Today is the 75th Anniversary of VE day, which marked the end of the Second World War. Children in the war had been living in similar ways to you now - not going to school, not being able to visit people etc.

Codes were used to communicate between German allies. Thousands of Mathematicians were employed to try and break the codes (messages) that enemies were sending to their allies. Eventually our allies broke the code..

Read this and have go at the quiz… How much do you know about WW2?

https://www.dkfindout.com/uk/history/world-war-ii/cracking-codes/

CODE BREAKING

During **World War II**, Germany believed that its secret codes for radio messages were indecipherable to the Allies. However, the meticulous work of code breakers based at Britain's Bletchley Park cracked the secrets of German wartime communication, and played a crucial role in the final **defeat of Germany**.

The Enigma story began in the 1920s, when the German military - using an 'Enigma' machine developed for the business market – began to communicate in unintelligible coded messages. The Enigma machine enabled its operator to type a message, then 'scramble' it using a letter substitution system, generated by variable rotors and an electric circuit. To decode the message, the recipient needed to know the exact settings of the wheels. German code experts added new plugs, circuits and features to the machine during the pre-war years, but its basic principle remained the same.

The first people who came close to cracking the Enigma code were the Polish. Close links between the German and Polish engineering industries allowed the Polish Cipher Bureau to reconstruct an Enigma machine and read the Wehrmacht's messages between 1933 and 1938. In 1939, with German invasion looming, the Poles shared their information with the British, who in turn

established the Government Code and Cipher School at Bletchley Park in Buckinghamshire. Mathematicians and intelligence experts, with the help of primitive early computers, began the complex and urgent task of cracking the Enigma code.

The Germans, convinced their Enigma messages were unbreakable, used the machine for battlefield, naval, and diplomatic communications. Although the experts at Bletchley first succeeded in reading German code during the 1940 Norwegian campaign, their work only began to pay off meaningfully in 1941, when they were able to gather evidence of the planned invasion of Greece, and learn **Italian** naval plans for the Battle of Cape Matapan. In the autumn, the Allies gained advantage in **North Africa** from deciphering coded messages used by **Rommel's** Panzer Army. Information obtained from such high-level German sources was codenamed ULTRA.

The Germans also enjoyed some noteworthy code breaking successes. The B-Dienst (surveillance service) broke British Naval code as early as 1935, which allowed them to pinpoint Allied convoys during the early stages of the **Battle of the Atlantic**. Although the US altered its naval code in April 1942, the change came too late to prevent the havoc wreaked by Operation Paukenschlag, the German U-boat campaign off America's east coast early that year. The Germans also managed to crack Soviet and Danish code systems. But their efforts – fragmented and divided between rival cryptology departments - lacked the consistent success achieved at Bletchley Park.

From 1941 onwards, Bletchley's experts focused upon breaking the codes used by **German U-boats** in the Atlantic. In March 1941, when the German armed trawler 'Krebs' was captured off Norway complete with Enigma machines and codebooks, the German naval Enigma code could finally be read. The Allies could now discover where U-boats were hunting and direct their own ships away from danger.

The German Navy, rightly suspicious that their code had been cracked, introduced a fourth wheel into the device, multiplying the possible settings by twenty six. The British finally broke this code that they called 'Shark' in December 1942. Using ULTRA always presented problems to the Allies, because any too blatant response to it would cause the Germans to suspect their messages were being read. But neverthless Bletchley Park and its staff made a crucial and groundbreaking contribution to the defeat of the Axis.

Here is a famous code for you to decipher. We will be kind and give you the symbols and what they mean…

A ●—		N —●
B —●●●		O ———
C —●—●		P ●——●
D —●●		Q ——●—
E ●		R ●—●
F ●●—●		S ●●●
G ——●		T —
H ●●●●		U ●●—
I ●●		V ●●●—
J ●———		W ●——
K —●—		X —●●—
L ●—●●		Y —●——
M ——		Z ——●●

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Morse Code

Morse code is a way to send messages without using words. The code has its own alphabet made up of short and long sounds or flashes of light. Use the Morse code alphabet to translate the messages below.

1

●●● ●— ——

●● ●●●

●●—● ●—● ——— ——

●—●● ——— —● —●● ——— —●

2

●●—● ●● ●—●● ● —●——

●● ●●●

●● —●

—●—— ——— ●—● —●— ●●● ●●●● ●● ●—● ●

3

•— •—•• —••• • •—• —	
•• •••	
•—	
——• • •—• —— •— —•	
••• •——• —•——	

Use the Morse code alphabet to write this sentence in code.

L   I   L   Y   I   S   T   E   N

_____

Y   E   A   R   S   O   L   D

_____

Use basic circuit equipment (including a buzzer or light bulb) to share a message with a partner. Each dot is a short sound or flick of light and each dash is a longer sound or pulse of light.

_____

_____

_____

A •—		N —•
B —•••		O ———
C —•—•		P •——•
D —••		Q ——•—
E •		R •—•
F ••—•		S •••
G ——•		T —
H ••••		U ••—
I ••		V •••—
J •———		W •——
K —•—		X —••—
L •—••		Y —•——
M ——		Z ——••

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Morse Code **Answers**

1. SAM IS FROM LONDON
2. FILEY IS IN YORKSHIRE
3. ALBERT IS A GERMAN SPY

●—●●	●●	●—●●	—●——	
L	I	L	Y	

●●	●●●		
I	S		

—	●	—●	
T	E	N	

—●——	●	●—	●—●	●●●
Y	E	A	R	S

———	●—●●	—●●	
O	L	D	