



## Aircraft, crew and marshalling

### Key Stage 1

History:

Chronological understanding

Historical interpretation

Historical enquiry

### Key Stage 2

History:

Chronological understanding

Historical interpretation

Historical enquiry

British History

### Key Stages 1 and 2

English:

Speaking and listening

Group discussion and interaction

Writing

Composition

Planning and drafting

Reading

Understanding texts

Reading for information

Non fiction and non-literary texts

### Key Stages 1 and 2

Art and Design:

Investigating and making art, craft and design

Evaluation and developing work

### Overview of the activities

There are four activities described. Each activity is self-contained and so can be run individually. The activities are designed to give an idea of history and chronology and to introduce the idea of sources of information. The activities are designed to last between 30 minutes and an hour. Extension activities are included.

The activities look at:

Aircraft timeline

Aircraft top trumps

Aircrew and aircraft

Marshalling

### Role for children

Pilots, aircrew, marshallers

### Venues

All

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**Aviation Heritage**  
**Lincolnshire**  
*a partnership of Lincolnshire's aviation heritage*



## **Activity 1: Aircraft timeline**

### Overview of activity

Recognise the difference between present and past

Demonstrate a sense of chronology

Find answers to simple questions about the past from sources of information

Consider how aviation has developed over the years

### Resources

PowerPoint presentation of different aircraft

You may choose to run this activity in tandem with 'Aviation Development' and 'Can it fly' which look at this topic from a scientific point of view.

## Introduction

In this session we will look at aircraft that have been flown from airbases in Lincolnshire.

## Starter activity

Discuss children's experience of aviation. Have they ever seen an aircraft close up?

- Where was this? At an airport, at an airbase?
- Have they travelled on an aircraft?
- What did the aircraft they travelled on look like?
- What did that feel like?
- Where did they go?
- What could they see?

Ask children to contribute to the discussion and write any key adjectives (excited, scared, happy, amazed) words on the whiteboard.

## Activity

Have the children seen any of the aircraft in the photographs? Show the aircraft on the PowerPoint.

How are these aircraft different from the aircraft they have flown in?

## Activity

Print off the images of the aircraft and hand the photographs out to teams of five or six children.

Ask them to arrange the photographs in order of age: the oldest first.

Ask them to consider:

- How do they know which aircraft are older than others?
- What are the similarities and differences?
- What are they made from? What was the purpose of a particular aircraft?

When the children are happy with their choice ask them to prepare to share their thoughts with the class.

Ask them to review their decision and ask why they chose to put the aircraft in this order. What made them think one aircraft was older than another?

This may prompt answers such as shape of the aircraft, materials used, design, etc.

## Plenary

To summarise and reinforce the activity choose six children and hand them each a photograph of the six aircraft and ask the teams then to arrange the children in the order they have for the oldest to most recent aircraft.

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When the children are happy with the order of aircraft, review their decision and ask why they chose to put the aircraft in this order. What made them think one aircraft was older than another? It may help the children to understand if you provide examples of events to put the age of the aircraft in context – such as your grandparents may have been born in this year etc.

How do they know which aircraft are older than others? What are the similarities and differences? What are they made from? What was the purpose of a particular aircraft?

This may prompt answers such as shape of the aircraft, materials used, design.

### **Extension activities**

Ask the children to write a description of their aircraft using the facts they have found out.

They can use some of the adjectives collected earlier in the session.

Ask the children to write a story about travelling by aircraft. It could be about a holiday or a completely imagined journey. Where did they go, how did they feel, what happened?

Remind the children that their story must have a beginning, middle and end so that people can understand their story. Use the writing frame.

Ask the children to choose an aircraft and research it further. Can they find out anything about people who flew these aircraft or worked on them?



**Use this sheet to help plan your story.**

**Think about ...**

How might your story start?

Who might be in your story?

What might they do?

Is there a big event that happens?

How will your story end?

**Use this space to write some powerful words to give your story impact.**

**Word bank** You may choose to use some of these words or phrases in your story

A long time ago...

That day/that night...

Suddenly...

Next...

Finally...

Just then...

After a few minutes/hours...

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## **Activity 2: Aircraft top trumps**

### Overview of activities

Recognise the difference between present and past

Demonstrate a sense of chronology

Find answers to simple questions about the past from sources of information

Consider how aviation has developed over the years

### Resources

PowerPoint presentation of different aircraft

Top trump cards

## Introduction

Use the PowerPoint and ask children what they know about each aircraft. Give them top trump cards which contain information about:

- The type of aircraft
- Date introduced
- Crew
- Length
- Wingspan
- Maximum speed
- Range (distance it is able to fly without refuelling)

Ask the children if they understand the terms. Ask for contributions. Explain any terms that the children do not understand.

