Large print guide

Second World War Galleries

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Contents

Gallery 1 | How did the Second World War begin?

Nations and Empires

Fascist Italy

Mussolini's rise to power was aided by his thuggish paramilitary supporters, the 'blackshirts'. By the 1930s they had become a key part of the fascist state. They wore a **dagger** and **fez** with their black uniforms. Children were pressured to join junior Fascist organisations. Even six-year-olds were expected to become *Figli della Lupa* (sons of the she-wolf).

Fascist Italy embraced modernism in architecture and art, as shown by **Renato Bertelli's sculpture** *Profilo Continuo di Mussolini* (Continuous Profile of Mussolini). At the same time it displayed nostalgia for the ancient Roman Empire. The Fascist Party took its name from the bundle of *fasces* (wooden rods) that were a Roman symbol of authority.

This **painting on antelope hide** by an Ethiopian artist shows Ethiopians (left) resisting the Italian invaders

(right). Emperor Haile Selassie of Ethiopia denounced to the League of Nations the use of mustard gas against his people: 'Women, children, cattle, rivers, lakes and fields were constantly drenched with this deadly rain'. The League, created after the First World War to settle international disputes, imposed weak penalties on Italy.

This **pamphlet**, published by British peace campaigners, exposes Italy's involvement in the 1936–1939 Spanish Civil War. Spain's government sought aid from the Soviet Union, while Italy and Germany supported the right-wing rebels. Mussolini sent 75,000 men to fight there. Britain and France, unwilling to back a left-wing government, stood aside and fascism triumphed in Spain.

Imperial Japan

Passionate patriotism dominated Japanese culture. Japan's people revered their emperor, Hirohito, as a living god. Many took pride in the aggressive actions of their armed forces. Even children's clothing, like this ***chanchanko*** (sleeveless jacket), could reflect militaristic sentiments. Anyone who did not sign-up to this nationalist vision faced intimidation, violence and social pressure.

Weeks of terror followed Japan's capture of the Chinese city of Nanjing where this **photo** was taken in December 1937. Japanese soldiers were taught to view Chinese people as their racial inferiors. At Nanjing they turned on civilians, raping or murdering tens of thousands of them. US missionary John Magee stayed in the city to secretly film and document the massacre.

This **Japanese air-dropped propaganda sheet** shows much of China allegedly happy under Japanese control, while Chiang Kai-shek cowers in the south-west. The **photograph album** shows fighting in Shanghai, following Japan's invasion of China in 1937. Japan conquered China's north and east, and started to cut it off from the world by capturing its ports.

This Japanese **poster** calls for investors to support the 'China Incident', as the war against China was called in Japan. China's fragile Nationalist Party government was led by Chiang Kai-shek. He ruled only with the support of regional warlords, and faced armed communist opposition. China's north-eastern region, Manchuria, had been seized by the Japanese from its warlord ruler in 1931.

Nazi Germany

Hitler won support by promoting a German sense of community. This **poster** celebrates the Nazi Labour Corps, part of his war on unemployment. The Nazis seized control of all aspects of society. **Daggers** and **sidearms** added to the swagger of the many uniformed organisations. These examples were worn by (from left to right) the Hitler Youth, the police, the German Red Cross and the Labour Corps.

The Nazis imprisoned political opponents in concentration camps such as Dachau, where this **photograph** was taken. Others whose beliefs, behaviour or biology did not meet Nazi ideals, were also imprisoned in camps. These included Jews, gay men, Jehovah's Witnesses, Roma and petty criminals. The camps were run by Hitler's security organisation, the *Schutzstaffel* (SS), who subjected prisoners to hard labour and brutal discipline.

German Jews, identified by Hitler as racial enemies, were progressively deprived of their citizenship. This **passport** marked 'J' identifies its bearer as a Jew. Jewish people were excluded from society. They were denied jobs in education or public services. Their

businesses were stolen by the state. Propaganda like this antisemitic **children's book** containing vicious racial caricatures whipped up hatred.

Hitler gained popularity by defying the hated peace terms, forced on Germany in 1919. He broke them by expanding Germany's army and creating a powerful modern air force. In March 1938 he went even further, launching an unopposed invasion of Austria. This **ballot paper** is from the referendum held to rubber-stamp the *Anschluss* (union) of Germany and Austria.

Europe's last year of peace

Peace without honour

This **handkerchief** celebrates the 20th anniversary of the creation of Czechoslovakia. War loomed when Hitler threatened to invade it. Desperate to preserve peace, Britain's Prime Minister Neville Chamberlain flew to Germany twice to talk with Hitler. At the resulting international conference at Munich, Britain and France gave in to most of Hitler's demands. Czechoslovakia itself got no say. Forced to hand over territory, it was fatally weakened.

In Munich, Chamberlain asked Hitler to sign this **document** declaring the 'desire of our two peoples never to go to war with one another again'. On his return he announced that it meant 'peace for our time'. Many saw the Prime Minister as a hero, as this **plate** shows. Others thought that the Munich deal was a 'betrayal'. Chamberlain himself regretted his optimism almost immediately.

Thousands of Jews fled Nazi persecution. Forced to leave money and property behind, they found it difficult to find refuge. Some British people opposed offering them a home, as shown by this extreme right-wing **newspaper**. Even the mainstream *Sunday Pictorial* falsely claimed that 'refugees are stealing jobs from Britons'. This **doll**, 'Trixie', was brought to Britain by Inga Pollak, a 12-year-old child-refugee from Vienna.

Europe prepares for war

Britain speeded up its rearmament. **Toys** like these Hawker Hurricane fighters reflected rapid improvements made to Britain's air defences in the late 1930s. The **plaque** commemorates the opening of one of many factories built to manufacture

new war material. For the first time since the end of the First World War military service was made compulsory for some men.

Germany greatly boosted its industrial power by seizing control of Czech industry. The German Army gained 2,000 Czech artillery guns, 600 tanks and other high-quality weapons such as this **light machine gun**. This **scarf** celebrates Germany's expansion between 1935 and 1939, including the union with Austria and the destruction of Czechoslovakia.

In this **directive**, Hitler ordered the invasion of Poland on 1 September 1939. A secret agreement made with Stalin to divide up Poland meant he could attack without fear of Soviet interference. Hitler expected to avoid British and French intervention by acting with 'speed and brutality'. But Britain and France kept their promise to go to war.

Gallery 2 | How did the war spread across Europe?

Destroying nations

Poland's fate is shown in this **film**. In less than five weeks, in 1939, a joint German and Soviet invasion overwhelmed Poland. Under pre-agreed terms, the two invaders divided the country between them. They quickly established a brutal rule over their conquests. Poland was torn apart and many of its people deported, persecuted or murdered.

'Bore War'

A waiting game

This **watercolour** by British war artist Edward Ardizzone captures the experience of the British soldiers who made up 10% of the Allied army serving in France. The lack of action prompted talk of a 'Bore War' or, in the US, a 'Phoney War'. Even Britain's Prime Minister Neville Chamberlain expressed puzzlement at this 'strangest of wars'.

France placed its faith in the Maginot Line. This **newspaper** shows these defences protecting France's eastern border. The **badge**, worn by French troops defending the line, says, 'They shall not pass!' – a slogan from the First World War Battle of Verdun. Meanwhile, British bombers showered **propaganda leaflets**, rather than bombs, on German cities. These examples were dropped while Poland was being overrun.

The Allies thought Germany would collapse if starved of resources. Goods being shipped to Germany were declared 'contraband' and seized by the Royal Navy. This **sample box** was used to identify materials in ships examined by Contraband Control at Weymouth, Dorset. But Hitler's deal with Stalin gave Germany access to the supplies it needed, through the Soviet Union.

This **cap** was worn by a sailor on the German battleship *Graf Spee*. The **cash box** was on board HMS *Exeter*, one of the ships that hunted down and fought *Graf Spee* in December 1939. It was damaged by shellfire in what Britain's navy minister Winston Churchill called a 'brilliant sea fight'.

War comes to Scandinavia

Finland's outnumbered army and Civil Guard put up a formidable resistance in sub-zero temperatures. This **rifle** and **bayonet** are examples of weapons used by the Civil Guard. To fight Soviet tanks they used the **Molotov cocktail** – a bottle of flammable liquid filled at Finland's state vodka distillery. The invaders struggled to overcome the combination of Finnish stubbornness and extreme weather.

This **flag** is from the destroyer *Z18*, one of many German ships the Allies sunk off Norway in April 1940. The Allies hurriedly sent an expedition to oppose Germany's surprise invasion. While the British Royal Navy scored some successes, British, French and Polish troops achieved little. The badly organised expedition had arrived too late.

This souvenir **handkerchief** was bought by a British serviceman sent to occupy Iceland. Once Germany had conquered Norway, its navy could attack directly into the North Atlantic, a major British supply route. At Winston Churchill's insistence, Britain invaded neutral Iceland to counter this threat. The only resistance came from a local man who pressed his cigarette

into the muzzle of a British Royal Marine's rifle.

This **poster** shows how Finland's struggle inspired people in Britain. The British and French governments discussed sending help. But, in March 1940, Finland was forced to give up land in return for peace. Nevertheless, within a month, the Allies did find themselves fighting in Scandinavia – against a German invasion of Norway.

Britain's defeat in Norway destroyed confidence in Neville Chamberlain. He was forced to resign as prime minister. On 10 May 1940, despite his own involvement in the Norwegian fiasco, Winston Churchill took over. This **newspaper** shows his 'all-party ministry', formed from all the main political parties. To his bodyguard he said, 'I hope it is not too late. I am very much afraid that it is'.

This **fishing boat**, *Tamzine*, was the smallest of over 900 ships and boats used to evacuate British and French soldiers from Dunkirk. *Tamzine* was used to ferry men from the shallow beaches out to larger vessels. Some boats were crewed by civilian volunteers, although most were operated by the Royal Navy, who took over commercial boats when

civilian crews refused to go.

The Allies defeated

Germany strikes in western Europe

The Germans advanced into Luxembourg, Belgium and the Netherlands, using airborne troops to seize key locations. German aerial bombing terrorised soldiers and civilians alike. This type of **helmet** was worn by the Dutch Army, which surrendered on 15 May. The **beret** was worn by the Belgian *Chasseurs Ardennais* – light infantrymen. They defended the southern region of Belgium through which German tanks advanced on France.

Tanks spearheaded the German advance. This British **recognition model** shows Germany's newest and most powerful tank, the Mark IV. Most German tanks were less modern. The French leadership, represented by this **staff officer's uniform,** proved unable to respond to the high-risk tactics of Germany's mobile units.

Trapped at Dunkirk

The *Medway Queen*, a paddle-steamer taken over by the Royal Navy, flew this **flag** at Dunkirk. Among anxious soldiers on the beach was Henry Linley. His **diary** captures the 'desperate' mood. Good weather and German caution meant that 338,000 British and French soldiers were saved. The operation's commander, Vice Admiral Sir Bertram Ramsay, sent this **signal** to congratulate all who took part.

France defeated

Mussolini, seeing France facing defeat, joined Hitler and declared war on the Allies, as shown in this **Italian magazine**.

Italian troops achieved little in the 12 days before France's surrender. By contrast, Germany could celebrate a triumph. This **plate** commemorates the part played in the fighting by one German anti-tank unit.

