



## Stage 3



Name:

Scout Group:

### 1a: Airfields Can Be Dangerous Places!

Learn the rules for access to an airfield. 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?

## 1b. Learn the different parts of an airfield

At home, draw a diagram or make a model of an airfield to show and name different points. Label the runway, control tower, and hangar.

## 2. Understand the terms nose, fuselage, tail, wings, port, starboard and tailfin. Learn the names of an aeroplane's control surfaces

Correctly label the aeroplane diagram below with the following terms:

**Fuselage** – the body of an aeroplane

**Wing** – the part which supports the aeroplane when flying

**Tailplane** – small horizontal wing at the tail of the aeroplane

**Tailfin** – the upright surface on the tail

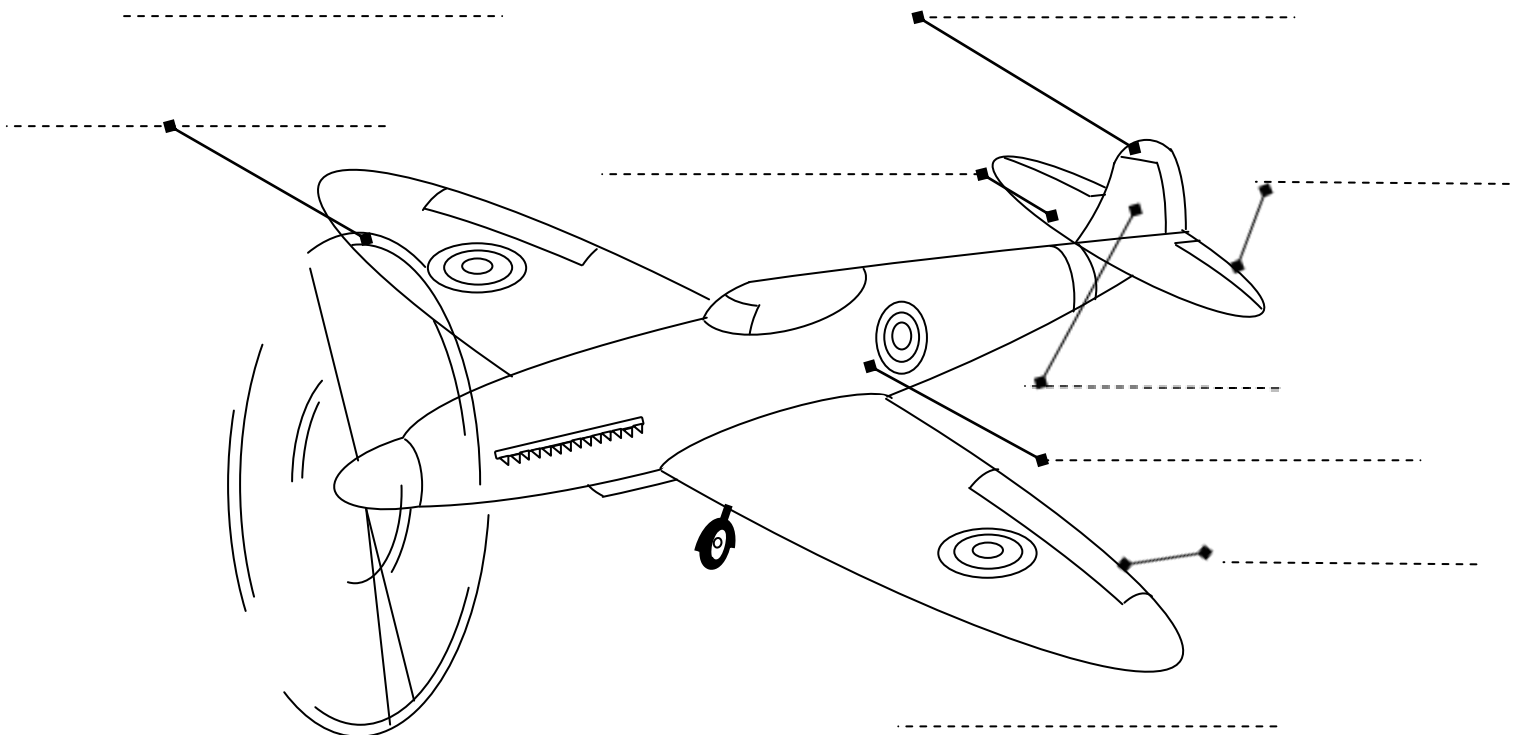
**Rudder** – hinged rear part of the fin which helps the pilot to steer

