ROYAL AIR FORCE museum LONDON

AIR RESEARCHER BADGE

scouts be prepared

Name:
Patrol:
Scout Troop:

1

Section 1: Airfields Can Be Dangerous Places!

1

Know the safety rules relating to access to airfields as laid down in *Policy, Organisation and Rules*

Read the statements below and tick the correct answer.

1. The troop has been told to get from A to B on an airfield. You think you know where to go but the roads and signs are not clear and the airfield controller is unavailable. Should you…?

- ❑ Move to where you think you should be heading taking the shortest route possible?
- ❑ Sit down where you are and wait until someone comes to help?
- ❑ Move in the direction that you think you are meant to be heading sticking close to the perimeter, never crossing the airfield and being observant of what is going on around you?

2. You have not been paying attention on the airfield and it is possible that there is going to be a collision between yourself and an aircraft. Should you…?

- ❑ Remain still unless avoiding action is absolutely necessary?
- ❑ Immediately lay down on the ground preparing to roll out of the way if need be?
- ❑ Jump up and down making as much noise as possible to get the pilot's attention?

3. A jet plane is on the tarmac with its engine running. Should you stand…?

- ❑ Behind the jet so that the pilot will not collide with you when taking off?
- ❑ Inside the safety of the airfield controllers' tower as jet engines are one of the most hazardous things on the airfield and members of the public should not be nearby?
- ❑ To the side of the aircraft and well clear?

4. Your troop is looking at an aircraft with a propeller. The propeller is not turning. Should you…?

- ❑ Leave well alone unless a qualified flying instructor is present and says otherwise?
- ❑ Try to turn it and see if anything happens?
- ❑ Try turning it only after checking that there is no pilot in the aircraft and that the controls are off?

5. You see a red triangle near the cockpit of the jet aeroplane. Does it mean…?

- ❑ Do not attempt to climb on the aircraft?
- ❑ It is the marking of the ejector seat?
- ❑ The aircraft is dangerous and in need of repair?

6. A light aircraft is being serviced in a hangar. Is it safe to…?

- ❑ Jump in the cockpit and try the controls?
- ❑ Touch the various parts of the aircraft?
- ❑ Assume that the aircraft is dangerous and leave well alone?

7. You see a large spillage of an unidentified liquid on the tarmac. Do you…?

- ❑ Treat the spillage with caution and notify a member of staff on the airfield?
- ❑ Rub your hand in it to try and smell what it is?
- ❑ Do nothing about it?

2b

Section 2b: Carry out research into the development of a specific aircraft type, giving details of its history, role and achievements.

2b

The Royal Air force Museum houses an amazing collection of aircraft from around the world, from early aircraft designs to the latest modern jets. During your visit you will need to investigate just one type of aircraft in detail using this worksheet to help you. You have two options. You can choose to research the development of the Supermarine Spitfire (Section 2bi), OR compare and contrast two famous Second World War Bombers – the Avro Lancaster and the Boeing B17G Bomber (Section 2bii).

Before your visit!!!

When researching you will need to know useful facts. There are many books and websites about these aircraft, so finding information will not be a problem, but when you are researching you need to come up with your own thoughts not somebody else's! You should do your own research prior to visiting the museum and then, whilst here, study the aircraft up close using our caption boards. This way you will really have your own ideas and conclusions enabling you to answer the worksheet – you may even become an expert!

During your visit!!!

Choose the aircraft you would like to research. Complete EITHER section 2bi OR section 2bii. Look at that aircraft in detail and note down some of the facts on the caption boards.

Section 2b(i): The Supermarine Spitfire

The Spitfire is a good example for your research.
Probably the best known plane of all time, the Spitfire is certainly one of the most memorable to enter service with the Royal Air Force during The Second World War.

Compare and Contrast

Here at the Royal Air Force Museum, London we have three different Spitfires for you to look at. Find each aircraft in our galleries and c*ompare* and *contrast* them using the table below. By noting this legendary aircraft's history, role, achievements and improvements over the years you will be well on your way to attaching your **Air Researcher Badge** to your sleeve.

