

Hangar 3,4,5 Trail

H5

Find the Avro Lancaster



Bomber aircraft like this one took part in bombing missions over Germany during the Second World War, including the famous Dambusters Raid.

Turn right and head to the far corner of H5 to find Barnes Wallis' office to discover more about the Dambusters Raid.



Destroying dams with normal bombs was impossible. A new type of bomb had to be made that would rest against the side of a dam and sink to the bottom before exploding.

What shape did Barnes Wallis choose for his bomb?



What could the bombs do that made it possible to get them right up to the wall of the dam?



The Lancaster that dropped the Bouncing Bombs was made by the same company that made the largest aircraft in this Hangar.

Find the Avro Vulcan Bomber



The Avro Vulcan was designed to carry nuclear weapons but fortunately it never had to use them.

Take a look at the front of the Vulcan. What is missing compared to earlier aircraft? Hint – it propels the aircraft through the air.



The Vulcan is a jet aircraft. It uses four jet engines to reach speeds of over 600mph. Air is sucked in through the intakes in the front of the wings, mixed with fuel, then ignited. The explosion pushes air backwards at high speed, moving the aircraft forwards.

Jet engines use a lot of fuel. Sometimes so much fuel is needed that they need to be refueled while still flying.



The RAF uses flying tankers like the Victor that use long hoses to refuel other aircraft in flight. The fuel is pumped through fuel probes in to the aircraft.



Where on an aircraft can you usually find the fuel probe?



H3

Find the Tornado F3

Hint – it's next to the red Wessex helicopter

H4

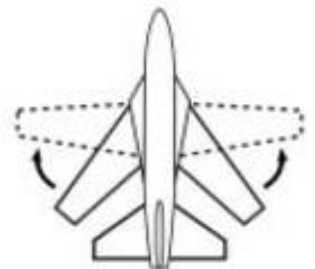


The Tornado F3 was a fighter aircraft designed for high speed flight to intercept enemy aircraft. Fast aircraft are aerodynamic, meaning they can cut through the air easily.

Sketch out what you think the aircraft looks like from above (you can use the viewing area upstairs next to the Typhoon simulator).



To make it more aerodynamic, when flying faster the Tornado can sweep its wings back. When needing to fly slower to take off or land it can spread its wings straight. We call this a swing wing design.



H3

Interceptors like the Tornado F3 have to be very fast. They usually have wings that are swept back and have a pointy shape. This means there is less air resistance to slow them down.

H4

Not all aircraft need to be fast. Can you think of any jobs that an aircraft would do that would need slower flight?

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Find the Slingsby Cadet

This aircraft is a glider so it has no engine. It is used to teach beginner pilots to fly. It has a large straight wing designed to give lift at low speeds.

Find another aircraft in this building that also has straight wings

What is it called?

What is it used for?

What is its top speed?

The Tornado F3 could fly at 1450mph. How much faster is it than the aircraft you have found?

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