

AIR RESEARCHER BADGE

Activity sheet for use at IWM Duxford



SCOUTS! This page is for you!

For your Air Researcher Badge you must:

1) Know the rules relating to access to airfields in Policy, Organisation and Rules

Some useful sites to help you with this are:

- <http://www.caa.co.uk/homepage.aspx>
- <http://www.scoutbase.org.uk/library/hqdocs/facts/pdfs/fs120702.pdf>

2) Carry out research into one historical aspect of flight, and share your findings with others in the Troop. Some example research topics could be:

- *The development of aviation or flight over a period agreed with your assessor*

At IWM Duxford there are a number of displays which can be used to demonstrate your understanding of the development of flight over a number of years, some things you can look at are:

- The development of flight between World War 1 and World War 2 – You should view the exhibits: Anson, Tiger Moth, Spitfire, Swordfish, Magister, Oxford, Lysander, Sunderland
- The development of jet propulsion from World War 2 to 1970's
- Passenger aircraft; from the Anson to Concorde
- Development of Strike aircraft from the museums TSR2 to the Eurofighter Typhoon

OR

- *The development of a specific aircraft type, discovering details of its history, role and achievements. Examples might be the Spitfire, the Boeing 747, the Harrier or the Wessex helicopter.*

At Duxford we have many airplanes which have very interesting stories, some which have ended and some which still continue. You could make a detailed timeline of a specific airplane. This should be able to be shared with your group.

Here is a list of some aircraft you might want to focus on, and where they can be found at Duxford:

- Concorde (AirSpace)
- Eurofighter Typhoon (AirSpace - Conservation area)
- RE8 (AirSpace)
- Spitfire (AirSpace)
- Lancaster (AirSpace)
- Harrier (AirSpace)
- SR 71 Blackbird (American Air Museum)
- B 52 Stratofortress (American Air Museum)

OR

- *The development of balloons or airships from their first appearance to the present day.*

At Duxford we do not have any lighter than air aircraft on display. Therefore choosing to focus on this area would be impractical during a visit to IWM Duxford.

OR

- *The development of a type of aero engine (aero engine simply means an engine fitted to an airplane). Examples might be jet or piston engines in general, or a specific engine such as the Rolls Royce Merlin.*

In AirSpace at Duxford there are a number of engines which can be seen and researched. You should have a good understanding of how an engine works before visiting the museum however you can progress your knowledge through the interactive exhibits which are available on the first floor of AirSpace, above the engine examples. Below are some examples of engines you might want to focus on:

- Pegasus engine built in 1959 - first hovering in 1960. An examples of a VTOL (Vertical Take Off and Landing) engine.

- Rolls Royce Merlin engine - the legendary Spitfire and Hurricane were developed around this engine.
- Leonides Major - this engine was used to power the Whirlwind Helicopter which can be seen in AirSpace.
- Rolls Royce RZ2 - this engine was designed for 5 years from 1955-1960 as an engine to drive our nuclear deterrent.

3) In the course of your research, visit at least one place of interest that is directly relevant to your project; for example a museum, an air display or an aeronautics factory.

The IWM Duxford is a fantastic place to visit which will aid in the completion of this badge. In addition, IWM Duxford has flying displays on throughout the year celebrating different areas of aviation.

You should keep the ticket from your visit or purchase a guide book to show that you have visited the museum. You could also pick up some leaflets to give to others in your troop.

4) The presentation of your findings should include a model that you have made to illustrate some aspect of your research. Other resource materials such as diagrams and pictures should be used wherever possible.

You are able to take pictures of the exhibits at IWM Duxford. These should be used in your presentation. The gift shop also sells a number of models which can be produced for the completion of the badge.

Alternatively you could create your own model out of wood, which could have a small motor attached or a number of paper models in different shapes. You should show that you have researched different paper aircraft and these should be shown to your troop.