

RAF Museum London Air Cadet Quiz



Welcome to the RAF Museum London. Our Museum tells the story of the RAF from its formation during the First World War through to today and even looking to the future.

Your challenge is to visit each of our Hangars and find the answers to as many of the questions as possible. You will be competing against your fellow cadets so search carefully. Most of the answers can be found in the Museum, however for some of the answers you may need to use some of your own knowledge and skills.

There is a bonus selfie and picture challenge so check this before you begin to make sure you don't miss an opportunity for points.

Good luck!

Bonus point selfie challenge (6 points)

- | | |
|--|---|
| <input type="checkbox"/> Wearing a uniform from Hangar 1 | <input type="checkbox"/> With an emergency vehicle |
| <input type="checkbox"/> With a biplane | <input type="checkbox"/> Using an interactive exhibit |
| <input type="checkbox"/> With an aircraft used by Air Cadets | <input type="checkbox"/> In an aircraft |

H1

- 1 In what year was the RAF formed?
Bonus point: who was the first head of the RAF?

1918 – Sir Hugh Trenchard

- 2 What percentage of RAF personnel work in Engineering?

38%

- 3 What is the most powerful weapon in the bombing area?

Blue Steel Nuclear Missile

- 4 The Gnat is the predecessor of the BAe Hawk used by which display team?

The Red Arrows

- 5 Which kind of engine is attached to a Gnat? Hint... it isn't a piston engine.
Bonus point: name the four stages that describe how this type of engine works.

Jet – Induction, Compression, Power, Exhaust OR Suck, Squeeze, Bang, Blow

- 6 Which aircraft in Hangar 1 has a Royal connection?
Bonus point: name the Royal.

Sea King – Prince William

- 7 What is the RAF's newest aircraft?
Bonus point: give an example of what makes it so advanced.

F35 Lightning – stealth, helmet technology, targeting, radar, vertical takeoff/landing

- 8 What is the RAF's unmanned aircraft called?

Reaper

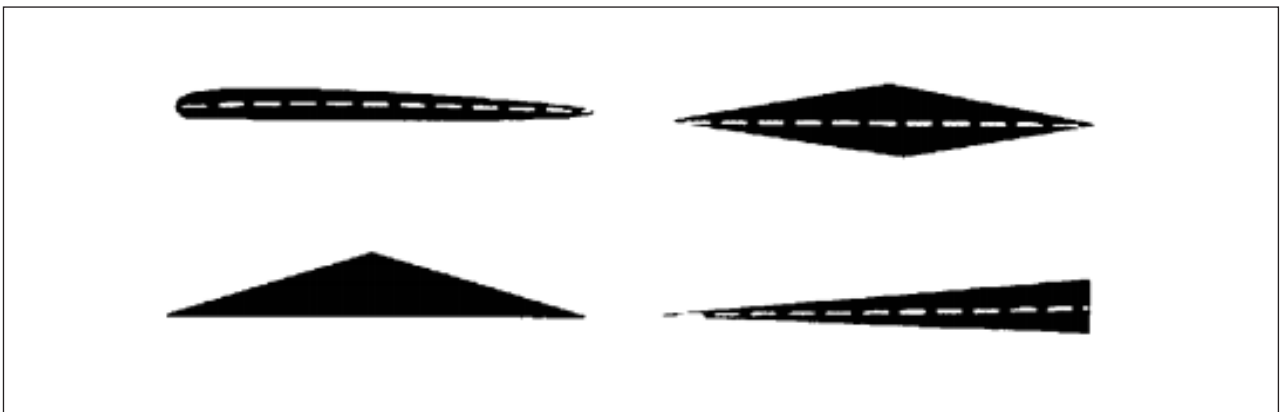
- 9 What does ISTAR mean?

Intelligence, Surveillance, Target Acquisition, Reconnaissance

- 10 Name two tasks that can be carried out by a drone.

Any of ISTAR, Strikes

- 11 Fast aircraft need to be aerodynamic. Take a look at the wind tunnel models and designs. Sketch out what the cross-section of a high-speed wing could look like.
Hint: the cross-section is what the wing would look like if viewed from the side.



- 12 When designing aircraft, engineers have to take in to account the four forces of flight. What are they?

