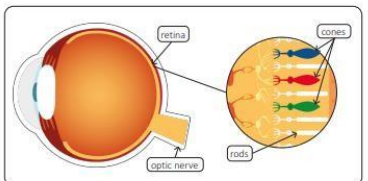


Light continues to travel when it is reflected off the surface of an object. When light hits a mirror, it reflects off the surface in a straight line. All mirrors reflect light at an angle equal to the angle of impact.

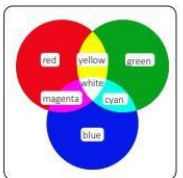


Perceiving colour

Light enters our eyes through the pupil and is focused onto light-sensitive cells called rods and cones that cover the retina at the back of the eye. Rods help us to see light and dark and cones help us to see different colours. Once the cone cells have been stimulated, a signal is sent to the brain through the optic nerve. The brain interprets the signal as a particular colour, giving us colour vision.



Red, green and blue are the primary colours of light. When the red and green cones in our eyes are stimulated, we perceive a yellow colour. When the blue and green cones are stimulated, we perceive a cyan colour. When the red and blue cones are stimulated, we perceive a magenta colour. If the red, green and blue cones are all stimulated, we see white.



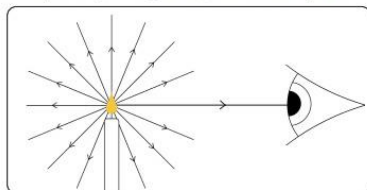
Shadows

Shadows form when an object blocks the passage of light, leaving an area of darkness. The size and length of an object's shadow can vary depending on the position of the light source.

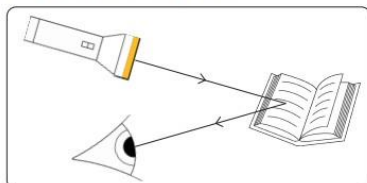


Light and sight

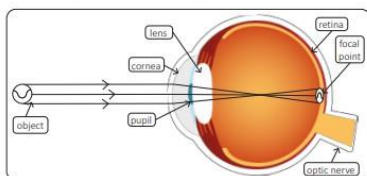
For us to see any object, light must enter our eyes. Light rays can travel to our eyes directly from a light source, so we can see the light source.



Light can also travel to our eyes after it has been scattered or reflected. In this diagram, light from the torch travels to the book and is then reflected from the book into the person's eye.

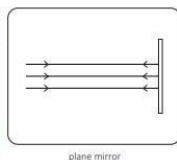


Light rays reach the eye and travel through the cornea before entering the eye through the pupil. The lens focuses the light onto the back of the eye, called the retina. The retina turns this light information into electrical signals, which travel through the optic nerve to the brain, where the signals are 'seen' as an image. Without light, we cannot see.

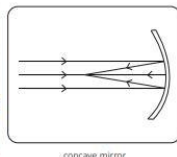


Reflection in different mirrors

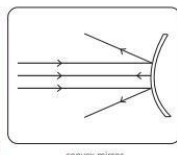
There are three main types of mirror: plane, concave and convex. A plane mirror has a flat reflective surface, so perpendicular light rays are reflected back along the same path. This means the reflected image is the same size and the same way up as the object, but the image is reversed.



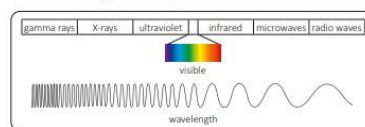
The surface of a concave mirror curves inwards, so light rays are reflected inwards to a focal point. Images appear larger and brighter in a concave mirror, but they reflect a narrower view. Dental mirrors and torches use concave mirrors.



The surface of a convex mirror curves outwards, so light rays are reflected outwards and dispersed. Convex mirrors make images smaller, but they reflect a wider view. Shop security mirrors and car wing mirrors are convex.



Electromagnetic spectrum



The electromagnetic spectrum shows all the different types of light, from gamma rays with waves that are close together, to radio waves with waves that are far apart. Visible, or white light is the only light the human eye can see and is only a small part of the electromagnetic spectrum.

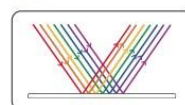
Visible light

Visible light is made up of a continuous spectrum of different colours of light, from violet to red. All the colours of light mix together to create white light.

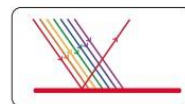


The way objects reflect or absorb light determines their colour.

Some objects reflect all the colours of light, so we see those as white.



Other objects absorb some of the colours in white light, but some colours are reflected. We see these objects as the coloured light that is reflected.

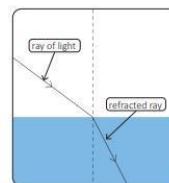


Black objects absorb all the colours of white light.

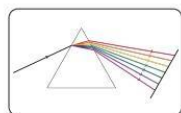


Refraction

Refraction is the change in direction of light as it passes from one transparent material to another. This diagram shows a light ray travelling in a straight line through the air, then hitting the surface of the water. Water is denser than air because water is a liquid and air is a gas, so the light slows down and changes direction.



When white light travels through a triangular prism, light is refracted twice. This, along with the prism's angled edges, splits white light into a spectrum of colours from red to violet.



Refraction creates different phenomena on Earth. For example, light refracted by raindrops creates a rainbow. Light refracted by a glass of water can make a straw look bent or disjointed.



Glossary

absorb	The ability to soak something up, such as a liquid or light.
reflect	To bounce off a surface.
scatter	To move apart in different directions.
spectrum	A band of colours produced when white light is separated.
visible light	The part of the electromagnetic spectrum that the human eye can see, also known as white light.

Home Learning

Children to use the knowledge organisers provided to help them further their learning.

Create a fact file about Winston Churchill.

Why did both wars start?

Which countries were involved?

Design and create an underground shelter.

Useful Links:

**RAF Museum Midlands,
Lysander Avenue,
Cosford, TF11 8UP**

10.00am - 5.00pm

[World War One - Year 6 History - BBC Bitesize](#)

[World War 1 facts for kids | National Geographic Kids \(natgeokids.com\)](#)

[World War 2 facts for kids | National Geographic Kids \(natgeokids.com\)](#)