Binary Numbers

Binary is a way of counting that uses only two numbers: 0 and 1

Binary is the way that computers count and store data - even photographs, videos and audio files are stored using **binary digits**

Binary Numbers

0

1

Binary Numbers

We usually count in **decimal numbers** (denary)

Decimal numbers go from 0 to 9

We call this **Base 10**

Binary Numbers

An example of a decimal number is:

1024

This has four columns of numbers - thousands, hundreds, tens and units

Binary Numbers

Binary numbers can only use 0 and 1

Here’s a binary number:

10

This number has two columns - the 1 and the 0

Binary Numbers

10 is the third binary number:

00

01

10

What comes next?

Binary Numbers

		2s	1s

Don’t forget - you can only use 1s and 0s

Binary Numbers

	4s	2s	1s

Don’t forget - you can only use 1s and 0s

Binary Numbers

8s	4s	2s	1s

With 4 binary digits the highest number we can make is:

8 + 4 + 2 + 1 =

Binary Numbers

You need to be able to deal with 8 digit binary numbers.

Keep doubling each time:

128s	64s	32s	16s	8s	4s	2s	1s
0	0	1	0	1	1	0	0