



Hazel Hill

World War 2 hadn't even started when the British government decided it needed a new fighter plane. Captain Frank Hill was one of the men given the job of coming up with new ideas. Most engineers thought that the new aircraft should have four machine guns. Captain Hill wanted eight. He was convinced that this would help them to win future battles.

Frank couldn't figure out a way to make the new design work. He needed help from the best mathematician he knew. He returned home one day and explained the situation to his daughter. Hazel Hill was only 13-years-old at the time. She was very talented at maths.

Hazel was born and raised in North London. She worked alongside her father to solve the problem. They finally cracked it in 1934. They didn't know how important the breakthrough was at the time. It would prove to be responsible for Britain winning one of the most important battles of World War 2.

British planes took to the skies on July 10th, 1940. They waged war on the German air force. It was the beginning of the Battle of Britain. The planes that Hazel had helped design were pivotal in Britain's victory. The Spitfire and Hurricane aircraft were both fitted with eight machine guns. This would have been impossible if it wasn't for Hazel Hill's mathematical talent.

Each of the guns was capable of firing 1,000 rounds a minute. Pilots were now able to destroy German bombers in less than 2 seconds. This was how long they could keep them in their sights for. If they'd only had four guns, it would have meant doubling back for a second attack. British planes were now far superior to the Luftwaffe.

By the end of October 1940, Britain was victorious. Germany had failed in its attempt to destroy Britain's air force. Hitler had hoped that defeating the British in the air would force them to surrender. This was one of the first major defeats for Germany during the war. As they began to realise their air attacks were unsuccessful, Germany started to attack Britain at night. This became

known as the Blitz. Even though the Spitfires could fly at night, they couldn't reach the high altitudes of the Luftwaffe bombers. They were unable to help much during the Blitz.

Despite this, the manoeuvrability and extra firepower of the Spitfire meant that it was used throughout the war. They were responsible for shooting down over 500 enemy planes during the Battle of Britain alone. She didn't know it at the time, but Hazel's ideas had helped to win the battle before it even began.

VOCABULARY FOCUS

1. Find a word that tells you Hazel Hill was good at maths.
2. Which word tells you that Hazel and her father had solved a problem?
3. What does the word "pivotal" tell you about Hazel's designs?
4. Find a word in the text that is a synonym for "better".
5. What does the word "manoeuvrability" describe about a plane?

VIPERS QUESTIONS

R

Where was Hazel born?

S

Why did the eight guns help British planes to defeat the German air force?

I

Does the author think the Spitfires were important planes during the Battle of Britain?
What tells you this?

I

True or false: Spitfires were very important during the Blitz.

R

When did the Battle of Britain end?

Answers:

1. Talented/talent
2. Cracked
3. They were very important
4. Superior
5. How well/easily it moves in the sky

R: North London

S: They could fire more bullets and bring down a plane in 2 seconds. This meant that they didn't have to go back for a second attack.

I: Yes. There is a lot of information about how successful the plane was.

I: False - they couldn't fly high enough

R: The end of October, 1940 (31st October 1940)