The armistice between France and Germany was signed using this **framed pen.** France was divided into occupied zones and the so-called Vichy Republic.

The Vichy Republic was an authoritarian right-wing state led by French First World War hero Marshal Philippe Pétain. Hitler treated the Vichy leadership with respect, because he wanted a weakened and obedient France as part of his new European order.

Racial violence

Over 3,000 black African soldiers, recruited by France from its empire, were murdered after surrendering to the Germans in 1940. This **album**, with photographs of African prisoners of war, was kept by a *Waffen-SS* soldier. This armed wing of the Nazi party was heavily involved in the racist killings. When French–African prisoners appeared on newsreels in Germany, audience members shouted 'shoot these black beasts!'

This anti-British propaganda **poster** 'Don't forget Oran!' was produced by the French Vichy Republic. In July 1940, the British Royal Navy attacked the French fleet at its base near Oran in Algeria, due to fears that Germany would take control of it. This ruthless attack on a former ally showed to the world Britain's determination to keep fighting, but poisoned relations with the French.

Following France's defeat, Britain had to decide whether or not to keep fighting. Prime Minister Winston Churchill thought that a peace agreement would make Britain a hostage to further Nazi demands. After tense discussions his war cabinet agreed. This **newspaper** reported Churchill's stirring speech to the House of Commons. He proclaimed that Britain would fight on.

Gallery 3 | What did the war mean for Britain?

Prisoners of war

Prisoners received poor rations and looked forward to getting a **food parcel**. Aid organisations sent large numbers of them to POW camps, but they did not always reach the prisoners. They contained tinned foods and goods such as tea, chocolate, soap and tobacco. Most camps had facilities run by the prisoners, including libraries and barber shops. These **hair clippers** were used at camp Stalag VIIIB in Germany (now in Poland).

This **poster** (above) was one of several produced by the British Red Cross and Order of St John War Organisation. The appeal for donations for prisoners of war raised more than £50 million.

Over one third of that sum came from door-to-door collections and a 'Penny-a-Week' scheme. This funded packages for prisoners, which contained food, books, sports equipment and medical supplies.

Planning an escape kept many prisoners going. They were helped by MI9, a government organisation. It secretly sent escape aids – including maps and compasses – from Britain to POW camps. This **chess set** was used to smuggle escape equipment, concealed within the **tube**. British prisoner George Young hid **German money** and a **map** in this **boot brush**. Very few escape attempts were successful.

Britain alone?

Allies in exile

This French **tank helmet** was issued to a Polish soldier who fought with the Allies in France. When France fell, Polish soldiers escaped to Britain. This **booklet** celebrates Free French soldiers who had also escaped to Britain and fought for the Allies. This **certificate** from a Czech airman promised his British comrade a warm welcome if he ever visited Czechoslovakia.

Divided America

Americans tried to help as Britain felt the strain of war. New York socialite Natalie Latham started a

knitting circle to send bundles of **children's clothes** to Britain. **Commemorative charms** were sold to raise money. Samuel McVitty from Salem, Virginia donated his **Whitney Rifle** (below) to the British Home Guard. Just under 250 Americans volunteered for the Royal Air Force.

Anti-war groups in the US feared that President Roosevelt's support for Britain would lead them into another European war. In California, the Yanks Are Not Coming Committee published this **pamphlet**. It appeals to labour union members to avoid 'the filthy mess' of war. The America First Committee was a national anti-war organisation whose membership grew to around 800,000. Their **poster** proposes that the liberty of US citizens would be 'war's first casualty'.

This **pamphlet** was published in India after the 1941 Atlantic Conference. Here, Winston Churchill and President Roosevelt agreed to a set of principles 'for a better future of the world'. One of those principles was 'the right of all peoples to choose the form of government under which they live'. This was encouraging news for independence groups across the British Empire, including in India.

Britain bought US weapons like this **Colt pistol** (below right), but soon ran short of money. US President Franklin D Roosevelt was determined to help. In March 1941 he signed the Lend-Lease Act. The US would now lend countries weapons, with payment to be negotiated after the war. Officially the goods remained 'United States Property', as marked on this **Smith and Wesson revolver** (below left) used by the British Army.

Alliance and empire

All kinds of games, toys and publications reflected the fact that the British Empire was fighting alongside Britain. In Britain a set of **pottery figures** called 'Our Gang' featured Australian (far left) and New Zealand (left) soldiers, as well as British soldiers, war workers and Winston Churchill. Other pieces included a **teapot** decorated with Allied flags, this **pamphlet**, a **puzzle** from New Zealand and this **songsheet**.

Recruitment **posters** encouraged people across the British Empire to volunteer for the armed forces or to work in factories. These **statements** show that, while many volunteered, others were made to

contribute to the war effort against their will. Few remaining original records document the plight of those forced to fight or carry out manual labour. Many were illiterate and writing materials were scarce as people prioritised the necessities to survive.

The Battle of Britain

Invasion threat

This **map** was part of the Germans' plans for an invasion of Britain. It shows where German forces would land and advance.

They also wrote this **book**, *Die Sonderfahndungsliste G.B.* (Special Search List Great Britain), or 'The Black Book'. It was a secret list of people living in Britain who the Germans planned to arrest upon invasion. It included prominent Jewish people, politicians, communists, authors, actors and artists.

Many British people worried about how to defend themselves and their country against German invasion. This Ministry of Information **pamphlet** offered them practical advice.

The government set up a new force, the Local

Defence Volunteers (LDV). Within weeks, 1.5 million men who were too young or too old for military service joined. At first they had no uniforms, so they wore an **armband** over their clothing.

The Local Defence Volunteers would support the Army if there was an invasion. Many members had to find their own weapons, like this **club**, **pike**, **sword**, **knuckle-duster knife** and **knife** made from piping. In July 1940, Prime Minister Winston Churchill changed the name to the Home Guard. Over time, the Home Guard received better equipment and guidance, like this **officer's handbook.**

Battle of Britain

Britain had an excellent air defence network, as shown in these **photographs** (left and far left. Members of the Observer Corps watched for incoming enemy aircraft and estimated the height at which they were flying at. Radar operators detected and located enemy aircraft. The combined intelligence was used to scramble RAF fighter aircraft into action.

In total, 574 men from outside Britain flew as RAF

pilots during the Battle of Britain. Adolph Malan, from South Africa, was a skilled pilot and tough leader. British war artist Eric Kennington drew his **portrait** (right).

People came together to fight the battle. They volunteered for the RAF and the Women's Auxiliary Air Force (WAAF) and donated money to build new aircraft.

Both air forces had some of the best fighter aircraft in the world. The British had the Hurricane, represented in the **model** (above right) and the Spitfire. Germany had the Messerschmitt Bf 109E, shown in the **model** (above left).

When British and German aircraft confronted each other, fierce aerial battles known as dogfights broke out. Airmen needed skill, endurance and luck to survive.

German pilots wore this type of **flying helmet.** Their morale slumped as more were shot down. The British found that captured German airmen showed signs of 'nervous exhaustion'. This **metal plate** is from a German dive bomber shot down on 18 August 1940. It crash-landed on a golf course in Sussex. The pilot, Sergeant Kurt Schweinhardt, was taken prisoner.

Despite the presence of the local Home Guard, souvenir hunters stripped the aircraft apart.

British war artist Paul Nash completed this **oil painting** *Battle of Britain* in 1941. He wanted to capture the overall impression of what he had witnessed, not just a single event. He wrote that the intense clashes in summer skies above the English landscape and the 'smoke tracks of dead or damaged machines falling' were all intended to 'give a sense of an aerial battle'.

Mass evacuation

Safety in the countryside

Each evacuee child wore a label with their details. Manchester schoolgirl Audrey Williams carried her belongings in this **rucksack** when she was evacuated to Derbyshire. Parents were told to pack warm clothes and sturdy **shoes** like the ones here. But many families could not afford them. The evacuee experience was soon reflected in this **card game** 'Vacuation'.

Many homesick evacuee children wet the bed. Host families assumed it was a sign of bad character or neglectful parents. The Women's Voluntary Services produced this **leaflet** giving advice on how to help children settle in and prevent bed-wetting. Some people exaggerated the situation in an effort to claim an additional laundry allowance from the government.

Evacuated mothers were forced to fit in with the household routines of the families they were billeted with. They were often accused of being lazy and negligent. Devon's education inspector noted evacuee children being 'seen outside the local public houses in the evenings' while their mothers were inside. *Spectator* magazine reported that many evacuated mothers were the 'lowest grade of slum woman'.

Oceans apart

Cliff and his sisters Sheila and Dinah were evacuated from Southampton to Cincinnati, America. They wrote letters home describing their new friends and school. They also sent these small **photograph souvenirs** from a holiday in Cumberland Falls. The children recorded messages for their parents

for a BBC radio programme. In this **photograph** Cliff is waiting for his turn. Their dad, John, 'shivers with fright' when he nearly missed the broadcast.

The Blitz

Volunteers wanted

Air Raid Precautions (ARP) wardens were issued blue **overalls** from October 1939. The metal **eye shields** were meant to protect wardens' eyes from bomb splinters. This warden also carries a **haversack** containing a gas mask. At first, wardens worked in communities to distribute gas masks, enforce blackout regulations and help people build shelters. As bombing intensified, they dealt increasingly with the impact of raids.

Air Raid Precaution (ARP) wardens had to deal with incendiary bombs. These fire bombs crashed through roofs and set buildings alight. Wardens could use a **bomb scoop** either to move a bomb to where it could do no harm, or to cover it with sand to put it out. They put out small fires using a **stirrup pump**, and advised civilians to keep a **bucket** of water in their homes.

A volunteer Auxiliary Fire Service (AFS) was created in 1938 to support the full-time fire services. It set up stations in schools, garages and factories. AFS firefighters wore a **helmet with neck protector, rubber boots and oilskin leggings.** To fight fires, the AFS at first used trailer pumps towed by taxis. In 1941 the AFS and local authority fire brigades were combined into a National Fire Service.

Members of the Home Guard were issued with khaki battle dress uniform. However, shortages meant that personnel often found themselves without a steel helmet or overcoat. The Home Guard patrolled factories and coastlines, and checked identification cards at road blocks. Small units were trained in sabotage techniques to attack behind enemy lines if there was an invasion. But in quiet village streets, most noises in the night were false alarms.

The Women's Voluntary Services (WVS) was formed in 1938 to support communities affected by war. Members looked after evacuees at railway stations and escorted them on their journey. During the Blitz, the WVS ran rest centres that provided washing facilities, food and clothing for those bombed out. As the WVS was not a government-run civilian

defence organisation, members were not issued with uniforms. They were required to purchase their own **uniform** or make one from an approved pattern.

A nation at war

The British government feared that the Germans would drop poison gas on civilians. They ordered everyone to carry a **gas mask** at all times. Air Raid Precautions wardens encouraged people to seal windows and doors with **tape** to keep gas out. After an air raid, wardens used a **detector kit** to test for carbon monoxide gas coming from damaged buildings. As it happened, however, gas was never dropped on Britain.

Young children were given a red and blue 'Micky Mouse' **gas mask**. When they breathed out through the rubber nose flap, it made a funny 'raspberry' noise. Joan Pickney, who lived in Middlesbrough, had her own gas mask carrier made from a **teddy bear**. Women could buy a **handbag** with a gas mask compartment.

