

# RELIEF OPERATIONS

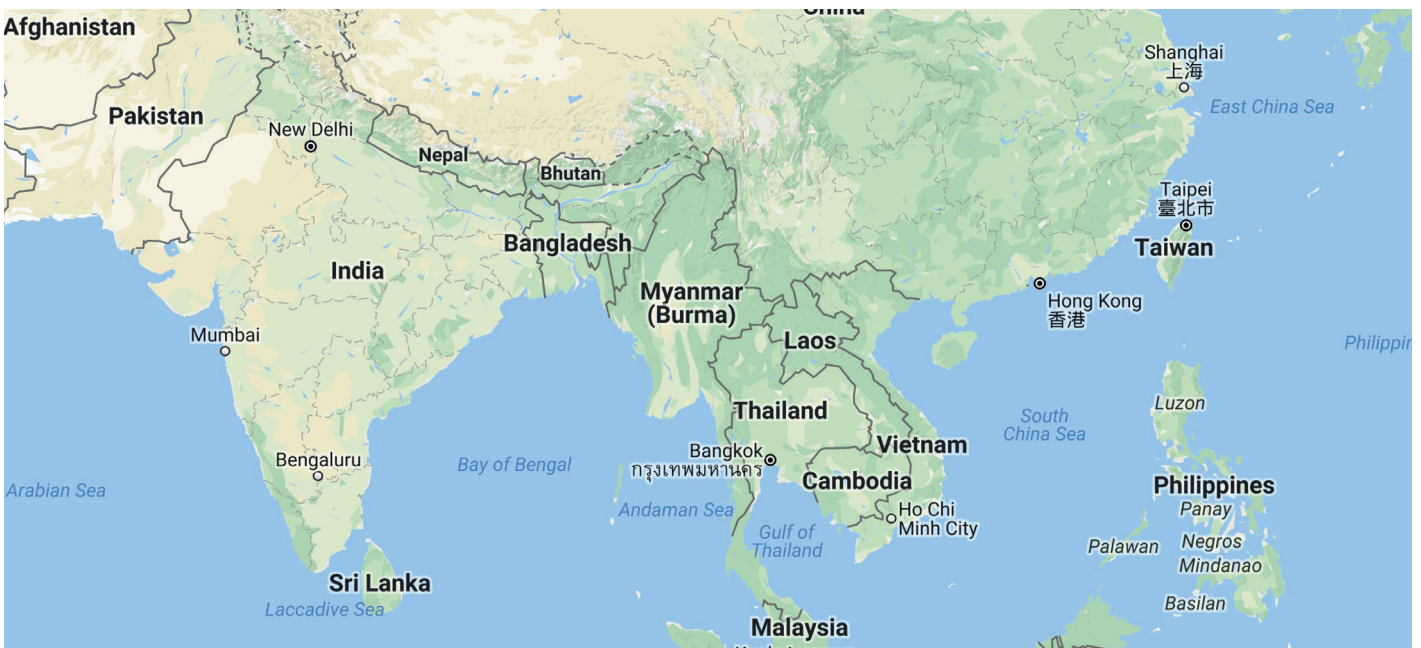
## RELIEF OPERATIONS AND AIRDROPS

It was during the First World War that aircraft first started carrying things to drop on targets – more often than not, these were propaganda leaflets rather than bombs. The aircraft of the First World War were not able to carry very much, and although there were bombing raids by air, they were limited by the size and power of the aircraft.

By the Second World War, Britain, along with the other countries, had developed more sophisticated aircraft. These aircraft were capable of carrying much heavier loads, such as passengers, airborne troops, bombs, food

and supplies. Over the course of the war, the RAF and other Allied air forces would deliver all of those loads, and deliver them all with the care required.

## THE BURMA AIRDROPS



**Prior to the Second World War, Britain held many territories in South Asia – these included India (and modern-day Pakistan and Bangladesh) and Burma.**

When Japan launched its attack on the United States at Pearl Harbour, it also set in motion fighting in the Pacific and Asia. The fighting in Southeast Asia – Burma – was particularly brutal and difficult. Britain had put together a huge British and Commonwealth force in the region, with British, Indian (including those from what are now Pakistan and Bangladesh) and African soldiers. One of the main problems for those troops fighting there was getting supplies of food and equipment to them. Things could only be brought in by air, as the Japanese controlled most of the major roads. The geography of the region was

a further challenge, as it was primarily jungle so aircraft couldn't land. Instead, everything had to be parachuted in – food, water and equipment.

