

# RGS Cryptography Quiz

**Always wanted to be a code breaker? Then have a go at our special RGS-themed cryptography quiz!**

Our Year 7 students faced these questions for their assessment in 2025, cracking codes all based on the story of RGS Newcastle during the Second World War.

Work your way through the document, writing the answers in the tables provided. You can find the answers to each cipher on pages 9-10. Good luck!

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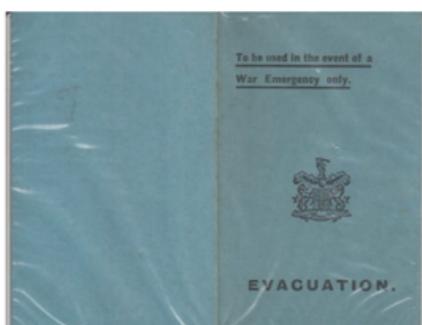
## **Sunday 3rd September 1939 - Prime Minister Neville Chamberlain Announces Britain is at War**

Two days before this announcement, after a week of waiting, RGS Newcastle had been evacuated to Penrith, escaping the "danger area" of Newcastle just before World War II began.



Picture these boys (as it was then a single-sex school) all lined-up outside Eskdale Terrace. They are wearing their uniforms of blue blazer and cap, carrying one bag each labelled with their name and student number, as well as a cardboard box containing their gas mask. For some, this would have been their first ever day at school. For others familiar with our halls and corridors, many would never walk them as students again.

Now to Central Station: a long trail of almost 800 schoolboys winding their way through the city. They board a train for Penrith, Cumbria, and say goodbye to Newcastle – who knows when they will return?



RGS is and always has been a day school. Most boys would never have experienced being away from their families overnight, and certainly not for any extended length of time. How would the boys have been feeling at this upheaval? What must it have been like to leave families behind in a danger area? When would they see them again?

**Decipher your first message below to find the name of the school that RGS partnered with in Penrith, sharing buildings while they were there.**

You could say that the boys and teachers were transposed to another school because of the events of 3rd September...



Cipher 1	
Cipher Text	QamubaeeretSnhcEGhIroiaozml
Plain Text	
Cipher Used	
Key Used	

In September 1939, the Ministry of Home Security was established which was responsible for all central and regional Civil Defence organisations. Great Britain was divided into 12 Civil Defence Regions during the war, with a Regional Commissioner having direct control over each area if an invasion was to take place. The role of Civil Defence was about protecting Britain at home during the war, including sharing intelligence on air raids.

The Northern (No.1) Region was located in Newcastle, the original headquarters at Watson House on Pilgrim Street.

In April 1939, an Old Novo and Lord Mayor of Newcastle was appointed as Regional Commissioner for the Northern Region.

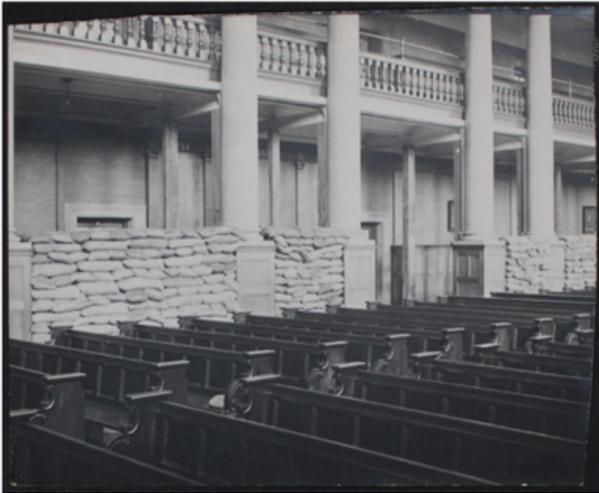


**Solve your next cipher to find out his name.**

Cipher 2	
Cipher Text	VGF JF>N<F VFLFLJ J JBUOF>
Plain Text	
Cipher Used	

When the school was evacuated to Penrith, the site was used by war time services - the school field had been taken over by the War Department, including as a space for an ammunition store; and the rifle range was used by the Home Guard. Whilst these services had tried to protect the buildings as much as possible during this time, with sandbags to protect from bomb blasts piled in the Main Hall, there would inevitably be some impact from their stay.