This **gas proof enclosure** (below) was for small dogs. The dog's owner operated the pump to circulate air.

The British authorities interned approximately 27,000 Germans and Austrians living in Britain. They feared there might be spies among them. A Jewish aid committee produced this **circular** warning refugees to 'avoid talking German'. This business **sign** shows the hostility often experienced by 'enemy aliens'. Women interned in a camp on the Isle of Man embroidered this **bag**. This **passport** belonged to a Jewish refugee held there.

Telkea Kuck, a German nurse and midwife, came to Britain in 1933 to work as a domestic servant. On 10 September 1940 she was interned as an 'enemy alien' in Holloway Prison, London, then Rushen Camp on the Isle of Man. 'I want to get out', she wrote in a **letter** to her British lover Hugh Shayler. Hugh sent letters to the Home Office begging for her release. This was granted over one year later in November 1941.

From September 1939 everyone had to carry a **National Identity card,** showing who they were and where they lived. This one was issued to Judith Allen from Weston-Super-Mare.

Everyone received a **ration book** from January 1940. Rationing was meant to ensure everyone received fair shares of food. People were required to register

with local shops. The shopkeeper crossed off the relevant coupons inside the ration book.

A nationwide 'blackout' made it harder for German bombers to spot cities at night. Street lights were turned off and car headlights masked. Light from windows was blocked out with thick curtains, cardboard or paint. People wore luminous **armbands, buttons**, or **flowers** to prevent accidents. A **kerb finder wheel** could be attached to the end of a walking stick or umbrella to avoid tripping in the dark.

This government **pamphlet** encourages owners to 'destroy' pets at risk from bombing raids. In one week in 1939, pet owners in London took almost 400,000 animals to vets and animal charities to be killed.

This **collar** belonged to 'Bobby' the cat. The National Air Raid Precautions for Animals Committee registered pets with **identification tags.** The committee issued this **casualty report** for a pony injured by bomb splinters.

This is a **Morrison shelter**. These small indoor air-raid shelters were issued for free to lower-income households. Although they took up space, they were

more convenient than going to an outside shelter. People kept blankets and clothes in them for quick use. The Morrison was designed to withstand the upper floor of a house falling on it. In government tests, it proved to be effective.

Britain under attack

Many people chose to sleep in their own beds, only going to a shelter if the air raid siren sounded. This all-in-one **Siren Suit** could be put on quickly over night-clothes.

From March 1941, a family of four could sleep in the newly available Morrison shelter. This was a steel cage that doubled as a table, as shown in this **poster** (above left).

Those without space for a shelter at home used communal shelters. This **illuminated sign** (outside, right) guided people to one of the packed public shelters that held around 50 people. Ron Weir, aged 6, wrote this **letter** to his grandmother from a communal shelter. By September 1940, around 177,000 Londoners were taking refuge in the Underground. At some stations you needed a

permit to guarantee a place.

People with gardens could install a corrugated steel **Anderson shelter**. Free to low earners, by September 1940, 2.3 million had been issued. They offered protection against anything other than a direct hit. Increasingly, people spent less time in these cramped, cold and damp shelters, preferring the comfort of their homes. Air raids could be lengthy. People played cards and games, read, knitted and listened to music.

During the Blitz, over 45,000 tonnes of bombs were dropped on Britain. These varied in size and impact. Large parachute mines and high explosive bombs caused huge devastation. **Butterfly bombs** were smaller but deadly, as this **poster** warns. Small **incendiary bombs** (below left) were dropped in vast quantities to start fires that burned buildings and guided German bombers at night.

German bombers targeted not just London but other major British cities and industrial centres. This **booklet** commemorates the bombing of Merseyside.

This **panel** was cut from a German bomber shot down on 8 May 1941 during a night raid on Hull. Two of the four crew were killed. In that raid, and one the next night, around 10% of Hull's population was made homeless.

London was the most-raided city during the Blitz, bombed for 57 nights in a row. This **album** shows some of the damage. Densely populated, poorer areas in east London suffered heavily. These **coins** were fused together by heat during a raid on Plaistow.

At first, bombed-out people struggled to get help. But soon, organisations providing emergency assistance with housing, food and clothing were better coordinated.

This **footage** shows how the German bombing campaign against Britain, known as the Blitz, was experienced. People built shelters and queued to take refuge as Air Raid Precautions (ARP) wardens prepared for incoming raids. As the bombers approached, the sirens sounded and the bombs fell. People fought the fires that raged and searched for victims in the aftermath of the raids. Across the country, the bombing had a devastating impact.

This type of large **parachute mine** caused huge devastation during the Blitz. Initially dropped by the *Luftwaffe* around the British coast, these magnetic mines were later deployed against land targets. They were first dropped on 16 September 1940 and could cause considerable damage in built-up areas.

Fighting back

These **photographs** show Joyce Robinson (above left), Edward Rushworth (above right) and other workers at Bletchley Park (right). They all had to keep their jobs secret.

Bletchley Park was the hub of Britain's code-breaking activity. Joyce and Edward worked in Hut 3, where German Enigma messages were analysed. They later married.

German armed forces used **Enigma machines** like this to encipher their messages. They believed the ciphers were unbreakable. From early in the war, the British worked on cracking the Enigma to discover German plans. At Bletchley Park, mathematicians Alan Turing and Gordon Welchman worked in secret to design a machine to help read intercepted

German messages faster. The resulting **reports** were vital to Britain's war effort.

Spies, raids and codebreaking

Britain set up a secret organisation in July 1940 to work against the Germans. The Special Operations Executive (SOE) trained and armed agents and sent them to work with resistance groups in occupied Europe. With special equipment, like this **timed detonator** (above), they carried out acts of sabotage. This **suitcase radio** was used by SOE wireless operators to send vital messages back to Britain.

'There seem enormous possibilities of creating untold havoc', wrote Dudley Clarke in this secret **memorandum** in May 1940, as the Germans were attacking France. Dudley worked for the professional head of the British Army. He suggested setting up a new force to carry out small-scale raids against the Germans. This force would carry out targeted attacks behind enemy lines. It became known as the Commandos.

Early Commando recruits were army volunteers. They had intensive training in weapons handling, survival and close combat. Many carried a US-made Thompson **submachine gun**.

This is a magnetic **limpet mine**, which had a timed fuse. Commandos attached these mines to ships to destroy them. The Commandos were relatively few in number, but their small-scale raids kept the Germans on the alert and boosted British morale.

This British **poster** depicts one of the Commando raids in Norway in 1941. Norway was targeted because it produced huge quantities of fish oil, used in German war production. The commandos destroyed vast amounts of this oil in attacks on the Lofoten Islands in March and on Vågsøy in December. The raids forced the Germans to send more troops to guard the Norwegian coast.

Commandos would carry a **limpet mine** as they secretly swam or dived under enemy ships. They attached the mine to ships with magnets. The mines take their name from limpet sea snails often found clinging to rocks, wharves and piers.

Bombing Germany

The British public was encouraged to back the bombing campaign through this **poster** (above) and other propaganda.

The 1941 documentary-style film *Target For To-night* featured real servicemen. It inspired public support but was misleadingly positive. It followed a Wellington bomber crew on a successful raid against a German oil plant. It was so popular that this souvenir **pamphlet** with stills from the film was published.

British RAF bomber crews had outdated bomb-aiming technology. This 1941 **government report** (right) found that only one in three aircraft dropped its bombs 'within five miles' of the target. RAF raids on Germany had little real impact as German defences grew ever stronger. The British suffered an unsustainable rate of loss. Prime Minister Winston Churchill wanted a 'devastating, exterminating attack' on Germany. It did not happen.

Gallery 4 | How did the war turn global?

Africa and the Middle East

Clash of empires

British, Indian and Australian troops won an astonishing victory over the Italian army that invaded Egypt. Just 36,000 men beat 300,000, capturing 133,000 of them. This is the **pistol** of Italian general Annibale Bergonzoli, known as 'Electric Whiskers' to the British. He was captured at the Battle of Beda Fomm in Libya. Victor Hudson, the British ambulance driver who transported him into captivity, took the pistol from him.

This is the tropical **uniform** worn by an Italian infantryman. Britain made beating the Italians in Libya a priority. Once this was achieved it turned on Italian East Africa. This **carbine** bears the crest of the Italian ruler there, the Duke of Aosta. He gave decorated guns to friendly local leaders. Two thirds of his soldiers were recruited in Eritrea, Libya, Somalia

and Ethiopia. They fought alongside 100,000 Italians.

Soldiers were brought from across the British Empire to invade Italian East Africa. They attacked in early 1941 from Kenya and Sudan. These **badges** were worn by troops from India (top and middle right), east and west Africa (top left and bottom right), Sudan (top right) and South Africa (bottom left). The Italian Empire in East Africa had ceased to exist by November 1941.

Emperor Haile Selassie returned from exile in Britain to help liberate his country. To pay Ethiopian troops who fought for him, Britain minted thousands of this eighteenth-century Austrian **coin**, which was already widely used in east Africa. The Italians were terrified of Ethiopian vengeance. But the emperor told his soldiers to 'receive with love and care' any captured Italians, 'despite the wrongs they have committed'.

Britain overstretched

The British Empire troops sent to Greece were quickly forced into retreat by the Germans. Most of the troops were from Australia and New Zealand.

This **jacket** was worn by a soldier of 2/8th Australian Battalion. Australian Sergeant Arch Fletcher's diary ironically noted the 'wonderful experience' of being 'chased the whole length of Greece'. Once again, as in Norway and France, a British campaign ended in a desperate evacuation by sea.

British and Empire troops were evacuated from Greece to Crete. But on 20 May 1941, the Germans launched a dramatic attack on the island, spearheaded by 10,000 paratroopers. After a close-fought battle, the defenders were forced to evacuate the island. 18,000 men were left behind as prisoners of war. This **watercolour**, by eye-witness John McIndoe, shows some of them being marched into captivity.

Lieutenant James Phillpotts mischievously posted this **gerbil** home to his sister. He found it drowned in a trench in Iraq. British troops had been sent there to stop a German-backed nationalist takeover. British and Empire troops were also forced to invade Syria and Lebanon, when these Vichy French colonies were used as a staging post for German aid to the Iraqi rebels.

Battle for the Mediterranean

Destruction

This **drawing** by British war artist Leslie Cole shows the aftermath of an attack on the city of Senglea, on Malta's Grand Harbour. The island of Malta was the most bombed place on earth during 1942. This year saw the climax of an Italian and German bombing campaign that Maltese people had endured since June 1940. Over 30,000 buildings were destroyed or damaged.

This **25 Pounder gun** saw action at a pivotal moment in the desert war. In summer 1942, Germany won a major victory in Libya. The British were driven back into Egypt. But the German and Italian advance was stopped by British Empire troops at El Alamein in Egypt. The British Royal Artillery used this gun as an emergency anti-tank weapon in this battle.

Desert war

Two British soldiers made this **banjo** for their makeshift band. They were defending the crucial

port of Tobruk in Libya during a seven-month siege in 1941. The British celebrated the successful defence of Tobruk as a sign that their troops could beat the Germans. This made it all the more humiliating when they swiftly lost it during a renewed German offensive in June 1942.