Don't forget you will need to share your findings with the assessor and other scouts!

Find the 3 Spitfires and note the differences between them. Complete the table and answer the questions below.

(Note: The Spitfire MK1 is located in the Battle of Britain Hall which opens at 12.00)

	Spitfire MK1	Spitfire MK Vb	Spitfire F24
Years in service			
Top Speed (km/h)			
Engine type			
Engine Horsepower (hp)			
Number of propeller blades			
Armament			

- How does the performance of each aircraft compare? Consider their top speeds and engine horsepower.

  _____

  _____

- Compare their armament. Which of the three Spitfires has the greatest firepower?

  _____

Spitfire MK1

- The prototype of the Spitfire Mk1 first flew in an RAF display for delighted crowds here at Hendon in 1936.
- The Mk1 played an important role in which battle in 1940?

_____

Spitfire MK Vb

- Why was the Spitfire MkV introduced into service?

_____

- Which major event of the Second World War did the Spitfire MkV take part in by providing gunfire direction?

_____

- The Museum's Mk Vb took part in an offensive operation in August 1942. What was it? (Hint: look at the timeline on the MkVb display board)

_____

Spitfire F24

- The F24 was the last type of Spitfire made. It incorporated all of the modifications and improvements developed in earlier Spitfires. Name one of these improvements.

_____

- How many hours did the Museum's F24 Spitfire actually fly?

_____

- Why were so few F24 Spitfires built?

_____

Congratulations! You have now completed Section 2b of your Air Researchers Badge. Please turn to Sections 3 and 4 on page 7 to learn how to complete your badge.

Section 2b(ii): The Avro Lancaster Vs The Boeing B17G

The Lancaster and the B17 Flying Fortress are two of the most famous bombers of the Second World War. The B17 played an important role in America's daylight bombing campaign over Europe, while the Lancaster formed the backbone of the RAF's nighttime offensive.

Compare and Contrast

Your task is to research these two bombers in detail. Find each aircraft in the Bomber Hall and c*ompare* and *contrast* them using the table below. By noting these legendary aircrafts' histories, roles, and achievements you will be well on your way to attaching your **Air Researcher Badge** to your sleeve.

Don't forget you will need to share your findings with the assessor and other scouts!

	Boeing B17G	**Avro Lancaster**
Years in service		
Number of crew		
Maximum speed (km/h)		
Number of engines		
Engine type		
Engine Horsepower (hp)		
Armament		
Maximum bomb load (kg)		

- How does the performance of these two bombers compare? (Hint: Look at the statistics you have compiled above)

_____

_____

_____

_____

Boeing B17G

- The B17 was used by which Air Force in the last years of the Second World War?

  _____

- Why was the B17 nicknamed the “Flying Fortress”?

  _____

- What job did the Museum’s B17 do for the US Navy?

  _____

- At the end of its flying career this B17 had an unusual job. What was it?

  _____

Avro Lancaster

- What was the average age of the Lancaster crew?

  _____

- On average how many missions did a Lancaster usually fly before it was lost?

  _____

- How many missions did the Museum’s Lancaster fly?

  _____

- In April and May 1945 this Lancaster was given a new job, it was sent to pick up prisoners of war and fly them back home. This Lancaster was the first aircraft to undertake such a mercy mission.

- You have now looked at both of these aircraft in detail. Do you have a favourite? If so why?

  _____

  _____

Congratulations! You have completed Section 2b of your Air Researchers Badge. Now turn to Sections 3 and 4 below to learn how to complete your badge.

Sections 3 & 4

By visiting the museum you have completed Section 3.

For Section 4 you will need to present your findings, you need to make a model to illustrate some aspect of your research. Consider using diagrams and other resource materials to illustrate your presentation. You will find many things including pictures, books, videos and models in our Museum Shop to help with your presentation.

To complete your badge