## Activities

Then ask them to find out which aircraft:

- is the oldest
- has the largest crew
- is the longest
- is the shortest
- is the fastest
- has the longest range
- has the shortest range.

Look at different types of aircraft and see if children can work out what they are used for.

## Activity

Play a quick game of top trumps.

Top trumps is a card game. These cards contain numerical data about the different aircraft. The aim of the game is to compare the values and to gain opponents cards by trumping their cards. For example the Typhoon would trump the Spitfire on speed, but the Spitfire would trump the Typhoon on age.

## Plenary

Ask children what they have found out about the aircraft. What conclusions can they draw about the different aircraft? What strikes them about when aircraft were built?

## Extension

Ask children to create more top trump cards about different aircraft. They will have to carry out research to do this.

Which aircraft would they most like to fly and why?

You can carry out simple maths quiz activity by asking children for example to work out how old each aircraft would be today.

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## Handley Page 0/400



Date introduced: 1916

Crew: 5

Length: 19.16 m

Wingspan: 30.48 m

Maximum speed: 97.5 mph

Range 700 miles

## Sopwith Camel



Date introduced: 1917

Crew: 1

Length: 5.71 m

Wingspan: 8.53 m

Maximum speed: 115 mph

Range: 300 miles



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## Hurricane



Date introduced 1937  
Crew: 1  
Length: 9.84 m  
Wingspan: 12.19 m  
Maximum speed: 378 mph  
Range: 600 miles

## Spitfire



Date introduced 1938  
Crew: 1  
Length: 9.12 m  
Wingspan: 11.23 m  
Maximum speed: 340 mph  
Range: 1140 miles

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## Lancaster



Date introduced: 1942  
Crew: 7  
Length: 21.18 m  
Wingspan: 31.09 m  
Maximum speed: 280 mph  
Range: 3,000 miles

## Jet Provost



Date introduced 1955  
Crew: 2  
Length: 5.71 m  
Wingspan: 10.77 m  
Maximum speed: 440 mph  
Range: 900 miles

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## Hawk



Introduced: 1976

Crew: 2

Length: 11.9 m

Wingspan: 9.39 m

Maximum speed: 1,028 mph

Range: 2,520 miles

## Typhoon



Introduced 2003

Crew: 1

Length: 15.96 m

Wingspan: 10.95 m

Maximum speed: 1,550 mph

Range: 1,800 miles

## **Aircraft information sheet**

### **Handley Page 0/400**

The Handley Page 0/400 was a biplane and an early bomber aircraft. It was used in the First World War.

Date introduced: 1916

Crew: 5

Length: 19.16 m

Wingspan: 30.48 m

Maximum speed: 97.5 mph

Range: 700 miles

### **Sopwith Camel**

The Sopwith Camel was a biplane and an early fighter aircraft. It was a single seater.

Date introduced: 1917

Crew: 1

Length: 5.71 m

Wingspan: 8.53 m

Maximum speed: 115 mph

Range: 300 miles

### **Hurricane**

The Hurricane is a single-seater fighter plane used in the Second World War.

Date introduced 1937

Crew: 1

Length: 9.84 m

Wingspan: 12.19 m

Maximum speed: 378 mph

Range: 600 miles

### **Spitfire**

The Spitfire was a single-seater fighter aircraft that was used in the Second World War by the Allies.

Date introduced 1938

Crew: 1

Length: 9.12 m

Wingspan: 11.23 m

Maximum speed: 340 mph

Range: 1140 miles

### **Lancaster**

The Lancaster was heavy bomber used in the Second World War. It had four engines and was made for the Royal Air Force.

Date introduced: 1942

Crew: 7

Length: 21.18 m

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Wingspan: 31.09 m  
Maximum speed: 280 mph  
Range: 3,000 miles

## **Jet Provost**

The Jet Provost is a trainer aircraft that was used by the RAF from 1955 to 1993.

Date introduced 1955

Crew: 2

Length: 5.71 m

Wingspan: 10.77 m

Maximum speed: 440 mph

Range: 900 miles

## **Hawk**

The Hawk is an advanced jet trainer used by the Red Arrows.

Introduced: 1976

Crew: 2

Length: 11.9 m

Wingspan: 9.39 m

Maximum speed: 1,028 mph

Range: 2,520 miles

## **Typhoon**

The Typhoon is a multirole combat aircraft.