The RAF flew low over the jungle to drop the supplies. Flying low was dangerous, as it risked being fired at from the ground and, because of the trees, there could be accidents. This was further compounded by carrying out many of the drops at night, with limited vision, in order to avoid being seen by the enemy. Nonetheless, the RAF carried out the drops throughout 1943 to 1945.

# RELIEF OPERATIONS

The Fourteenth Army, known to many as 'The Forgotten Army', numbered over one million men under arms, the largest Commonwealth army ever assembled. Air lines of communication were crucial: some 615,000 tons of supplies and 315,000 reinforcements were airlifted to and from the front line, frequently by parachuted air drops, and 210,000 casualties were evacuated. The Royal Air Force and the Indian Air Force, supported by carrier-borne Fleet Air Arm aircraft, provided constant offensive bombing sorties (a flying mission), together with fighter cover and essential photo-reconnaissance (taking photographs from the air to gather information) in support of the Army. Towards the end of the War, RAF Liberator aircraft carried out some of the longest operations ever flown to drop mines into the Pacific.' <https://www.burmastar.org.uk/burma-campaign/>

Without the airdrops, the British troops fighting in Burma would not have survived, let alone have successfully fought the Japanese in that area.



RAF Dakota over Burma

## OPERATION MANNA

**Later in the Second World War, airdrops were used again. The Germans had invaded and occupied the Low Countries (Belgium, the Netherlands and Luxemburg) in 1940.**

The food, produce and goods from those countries were frequently taken by the Nazis for their own use. After the Allied invasion in Normandy, France, in June 1944, to liberate Europe, the Nazis began to take even more supplies from the local populations. They removed some of the water defences in the Netherlands, which led to large-scale flooding – this was intended to make it difficult for the Allies to advance through those areas, but it also ruined harvests. The winter of 1944/45 was a harsh winter, which, along with the flooding and German barbarism to the local population (arrests, forced labour and the seizing of all food), meant that famine became a reality.

By spring 1945, it looked like the people of western Holland might all starve, especially as the flooding and the fighting meant that it was incredibly difficult to get any supplies there. The RAF, Canadian, Australian and United States Air Forces began Operation Manna. Food and other essential goods were parachuted into the Netherlands – this airdrop literally saved lives and stopped the people of the Netherlands from being some of the last victims of the Nazis.

*My mother was in Holland during the Second World War. The food situation was so bad that at the end of the war, aged 28, she weighed 6 stone. I know she talked about receiving parcels. In particular she was given a small tin of condensed milk which she had to eat all of, because she was so malnourished, with the family looking on hungrily.*

*I looked up the drop points for the operation. My mother lived in Rotterdam very close to the Kralingse Plas (a plas is a small area of water) and this was one of those drop areas. I have walked or cycled around the plas a number of times. My uncle lived in The Hague and had to hide in his cellar to avoid being taken by the Nazis.*

*There is a plaque about the airdrop in a photo that hangs on our wall. The caption at the bottom says 'food, peace and freedom. 29th April to the 5th May 1945.' The food drop probably saved my mother's life.*

Gerard Hallows, Teaching and Learning Coach, Stimulating Physics Network

# RELIEF OPERATIONS



## THE BERLIN AIRLIFT

By the end of 1945, the Allies of the Second World War had started to disagree with one another. The division was geographical as well as ideological, and Europe was split into two. Germany was divided into four regions of control, but the capital, Berlin, was situated in the Soviet sphere and the city itself was split into four zones (Britain, France, the United States and the Soviet Union).

By 1946, The Western Allies of Britain, France and the United States, in charge of three of the zones, were working to make plans to support the German economy and rebuild the country. This co-operation upset the Soviets, who wanted a different economic system.

In an attempt to take over the whole city and separate it from the Western Allies, the Soviets started to restrict movement into the city by train

and by road; they even introduced restrictions from the Western zones to the Soviet zones by the river and canals.

