LO
1. How to write code to solve problems
2. How spies communicated during World War 2

During the war, Britain used spies to get important information about other countries. Your challenge to help our Spy to get an important message back to Britain.

Morse Code
Messages were changed into Morse code so they can be sent a long way. Morse code uses dots "." and dashes "-".

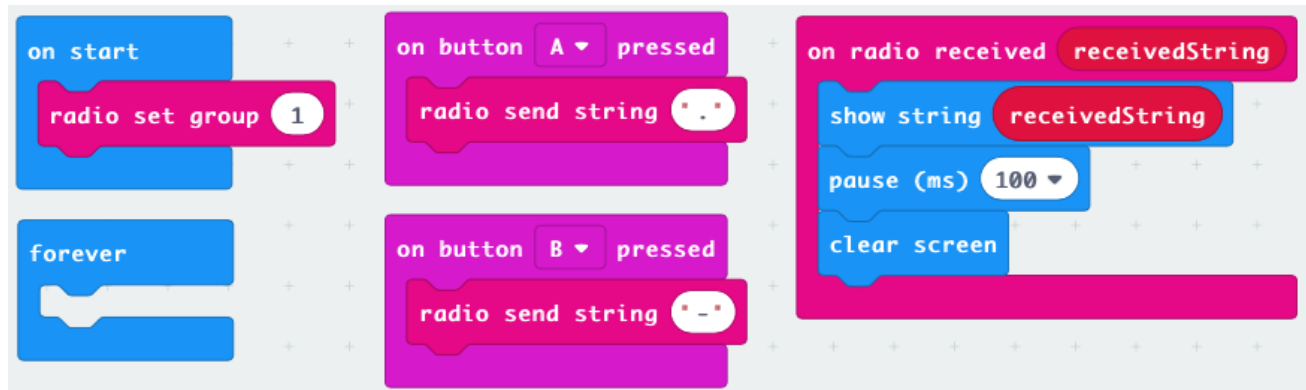Our spy wants to send
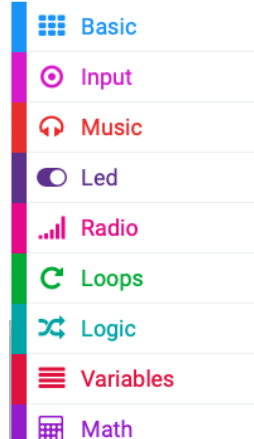
.- - - .- -.-. -.- ----. .- --

Radio
Morse code messages were sent by radio (they didn't have mobile phones)

Steps to follow for your spy radio
1. Use micro:bit editor and to follow the 'micro chat' example
2. Change it a little so it looks like the picture below
3. Now you can press A for a ".", press B for a "-", and both together to clear the screen.
4. Try it out with another group
5. What happens if you change the radio group number to 2?

	This challenge makes use of blocks from

Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
	• BASIC; where you can find
	  ○ 'show string'
	  ○ 'pause', this is hidden in the 'more' area
	  ○ 'clear screen'
	• INPUT; where you can find
	  ○ 'on button pressed'
	• RADIO; where you can find
	  ○ 'radio set group'
	  ○ 'radio send string'

Example completed project https://makecode.microbit.org/_XLd4J5XCei7w

SPY

A spy must first code the message they need to send into Morse Code.

- Use the boxes below and the Morse Code Sheet to write your Morse code message.
- Here's how to do it:

Letter	H	E	L	P	
Morse	. . . .	.	. ⁻ . .	. ⁻ ⁻ .	

Your message (no more than 15 letters):

Letter					
Code					

Letter					
Code					

Letter					
Code					

Questions:

Did you find it easy to write your message?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

What do you think makes a good spy?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

All countries know Morse code. How could a spy stop everyone reading the message?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

Listening Station

At a listening station in the war, a radio operator would listen to the Morse code and write them down on sheets of paper to be decoded.

Code					
Letter					

Code					
Letter					

Code					
Letter					

Questions:

Is it easily being a radio operator?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

What can be the problem?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

What do you think made someone good at the job?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

MORSE CODE

This code was used in the war to send messages by radio or flashing lights.

A 'dot' is a short 1 second beep on a radio

A 'dash' is a long 2 second beep on a radio

After each sending all the dots and dashes for a letter you leave a 4 second gap
- This is so anyone listening knows that was the end of a letter or the message

Questions:

Can you make your name in Morse code?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

Can you make your find the Morse code number for your age?

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..