Make a Modular Bead Bracelet

Make a mod 8 bracelet:

Choose a color to represent numbers 0 through 7.

Choose a number between 1 and 7.

Start your bracelet with a zero bead. Add your number to this, find the equivalent mod 8, and put on the next bead.

Add your number to the previous number, find the equivalent mod 8, and put on the next bead. Continue until you have enough beads on your string to make a bracelet.
Here's how it works if you choose 5 for your number:

My color choices

0  1  2  3  4  5  6  7

The bracelet

0  0+5  5+5  2+5  7+5  4+5  1+5  6+5  3+5  0+5

=5  =2  =7  =4  =1  =6  =3  =0  =5

5 + 5 = 2???

It's equivalent to 2 in mod 8, because 5 + 5 = 10, and 10 - 8 = 2.
Experiment with some variations:

1. Try choosing different numbers to add, maybe 4 instead of 5, and see what happens to the pattern.

2. Make a mod 10 or a mod 12 bracelet.

3. Make a mod 10 Fibonacci bracelet. Start your bracelet with any two bead colors. Add the two numbers which go with those colors and find the equivalent mod 10. Put that color bead on the string. Continue adding the numbers of the last two beads on the string to get the next color until you have enough beads on the string to make a bracelet.