Some doorways had been bricked-up; three air raid shelters had been built next to the main building; and the school field was damaged.



At the time of World War II, messages were sent via telegram, using Morse code. While not a cipher in itself, it does give encoded messages. Important military messages would have been encrypted and then converted to Morse code, so people receiving them would have needed to understand Morse as well as whatever cipher was being used. The people working in the RGS buildings would probably have needed to understand Morse code.

Eventually, the Civil Defence headquarters moved to Eskdale Terrace too.

### **Decipher your next message to find out when this happened.**

Cipher 3	
Cipher Text	. - - -    .. -    - . .    /    . - - - - - - . . . . -    . - - - -
Plain Text	
Cipher Used	

A number of women worked in the Civil Defence HQ during the war. By 1944 the War Room was staffed only by women. The roles of women certainly shifted during the almost 5 years that the school buildings were being used by Civil Defence.

One of these women held the fascinating role of Regional Woman Officer. This was a unique post where her role, in her words, was to find any solutions to any issues affecting women working in any of the Regional Command Centres. She also became a Fire Guard Instructor in August 1944, responsible for training others in Civil Defence how to diffuse incendiary bombs.



She recalled, "The only real action was when I defused an incendiary [bomb] in the back garden of 265 Heaton Road." This was in fact her parents' house!

As well as working in the RGS buildings during the war, her father and son both attended the school, and she attended the girls' school at Rye Hill, in the buildings previously occupied by RGS before we moved to Eskdale Terrace.



**Decipher your next message to find out her name.**

Cipher 4	
Cipher Text	Jqjfstw Snhmtqxts
Plain Text	
Cipher Used	
Key Used	



The woman you found out about in the previous cipher also got to meet the Prime Minister when he visited RGS during the war. She wrote:

*"In the course of my duties I was able to welcome Mr Churchill - he only said "Good Morning" and gave his V sign but I was proud to have seen the mighty character who was a tower of strength to us in the dark days."*

At the height of the war, everything was somewhat turned upside down at the time of Churchill's visit.

**Decipher your next to code to find the date that he visited.**

Cipher 5	
Cipher Text	Hvevmgs lu Mlevnyvi Mrmvgvvm Uligb-Lmv
Plain Text	
Cipher Used	

Another of the women who worked here during the war was Grace Watt, a former school teacher in Gosforth, who was the first woman in England to hold her post. Her team was responsible for recording air raids in the region and their consequences, recording numbers killed or injured.

**Decipher your next message to find out the name of her role. Her job would have needed messages to be sent to London in secret - maybe this is encoded in two ways.**





It is clear that he felt Christmas celebrations were the key to making sure everyone was ready to carry on into the new year as the war continued.

**In order to decode your final cipher and find out who was playing the school organ at Christmas, you may need to find out a little about a French diplomat from the 16th century, called Blaise de Vigenère...**



Cipher 8	
Cipher Text	Upi Tsfnejv'z Nqxx
Plain Text	
Cipher Used	
Key Used	

**Congratulations! You have completed the RGS Cryptography Quiz!**

**You can check your answers on pages 9-10**



# ANSWERS

Cipher 1	
Cipher Text	QamubaeeretSnhcEGhIroiazml
Plain Text	QueenElizabethGrammarSchool
Cipher Used	Rail Fence
Key Used	9 3

Cipher 2	
Cipher Text	VGF JF>N<F VFLFLJ J JBUOF>
Plain Text	Sir Arthur William Lambert
Cipher Used	Pigpen

Cipher 3	
Cipher Text	.--- .- .- / .--- .--- .---
Plain Text	Jun 1941
Cipher Used	Morse Code

Cipher 4	
Cipher Text	Jqjfstw Snhmtqxts
Plain Text	Eleanor Nicholson
Cipher Used	Caesar Cipher
Key Used	5