When the Western Allies introduced a new version of the German currency in 1948, the Soviets responded by introducing a complete blockade on the city, so that on 24 June, all land and water access to West Berlin via Soviet territory was halted completely. They even cut off the electricity.

At that point, the people of West Berlin had 36 days' worth of food and 45 days' worth of coal. The Western Allies were determined not to abandon the people of Berlin. Another war was not an option – the Soviet forces greatly outnumbered the Western ones and, after the Second World War, there was no desire for another conflict.

Although there was little the Allies could do about accessing Berlin by land, all the sides had agreed on 30 November 1945 to there being three 20-mile-wide air corridors; these would provide free access to Berlin, and it had all been agreed in writing. As long as the Allies did not fly in bombers or attack aircraft, the Soviets could not argue about the air corridors being used or that they were threatening war.

The Allies decided that using the air corridors was how they would get the supplies into the city. The supply drops of the Second World War now seemed like a small endeavor. One advantage over the past aid drops was that at least the aircraft could land in Berlin; however, to keep the amount of supplies coming in, they would not be allowed to land for long. The airlift started on 14 June 1948.

There were approximately 2 million people living in Berlin at the time of the blockade. To keep that population alive, the daily food requirement was:

**900** tons of potatoes

**641** tons of flour

**106** tons of meat and fish

**105** tons of cereals

This was a total of approximately 1,800 to 2,000 tons of food.

The major Berlin airfields involved were Tempelhof in the American sector, Gatow on the Havel river in the British sector, and Tegel, which was built by army engineers and Berlin volunteers in 49 days inside the French sector.

Approximately **45 per cent** of the food and supplies taken into Berlin were flown in British aircraft.

At the height of the operation, on 16 April 1949, an Allied aircraft landed in Berlin **every minute**.

The pilots and aircrew also came from Australia, Canada, South Africa and New Zealand.

**394,509 tons (400,821 tonnes)** of foodstuffs, coal and supplies were carried by **689** military and civil aircraft – **441 US, 147 RAF** and **101 British** civil – during the whole airlift.

In addition, the RAF transported people out of Berlin if they were considered vulnerable or needed medical assistance, including thousands of children.

The airlift cost the United States **\$350 million**, the UK **£17 million** and Western Germany **150 million Deutschmarks**.

In total, British aircraft spent more than **210,000 hours** in the air, the equivalent of **24 years**, and flew more than **30 million miles**, the equivalent of flying to the moon and back 63 times.