Introduced 2003

Crew: 1

Length: 15.96 m

Wingspan: 10.95 m

Maximum speed: 1,550 mph

Range: 1,800 miles

## **Activity 3 Aircrew and aircraft**

### Aims of the session

Recognise the difference between present and past

Demonstrate a sense of chronology

Find answers to simple questions about the past from sources of information

Consider how aviation has developed over the years

Examine the different jobs associated with aviation

Practise presentation skills

### Preparation

PowerPoint Aircraft and crew

Images of crew from different aircraft and the aircraft they would fly

Images of aircraft and pilots

Crayons, paper, pencils

### Venues

All



## Introduction

In this session we will look at people who worked with the aircraft, both ground crew and aircrew.

## Starter activity

Ask the children to match the images of aircrew/ground crew in the PowerPoint presentation to their aircraft.

When they think they have matched the correct people to the correct aircraft, ask them which time period they think the aircraft and crew come from.

To conclude this activity, ask the children to call out which pictures go together.

## Plenary

Ask children why they choose the pairings? Ask what it was about the photographs, (the clothes, the materials, the aircraft etc) made them think they should go together. Explain which are the correct pairs and why. If they look carefully at photographs of the aircraft in the air they might notice some differences. Ask them to compare what the crews are wearing in the modern photographs and the older photographs. The photographs show Jan Zumbach in his Spitfire. What can the children find out about Jan? The next photograph shows Rear Gunner Alan 'Birdy' Avery. Why do they think he is wearing such a thick suit? The next shows a wireless operator. He is carrying two boxes with a pigeon in each. Why might this be? The final picture of crew shows the crew of Lancaster bomber, Phantom of the Ruhr. What similarities and differences can the children spot in the uniforms of the men?

## Activity

Ask children to choose a character and write about that person in their own words and create a picture to illustrate their story.

## Plenary

Ask children to read their stories.

## Extension activities

Ask children to look at the detail of the uniforms worn and create their own distinctive uniform that would be suitable for a particular era.

Use the stories of the Lancaster crew as the basis for comprehension exercises or as inspiration for creative writing.

## **Activity 4: Marshalling**

This is a fun activity where children get to marshall aircraft. It can be used to support a visit to any of the venues.

### **Introduction**

Talk about a marshaller's job. They help pilots to park aircraft at an airfield  
Ask children to suggest ways that a marshaller might communicate with pilot from the ground.

Can they identify any problems in being able to communicate with the pilot?

How might marshalls let pilots know where to go?

### **Activity**

Tell children that there are eleven basic signals and ask if they can guess what each one means. Either demonstrate the signals yourself or ask for volunteers to act as marshalls for you. See if the children can remember what each of the signs means.

Now ask the children to be marshalls. Ask them to make the sign for Turn left, Turn right, Stop etc

If you have enough outside space children could role play being pilots and planes and marshalls.

### **Extension activity**

This is one example of where a special language or code is used. Ask if children think of other occasions where we need to communicate by sign or signal.

They may suggest street signs, signs in airports, using different languages, secret languages such as Morse code. In teams can they think of different ways to get a secret message from one person to another? If they are struggling you could give them ideas such as a coded message etc. give them the example of a code such as A= 1, B= 2, C=3 etc. They can use this code to create a message or create their own code.

Ask them write to a message in code.

