**Have your DNA and eat it too!**

Making DNA models can be informative, fun, and in this case tasty. Here you will learn how to construct a DNA model using candy. But first, what is [DNA](http://biology.about.com/od/geneticsglossary/g/DNA.htm)? DNA, like [RNA](http://biology.about.com/od/molecularbiology/ss/rna.htm), is a [nucleic acid](http://biology.about.com/od/molecularbiology/a/nucleicacids.htm) that contains the genetic information for the reproduction of life. Its shape is that of a [double helix](http://biology.about.com/od/biologydictionary/g/doublehelix.htm) and its appearance is somewhat of a twisted ladder or spiral staircase. DNA is composed of nitrogenous bases (adenine, cytosine, guanine and thymine), a five-carbon sugar (deoxyribose), and a phosphate molecule.

**What You Need:**

* Red and black licorice sticks
* Colored marshmallows or gummy bears
* Toothpicks
* Needle
* String
* Scissors

**Procedure:**

1. Gather together red and black licorice sticks, colored marshmallows or gummy bears, toothpicks, needle, string, and scissors.
2. Assign names to the colored marshmallows or gummy bears to represent nucleotide bases. There should be four different colors each representing either adenine, cytosine, guanine or thymine.
3. Assign names to the colored licorice pieces with one color representing the sugar molecule and the other representing the phosphate molecule.
4. Use the scissors to cut the licorice into 1 inch pieces.
5. Using the needle, string half of the licorice pieces together lengthwise; alternating between the black and red pieces.
6. Repeat the procedure for the remaining licorice pieces to create a total of two strands of equal length. Tie off the string so that the black and red pieces fit tightly together and will not slide off.
7. Connect two different colored marshmallows or gummy bears together using the toothpicks.
8. Connect the toothpicks with the candy to either the red licorice segments only or the black licorice segments only, so that the candy pieces are between the two strands.
9. Holding the ends of the licorice sticks, twist the structure slightly.
10. Create a key to explain what each type of candy represents. (Include Adenine, Thymine, Guanine, Cytosine, hydrogen bond, phosphate)
11. Get Mrs. Bowers to view your DNA model and then you can eat it!