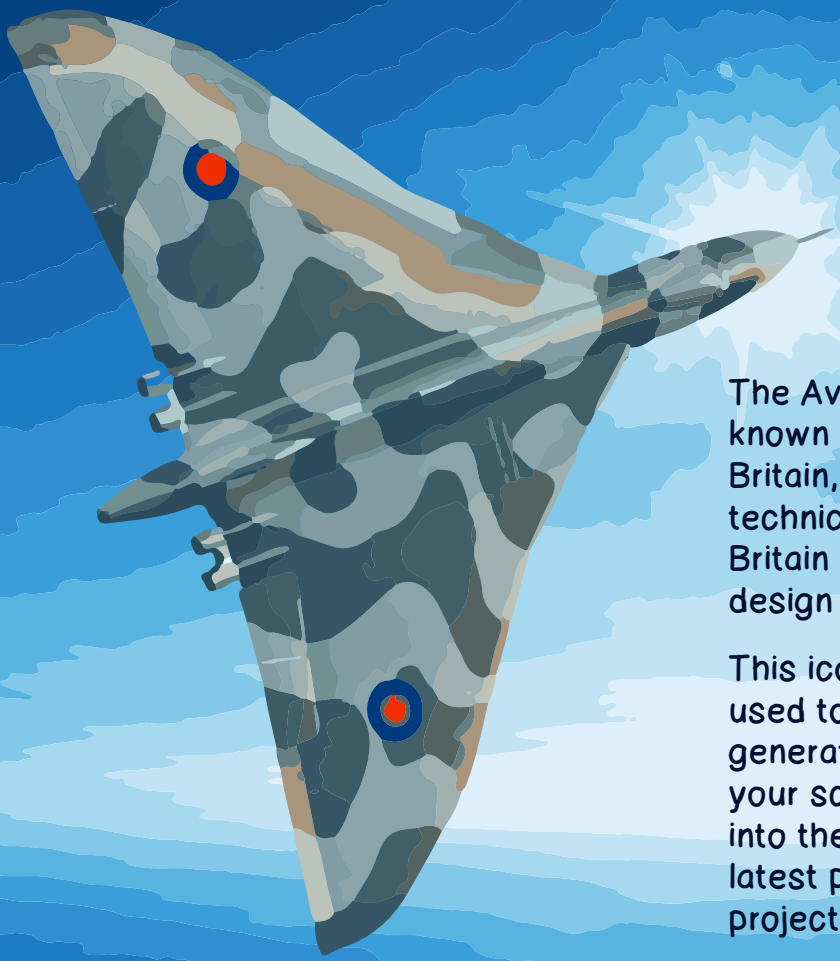
Dr Pleming's Operation Vulcan

DESIGN PROJECT 2023/24

PRIMARY

An innovative and fun project for Year 5 & 6 Students



The Avro Vulcan XH558, also known as The Spirit of Great Britain, with its impressive technical innovations, helped place Britain at the forefront of aviation design nearly 70 years ago.

This iconic aircraft is now being used to enthuse and inspire future generations. Here is a chance for your school and students to get into the spirit and take part in our latest primary schools design project.

VULCAN TO THE SKY TRUST
HONOURING THE PAST, INSPIRING THE FUTURE

in partnership with

work-wise
INSPIRING SKILLS AND EMPLOYABILITY

HISTORY

Seventy years ago, Britain led the world in aircraft design, and it was then that the famous Avro Vulcan was born. It still remains one of the best examples of aerospace innovation and engineering, combining the requirements of a bomber with the performance and agility of a jet fighter. This is its story...

Following the end of the Second World War in 1945, tensions started to grow between two sides: the USA and Western Europe on one side, and Russia and Eastern Europe on the other. Both sides were also starting to develop nuclear weapons to defend themselves against attack by the other side, and this gave rise to what became known as the Cold War – something that lasted for another 45 years.

In 1947 The British Government held a competition to design an aircraft that would be bigger and faster to carry the bombs that would be our nuclear deterrent.

Avro put forward the Vulcan design which led to the first full size Vulcan taking to the skies in 1952. Over a period of 32 years, a total of 134 Vulcans were made, and towards the end of the Cold War, many aircraft were converted from bombers to reconnaissance aircraft and fuel-carrying tankers.

The Vulcan played a famous part in the battle for the Falkland Islands between Britain and Argentina in 1982 - in fact, this was the only time the aircraft saw active service within a war .They served the RAF up until 1984, when they were finally grounded, with the exception of one...

VULCAN XH558

Vulcan XH558 was built in 1960 and chosen by the RAF in 1984 to remain in operation as a display aircraft. Over the years XH558 performed at air displays in front of millions of people until the Ministry of Defence discontinued the Vulcan Display Flight. In 1993, XH558 – the last Vulcan in RAF service – landed for what many believed was the final time.

However, one person was not going to let the Vulcan disappear from our history. In 1997, Dr Robert Pleming began the journey to restore XH558 and put her back into the skies. When the Vulcan was bought from the MOD, the purchase included an almost complete library of original documentation and design data, and several hundred tons of spare parts which were invaluable to the project. After many years of modifications and repairs, Vulcan XH558 finally returned to the skies in 2007, and thrilled spectators at air displays all over the world until 28 October 2015, when it was grounded for the final time.

Vulcan XH558 has now started the next chapter in its story, helping young people think about and explore some of the current and future questions in aviation, aerospace, and more broadly around future technologies and sustainability, learning the lessons from the past and using these to inspire the future.

Dr Pleming's Operation Vulcan
PRIMARY SCHOOL DESIGN PROJECT

We would like students from Year 5 or 6 to create sustainable models of Vulcan XH558 to be displayed as part of an Operation Vulcan Squadron at Get up to Speed with STEM on 20 March 2024.

These models can be created individually or as a team. All entries will be judged by visiting VIPs on the day, and the winners will be announced after the event.

The winning team and their class will be invited for a trip to see Vulcan XH558 close up, explore the aircraft and meet some of the people involved in maintaining it and learn more about its story.

We would like all models to meet the following criteria:

- To use as many recycled materials as possible
- To have a wing-span of no more than 50cm
- Be sturdy enough to form part of a display
- To include a story book telling us about their aircraft, what materials were used, how they designed it and what's special about it
- Schools can make one or multiple models

PROJECT LAUNCH DAY

All teams who sign up will be invited to a hands-on project launch day in on 25 January 2024 at Magna Science Adventure Centre, during which the project will be explained in more detail and the children will be involved in a range of flight-related interactive activities which will help them understand the theory of flight and allow them to explore initial ideas for their models.

TIMELINE

NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG

November 2023
Invitations to enter - **Closing date for registration Friday 15 December 2023**
Places will be booked on a first come first served basis.

25 January 2024
Operation Vulcan Launch Day at Magna Science Adventure Centre

Jan – March 2024
Models to be created in school. Closing date for submission entries **Friday 8 March 2024**

20 March 2024
Vulcan Squadron Display at Get up to Speed with STEM at Magna Science Adventure Centre. VIPs to pick the winning entry.

Summer Term –
Winning team and their class to visit Vulcan XH558.

The project is free to enter. To sign up for this project, please complete the on line booking form here **https://bit.ly/operationvulcan** or for more information e-mail Emily Woods at emily@work-wise.co.uk. Note the closing date for registration is **15 December 2023**.