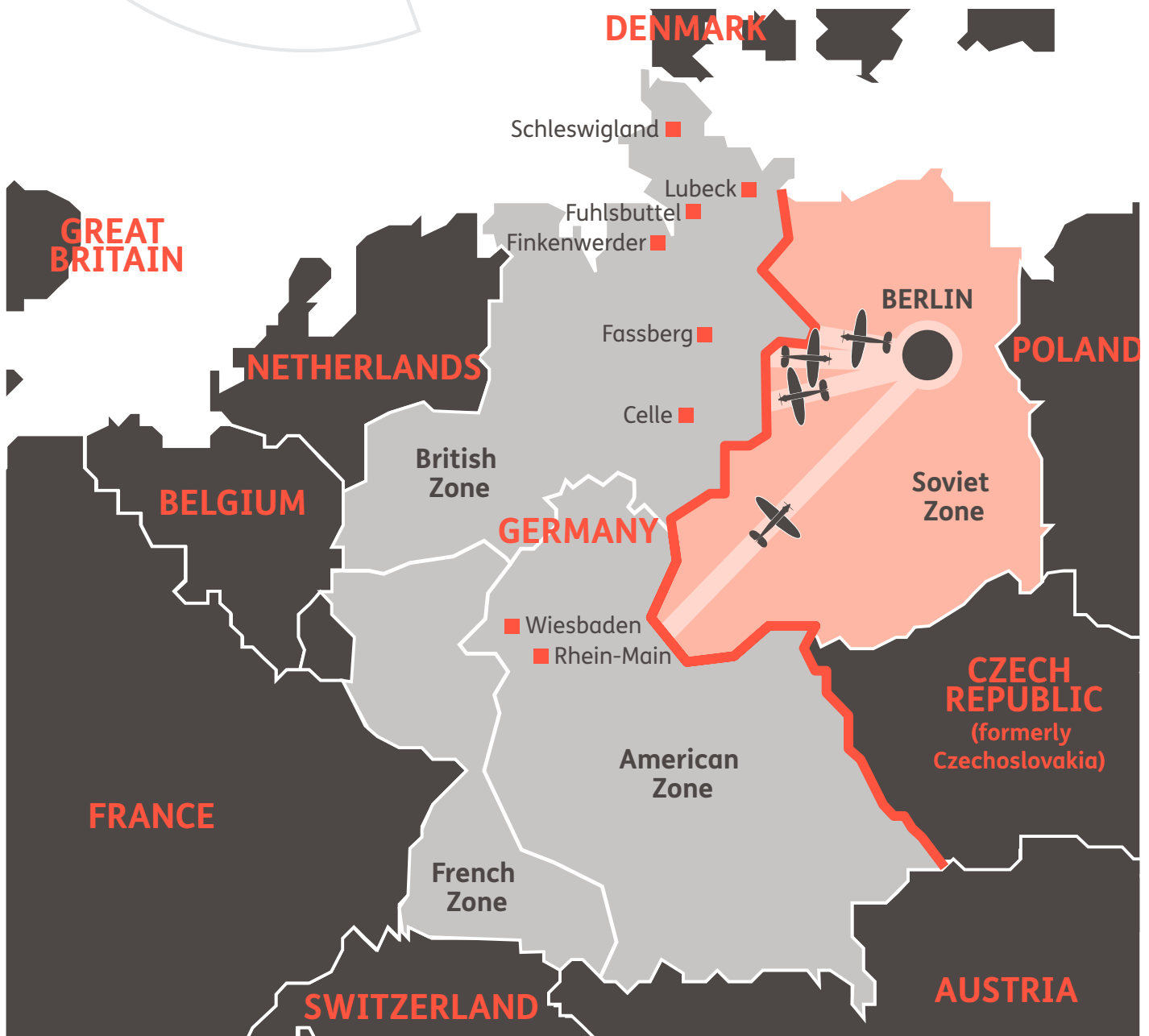
# RELIEF OPERATIONS

RAF  
100

[raf100schools.org.uk](http://raf100schools.org.uk)

In addition to all the goods and supplies going into Berlin, the British brought German goods out, so that the German economy could begin to rebuild. After the Allies managed to keep Berlin going, even through the winter, the Soviets began to see that their blockade was not working. On 12

May 1949, the Soviets lifted the blockade. Everything could now be transported in and out of Berlin by land once more (although the airlift continued for a few more months until it was clear that everything could be transported by other means).





# RELIEF OPERATIONS

RAF  
100

raf100schools.org.uk

## OPERATION BUSHEL - ETHIOPIA

In the decades following the Berlin Airlift, getting supplies to difficult places remained important. Ethiopia is one of the oldest countries in the African region. Its history in the twentieth century is marked by civil war and drought. By the early 1980s, these two factors had led to widespread famine; across the country, millions of people (from a population of over 32 million) were starving. A BBC journalist reported from the region, showing images of dying people that spread around the world.

Famously, the British musician Bob Geldof responded by organising a charity single and concert – Band Aid and Live Aid. Crucially, however, even if funds were raised to help people, food and support still needed to reach remote areas, often mountainous with limited access.

In advance of the pop star treatment, the British government became involved through the RAF. Recognising its international responsibilities and capabilities, the government authorised the RAF to be one of the key mechanisms for delivering aid and support. The RAF's history of getting goods and supplies into difficult areas was crucial to this operation – Operation Bushel, as it was codenamed.

Six Hercules aircraft arrived in the capital city Addis Ababa in November 1984. The Hercules were capable of carrying huge loads and landing on short landing strips, or not even landing at all – simply touching down and pushing goods out of the back of



the aircraft and then taking off again if necessary. The British crews flew four to five aid missions a day.

The RAF delivered food and medical supplies but also temporary accommodation and sometimes aid workers. Supplies would be flown into the capital and then taken out by the Hercules across hundreds of miles to

where they were needed.