**Aileron** – hinged rear edge of the wing

**Elevator** – hinged rear part of the tailplane

**Port** – left hand side of the plane

**Starboard** – Right hand side of the plane



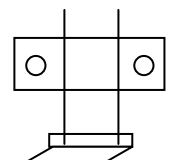
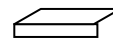
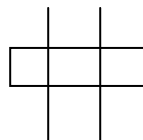
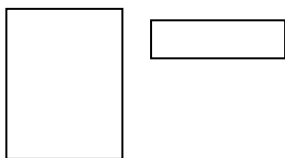
**Find the large model Spitfire in the Aeronauts Interactive gallery. This exhibit will help you find out about the control surfaces of an aeroplane and how they work.**

Fill in the table below:

Instruction	Model Plane Response	Real Plane Response
Pull control column backwards.	_____ move up.	The plane climbs.
Push control column forwards.	_____ move down.	The plane dives.
Push control column left.	Port (left) _____ goes up and the starboard (right) _____ goes down.	The plane banks (tilts) left allowing the pilot to change direction.
Push control column right.	The port _____ goes down and the starboard _____ goes up.	The plane rolls to the right.
Push left pedal forwards.	The _____ moves to the left.	The plane will turn left if it is also banked to the left.
Push right pedal forwards.	The rudder moves to the _____.	The plane will turn right if it is also banked to the right.

### **3. Construct and fly a chuck glider for at least five seconds. You can also build and fly a miniature hot air balloon or kite instead.**

You may find that a visit to the museum shop could help you. There are simple model glider kits on sale which can help you complete this activity. Alternatively have a go at making your own at home.



1. Take a piece of A4 paper and fold it into rectangle about 2cms in width. Secure your 'wing' with tape to stop it unfolding.

2. Tape 2 drinking straws to your wing approximately 9cms apart. Make sure the wing is in the middle of the straws.

3. Cut a small piece of card (2cms by 13cms). Fold this in half.

4. Tape the card to the rear of the glider making sure the bending point is facing up. Put 2 small blobs of blu tack at each end of your wing.

5. Your glider is ready to test.

**4. Collect photographs or pictures of six aircraft that interest you. Name them and identify their operational uses.**

Take a photograph of 6 different aircraft you can find at the RAF Museum. Write the name of each aircraft and their operational use below.

1. Aircraft Name: \_\_\_\_\_

Use: \_\_\_\_\_  
\_\_\_\_\_

2. Aircraft Name: \_\_\_\_\_

Use: \_\_\_\_\_  
\_\_\_\_\_

3. Aircraft Name: \_\_\_\_\_

Use: \_\_\_\_\_  
\_\_\_\_\_

4. Aircraft Name: \_\_\_\_\_

Use: \_\_\_\_\_  
\_\_\_\_\_

5. Aircraft Name: \_\_\_\_\_

Use: \_\_\_\_\_  
\_\_\_\_\_

6. Aircraft Name: \_\_\_\_\_

Use: \_\_\_\_\_  
\_\_\_\_\_

**5. Take part in a visit to a place of aviation interest.**

By visiting the RAF Museum today you have completed requirement 5 of your Stage 2 Air Activities Badge.

**6. Communicate with someone or spell your name using the phonetic alphabet. Explain why it is used in aviation.**

The phonetic alphabet, replaces letters and numbers with code words. It is used by pilots and air traffic control when they are talking over the radio. Certain combinations of letters and numbers can be easily misunderstood, (such as hearing an "S" for an "F" or a "B" for a "D"). Using the phonetic alphabet ensures that voice communications are understandable.

A - Alpha	N - November
B - Bravo	O - Oscar
C - Charlie	P - Papa
D - Delta	Q - Quebec
E - Echo	R - Romeo
F - Foxtrot	S - Sierra
G - Golf	T - Tango
H - Hotel	U - Uniform
I - India	V - Victor
J - Juliet	W - Whiskey
K - Kilo	X - X ray
L - Lima	Y - Yankee
M - Mike	Z - Zulu

Spell out your name below using the phonetic alphabet

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**Well done! You are well on your way to achieving Stage 3 of your Air Activities Badge. There are still two more tasks you need to do to complete the badge. You could do these at the museum or at your next section meeting:**

**7. Show how you would get a weather forecast for an air activity.**

**8. Using 1:50000 and 1:25000 OS maps, show you understand the meaning of scale and common map symbols. Explain how a pilot might use a map differently from a car driver or somebody on a hike.**