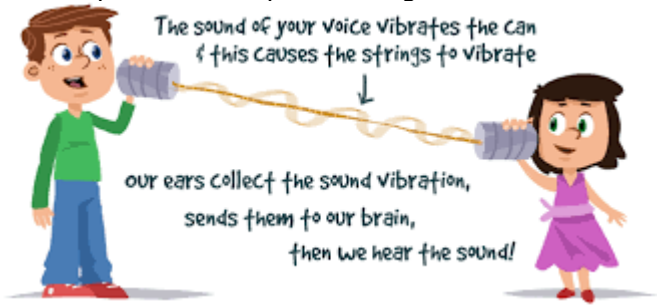
VE Day Sound communications

For this investigation you are going to try out your skills of silent messaging that was used to send information during the wars.
One of the most common codes to use is **Morse Code**. This represents the whole alphabet using dots (short taps) and dashes (longer taps).

You can use Morse code in a number of ways. It works with sound as well as light (investigation 1). You're going to use it with a string telephone, and send a simple message from one side of the room to the other.

Resources: Paper or plastic cups (or recycle a tin cans with the help of an adult)
String

- Get 2 cups/tins and connect them together with string. (It can be taped on if you haven't got disposable cups) The length and thickness of string can be changed to see which has the best results! (These are the variables-posh scientific word!!)
- Make sure the string can be pulled tight without it coming detached from the cup.
- Try the string phone out using a voice message first. If you can't hear anything you may need to reattach the string or make it shorter and tighter. The voice may not be that clear but don't worry about that.
- Think up a simple message to send to someone else and write it down.
- Use the Morse code sheet on next page to find the correct pattern for each letter.
- Practice your message sending skills by tapping on one cup.
- Send to another member of your family across the room.
- Can they understand your message?



Remember to send me your pictures or experiences of how it went.

VE Day Light communications

Flashing lights – Morse code

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	— — . .

1	. — — — —	6	— . . . .
2	. . — — —	7	— — . . .
3	. . . — —	8	— — — . .
4	. . . . —	9	— — — — .
5	. . . . .	10	— — — — —

VE Day Sound Communications.

The science behind it:

Sound waves are created when sounds make vibrations in the air. In this activity, your voice vibrates the air inside the cup, which are then transferred to the bottom of the cup. The bottom of the cup passes the sound waves to the string, and so on to the other cup. You can hear surprisingly far using a string telephone if held the right way!

If the string is kept tight, the sound waves will travel. If the string is loose, the sound is less. This is because the lose string causes the vibrations to travel all around rather than directly down the string. Try experimenting with different lengths of string, types of string, and types of cups to see which produces the best sound over the longest distance.

Old landline phones were created using the same principle as a string telephone. The sound waves are turned into an electrical signal that can travel much farther than a simple string.

Talking points:

Want a further challenge?

- Can you create a way to get a message around a corner?
- Can you use other materials to create a clearer phone line?
- Can you get a message to someone upstairs when you are downstairs using taps on a cup?

https://raisinglifelonglearners.com/string-telephone-explanation/