

Airplanes in Cambridge

A schools pack for Key Stage Two, prepared by Marshall of Cambridge.

a) Useful resources

Interactive website: history.marshallgroup.co.uk

Marshall has created a school-friendly interactive version of its history. It is a scrollable timeline, using photos, videos and documents from the Marshall archive. It references Cambridge extensively.

Poster

You can also download a poster of famous planes worked on in Cambridge from:

https://www.marshallgroup.co.uk/media/pages/schools/ee47fbe6b9-1692267887/poster_schools_pack_2-1.pdf

Answers and additional notes

Answers to the questions, as well as further talking points for teaching staff, can be found in the Notes pages of the PowerPoint.

b) Schools pack contents

Section 1: Introduction

a) Subjects: Local history

b) Key skills:

- a. Sequence key events
- b. Ask a variety of questions about the past

c) Content

- Linking Cambridge and aviation
- Brief biographies of key members of the Marshall family
- Marshall's history microsite – which contain many more period photos and documents

d) Activities:

- a. Generating questions – review site and record list of questions.
- b. Timeline – find dates and place in order on a correct scale

Section 2: Famous planes worked on in Cambridge

a) Subjects: Local history, STEM

b) Key skills:

- a. Use a range of sources of evidence
- b. Identify change over time

c. Communicate knowledge and understanding

c) Learning outcomes:

- The role Cambridge played in aviation history
- The design of planes relates to the purpose they serve
- The design of planes has evolved and grown more sophisticated over time

d) Content

- A comparative roster of planes worked on in Cambridge

e) Activities

- Print out aircraft pages – children to explore and discuss
- Comprehension
- Group discussion
- Create and play Top Trumps based on the planes worked on in Cambridge

Section 3: Cambridge's role in keeping Britain flying in World War Two

a) **Subjects:** Local history, STEM, Maths, Creative Writing

b) Learning outcomes:

- Many pilots in World War Two were trained in Cambridge
- Being a pilot took considerable skill.
- Women were also pilots and were part of the workforce repairing planes.

c) Key Skills:

- a. Use a range of sources of evidence
- b. Identify differences between men and women in the past
- c. Communicate knowledge and understanding

d) Content

- Historical photos of pilots training in Cambridge in World War Two
- A biography of a local female WW2 pilot, Molly Rose

e) Activities

- Group discussion – the need for camouflage; the design of pilots' flying suits; the skills needed to be a pilot
- Examine a real WWII pilot's log and work out what information it shares
- Creative writing – imagining being a pilot flying in bad weather conditions

Section 4: C-130 – a famous plane worked on in Cambridge

a) **Subjects:** Local history, STEM, geography

b) Learning outcomes:

- Airplanes can play multiple roles, including transporting people and goods
- Airplanes can be adapted for different circumstances
- Many countries around the world have airforces – and those airforces have connections to Cambridge

c) Key Skills:

- a. Locate places on a map
- b. Measure distance

d) Content

- Historical photos of the C-130, including being painted pink
- An outline of an empty C-130
- A map of the world featuring airforces that fly their planes to Cambridge for repair and upgrade

e) Activities

- Imagining and drawing a cargo load for a C-130 plane
- Filling in the blanks of names of countries around the world
- Group activity: researching these countries, distances to Cambridge, and lands between using Google Maps

f) Resources needed: access to Google Maps

Section 5: Cambridge's role in designing the world's most famous plane

a) **Subjects:** STEM

b) Learning outcomes

- Nature has an influence on engineering
- The aerodynamic shape of an airplane is important to how it flies
- A plane's function will change its design

c) Key Skills:

- a. Use a range of sources of evidence
- b. Communicate knowledge and understanding

d) Content:

- Historic photos of Concorde
- Concorde's nose
- Why Concorde no longer flies today

e) Activities

- Assessing the design of Concorde's nose
- Comprehension exercise
- Designing a plane
- Drawing the design of that plane

Section 6: Saving lives by air (East Anglian Air Ambulance)

a) **Subjects:** Geography, STEM, Creative Writing

b) Learning outcomes:

- The design of a helicopter makes it uniquely suited for certain tasks

Key Skills:

- o Use a range of sources of evidence

- Communicate knowledge and understanding

c) Content:

- Role of Easy Anglian Air Ambulance
- Counties of England
- Helicopter design

d) Activities

- Marking four counties on a map of England
- Analysing why a helicopter might (and might not) be suitable as an ambulance
- Creative writing in the style of a newspaper

Section 7: About airports

a) **Subjects:** Maths, Careers, STEM

b) Learning outcomes:

- Many different types of careers are available at an airport
- Airports require a number of different functions to operate successfully

c) Key skills

- a. Communicate knowledge and understanding

d) Content

- A fictional Cambridge departure board
- Jobs at an airport
- Features of an airport
- Designing an airport

e) Activities

- Maths exercise based on departure board
- Group discussion about jobs at an airport
- Group discussion about airport design and features
- Comparison of airport of different sizes
- Group co-design of an airport

f) Resources needed: A3 (or larger) paper; access to Google Earth