



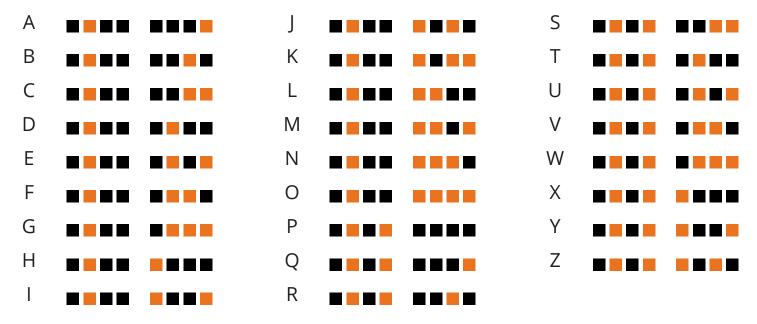






Binary Bracelets

A Bracelet that Spells out a Word in Binary



- 1. Write out the letters of a word you want to put on your bracelet.
- **2.** Tie a knot in one end of the elastic string to keep the beads from sliding off when you add them.
- **3.** Slide beads onto the elastic in the order of the letters, according to the table above.
- **4.** Make sure the order is right.
- **5.** Tie a knot on the second end of the elastic to keep the beads from sliding off.
- **6.** Tie a knot connecting the two ends of the elastic, cut off excess elastic, and your bracelet is ready to put on your wrist!
- **7.** Count how many bytes are in your bracelet! (Hint: It equals the number of letters in the bracelet!)

What is Binary?

- Humans use a "base 10" numbering system because we count things using our 10 fingers. Each finger represents a digit from 0 to 9. Each number in our base 10 number system is made of a string of digits from 0 to 9.
- Computers, however, use a binary system. They count in "base 2" because their switches have only two options: off and on. In binary code, there are only two digits: 0 and 1. Zero represents "off" and 1 represents "on." In binary each number is represented by a string of 0s and 1s. Every 0 or 1 in the string is called a "bit," and a string of 8 bits is called a "byte." Back in 1963 each letter of the alphabet (along with all of the other symbols on a keyboard) were assigned a standard byte, as shown in the table above. Black represents 0 and orange represents 1.



Sample bracelet that reads "liger"

















