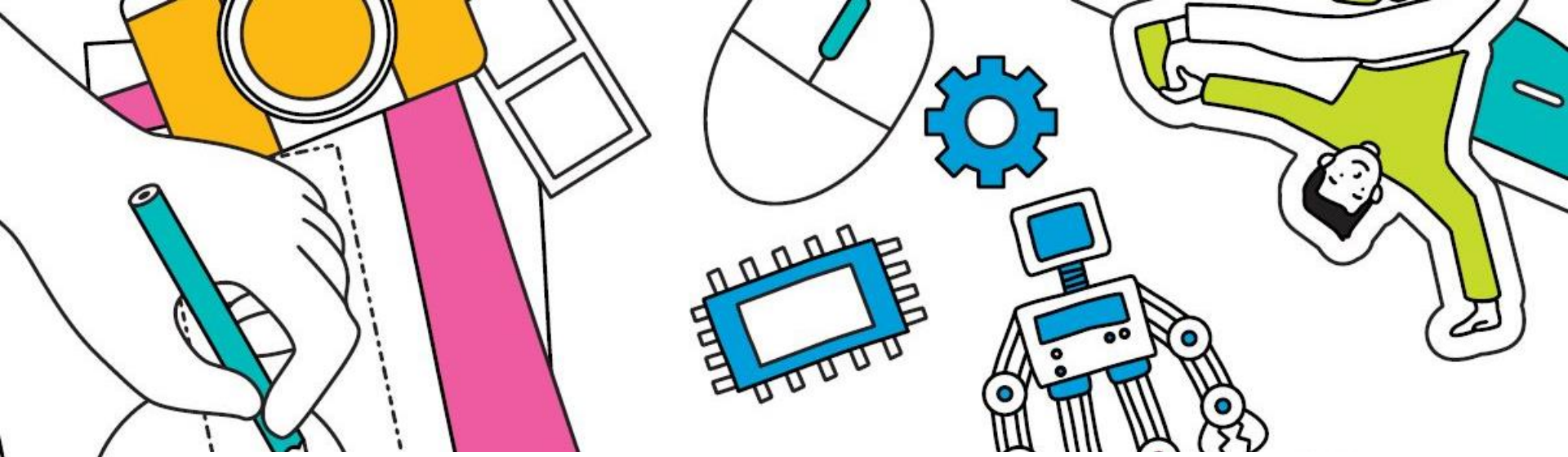


TWEENS DIY PACKAGE SECRET MESSAGES

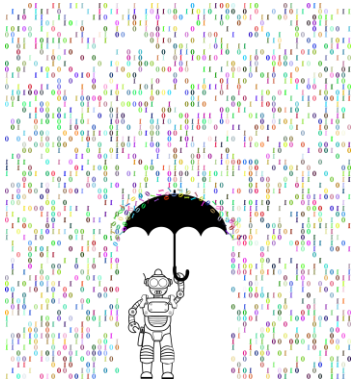
This programme provides Tweens the creative space to problem-solve through a do-it-yourself activity. Just follow the instructions and have fun!

DID YOU KNOW?

A cipher is a special code. It does not require a codebook to figure out the secret message, but relies on mathematics to keep messages secret. The more complex the mathematics is, the harder the secret message is to crack.

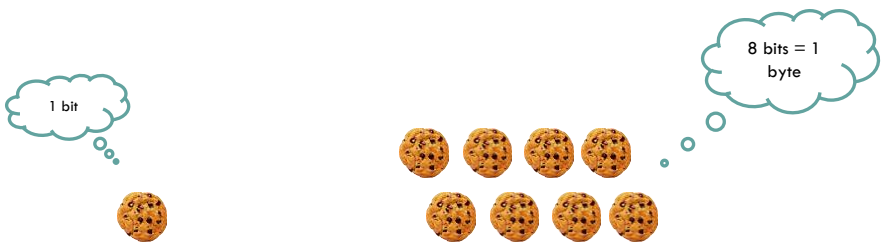
Source: Schwartz, E., & Williams, L. (2019). Can you Crack the Code? New York, NY: Bloomsbury Children's Book.