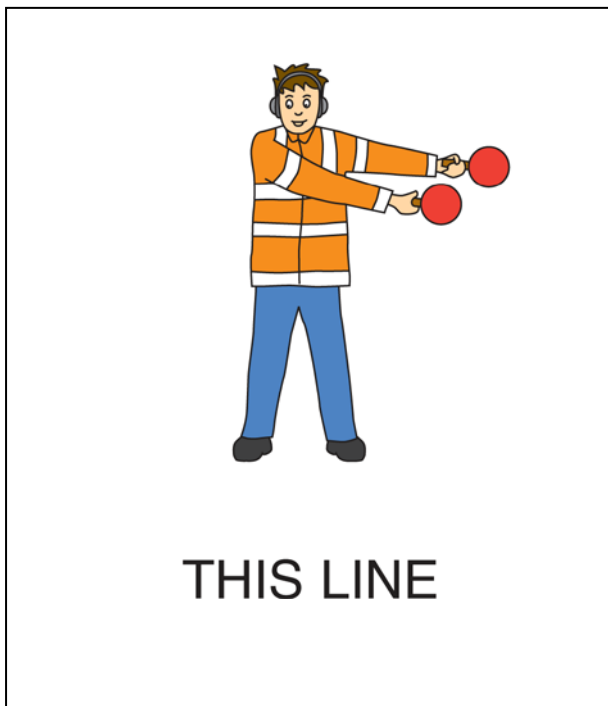
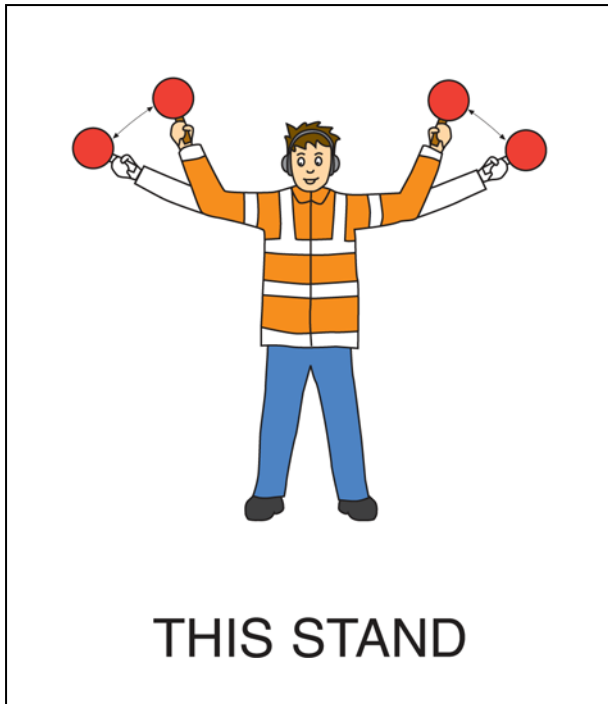
When they have done this ask them to write their coded message on the white board and see if other children can decipher it. Ask the children to explain the code they have developed and how it works.

This activity will link with the Science Communication activity.