The Long Range Desert Group used this **sun compass** to navigate through the Libyan desert. The group was created when British desert explorer Major Ralph Bagnold suggested a force to operate behind enemy lines. Bagnold designed the compass himself. From late 1941 the group helped another new unit, the Special Air Service (SAS), to launch sabotage attacks on enemy airfields and other targets.

In north Africa soldiers endured extreme temperatures, sandstorms and swarms of flies. This British soldier's **uniform** includes a pullover for the cold nights. Repeated defeats in these tough conditions damaged morale. Some men began to dodge the fighting by lurking in Cairo or Alexandria. Senior commanders called for the return of the death penalty for desertion and cowardice.

Churchill was furious at the failure to win victory

in north Africa. In August 1942, he put new commanders in charge. A little-known lieutenant general, Bernard Montgomery, now led Britain's army in Egypt, under General Sir Harold Alexander's direction. They are both shown in this **photograph**. Montgomery had excellent air-support and new American-built tanks, as well as top-secret information about his enemy, gathered by codebreakers at Bletchley Park.

Keeping vehicles fuelled in the desert was an enormous challenge. The British wasted vast amounts of precious fuel by using a leaky type of petrol tin that soldiers called a 'flimsy'. From 1942, they copied the robust and efficient German design of the so-called **Jerry can**. The can took its name from an Allied slang term for the Germans – 'the Jerrys'.

This **watercolour**, by soldier Jack Chaddock, shows British troops at the Second Battle of El Alamein on 23 October 1942. In this annotated **speech**, an elated Winston Churchill announced the defeat of Rommel's army in the battle. This clear British Empire victory coincided with the US joining the war in north Africa. On 8 November 1942, 63,000 US troops led an Allied landing in Morocco and Algeria.

Half a million **mines** were buried by the Italians and Germans to protect their positions at El Alamein in Egypt. The Italian **minefield sign** warns 'who touches dies'. British Empire troops had to clear paths through these minefields under enemy fire so their tanks could attack. This was just the start of a grinding two-week long struggle before the German and Italian armies were forced into retreat.

Soviet Union invaded

Germany planned to exploit the Soviet Union ruthlessly. This German planning **map** from March 1941 identifies key resources and military industries. It also hides a darker intention. The areas in yellow are regions that produced a surplus of food. This would all be taken for Germany. The brown-tinted areas normally imported food from other regions. Here the Soviet people would be left to starve.

Hollow victories

Panzer Divisions, equipped with tanks, led the German advance. This is the **uniform** of an officer of 13 Panzer Division. The Division drove 1,450 km (900 miles)

over five months to Rostov-on-Don in the Soviet Union. Panzer units surrounded huge numbers of Soviet troops, who had been ordered to hold their ground. Soviet generals feared Stalin would have them shot if they allowed their troops to retreat.

This is the **uniform** of a German infantry private. Most German soldiers marched east on foot. They endured scorching summer heat and dust, then autumn rain. Willy Peter Reese, a young private, wrote, 'we strained forward through the mud... coats became damp...wet boots could no longer be removed from swollen and inflamed feet. Skin festered from the dirt and lice. But we marched, stumbling, swaying...'

The *Schutzstaffel* (SS) controlled the security services in Germany and in occupied countries. It also ran the concentration camp system which enslaved and murdered millions. When Germany went to war it created a military branch, the *Waffen* SS, which fought alongside the Army. This is the **uniform** of a *Waffen* SS machine-gunner. The *Waffen* SS pioneered the use of camouflaged combat clothing.

Invading the Soviet Union stretched the German Army to its limit. Specialist units were used as ordinary infantry. This is the **uniform** of a soldier of 1 Mountain Division. He carries a Gewehr 33/40 **carbine**. This weapon was made in German-occupied Czechoslovakia for mountain troops. The Division captured 100,000 Soviet soldiers in August 1941 after a two-week battle near Uman, Ukraine.

This is the **uniform** of a Romanian infantry private. Romania was allied with Germany and joined the invasion of the Soviet Union. Smaller forces were sent by Italy, Hungary and Slovakia. Finland also attacked to avenge its defeat against the Soviet Union in the Winter War of 1939–1940. The Germans noted that Romania's large army was badly led by officers who stayed 'in the rear with music and alcohol'.

Battle for Moscow

Clothing like this **greatcoat** lined with small animal furs was hurriedly produced for German soldiers enduring the Russian winter. Felt or straw **over-boots** were issued to protect soldiers' feet. Despite this, 250,000 German soldiers suffered from frostbite in winter 1941–1942. To Soviet soldiers, 'Winter Fritz'

became a figure of fun. The Germans did not look so unbeatable after all.

Crimes against prisoners of war

This **shirt** was worn by a Soviet prisoner held in Majdanek concentration camp in Nazi-occupied Poland. The German Army made little effort to feed or house captured Soviet soldiers in 1941. Some – communist officials and Jews – were shot. Most simply starved, or died of disease or exposure. Later in the war Soviet prisoners were kept alive but only to be exploited as a labour force.

Holocaust: a million shot

These **cartridge cases** were recovered from a pit into which Jewish civilians from Khvativ (now Ukraine) were shot by a German *Einsatzgruppe*.
The *Einsatzgruppen* were mobile units formed to kill so-called 'partisans' resisting German occupation. Believing that 'where the partisan is, the Jew is also', they targeted Jewish people in the occupied areas.
The *Einsatzgruppen* were assisted by the German Army and by local collaborators.

The Battle of Stalingrad

On 19 November 1942, the Red Army attacked north and south of Stalingrad (now Volgograd), surrounding 265,000 Germans and Romanians there. Hitler sent this **signal** ordering them to hold the city. In February 1943, 91,000 starving and sick survivors surrendered. The Germans were driven back to where they had stood a year previously. An overjoyed Soviet soldier wrote, 'Imagine it – the Fritzes are running away from us'.

Japan attacks

China fights for survival

As Japanese troops advanced in 1938, the Nationalist Party government and thousands of civilians fled to Chongqing. In 1939, Japanese aircraft bombed the city.

Air raid shelters were built into the sides of the mountains. Chinese Air Raid Precautions personnel, issued this **shelter entry permit** to a civilian. In May 1939, over 4,000 people were killed in the air attacks in Chongqing.

This **uniform** was worn by retired US Army Air Force (USAAF) General Claire Chennault who from 1937 worked as an advisor in China. Chennault recruited about 100 volunteer pilots to fight in China. They were nicknamed 'Flying Tigers'. When the US entered the war in 1941, the pilots were absorbed into the USAAF. The 14th Air Force incorporated the flying tiger into their **badge**.

Attack on Pearl Harbor

When Japanese bombs penetrated the armoured deck of the USS *Arizona,* its ammunition stores exploded, ripping the battleship apart. Fierce fires burned for days. Of the 1,512 crew on board, 1,177 were killed. This **piece of the Arizona** was salvaged from the wreckage.

In the early hours of 7 December 1941, an urgent **radiogram** went out to all US Navy ships near Hawaii: 'Air raid on Pearl Harbor. This is not drill'. But the warning came too late.

Newspaper reports across the world documented the attack. Crucially, the Japanese failed to damage US aircraft carriers. Japan faced a long war in the

Pacific for which it was unprepared.

After Pearl Harbor the Allies depicted Japanese as bloodthirsty savages. ***LIFE* magazine** highlighted differences between 'good Asians' – America's Chinese allies – and the 'barbaric' Japanese. The US viewed citizens with Japanese ancestry as a security threat. 117,000 Japanese–Americans were forced into internment camps.

This lightweight **uniform** was worn by Japanese soldiers. The unique footprint made by their split-toed *Jika-Tabi* **shoes** made it easy for Australian troops to track Japanese soldiers through the muddy rainforests of New Guinea.

Japanese army officer Tadahide Hamada described the long distances he had to march: 'Occasionally I could not keep my eyes open while still walking, only to be suddenly awakened by stepping into a puddle'.

Civilian prisoners of the Japanese

Noel and Dorothy Clarke, along with their daughters Jill and Coryn, were British internees in China. These **photographs** of Noel, Coryn and Jill were taken

during their imprisonment in Ash Camp, Shanghai. Photos were used to make **identity cards** like this one belonging to Dorothy. Noel tried to create a sense of normality by giving Coryn lessons and made a school leaving **certificate** for her. Coryn was only 14 years old.

New Zealander Audrey Owen, another member of the Sumatra camp orchestra, made this traditional Chinese **Mahjong game** from a wooden door. Audrey painted British flowers on each one, using a knife, and a rusty file and the rough surface of a jungle leaf to polish the counters. Audrey tried to find hope and beauty amidst the squalor of the camp.

Police Sergeant Robert Bulpin covered his **jersey** with the signatures of the 382 British, US, Belgian, Dutch and Greek nationals imprisoned alongside him in a Shanghai camp. Internees faced harsh punishments if caught recording their experiences. But for many, the act of signing their name was proof that they had lived and would not be forgotten if they died in the camps.

Prisoners of war held by the Japanese

At their camp in Singapore, British POWs Denis Houghton and Reg Bradley asked a guard to teach them Japanese. They suggested he write 'workshop' on a piece of wood, which Denis nailed to his hut. Now with 'permission' to have a workshop, Denis constructed this **flute** from scrap metal found in the camp. Materials were salvaged to make this **prosthetic limb** for a patient whose limb had to be amputated.

This **nail** is from the Thai–Burma railway. About 90,000 South-East Asian civilian labourers and 12,000 Allied prisoners died during its construction. 'It became common for our men to be literally driven with wire whips', wrote British POWs in a report.

British POW Fred Taffs was forced to work in a mine in Taiwan. In an act of defiance, he smuggled out this piece of **copper ore** up his bottom.

The Japanese prevented the Red Cross from delivering food parcels or letters to the camps. The few letters prisoners could send were heavily censored. Andrew Johnstone addressed this **postcard** to 'Lotta, Liza, Mill' (meaning 'lot of lies

– am ill') to tell his family how bad conditions really were. This **handwritten letter** from a worried Indian father begs the Red Cross to help locate his son.

Prisoners held by the Japanese tried to make the best of their situation. They staged concerts or plays. Great effort went into designing the theatre programmes and costumes. British POW Charles Woodhams, a former dancer, produced shows in Changi camp, Singapore, and the Wampo and Kinsaiyok camps on the Thai–Burma 'Death Railway'. He wore this **dress** made from a mosquito net while dancing with an officer onstage.

The battle of the Atlantic

Beating the U-boats

This **painting**, *A Rescue-ship in the Atlantic, March 1943* by British war artist George Plante, shows a British convoy being attacked by submarines in the North Atlantic. U-boats attacked on the surface at night. Rescue ships took shipwrecked sailors on board. Some survivors can be seen, cleaning themselves up after being rescued from water

covered with oil from a sinking ship.
Britain believed it could beat the U-boats using ASDIC (sonar), which located submerged submarines using sound waves. This **stopwatch** was used to time the 'pings' heard when a U-boat was detected by ASDIC. But the system proved useless when U-boats attacked on the surface at night. Aircraft were a better deterrent to U-boats, but Britain had few suitable long-range aircraft.

The Allies needed new ships to replace losses. US shipbuilders modified a simple British design to create the **Liberty Ship** (*rear*), which could be built in just six weeks. In Britain and Canada a basic warship for escorting convoys, the **Flower Class corvette** (*front*), was rushed into production. Corvette crews faced sea sickness and constant soakings as these small vessels battled heavy seas.

