Binary Code Challenge

DID YOU KNOW?....

Computers and Apps have their own language. It's called Binary Code and allows them to communicate numbers, letters, symbols and even sounds and videos to one another using just two digits: 0 and 1.

A binary string with 8 bits or 'Binary Digits' is called a 'byte' and there are 256 possible order combinations of the 0s and 1s in each byte!

Luckily for us each letter of the alphabet has a specific combination of bits. For instance, an uppercase 'A' is written with the binary code 01000001 but a lower case 'a' is written 01100001.

Not all binary codes represent letters. If we use the ASCII binary code for each letter, we can translate words into strings of 8 bit binary code.



Using the Binary Code Sheet and Translation Sheet below write a short Christmas greeting and translate it into 8 bit binary code. You will need to write your message vertically on the Translation Sheet and might need more than one sheet if it's a long message!!

Choose one colour paper to represent the '1 and a different colour paper to represent the 0'.

Cut strips of each colour paper approximately 1cm wide and 14 cm long.

Start with the first letter in your message. For the first binary number make a circle with the coloured strip using sellotape. Then continue with the next binary number colour but join it to the first to make a paper chain. Repeat for each of the letters in your message so you create a long paper chain of Binary Code.

When you have finished your paper chain hang it in the house and see if your family members can work out what your Christmas message says! Our team would love to try and work it out so please load your photos to our Facebook page.



BELOW: Example of Binary Code paper chain.



Equipment List

 2 different coloured papers – you can use different sheets of wrapping paper or card stock or you can even paint sheets of newspaper.



- Scissors
- Glue or sellotape











A	01000001
В	01000010

C 01000011

D 01000100

E 01000101

F 01000110

G 01000111

H 01001000

01001001

J 01001010

K 01001011

L 01001100

M 01001101

N 01001110

O 01001111

P 01010000

Q 01010001

R 01010010

S 01010011

T 01010100

U 01010101

V 01010110

W 01010111

X 01011000

Y 01011001

Z 01011010





Translation Card

Your letter	Binary Code