**By the end of the December in 1987, the RAF had carried out 2,152 missions to deliver aid to the Ethiopian people.**

# RELIEF OPERATIONS

## PLANNING AIRDROPS, AIRLIFTS AND AID DROPS

Planning an airdrop or aid drop is not as straightforward as it first seems. A number of issues have to be taken on board.



Everything dropped from an aircraft can be dangerous if thought hasn't gone into the drop. In Burma and the Low Countries, the supplies had to arrive in one piece and not explode on landing or come down so fast that they could hurt people. This means that someone needs to understand the physics behind things falling and being dropped. The mass of the object(s) needs to be known, along with the height of the drop, the wind direction (to ensure that the things

dropped get to the right location) and the parachute size or the pallet size (for things being pushed out of the back of an aircraft).

Accuracy for an airdrop is incredibly important if being parachuted in – there is no point in vital supplies going to the enemy in a warzone, or ending up in a river or stuck in high trees if they are life-saving supplies for civilians. The best way of achieving accuracy is to fly low, but this is risky for the pilot and crew – they might be shot at or be very close to obstacles, such as trees and mountains. Alternatively, they might alert an enemy that supplies are being delivered and cause fighting.

Aid is not always parachuted in; sometimes, aid can be brought in by air to landing strips, but the aircraft

are only allowed to deliver the supplies and are not allowed or able to actually stop. This is the case sometimes in war zones, where the aid drop is part of a humanitarian mission for the suffering civilians caught up in the fighting, or in mountainous regions where there isn't sufficient space for a landing and take-off strip. In these cases, the team delivering the aid needs to know when to push the pallets off the aircraft without them being destroyed as they hit the ground, and without them affecting the aircraft that is still moving.

Over the decades, the RAF and other air forces have developed equipment and techniques for getting supplies in by air. If you stand on the back of a Hercules aircraft or a C17 airbus, the floor and walls are covered in hooks, metal ties and any number of gadgets to get equipment around the world and landed safely.

## BEING IN THE INTERNATIONAL ARENA

**Since the Second World War, the UK has been a founding member of the United Nations and is one of only five countries that have a permanent position on the Security Council. The UK is also one of the original members of NATO and is a member of the G7 – the seven richest nations in the world. It is in the top ten for world military capability. However, the UK, as a world leader, has changed since 1945, when it was still a country with an Empire.**

Assistance in global events through humanitarian aid and action is one of the ways in which the UK demonstrates its continued status as a leading international power. By being able to act in an emergency and assist people and countries around the world, Britain is able to play a continued role in international politics as an influencer and a participator.

Being able to assist countries with humanitarian support can help foster or strengthen international

friendships, such as assistance following the Nepal earthquake or after a hurricane in the Caribbean. Further, it helps to ensure that many of its military personnel continue to be innovators and capable of adapting and meeting new challenges for a range of circumstances and needs.

# RELIEF OPERATIONS

RAF  
100

raf100schools.org.uk

## USING THIS INFORMATION

This historical and factual information can be combined with the introductory film and resources from the resource section for exploring some creative ideas in a school club/informal club, or for a more curriculum-based lesson.

Below are the ideas and inquiry questions that these materials could support.

In addition to the historical information above, case studies and extra information are available in the resource section. These include biographies and aircraft technology case studies.

## KEY QUESTIONS FOR EXPLORATION IN ANY SETTING:

- Why was it difficult to get food to people in the Netherlands in 1945?
- Why were British troops in Burma during the Second World War?
- Was the Berlin Airlift the only option to the Allies in 1948?
- What are the problems with getting supplies into mountainous areas?
- What are the dangers of dropping fragile things from the air and how can they be overcome?
- How might humanitarian support for recent events affect the UK's visibility overseas?

## HOW TO USE THIS MATERIAL IN A HISTORY CLUB OR LUNCHTIME/ AFTER-SCHOOL/INFORMAL CLUB

These ideas are suitable for a mixture of age groups and abilities. They can also be used with the interactive map to begin a local history investigation.