This **photograph** shows Teleprinter operators at a naval communications centre. Unknown to the British Admiralty, the Germans had cracked one of its codes. Meanwhile deciphering the orders transmitted to the U-boats was a top priority for Britain's own codebreakers at Bletchley Park. Intercepted radio transmissions made by U-boats

gave away their location. In London, the Submarine Tracking Room analysed this information to route convoys away from lurking U-boat 'wolf packs'.

In mid-1942, improved antisubmarine weapons became available. Powerful air-dropped depth-charges replaced ineffective bombs. Some ships were equipped with a 'Hedgehog', a multiple **antisubmarine bomb** launcher. It launched bombs forwards, so the ship could chase a U-boat while attacking. This was more effective than dropping depth charges on the spot where a U-boat had last been detected.

This is the indicator unit of an Air to Surface Vessel (ASV) **airborne radar set** used to locate surfaced U-boats. A similar radar was installed on some ships. By 1943 these radars could even detect a submarine's periscope poking above the waves. The operator would be alerted by a 'blip' in the radar trace that appeared on the small screen.

These **photographs**, taken from an RAF Liberator bomber, show a U-boat sinking. U-boats liked to attack in the mid-Atlantic, beyond the range of most Allied aircraft. But in 1943 growing numbers

of modified US Liberators, which had the range to patrol at this distance, became available. They forced U-boats to submerge, making them slower and less effective.

Atlantic lifeline

These **posters** reminded the British public of the vital battle going on in the Atlantic, and of the sailors fighting it. Merchant ships supplying Britain were the target of German submarines. Between early 1941 and mid-1943 these U-boats were the deadliest threat faced by Britain.

Life and death in the Atlantic

Cargo ships were crewed by civilians of the Merchant Navy. This **jacket** was worn by Gerald Ducker, a signals officer who served on 19 different ships during the war. As is peacetime, seamen regularly changed ships from voyage to voyage. From 1941, regulations forced them to stay in the merchant service for the duration of the war.

This **winter cap** was issued to Canadian sailors. The

Royal Canadian Navy was rapidly expanded to escort convoys in the north-Western Atlantic. But it grew so fast that it never had enough equipment or time for adequate training. The waters they patrolled were among the U-boat's most favoured hunting areas, placing even more strain on Canadian sailors.

Efforts were made to increase the slim survival chances of men forced to abandon ship. Lifeboats were equipped with a radio**, rations** and **the means to catch rainwater** for drinking. Britain's Eagle Oil Company devised a **mask** to protect the mouths, noses, eyes and ears of men forced to jump water covered in oil from sinking tankers.

This practical **denim jacket** was worn by a German U-boat petty officer. Its design was based on the British Army Battledress jacket, from captured military stores, which had been issued to U-boat crews. In the cramped and dangerous conditions of a U-boat, relationships between officers and men were informal, and each wore whatever he found most comfortable.

When a U-boat was sunk there was little hope for its crew. Three out of every five German submariners were killed. These British aerial **propaganda leaflets**

show the U-boat service leading to a 'cold grave'. The crew of U-187 were unusually lucky. This German **life jacket** was signed by some its 45 captured survivors and by British officers of the ship that sunk it, HMS *Vimy*.

The race to build ships

The Ministry of Information sent Cecil Beaton to take **photographs** of scenes in the Tyneside shipyards. Cecil was well known as a photographer of fashion, celebrities and royalty. His wartime commissions took him all over the world and gave new breadth to his work. These images reflect the tough environment of the shipyards and the character of the people who worked there.

British war artist Stanley Spencer was commissioned to paint scenes at Lithgow's shipyard at Port Glasgow. This **painting**, *Shipbuilding on the Clyde: The Furnaces,* was the centrepiece of a monumental group of paintings that he completed between 1940 and 1946. Stanley became part of the local community. During his visits to the shipyard he often sketched on toilet paper.

Life under Axis rule

Collaboration and resistance

The Japanese recruited, often forcibly, unknown numbers of men in East Asia. Known as *heiho* (auxiliary soldiers), they boosted Japan's depleted armed forces. This **poster** (above), in Indonesian, encouraged men in the Dutch East Indies (now Indonesia) to become *heiho*. They didn't serve in the front line, but worked in transport, construction and supply. They received less pay and food than Japanese servicemen and were sometimes mistreated.

Unlikely allies

The 'Big Three'

The anti-Axis alliance was formed of many countries. In this **poster** (above) France is included in the symbolic breaking of a Nazi swastika. In reality, Free French leader Charles de Gaulle was excluded from key decision-making.

The US was helped by China in the war against Japan. But, over time, China's Nationalist Party leader

Chiang Kai-shek was side-lined as the US became increasingly frustrated at his requests for help.

This **poster** (left) depicts the Axis leaders – Italy's Benito Mussolini, Japan's Prime Minister Hideki Tojo and Germany's dictator Adolf Hitler. Unlike the Allies, they never all met together. The Axis powers had little in common, other than their aims to build empires. In June 1941, Mussolini said, 'I've had my fill of Hitler'. Hitler called Japan's emperor 'weak, cowardly and irresolute'.

Allies at war

The US supplied food and equipment to its allies under 'Lend-Lease'. It sent over 400,000 US trucks to the Soviet Union. This official **letter** thanks the Studebaker company for supplying almost half of them. This **wing section** (above), from an Airacobra fighter aircraft, has both British and Soviet markings. It was sent first from the US to Britain and then by the British to the Soviet Union.

From August 1941, Allied merchant ships with British Royal Navy escorts carried over four million tons of supplies to the Soviet Union. These convoys, shown

in this **poster**, crossed the Arctic Ocean from Britain. They demonstrated Britain's commitment to its ally, but were highly dangerous journeys for crews. Sailors battled heavy seas, German submarines, ships and aircraft. Over 3,000 died and 104 merchant ships were lost.

A key British innovation in radar technology was the E1189-type **cavity magnetron**. In August 1940, British scientist Henry Tizard took one of these to show scientists in the then neutral US. The Americans recognised the importance of what they had been shown. They agreed to collaborate on production of cavity magnetrons. Britain continued to share technology with the US after it entered the war in 1941.

Across the British Empire, there was huge sympathy for the Soviet people's suffering. An 'Aid to Russia' fund was set up, chaired by Clementine Churchill. This **collection box** was part of a fundraising drive that raised over £7 million. British schoolgirl Glenda Melton received this **letter of thanks** for her donation. The fund bought 11,600 tons of medical supplies and clothing for the Soviet Union.

The British Communist Party produced this **poster** (above). It echoes Stalin's repeated demands that his allies open a 'Second Front' by invading mainland Europe. But Roosevelt and Churchill knew attacking before they were ready was risky. In this **message**, Churchill stressed to Roosevelt they should decide together when to attack. At the November 1943 Allied conference in Tehran, Churchill, Roosevelt and Stalin agreed a date: May 1944.

Gallery 5 | How was the war won and lost?

Britain's reliance on the Empire

Empire audio transcript

Arabic: Civilians in Aden are building airfields for the RAF
Malay: Women in Singapore are providing clothes for air raid victims in Britain
Swahili: Thousands of Kenyan people are being conscripted for farm work or fighting
Maltese: Malta is an essential military base supplying British armies
Hindi: India is making clothing and weapons for soldiers
Australian English: Over 50,000 Australian women are serving in the war
Jamaican English: Skilled Jamaican workers are working in British factories

War-weary Britain

Mobilisation of women

Factory Worker

- Work in engineering and metals, explosives,

chemicals, shipbuilding industries

- Accidents from explosions possible. Poisoning from handling chemicals such as sulphur will turn skin and hair yellow
- Protective overalls must be worn, usually with a hair net or scarf to cover long hair
- Long shifts. On average working 55-60 hours a week. Sometimes required to keep working through an air raid.

Auxiliary Territorial Service (ATS)

- Wide range of jobs available to female soldiers as cooks, telephonists, drivers, postal workers and ammunition inspectors
- Four weeks of army basic training
- Training provided on driving, maintaining and repairing vehicles
- Volunteers will be taught to track enemy aircraft with radar and aim anti-aircraft guns – but only men are allowed to fire them.

Women's Land Army (WLA)

- Expected to work 48 hours a week in winter and 50 hours in the summer
- Accommodation provided on the farm or hostel
- Must like working with cows – dairy work in high demand

- Training in rat catching provided
- Specialist work in the Timber Corps available
- Pay – much less than men
- No holidays. (After 1943, one week's holiday a year will be introduced.)

Women's Royal Naval Service (WRNS)

- Mainly based on the shore to release men for service at sea
- Responsibilities include driving, cooking, clerical work, operating radar and communications equipment
- Will play a central part in planning and organising naval operations
- Must be good at keeping secrets. Top secret - you might be called upon to operate machines used in code breaking at Bletchley Park.

Women's Auxiliary Air Force (WAAF)

- Will work closely with pilots and aircrew, interpreting photographs of enemy targets, forecasting the weather for air operations, plotting aircraft movements and debriefing returning aircrew
- Highly skilled training available as mechanics, electricians or engineers
- Must be brave – your station might come under

air attack
- Pay – two thirds that of men
- No colour bar to applicants

Air Transport Auxiliary (ATA)
- Responsible for flying military aircraft from factories to front line bases or damaged aircraft to repair yards
- Willing to fly anything from temperamental fighters to four-engine heavy bombers
- Nicknamed 'Ancient and Tattered Airmen' – because pilots can join who have been rejected from the RAF for being too old, having a disability, or for being a woman
- Flying aerobatics forbidden
- Pay - from 1943 will be equal pay to men

Life in Britain

The British National Savings Committee created the Squander Bug, a character to discourage wasteful spending. Poster and newspaper campaigns encouraged people to 'squash the bug' and buy war savings certificates to help finance the war instead. This **Squander Bug**, complete with a Hitler moustache and swastika tattoos, is an air rifle target.

The Ministry of Food encouraged people to make the most of their rations and not waste food. It also offered ideas to make mealtimes more interesting. This **booklet** presented '25 Ways of Serving Potatoes', including in cakes and pastries. Carrots could be made into jam, fudge or mixed with swedes to makes a drink called 'Carrolade'.

The National Salvage Scheme encouraged people to recycle rags and metal so that they could be made into clothes, weapons and machine parts. This **silk scarf**, designed by Jacqmar of London, bears the slogan 'Salvage your Rubber'. Rubber could be recycled into aeroplane tyres or wellington boots. The Women's Voluntary Services was fundamental in organising the salvage scheme. They introduced rewards to inspire children to help with collections.

With fabric in short supply clothes were strictly rationed. The government introduced a **utility clothing** range, based on cheap, simple designs that used less material. Pockets and lapels were made smaller and trouser turn-ups banned. The utility scheme saved about 5 million square metres of cotton per year. A 'make do and mend' campaign, introduced in autumn 1942, encouraged people to patch-up old clothes.

War in Asia

Allied operations in Burma

In 1944, fierce battles raged around the towns of Imphal and Kohima along India's eastern border with Burma. At Kohima, bitter close combat saw armies separated only by the distance of a tennis court. Captain John Smyth rallied his men with this **hunting horn**, but was killed in action on 7 May 1944, at Jail Hill, Kohima. The British victory set the stage for a new offensive to retake Burma.

