Can you spell your name like a computer?

1. Look at the table of letters and the 8 matching *binary* ones and zeros below.

2. Spell your name by setting the switches for each letter:
   UP for 1   **DOWN for 0**

3. Press the green **ENTER** button to put each letter onto the screen.
   If you make a mistake, push the red **RESET** button to erase and start over.

The code is called **A S C I I**, the initials for **A**merican **S**tandard **C**ode for **I**nformation **I**nterchange, and we pronounce it "ask-ee".
Here are the codes for the alphabet in capital letters:

A	0100 0001	I	0100 1001	Q	0101 0001	Y	0101 1001
B	0100 0010	J	0100 1010	R	0101 0010	Z	0101 1010
C	0100 0011	K	0100 1011	S	0101 0011		
D	0100 0100	L	0100 1100	T	0101 0100		and for fun, here's:
E	0100 0101	M	0100 1101	U	0101 0101	!	0010 0001
F	0100 0110	N	0100 1110	V	0101 0110		
G	0100 0111	O	0100 1111	W	0101 0111		
H	0100 1000	P	0101 0000	X	0101 1000		

Question: *If computers only know about 1's and zeros, how do computers make letters?*

Answer: *Computer makers created a **CODE** that turns **NUMBERS** into **LETTERS**.*

8 binary digits (bits) are called a "byte", and 4 binary digits are called a "nibble"
4 binary digits can represent the decimal numbers 0 through 15
Computer People use the letters A, B, C, D, E, and F for 10 through 15
so that they can represent four bits with just one number or letter:
"0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F"