BINARY CODE



Computers use the binary system to process information. This system uses only two digits to represent information: 0 or 1.

The binary system is made up of bits. Eight bits make a byte. The grouping of bytes can represent numbers from 0 to 255. This collection of numbers forms the ASCII (pronounced as as-kee), which stands for American Standard Code for Information Exchange. ASCII is used as a character encoding standard, which combines one language character with another, for electronic communication.



Source: Binary Art Decoding. (2020, April 17). Retrieved September 12, 2020, from https://kids.discoveryplace.org/huntersville/stay-at-home-science/binary-art-decoding
Encyclopedia Character encoding (n.d.). Retrieved September 12, 2020, from: http://encyclopedia.kids.net.au/page/ch/Character_encoding

CAN YOU DECODE OUR SECRET MESSAGE?

Use the **ASCII BINARY CHARACTER TABLE** as a guide to decode our 2-part secret message.

ASCII BINARY CHARACTER TABLE

A	0100 0001	a	0110 0001	0	0011 0000
B	0100 0010	b	0110 0010	1	0011 0001
C	0100 0011	c	0110 0011	2	0011 0010
D	0100 0100	d	0110 0100	3	0011 0011
E	0100 0101	e	0110 0101	4	0011 0100
F	0100 0110	f	0110 0110	5	0011 0101
G	0100 0111	g	0110 0111	6	0011 0110
H	0100 1000	h	0110 1000	7	0011 0111
I	0100 1001	i	0110 1001	8	0011 1000
J	0100 1010	j	0110 1010	9	0011 1001
K	0100 1011	k	0110 1011	.	0010 1110
L	0100 1100	l	0110 1100	,	0010 1100
M	0100 1101	m	0110 1101	:	0011 1010
N	0100 1110	n	0110 1110	;	0011 1011
O	0100 1111	o	0110 1111	?	0011 1111
V	0101 0000	p	0111 0000	!	0010 0001
Q	0101 0001	q	0111 0001	#	0010 0011
R	0101 0010	r	0111 0010	&	0010 0110
S	0101 0011	s	0111 0011	‘	0010 0111
T	0101 0100	t	0111 0100	“	0010 0010
U	0101 0101	u	0111 0101	-	0010 1101
V	0101 0110	v	0111 0110		
W	0101 0111	w	0111 0111		
X	0101 1000	x	0111 1000		
Y	0101 1001	y	0111 1001		
Z	0101 1010	z	0111 1010		

Message 1:

01000111 01110010 01100101 01100001
01110100 00100001 00100000 01000011
01100001 01101110 00100000 01111001
01101111 01110101 00100000 01100100
01100101 01100011 01101111 01100100
01100101 00100000 01110100 01101000
01100101 00100000 01101110 01100101
01111000 01110100 00100000 01101101
01100101 01110011 01110011 01100001
01100111 01100101 00111111

Source: Binary Bracelets. (2020, April 14). Retrieved June 3, 2020, from https://www.discoveryplace.org/stay-at-home-science/binary-bracelets

CAN YOU DECODE OUR SECRET MESSAGE?

Congratulations! Now, let's see if you can crack this next message.