Working together in Burma

British Empire troops in Burma wore a variety of headwear, from the broad-brimmed **slouch hat**, to the **steel helmet** or **turban**. The slouch hat was pinned up on one side to allow a soldier to carry his rifle over his shoulder without knocking off his hat. Sandy coloured tropical kit was often dyed green, until a better-camouflaged jungle-green **uniform** was introduced.

The 11th East Africa Division's **rhinoceros badge**

was worn in Burma by troops from Kenya, Uganda, Nyasaland (now Malawi), Tanganyika (now Tanzania) and Northern Rhodesia (now Zambia). This **poster**, in Swahili, encouraged women to write to their husbands in the army. Contact with home was vital for morale. Unlike white soldiers, African soldiers serving overseas rarely received home leave. Their letters home often included anxieties about family, fidelity of their wives and property.

The 81st West African Division's **spider badge** represents the half-man, half-spider folk hero and trickster 'Anansi'. Worn on the sleeve, when a soldier pointed his weapon, Anansi appeared to be scuttling down his arm to attack. The 81st and later the 82nd West African Division, that wore a **badge with spears**, recruited solders from the Gambia, Nigeria, Sierra Leone and the Gold Coast (now Ghana).

This **figure** of a Gurkha soldier from Nepal was carved to commemorate British Empire forces fighting in Burma. The British Indian Army preferred to recruit men who hunted, worked on the land, or whose family members had been in the military. However, in reality the demand for soldiers was high, and men were recruited from across India to fight.

Chinese soldiers were airlifted to India from China to receive US training and equipment. Known as 'X Force', they helped drive the Japanese from northern Burma. Warrant Officer Chow Ying Chih learnt to drive military vehicles and was given his **licence**. This American Model 1917 **rifle** is one of 20,000 especially shortened in India to equip the soldiers of X Force.

Indian political consequences

Starvation

In 1943, famine struck Bengal in eastern India. The Japanese occupation of Burma had cut off Bengal's vital source of rice. Britain's Prime Minister, Winston Churchill, depicted on this Japanese produced **propaganda leaflet**, refused to use valuable wartime shipping to deliver food to India. Price increases, panic buying, hoarding and inflation followed. Between two and three million Bengalis died of starvation and disease.

When Singapore fell to the Japanese in 1942, 20,000 captured Indian soldiers agreed to fight for the Japanese as the Indian National Army (INA). Soldiers

wanted to avoid imprisonment, and sought freedom from British rule. These are INA **epaulettes**. INA propaganda **leaflets** (above) depicted Churchill as a tyrant. Under the leadership of Subhas Chandra Bose, the INA fought alongside the Japanese in Burma.

The Philippines and New Guinea

This **map** (above) shows victories won by General MacArthur's forces as he fought to fulfil a promise to return to the Philippines. MacArthur was a popular figure, as shown by this **commemorative doll**. But many US and Filipino troops left behind in the Philippines in 1942 felt betrayed by him. Forced to surrender, they endured starvation and brutal treatment at the hands of the Japanese.

In 1942, the Japanese prepared to menace mainland Australia. They planned an attack on Port Moresby in Australian-controlled Papua. To get there, the Japanese had to cross the Kokoda Track, a 60 mile (96 km) mountain path through dense jungle. A bitter fight for survival followed. This Japanese **propaganda leaflet** encouraged Australians to surrender. In the end it was the Japanese who were defeated.

In the jungles of Papua and New Guinea, soldiers endured hot, humid days, freezing nights and torrential rain. This **machete** was used by Australian soldiers to cut through the dense undergrowth. Weapons failed because of the moisture. The Australian-designed **Owen submachine gun** could be cleaned easily, and proved very reliable despite the jungle conditions.

This **sketch** shows Sergeant Sanopa from the Papuan Constabulary who rescued a group of Australians stranded in the mountains. Papuan and New Guinean men engaged in reconnaissance patrols against the Japanese. Papuan stretcher bearers in this **photograph** were nicknamed 'Fuzzy Wuzzy Angels' by Australian troops. Papuans were praised for their dedication to the sick, but this name suggests they were still viewed from a racist perspective.

The successful invasion of Leyte in October 1944 gave MacArthur's troops a base for further attacks across the Philippines. US soldier Orville Lee Knupp, aged 24, was fighting Japanese troops in the Camotes Islands. His unit attacked a Japanese machine gun nest. Orville was killed. His **Purple Heart** medal, awarded to all those wounded or killed in action,

was sent to his parents in Timberville, Virginia.

China's war against Japan

The US admired China's resistance to Japanese aggression. Nationalist Party leader Chiang Kai-shek appeared on the cover of ***TIME* magazine** ten times. Volunteers travelled to China with ambulances and medicine. Allied soldiers were sent to help train Chiang's Nationalist troops. British officer, William Dawson, received this **banner** from technology students he trained at the Army Mechanical School in Chongqing.

When Japan conquered Burma in 1942, it closed the Burma Road, the key route for sending supplies to China. The Allies were forced to airlift supplies over the Himalayan Mountains. In January 1945 they opened a new route from India to China – the Ledo Road. This **photograph** shows Indian and Burmese labourers who built the road alongside US soldiers, most of them African-American. Many labourers died.

The women in this **photograph** are stripping tree bark to eat. In1938 Chiang's troops destroyed

dykes on the Yellow River, hoping the floodwater would stop the advancing Japanese. Chiang knew this would destroy Chinese homes and crops, and by 1943 this had resulted in widespread famine and homelessness. Across the whole of China, approximately 80–100 million Chinese people became refugees and victims of famine during the war. Chiang's own soldiers seized food from civilians.

The Chinese were not just fighting the Japanese – they were also fighting each other. To prevent a civil war, Chiang's Nationalist Party forces and his political rivals, Mao Zedong's communists, united against Japan. While the Nationalists, who wore this **uniform**, fought battles in China and alongside the Allies in Burma, the Communist Eighth Route Army attacked the Japanese from behind enemy lines.

Sexual violence

The Japanese Military forced women and girls into sexual slavery. They were held captive and could be raped multiple times a day by Japanese soldiers. Some 200,000 women from Japanese occupied territories, especially China and Korea, forcibly held captive as *ianfu* (often translated as 'comfort

women'), a Japanese euphemism for prostitutes. This **sign** is likely from a 'Comfort Station' in Burma. One side reads 'sold out' while the other says 'closed/ temporary rest'.

Island hopping across the Pacific

Following success at Guadalcanal in the Solomon Islands, Nimitz attacked the island of Tarawa. Before the landing in November 1943, US warships and aircraft bombarded the island, hoping to destroy Japanese defences. But the camouflaged concrete wall, **beach mine** obstacles and machine guns remained intact. Tarawa's shallow coral reef prevented boats from getting close to the shore. However amphibious vehicles, like this **model**, could travel over the reef.

Tarawa saw the first use of this **camouflage uniform** by US Marines. As they advanced in November 1943, Marines collected souvenirs including this **newspaper, letter, identity card** and **Japanese cap tally**. In 76 hours, 3,300 Americans had been killed or wounded. Nevertheless, the US had won the battle and learnt tactical lessons. But the US public was shocked at the price to capture such a tiny and

seemingly insignificant island.

In June 1944, Nimitz captured the Mariana Islands of Saipan, Tinian and Guam. The Japanese aircraft carrier Taiho, represented by this recognition **model**, was sunk.

These **aircraft models** helped Allied personnel identify the Japanese Navy's Yokusuka D4Y3 and Nakajima B6N bombers. Japan lost irreplaceable pilots when 400 of its planes were shot down in what US pilots described as the 'Great Marianas Turkey Shoot'.

Sidney Hagerling wore this Marine Corps **uniform** during the battle for Okinawa Island in April to June 1945. Sidney's unit used a **flamethrower** to flush out Japanese soldiers from their heavily defended caves.

Almost 150,000 Okinawan civilians were killed during the fighting, went missing or died by suicide. The Japanese had told them that US troops would torture, rape or murder civilians if they were captured.

The US attacks Japan

US submarines sank hundreds of Japanese merchant

ships carrying food and supplies to Japan. This US Submarine Service **poster** shows Japan's economy collapsing under the pressure. Lack of steel, aluminium and fuel led to a sharp decline in Japanese aircraft production. US submarines also attacked troop transport ships. This stopped thousands of Japanese soldiers from reinforcing vital defensive positions on the Pacific islands.

On 10 March 1945, US B-29 bomber aircraft, represented by this recognition **model**, destroyed 16 square miles (41 square km) of Tokyo. Almost 100,000 Japanese civilians were killed. Fires destroyed wooden buildings. This 'extinguish' **flag** showed where fire fighters could access water. Japanese civil defence services lacked training and few air raid shelters had been built. US air-dropped **propaganda leaflets** prophesied defeat for Japan.

Allied bombing of Europe

On 16 May 1943, Lancaster bombers from the RAF's 617 Squadron attacked three dams feeding water to German industry in the Ruhr. They dropped special 'bouncing bombs' at low level. This **photograph** shows some of the 57 'Dambuster'

crew who returned (56 of their comrades were lost). The raid fascinated the public. But the attacks did not lead to the long-term disruption of the Ruhr water supply as hoped.

In this **photograph** members of the British Women's Auxiliary Air Force (WAAF) and the Women's Land Army (WLA) dance with men of the US Army Air Force (USAAF) at an air force base in Suffolk. Although relationships blossomed, some WAAF's were known as 'chop girls'. Supposedly any man that went out with these unlucky women was soon killed in action or 'got the chop'

In this **photograph** ground crew push a 4,000lb (1800kg) bomb towards a Vickers Wellington bomber in Mildenhall, Suffolk. Ground crew were vital to the success of every bombing raid. Whatever the weather, they serviced, repaired and armed the aircraft. The ground crew often joked that they 'owned' the aircraft and only 'lent' them to aircrew as long as they promised to bring them back in one piece.

A global air force

Crews decorated their aircraft with nose art to boost

morale or to bring them luck. This **panel** from a Handley Page Halifax aircraft shows Disney characters from the 1945 film *The Three Caballeros* plus a few friends. Crews were expected to complete a tour of 30 operations. By 1943 only one in six men survived their first tour. Only 2.5% survived their second.

RAF operations

The Lancaster bomber entered service in 1942. During the war, Britain produce 6,750. On raids, Lancasters often carried a 4000lb (1800kg) **'Cookie' bomb** (suspended above), which blasted roofs from buildings. This meant that the smaller **incendiary bombs** (above) could drop into ruined buildings and set light to wooden floors and furniture.

Air Marshal Arthur 'Bomber' Harris became commander of RAF Bomber Command in February 1942. He believed that bombing civilian areas of Germany would destroy morale and pressure Germany into surrender. In May 1942, Harris ordered an attack on Cologne with 1,000 bombers, the largest number of aircraft used so far in one raid. This **newspaper** reports on the raid, which demonstrated Bomber Command's growing power.

Navigation equipment guided RAF bombers. Gee, a system that followed radio signals from Britain, was introduced in 1942. The **indicator unit** (below) gave the navigator a visual image of these signals to determine the position of the aircraft. But the Germans could easily block the signals. The H2S navigation equipment shown in this **photograph** plotted radio echoes that bounced off coastlines, hills or rivers to make a virtual map of the ground below.