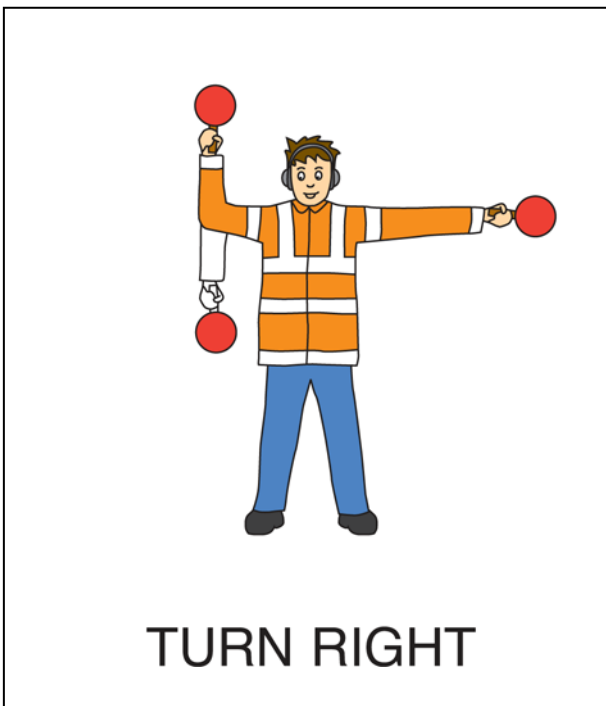
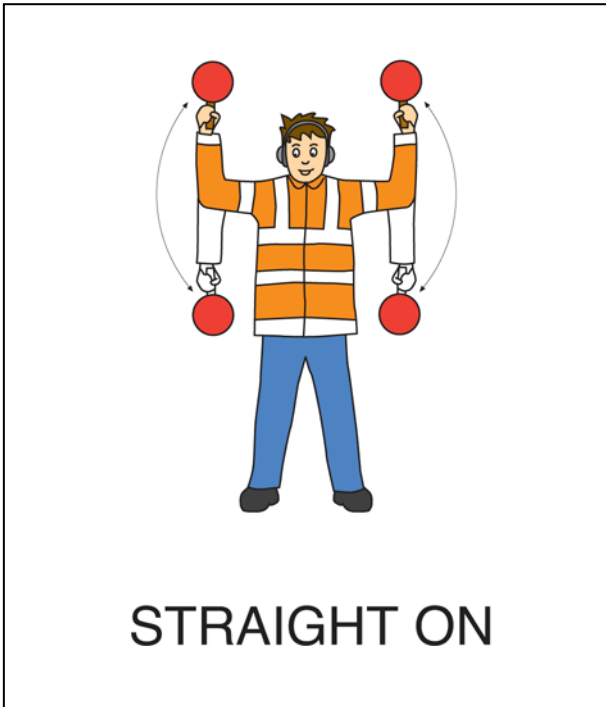
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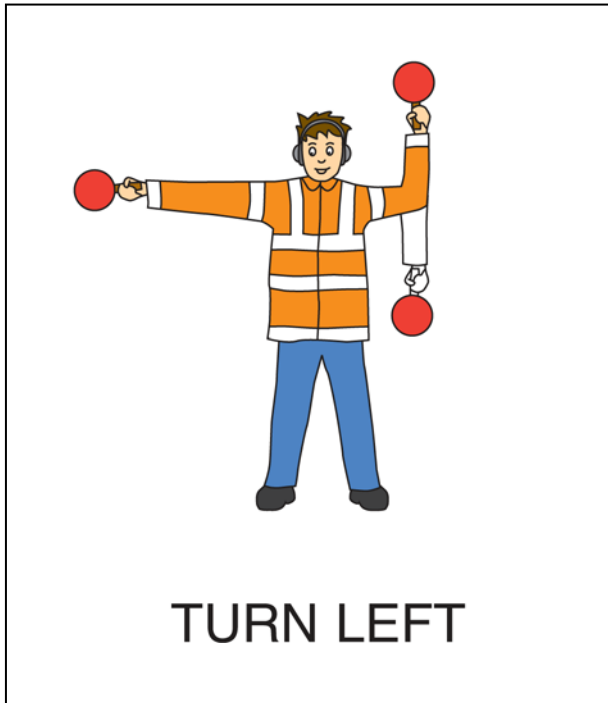
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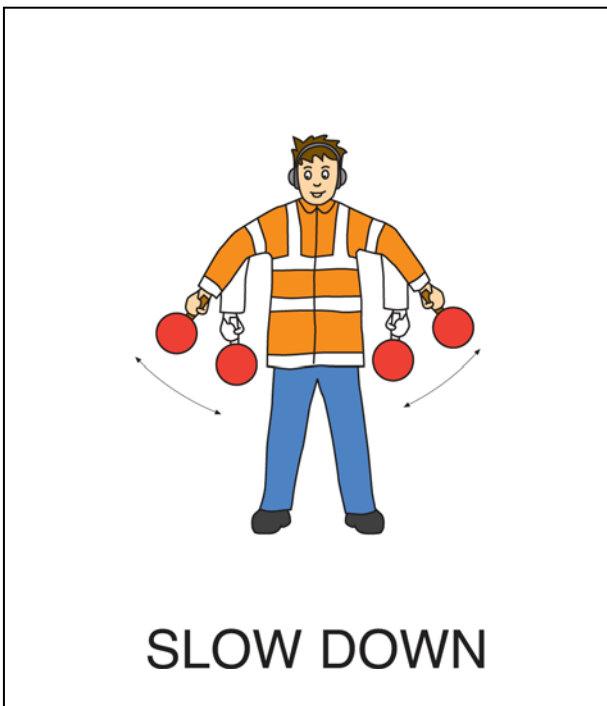
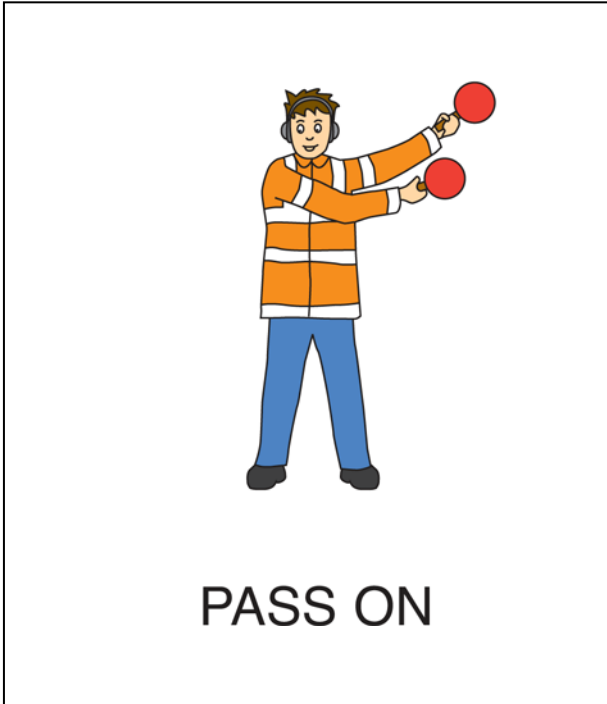
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**CUT ENGINES**



**CHOCKS IN**

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