ASCII BINARY CHARACTER TABLE

A	0100 0001	a	0110 0001	0	0011 0000
B	0100 0010	b	0110 0010	1	0011 0001
C	0100 0011	c	0110 0011	2	0011 0010
D	0100 0100	d	0110 0100	3	0011 0011
E	0100 0101	e	0110 0101	4	0011 0100
F	0100 0110	f	0110 0110	5	0011 0101
G	0100 0111	g	0110 0111	6	0011 0110
H	0100 1000	h	0110 1000	7	0011 0111
I	0100 1001	i	0110 1001	8	0011 1000
J	0100 1010	j	0110 1010	9	0011 1001
K	0100 1011	k	0110 1011	.	0010 1110
L	0100 1100	l	0110 1100	,	0010 1100
M	0100 1101	m	0110 1101	:	0011 1010
N	0100 1110	n	0110 1110	;	0011 1011
O	0100 1111	o	0110 1111	?	0011 1111
V	0101 0000	p	0111 0000	!	0010 0001
Q	0101 0001	q	0111 0001	#	0010 0011
R	0101 0010	r	0111 0010	&	0010 0110
S	0101 0011	s	0111 0011	'	0010 0111
T	0101 0100	t	0111 0100	"	0010 0010
U	0101 0101	u	0111 0101	-	0010 1101
V	0101 0110	v	0111 0110		
W	0101 0111	w	0111 0111		
X	0101 1000	x	0111 1000		
Y	0101 1001	y	0111 1001		
Z	0101 1010	z	0111 1010		

Message 2:

01001100 01101111 01101111 01101011 00100000
01101111 01110101 01110100 00100000 01100110
01101111 01110010 00100000 01101101 01101111
01110010 01100101 00100000 01100001 01100011
01110100 01101001 01110110 01101001 01110100
01101001 01100101 01110011 00100000 01101111
01101110 00100000 01101111 01110101 01110010
00100000 01000100 01101001 01110011 01100011
01101111 01110110 01100101 01010010 01100101
01100001 01100100 01110011 00100000 01110111
01100101 01100010 01110011 01101001 01110100
01100101 00100001

Source: Binary Bracelets. (2020, April 14). Retrieved June 3, 2020, from https://www.discoveryplace.org/stay-at-home-science/binary-bracelets

CAN YOU DECODE OUR SECRET MESSAGE?

Did you manage to crack this message correctly?

Message 1:

01000111 01110010 01100101 01100001
01110100 00100001 00100000 01000011
01100001 01101110 00100000 01111001
01101111 01110101 00100000 01100100
01100101 01100011 01101111 01100100
01100101 00100000 01110100 01101000
01100101 00100000 01101110 01100101
01111000 01110100 00100000 01101101
01100101 01110011 01110011 01100001
01100111 01100101 00111111

Message 1:

Great! Can you decode the next message?

Source: Binary Bracelets. (2020, April 14). Retrieved June 3, 2020, from https://www.discoveryplace.org/stay-at-home-science/binary-bracelets

CAN YOU DECODE OUR SECRET MESSAGE?

Did you manage to crack this message correctly?

Message 2:

01001100 01101111 01101111 01101011 00100000
01101111 01110101 01110100 00100000 01100110
01101111 01110010 00100000 01101101 01101111
01110010 01100101 00100000 01100001 01100011
01110100 01101001 01110110 01101001 01110100
01101001 01100101 01110011 00100000 01101111
01101110 00100000 01101111 01110101 01110010
00100000 01000100 01101001 01110011 01100011
01101111 01110110 01100101 01010010 01100101
01100001 01100100 01110011 00100000 01110111
01100101 01100010 01110011 01101001 01110100
01100101 00100001

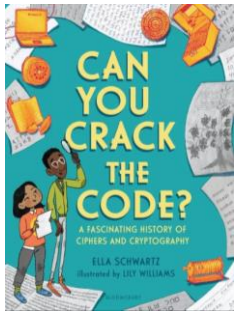
Message 2:

Look out for more activities on our DiscoveReads website!

Source: Binary Bracelets. (2020, April 14). Retrieved June 3, 2020, from https://www.discoveryplace.org/stay-at-home-science/binary-bracelets

LEARN MORE ABOUT IT!

Read more about Cryptography:



Title: Can you Crack the Code?: a Fascinating History of Ciphers and Cryptography

Author: Ella Schwartz & Lily Williams

Publisher: Bloomsbury Publishing, 2020

This book is available on Overdrive at https://nlb.overdrive.com/media/4721381

Read more about Coding:

Title: What is Coding? (Computers and Coding)

Author: Steffi Cavell-Clarke & Thomas Welch

Publisher: KidHaven Publishing, 2019

This book is available in the library at J 005.1 CAV