For the first time, during the July 1943 raid on Hamburg, British aircraft dropped thousands of **aluminium foil strips**. Codenamed 'Window', it confused German radar operators by creating thousands of false 'echoes' on their screens. The British feared the Germans would copy Window, so Bomber Command delayed using it until British radar had been adapted to detect the false echo effect.

Risks and stressful conditions

The icons on this **panel** from a Halifax bomber show 23 successful operations. But on the night of 28 June 1943, the aircraft was shot down over Cologne by a German night fighter. The bomber crew were killed. The Germans added a skull to the panel. The Halifax

was one of 169 aircraft shot down in the raid, which killed 4,300 German civilians, injured 10,000 and made 230,000 homeless.

Airmen were given basic disguises to avoid capture if shot down over hostile territory. RAF **flying boots** had a small **knife** concealed in the lining. Men could cut off the top section of their boots, leaving only a plain shoe that looked like civilian footwear. A jacket button could also contain a **hidden compass** that could be used to navigate to safety.

Intelligence agencies recorded varied British public opinions towards bombing. 'We appreciate the need for the liquidation of Hamburg, but for heaven's sake don't remind us of what we're doing', said an audience member after viewing newsreel footage. Some responses spoke of satisfaction and justice, but writer and pacifist Vera Brittain was outraged by bombing. She was one of several prominent campaigners to publish **pamphlets** lobbying the government to stop.

US bombers over Europe

US bombers were equipped with the **Norden bombsight** to achieve pinpoint accuracy on raids**.** US authorities kept the workings of the Norden secret, even from their allies. US bomb aimers took an oath not to reveal how it operated if they were captured. Yet official statistics showed that bombs dropped by US aircraft still regularly missed their targets.

At its peak in 1944, 450,000 US Army Air Force personnel were stationed in Britain. This became known as a 'friendly invasion of Britain'. Americans encountered British culture for the first time, often through **pamphlets** promoting tourist destinations. Americans in turn introduced British people to peanut butter, Coca Cola and chewing gum. These **wrappers** were collected by British schoolboy Michael Stockford.

Temperatures in aircraft flying at 25,000 feet (7,620 metres) could drop as low as -50° C. US aircrew often wore a padded **bomber jacket** over their flying suit for warmth. Their **helmet** and boots were lined with fur. Men also wore

protective **body armour** to prevent injuries from the metal fragments that ripped through the aircraft if it was blasted with gunfire.

Allied bombing of Germany

'The enemy sees your light – blackout!' warns this German **poster**. German civilian defence organisations published local news and information about raids in the **magazine** *Die Sirene* (The Siren), as well as others. This is a German fireman's **jacket** and warden's **helmet**. This **first aid box** contained supplies to treat cuts and burns.

This **photograph** shows devastation caused by Allied raids on Dresden in February 1945. An estimated 25,000 people were killed. The bombing was controversial. German propaganda claimed it had no strategic purpose. The Allies reasoned that Dresden was a major transport and communication centre. The attack would support the Soviet army's advance into Germany.

As RAF bombers approached Germany, searchlight beams flooded the sky picking out aircraft. Anti-

aircraft guns could then fire at the bombers. This is a **demonstration model** of one of these guns – the 88mm Flak 36. By 1944 there were nearly 25,000 anti-aircraft guns defending Germany. As more German men were sent away to fight, the gun crews relied on the help of young boys, *Flakhelfer* (flak helpers).

War in eastern Europe

Poland's agony

This German anti-Soviet propaganda **poster** publicised the 1943 discovery of a mass grave at Katyn in Russia. It contained the bodies of Polish Army officers captured by the Soviet Union in 1939. In 1940, 22,000 of them were murdered on Stalin's orders. The Soviet Union tried to blame Germany for the crime, but its relations with the exiled Polish government were poisoned.

In August 1944, the Polish resistance, the Home Army, shown in this **photograph**, tried to liberate Warsaw from German control. But when the Soviet advance on the city was halted, they had to fight alone. During two months of fighting over 150,000

civilians were killed by the Germans. Finally the Home Army surrendered. The Germans began the complete destruction of Warsaw, including deporting its inhabitants.

Deportation

This **badge** was worn by soldiers of the exiled Polish government's II Corps. After taking control of eastern Poland in 1939, Stalin deported an estimated 350,000 Poles to Soviet Central Asia. When the Soviet Union joined the Allies in 1942, Poles were allowed to walk south into British-controlled Iran. The Polish II Corps, which later fought in Italy, was recruited from these survivors.

Germany under pressure

By mid-1944 Germany's allies against the Soviet Union were desperate to leave the war. Under heavy attack, Finland made peace. This Finnish **submachine gun** was modified to be fired from inside defensive bunkers.

When Soviet forces invaded Romania, the country toppled its dictator, Marshal Ion Antonescu and

changed sides. Germany stopped Hungary from surrendering by overthrowing its government.

Germany struggled to meet the technological demands of its immense war against the Soviet Union. It even copied Soviet weapons. This **G43 self-loading rifle** was based on two Soviet guns. As Germany was unable to produce enough motorised vehicles, the German Army used 2.7 million horses during the war. These **badges** were worn by German military farriers, who shoed the horses.

The **uniform** of a *Luftwaffe* Field Division soldier. From 1943 German soldiers in eastern Europe had little air support. Pilots and planes were concentrated on fighting Allied bombers over Germany. Meanwhile, to meet the endless demand for more fighting men, the German Air Force, the *Luftwaffe,* turned thousands of its men into foot-soldiers. They fought in *Luftwaffe* Field Divisions, mainly on the Eastern Front.

In 1945, Germany began a last-ditch struggle against Soviet invasion. This is the **jacket** of an officer of the home-defence force, the *Volkssturm*. Men and boys between 16 and 60 not already fighting were made

to join. They were expected to face Soviet tanks with hand-held anti-tank weapons like this ***Panzerfaust***. Roughly made emergency weapons, like this **'people's carbine',** were also issued.

These Soviet air-dropped **leaflets** were intended to undermine German morale. In one, a terrified soldier screams, 'Enough'. In the other a dead soldier's child cries, 'Daddy where are you?' But fear of Soviet vengeance and Nazi threats kept most German soldiers fighting until the bitter end. From March 1945 'traitors', unwilling to fight, were hanged after brief trials by mobile courts martial.

Industrial miracle

Soviet factories had to make shortcuts to speed up weapons production. The difference in quality between these two **TT33 pistols** shows how standards fell between 1940 and 1942. New designs were adopted that were quicker to make. Of these **submachine guns**, the PPD 40 (top) took almost 14 hours to produce. The PPSh 41 (middle) could be made in just over seven hours and the PPS 43 (bottom) in fewer than three.

The Soviet Union liberated

Over 34 million men and women served in the wartime Soviet Armed Forces. One in four lost their lives. These are **summer and winter uniforms** of the Soviet Red Army. The Soviet recruitment pool was not limitless and most fighting units were severely understrength. In newly liberated areas from German control, local boys and men were forced to join the ranks of the advancing Red Army.

These **shoulder boards** for a Marshal of the Soviet Union were worn by Soviet dictator Josef Stalin. Shocked by the defeats of 1941, Stalin transformed the Red Army. He promoted a new generation of leaders, with greater freedom to make decisions. In 1943 the old Imperial Russian shoulder boards were re-introduced for officers. They symbolised the increasing independence of the army from Communist Party control.

These **orders** and **medals** were awarded to Soviet Red Army soldier Girsh Yossman. They include the prestigious Order of Lenin (left) and Order of the Red Banner (second left). Lithuanian-born Girsh fought in the 16th Rifle Division. Its soldiers were mostly from

Lithuania. Many of them, like Girsh himself, were Jewish. After a severe wound, Girsh became a combat medic, rescuing injured comrades under fire.

This **poster** calls for 'More help for the Front'. Soviet society was totally mobilised for war. If you did not work, you did not eat. Civilian life became bleak, with harsh working conditions and food rationing. Women provided 80% of the farming workforce and 57% of factory workers. A million women joined the armed forces, with half fighting on the front line.

Mobilising societies

The Soviet Union's communist leadership exerted complete control. All citizens, even teenagers and political prisoners, had to work or fight. Their lives were harsh. Unlike its allies and enemies, the Soviet Union did not care about keeping its citizens comfortable or happy. This **poster**, 'Salute the Heroes', pays tribute to the efforts of factory workers and miners.

A racial war

Annihilation

This is the last exchange of **telegrams** between German-Jewish refugee Eva Wohl and her father, Leonhard. Eva had fled to Britain in 1938. Her parents, trapped in Germany, could only communicate with her through the Red Cross. A month after Leonhard sent this reply to his daughter, he and his wife Clara were deported to their deaths at the Auschwitz-Birkenau death camp.

In 1942 the Germans began to murder Jews in Poland at specially constructed killing sites, using gas. In January 1943 British codebreakers intercepted, but could not understand, this mysterious **telegram**. In fact it reports on the number of people killed at the Belzec (B), Sobibor (S), Treblinka (T) and Majdanek (L) camps as part of Operation 'Reinhard'. The total for 1942 is given as 1,274,166.

The red triangle on this concentration camp prisoner's **jacket** indicates that it was worn by a political prisoner. Such prisoners worked as slaves in German

war industries. As the war turned against Germany, increasing numbers of Jews were also enslaved. Working conditions were appalling, with little food or medical care. Jews received the harshest treatment – the Nazis intended to work them to death.

This **pistol** was made for the German Army by slave labourers at Gusen concentration camp. The parts from a **V1 flying-bomb** (above) were made in the underground factory that produced Germany's secret 'revenge' weapons, the V1 and the V2 rocket. Its workers came from the adjacent Mittelbau-Dora concentration camp. An estimated 20,000 of them died or were killed in the process.

Forced labour

These **drawings** were made by Jewish cartoonist and political activist Wilhelm Spira. He was made to work at the Blechhammer synthetic oil plant in Eastern Germany, a sub-camp of the Auschwitz concentration camp. The drawings show various groups of forced and slave labourers marching to work. The groups include French, British and Soviet prisoners of war, Jews and German 'work education' camp prisoners.

These **shoes** were found at Majdanek concentration camp in occupied Poland, when it was liberated by the Soviet Red Army in July 1944. The camp was captured intact, complete with its gas chambers, crematoria and huge stores of personal belongings taken from Jews murdered at other sites. Soviet journalist Konstantin Simonov described it as 'too gruesome to be fully taken in'.

News of the murder of Europe's Jews spread around the world, including Britain. In late 1942, Sussex woman Joyce Lloyd pasted these newspaper stories into her **scrapbook**. Polish-Jewish refugee Szmul Zygielbojm published this **pamphlet**. He died by suicide after despairing at the 'inaction in which the world watches and permits the destruction of the Jewish people'. German-Jewish refugee Ulli Wohl confided her fears in this **diary**.

War in western Europe

This **painting** by Richard Eurich is titled *Preparations for D-Day*. It shows some of the intense activity along England's south coast in the build-up to Operation 'Overlord'.

Huge numbers of vehicles, tanks and supplies were loaded onto ships bound for France. By spring 1944, around two million Allied troops were in the south of England, preparing for the invasion and campaign in north-west Europe.

Operation Overlord

US General Dwight D Eisenhower was Supreme Allied Commander of the invasion force. His troops received his **Order of the Day**. He postponed the invasion by one day from 5 June due to poor weather.

