

HISTORIC HANGARS

Teacher, Group Leader and Parent Guide Notes

These notes are for any teachers, parents or group leaders using the Numeracy Trail Discovery Sheet for Key Stage Two in Historic Hangars. We have sheets available for Bomber Hall and Milestones of Flight. These notes are to help you complete the tasks successfully. However, the emphasis of this trail is not to answer all the questions correctly, but to learn to approach numeracy confidently. We hope this is achieved with relation to our aircraft collection. The tasks can be completed in any order following the section headings.

→ **The first question is situated in the Whirling Wings (Helicopters) section.**

Looking at the Merlin Helicopter:

This helicopter needs the same amount of fuel as 70 average size family cars. The children are asked to find out how much fuel this would be. They are given a figure of 50 litres (as an example of the amount of fuel an average size family car can hold). It is expected that the children will do the following calculation **$50 \times 70 = 3500$ litres**. This is a large calculation and it may be easier to prompt the children to do **$5 \times 7 = 35$** and **$10 \times 10 = 100$** , and then to complete the calculation **$35 \times 100 = 3500$ litres**.

The children are then asked to guess how many helicopters there are in this section and then to count the exact number. They are then asked to state whether this was close to their original guess. On rounding the exact number of helicopters to the nearest ten it is most likely that the number will be **10**. They are then expected to use this number to estimate the amount of aircraft in the hall, their estimate should be **50**. There are less than 50 aircraft in the hall, but the exercise aims to get children using this approximate method rather than to gain an exact figure.

→ **The next question is situated in the Wings Over Waters Section**

The children are asked to find the **Bristol Beaufighter TFX**. Situated towards the tail end there are some numbers: **253**. They are asked to write these numbers down and then to rearrange them to create the biggest number they can: **532**. They are then asked to find the smallest number they can by rearranging the three numbers: **235**.

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- The next question requires the children to look at the Southampton Flying Boat.

The children are asked to find the approximate surface area of one side of the Flying Boat, $15 \times 2 = 30 \text{ m}^2$. The total surface area would then be 60 m^2 this would require 6 pots of paint ($60 \div 10$). At £15 each this means the total cost to paint the Flying Boat would be £90.

- The following question also takes place in the Wings Over Water Section of Historic Hangars.

The children are given a table of values and asked to plot Speed versus Loaded Mass on the graph given. They are then asked to answer some simple questions. There should be a **weak, positive correlation** and a line of best fit can be drawn.

- The remaining questions are situated in the RAF Overseas Section and relate to monoplanes and biplanes.

The children are asked to create a tally chart of the number of monoplanes and biplanes and then to use this information to draw a **Bar Chart**. This information is then used for further questions. There should be approximately 7 monoplanes and 3 biplanes, thus there are more monoplanes. Therefore **monoplanes – biplanes** is equivalent to $7 - 3 = 4$.