### START BY SHOWING THE ACCOMPANYING FILM: *AIR DROPS*

Key question:

**Ask the students how different places might need different types of airdrops. Then ask them to present their conclusions in some of the following ways:**

(you might want to use some of the questions from the box to get them thinking)

- Draw a world map indicating the aid drops that are discussed in the information provided
- A newspaper story for their school/group newsletter on one of the aid drops and the issues that needed to be thought about before it could be carried out
- A display for the school/class/ group noticeboard about the RAF's role in humanitarian activities
- A series of cartoons that shows the different types of aid drops

**Extension:** Find out about recent humanitarian activities carried out by the RAF.

Now use this information to start investigating the local history of an airbase near you – this can be done starting with the interactive map. Explore which of the airbases have been used as departure points for humanitarian missions or supply activities – what can you find out about them?

Find out about the base. Identify what other information or understanding of an historical period is needed to tell the story of that base.

# RELIEF OPERATIONS

## LESSONS IN SUPPORT OF THE CURRICULUM AND/OR EXAMINATIONS



### GUIDANCE ON HOW THIS MATERIAL COULD BE USED IN A LESSON ABOUT:

1. The Second World War or Britain in the World Since 1945
2. The Technology of Warfare/War and British Society

## 1. THE SECOND WORLD WAR OR BRITAIN IN THE WORLD SINCE 1945

### Ages 11 years and above

The suggested idea for a lesson here can be used as a different approach for teaching about the Second World War; it can be combined with other lessons for exploring this conflict or as an extension homework piece.

Suggested key question:

### **Why were airdrops of food and supplies necessary during the Second World War?**

Show the film – *Air drops*

Use the historical information:

On a map, show Burma (students could be asked to research the terrain of Burmese jungles; there are images in the resources section).

Ask the students to think about what the difficulties were in dropping supplies from the air – write down their answers (or put these into a two-columned table, with difficulties numbered and listed in order in the first column).

Using the information about technical drops, ask the students to work out how the problems might be overcome (ask students to list possible solutions to particular difficulties in the second column of the table next to the first column).

Repeat the exercise using Operation Manna.

Lead the discussion about which operation was more difficult and why.

Now ask the students to create a spider diagram that shows the different elements to organising an airdrop during a war.

Using the quote from the Operation Manna section, ask students whether they think the risks of airdrops are worth it.

Finish by asking how airdrops might be used for UK or international events today.

**Extension:** Look at the STEM activity for dropping things from the air – can you try and do it?



## 2. THE TECHNOLOGY OF WARFARE/WAR AND BRITISH SOCIETY

### Ages 11 years and above

Suggested here is a way of using the information and the film to explore how humanitarian aid and airdrops are part of the UK's role as a modern international power. The materials can be used to support wider teaching on this theme or as a stand-alone lesson.

Alternatively, the resources here can be the beginning of a further investigation into how technology has been developed for airdrops, e.g. parachutes, loading pallets, etc.

*In addition to the resources here, you may want to include: the information about NATO, the information about the UN and the detailed article on the Berlin Airlift, all included in the resources section.*

Suggested key question:

### **Can humanitarian aid be a way of demonstrating power?**

Show the film- *Air drops*

Share the information about the Berlin Airlift.

Ask the students to read the information about the Berlin Airlift.

Ask the students to organise the information in order to be able to see roughly how much money the British and Americans spent on helping the 2 million people of Berlin.

'If the Allies had not responded to the blockade the Soviets would have annexed West Berlin.'

Ask the students to theorise about what they think the political cost of this happening might have been?

Using the information from the resources section:

Describe the UK's role in NATO and the United Nations.

Can they see a relationship between the UK's roles in these organisations and its actions in something such as Operation Bushel?

Ask the students whether they think these roles give power to the UK or whether they require the UK to show responsibility.

The UK is in the top ten military powers – how can this power be demonstrated in times of peace?

In groups, ask the students to break the following question down so that they can then discuss it in a debate, using evidence for their arguments: 'Does it matter if humanitarian aid relates to international power – or do the outcomes (assisting those in need) make the intent (motivation behind what is done) unimportant?'

Finish by taking a vote on the question.

**Extension:** Find out how the RAF has adapted its aircraft for airdrops and humanitarian support missions.

### MAKING THE STEM CONNECTION

The associated STEM activity is designed to show an aspect of technology that demonstrates some of the thinking in the past. The STEM activity here involves building an airdrop model and using it to investigate precision and accuracy of delivery for a supply package. Team up with a science teacher to help students explore the factors pilots need to consider when carrying out airdrops.