Craft Your Own DNA Wrist Bracelet

Major concepts

DNA, deoxyribonucleic acid, is the chemical name for the molecule that carries genetic instructions in all living things, from microbes to plants to insects to fish to human beings. DNA is made up of four types of chemical building blocks called nucleotides. These blocks – adenine, thymine, cytosine and guanine – are abbreviated with the letters A, T, C and G.

Objectives

- Learn that all living things have their own unique DNA sequence
- made up of four nucleotides –adenine, thymine, cytosine and guanine – abbreviated with the letters A, T, C and G Build a wrist bracelet using colorful beads that correspond to the four nucleotides from the real DNA sequence of an organism.

Materials (per person)

- Elastic cord
- Beads (4 colors)
- Scissors
- DNA sequence of an organism (link to pdf)
- Activity worksheet (link to pdf)

Procedures

1. Gather your materials and choose a DNA sequence of an organism from the link above.
2. On the activity worksheet at the link above:
   a. Write down the name of the organism you choose.
   b. Next, in the blank next to each nucleotide (A, C, T, G), write down the color of bead you want to use for each nucleotide. For instance, if you have a blue bead and you want to use if for "Guanine," then "G" will always be blue.
   c. Last, look at your organism's DNA sequence and choose a 15-letter section of sequence. Write that DNA sequence down under "Sequence Chosen."
3. Next, tie a loose double knot on one end of the elastic about 1 inch from the top:

4. Next, start beading your bracelet. The first bead that you place on the elastic will correspond to the first letter of your DNA sequence. You will continue adding beads corresponding to the sequence until you have put all 15 beads on the elastic.
5. Tie a double knot at the other end of the elastic and leave about an inch or so of elastic on the end after the knot. .
6. Lastly, tie the two ends together to form your wrist bracelet and cut away any excess elastic.