The weather was still a risk on D-Day. Eisenhower prepared a statement to be issued if the invasion failed, saying 'if any blame or fault attaches to the attempt it is mine alone'.

The Allies devised a range of clever tricks to confuse the Germans about where and when their invasion would happen. These included false information spread by double agents, fake armies and dummy landing craft, aircraft and tanks. This **badge** was worn by those who worked on this deception campaign, as members of R Force. They succeeded in convincing the Germans that there would be another invasion after D-Day.

Early on 6 June, 18,000 airborne troops dropped into northern France to support the seaborne invasion. Allied ships and aircraft attacked German defences along the Normandy coast. Nearly 5,000 ships carried 132,000 troops across the Channel. The men were each given a **sick bag** for the rough crossing. As they neared France, they scrambled down into smaller, flat-bottomed **landing craft** that took them onto the beaches.

From Normandy to the Rhine

The Allies launched a bold plan to cut through the Netherlands into Germany in September 1944. Operation 'Market Garden' involved airborne troops seizing key bridges at Eindhoven, Nijmegen and Arnhem, before ground troops advanced to meet them. Strong German resistance included the 9th and 10th SS Panzer Divisions. The soldiers of these tank divisions wore these **cuff-titles**. The Allied gamble to invade Germany failed disastrously.

George Baylis, who served in the British Glider Pilot Regiment, wore this **beret**. He was taken prisoner near Arnhem in the Netherlands. George was one of 35,000 British, Polish and US airborne troops

deployed in Operation 'Market Garden'. Along with ground forces, they struggled to reach their objectives and suffered heavy losses. The operation's failure ended any hopes of defeating Germany by the end of 1944.

The German attack in the Ardennes Forest in December 1944 was a complete shock to the Allies. Hitler chose troops of the *Waffen SS* to spearhead it. Fighting in snowy conditions, they wore **camouflage clothing** over their **uniforms** with a warm **toque** under their **helmets**. Some carried an MP43 **assault rifle**. But the Allies soon hit back. Drained of their last reserves, the Germans collapsed.

The battle for Normandy

Infantry soldiers bore the brunt of the fighting in Normandy. German mortars, like this *Nebelwerfer* **rocket launcher**, accounted for 75% of all British casualties. Allied troops came to fear their distinctive, moaning sound.

Armoured vehicles also played a key role. Both Allied and German tank crews hated the difficult countryside of narrow lanes and high hedgerows. It slowed down progress and made the battle static.

War in Italy

From Sicily to victory

Allied forces invaded mainland Italy in September 1943. This British **naval ensign** (above) was flown at Reggio, one of the landing sites. Although the attacking troops met tough opposition at Salerno, overall the invasion succeeded. The Allies then gradually moved north to begin clearing Italy of German forces. Italy's dictator, Benito Mussolini, was overthrown after the invasion. A new Italian government then surrendered to the Allies.

The ancient Monte Cassino Abbey stood atop a mountain that formed part of a German defensive line across Italy. Allied forces fought a long and costly battle over it.

This **organ key** was found in the abbey's ruins after Allied bombers destroyed it. Polish troops, fighting with the Allies, finally captured the abbey in May 1944. They each received the **Monte Cassino Commemorative Cross.**

In January 1944, the Allies landed a large force at

Anzio, behind German lines on the coast near Rome. They hoped this would draw German forces from their defensive line further south and break the deadlock in Italy. But the landing force moved inland too slowly, and trench warfare set in. British signallers at Anzio made this improvised **radio** to relieve their boredom.

This propaganda **poster** (above), made in German-occupied Vichy France, ridicules Allied progress in Italy. Trench warfare lasted for months at Anzio. In May 1944, the Allies finally broke out, threatening to surround the Germans. But, against orders, US General Mark Clark told his troops to head for Rome. German forces escaped. Allied soldiers entered Rome on 4 June but Clark's triumph was soon eclipsed by D-Day.

After abandoning Rome, the Germans withdrew to their defences north of Florence. The Allies tried to break through but their attacks ground to a halt as winter set in. A renewed Allied offensive in spring 1945 wore down German forces and captured Bologna. This **photograph** (above right) shows crowds welcoming Allied troops entering the city. Finally, the Germans surrendered. Fighting in Italy officially ceased on 2 May.

Italy at war

British officer David Wilson fought in Italy. He was shot in his left arm on 12 May 1944. When the wound turned septic, his arm was saved by **penicillin**. This new, ground-breaking drug was first used on a large scale during the war. David described the treatment in this **letter** to his mother just afterwards. He recovered and fought in some of the final battles in Italy. David was one of thousands saved by penicillin.

The Allied forces in Italy consisted of soldiers from a particularly high number of countries. There were units from Algeria, Australia, Belgium, Brazil, Britain, Canada, Czechoslovakia, France, Greece, India, Italy, Morocco, Nepal, New Zealand, Poland, South Africa and the US. A soldier from an Indian regiment is shown in this **photograph**. The mixture of different languages, customs and equipment was a challenge for Allied commanders.

This **badge** was worn by members of the only African-American infantry division that fought in Europe during the war. The US 92nd Division, known as the 'Buffalo' Division, served in Italy from August 1944. Its members were racially segregated

from white soldiers, poorly trained and badly led by their white officers. The division took part in heavy fighting in Italy, and suffered nearly 3,000 casualties.

The war ends

Surrender of Japan

These objects were found in the rubble of Hiroshima: **glass bowls** melted in the heat, **tiles** thrown off houses by the blast, **toys** and **ornaments** left behind. The atomic bombs dropped on Japan killed approximately 66,000 people in Hiroshima, and 39,000 people in Nagasaki. The Allies had begun to research the power of atomic weapons from 1939. This became known as the Manhattan Project.

On 8 August 1945, the Soviet Union declared war on Japan and invaded Japanese-occupied Manchuria in China the following day. The Soviets issued their own **occupation currency**. The hopes of Japanese leaders that the Soviet Union would help negotiate a peace deal with the Allies were dashed. Japan surrendered. Soviet troops were awarded this **medal** 'For the Victory Over Japan'.

This battle-damaged sculpted **eagle**, the symbol of the Nazi Party, was taken from the ruins of the Chancellery building in Berlin. It was later put on display in London in an Army exhibition called *Germany Under Control*.

Liberating the camps

Over 1 million people were killed at Auschwitz, a Nazi death camp and concentration camp complex. As Soviet forces approached in January 1945, the camp's guards hurriedly evacuated most of the remaining 60,000 prisoners. Thousands died during forced marches towards Germany. Polish-Jewish prisoner Hala Lichtenstein took this **scarf** while forced to sort clothing at Auschwitz. Hala survived her march and was saved by US soldiers.

Germany surrenders

As Allied forces advanced into Germany, most Germans knew the war was lost. The Allies air-dropped huge numbers of this **safe conduct pass** over Germany. They encouraged German soldiers to surrender, promising fair treatment. With certain

defeat in sight, Germany's military leaders negotiated an end to the war. On 7 May, the Supreme Allied Commander, US General Eisenhower, accepted the unconditional surrender of all German forces.

This **beret** was worn by Field Marshal Sir Bernard Montgomery. He was Britain's most senior commander in north-west Europe. Montgomery's energising leadership was invaluable when the Allies were under pressure. But his arrogance and lack of tact made him difficult to work with. Montgomery took the **surrender** of German forces in north Germany, Holland and Denmark on 4 May 1945.

As Soviet troops fought their way into Berlin, Adolf Hitler took refuge in his headquarters in an underground bunker. On 29 April 1945, he wrote this defiant **political testament**. In it he blames the war on his chief victims – the Jews. He boasts of having brought down on them 'due punishment', meaning their mass-murder. On the following day, Hitler shot himself dead.

Soviet troops captured and occupied Berlin. The city had been largely destroyed by recent fighting and

years of Allied bombing. Soviet soldiers helped visiting British officer Franklin Engelmann remove a **sign** from Berlin's most famous street, Unter den Linden. The devastation of Berlin symbolised the complete defeat of Nazi Germany.

Gallery 6 | How did the war change the world?

Aftermath

Judgement: Nazi Germany

British artist Laura Knight based this **painting**, *The Nuremberg Trial*, on sketches she made during the war crimes trial. Shocked by the state of the city, she included a ruined landscape.

Evidence included eyewitness testimony, documents and film. Twelve defendants were sentenced to death, seven to imprisonment and three were acquitted. Hermann Göring, the most senior Nazi on trial, committed suicide before his execution.

Allied-occupied Japan

This British **poster** explains how Allied-occupied Japan was governed. US General Douglas MacArthur was supreme commander. He allowed Emperor Hirohito to remain, to avoid public outcry in Japan. Under US control, some economic and social

reforms were introduced. The Allies aimed to rid Japan of militarism and ultra-nationalism. They dismissed thousands of military police and civil servants. But many others escaped these purges.

Return

This **painting**, *The Return of the Hero,* shows a soldier's homecoming. It was painted by Ugandan artist A K Lugolobi as part of a British scheme to encourage work by artists from Britain's colonies. Lugolobi's full name was not recorded.

Some servicemen were given a hero's welcome. But those who had fought for the defeated nations or had been captured were not usually given the same reception.

This pull-along daschund **toy dog** was made by Walter Klemenz. He was a German prisoner of war who worked on a family farm in Britain. Walter became friends with the family and made the toy for its three children. It is made from an old apple crate, fixed together with pieces of scrap metal.

Legacy

A better way

British Prime Minister Winston Churchill suffered a heavy defeat at the 1945 General Election. It was a bitterly fought campaign. The Conservatives emphasised Churchill's wartime leadership, as in this **poster** (above). Churchill shocked voters by suggesting that Labour's socialist policies would need 'some kind of Gestapo' to be implemented. Labour's campaign was more in tune with public feeling. This **poster** (below) and others promised a fairer Britain under Clement Attlee.

End of empire

After the war, many Jewish survivors of Nazi persecution hoped to emigrate to British-controlled Palestine. Fearing renewed Arab–Jewish violence and wary of Palestinian Arab opposition, Britain enforced tight pre-war immigration limits. Some Palestinian Jews turned to armed resistance. This **photograph** shows members of the Haganah, a Jewish paramilitary group. Fighting soon broke out between Arabs and

Jews. Amid worsening violence, Britain withdrew from Palestine in 1948.

United Nations

This 1943 **poster** shows the flags of countries that joined the United Nations (UN). This cooperation continued after victory. The UN ran the United Nations Relief and Rehabilitation Administration (UNRRA). It delivered food, clothing and medical care to victims of war around the world. But there were soon disagreements within the UN, reflecting growing tensions between the Soviet Union and the US.

Communism in Asia

China's new communist leader, Mao Zedong, waves to cheering crowds in Beijing on 1 October 1949 in this **poster**. The date marked the founding of the People's Republic of China. After four years of civil war, the communist People's Liberation Army defeated Chiang Kai-shek's Nationalist Party forces. China's people now looked to Mao for stability. But the years that followed were turbulent and often violent.

The atomic age

A huge ‘mushroom cloud’ dominates this **photograph**, taken at Semipalatinsk, Kazakhstan, on 29 August 1949. The Soviet Union had successfully tested its first atomic weapon. Within days, the US learned of the Soviets’ achievement. The US stepped up its nuclear programme and began work on a more destructive, hydrogen ‘superbomb’. People across the world soon lived in fear of nuclear apocalypse.