

Binary Bracelets

a Coding Lesson



Introduction



What language do computers speak?

Introduction



Binary!

Introduction



Check out this video about binary language:
<http://www.smugmug.com/gallery/n-R8WZR/>

Hands-On



Now, using the
Binary Decoder Key →
decode the message!

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	■□■□ □■■□

Hands-On: Challenge!

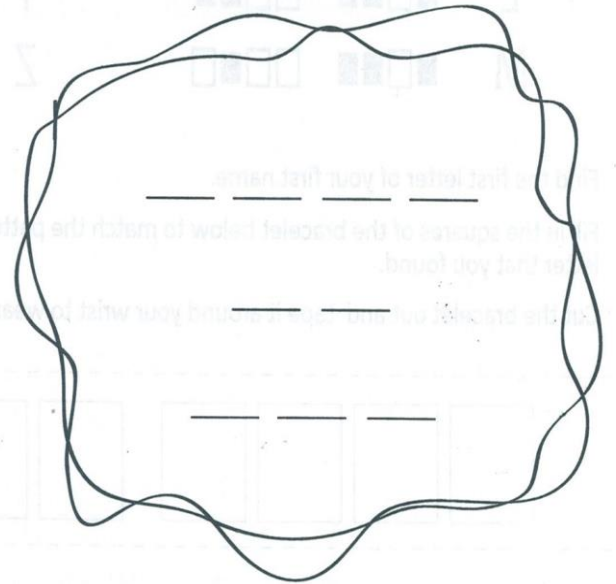


A	■□■□	■□■□	N	■□■□	□□□■
B	■□■□	■□■□	O	■□■□	□□□□
C	■□■□	■□■□	P	■□■□	■□■□
D	■□■□	■□■□	Q	■□■□	■□■□
E	■□■□	■□■□	R	■□■□	■□■□
F	■□■□	■□■□	S	■□■□	■□■□
G	■□■□	■□■□	T	■□■□	■□■□
H	■□■□	□□■□	U	■□■□	■□■□
I	■□■□	□□■□	V	■□■□	■□■□
J	■□■□	□□■□	W	■□■□	■□■□
K	■□■□	□□■□	X	■□■□	□□■□
L	■□■□	□□■□	Y	■□■□	□□■□
M	■□■□	□□■□	Z	■□■□	□□■□

Binary Decoder Key

Can you figure out what the message says?

■□■□ ■□■□ _____
 ■□■□ □□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____
 ■□■□ ■□■□ _____



Hands-On



Now that you know what you are doing let's personalize the project and make yourself a coding souvenir!

Using the Binary Decoder Key *plus* your WORD table skills, make a binary bracelet with the first and last initial of your name. Then print it out on the classroom printer.

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	■□□□	□□□■

NOTE: Use portrait orientation

Hands-On



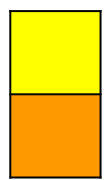
A	■□■□	■□■□
B	■□■□	■□■□
C	■□■□	■□■□
D	■□■□	■□■□
E	■□■□	■□■□
F	■□■□	■□■□
G	■□■□	■□■□
H	■□■□	■□■□
I	■□■□	■□■□
J	■□■□	■□■□
K	■□■□	■□■□
L	■□■□	■□■□
M	■□■□	■□■□
N	■□■□	■□■□
O	■□■□	■□■□
P	■□■□	■□■□
Q	■□■□	■□■□
R	■□■□	■□■□
S	■□■□	■□■□
T	■□■□	■□■□
U	■□■□	■□■□
V	■□■□	■□■□
W	■□■□	■□■□
X	■□■□	■□■□
Y	■□■□	■□■□
Z	■□■□	■□■□

The Binary Decoder Key

Hands-On Example



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	■□□■ □□□■



- The first letter of my first name (Angela)
- The first letter of my last name (DeHart)

NOTE: Use portrait orientation

Hands-On



Now cut the bracelet out, recycle the unused portion of the paper, tape the bracelet around your wrist and wear it home!

Explain your bracelet to your family!