Lift, weight, thrust, drag

- 13 The largest aircraft in Hangar 1 does not operate from airfields. Where would it operate from?

Water – rivers, seas, lakes, etc.

H2

1 As well as being used as fighters and bombers, what was the other major role assigned to aircraft in the First World War?

Photography, surveillance, intelligence (one needed for the point)

2 What were the main materials used to construct aircraft at this time?

Wood, fabric, tubular steel

3 Until the use of aircraft radios, how would pilots be able to send messages to those on the ground without the need to land?

Message streamers/dropping messages

4 The RAF was formed by combining two flying services. What were they?

Royal Flying Corps (RFC) and Royal Naval Air Service (RNAS)

5 What is unusual about the propeller location on the FE2b aircraft?
Bonus point: why is it there?

It is on the back of the aircraft, not the front. This is so a gun can be placed on the front

6 What was the name of the device that made fighter aircraft more accurate by allowing machine guns to fire through the propeller?

Synchronisation Gear

7 What was this building used for during the First World War?

This building was part of the Grahame White Aircraft Factory

/8 points

H3

H4

H5

1 Find the Yellow Harvard aircraft. What was its role?

Training

2 Name two aircraft in this building that have been used by the Air Cadets.

Viking, Slingsby Cadet, Grasshopper, Chipmunk

3 In which year was the Air Training Corps formed?

1941

4 Name two aircraft in this building capable of operating from water.

Supermarine Southampton, Supermarine Stranraer

5 Find the helicopters that when fully built has the largest number of rotor blades. What is it called and how many rotor blades should it have?

Westland Belvedere – eight Rotor Blades

6 Which three countries are represented by the 'fighter four' aircraft from the Battle of Britain?

Britain, Germany, Italy

7 Why do many people believe the Hawker Hurricane should be more highly credited than the Supermarine Spitfire?

The Hurricane shot down more aircraft during the Battle of Britain

The Lancaster bomber was one of the RAF's primary bombers during the Second World War.

8 What do the Lancaster and Spitfire have in common?

They have the same engine - Rolls Royce Merlin

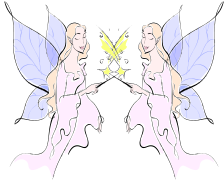
9 How many missions did our Lancaster fly?

137 – count the bombs!

10 The Lancaster was used in the Dambusters mission to destroy German dams. What was special about the bombs used for this mission?

They were 'Bouncing Bombs' and could bounce on water to settle and sink next to the dam walls

11 The following images give clues to the aircraft in Hangar 5. Name the aircraft.



Fairey Battle



Mosquito



Flying Fortress

Head to the Avro Vulcan and appreciate its enormity. It is the largest bomber ever used by the RAF.

12 This aircraft was one of the three V-force bombers used by the RAF during the Cold War. Name the other two.

Valiant and Victor

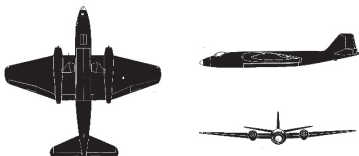
13 In what conflict was air to air refuelling used to increase the Vulcan's range?

The Falklands War

Go back through to Hangar 3.

14 What is this aircraft?

Bonus point: which Air Race did the aircraft displayed win?



The English Electric Canberra

Winner of the London to New Zealand Air Race, 1953

15 At the exit to Hangar 3 is the English Electric Lightning. The last Supersonic British-built fighter aircraft. How fast could it go?

1500 mph

H6

- 1 The Tornado by the entrance has a wing design that enables it to transition from low to high speed flight. What can the wings do that enable this?

Swing Wing – they can sweep back to enable high speed flight and forward again for slower flight

- 2 Name three aircraft in this building still in service for the RAF

Hercules, Chinook, Typhoon (accept Predator, though really the Reaper/Protector)

- 3 When was the Chinook helicopter first introduced?

1961

- 4 Why are the wings on the Hercules set high on the fuselage?

To enable easier loading and unloading of passengers and cargo



- 5 What was special about the Harrier aircraft?

It can take off and land vertically and hover. VTOL – Vertical Takeoff and Landing

- 6 Find the black aircraft. What is it and why is it painted black?

The Typhoon (or Eurofighter Typhoon). It is black as it was the prototype aircraft

/6 points

Total out of 55