

## Make an Edible DNA Model

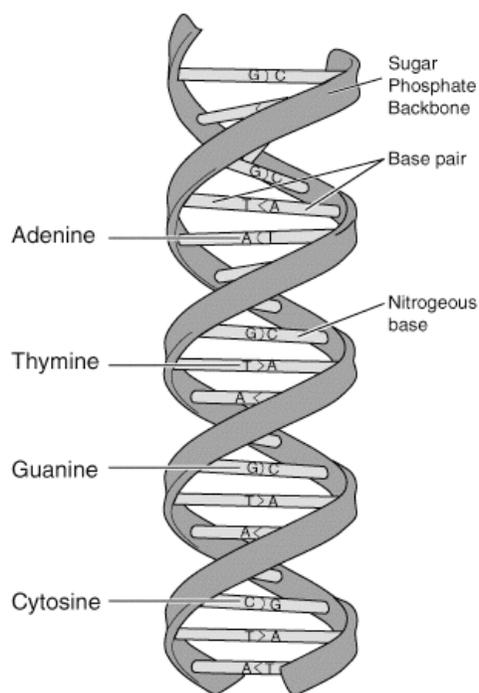
**\*Safety Warning:** We don't normally eat science experiments or activities unless told it is fine! Always do all activities with adult supervision.

DNA looks like a twisted rope with rungs or a ladder. This shape is called a double helix. The sides of the DNA ladder are called the backbone and the steps, also called rungs are chemical pairs known as bases.

Four types of chemical bases in DNA:

Adenine (A)  
Cytosine (C),  
Guanine (G)  
Thymine (T).

Pairs mean they go together in two  
A is always with T  
C is always with G



Make your DNA strand and use the following items. If you don't have one of these things you may substitute something you have around your home. You can make a DNA model that is NOT edible out of household items as well.

Label each one of the chemical bases. If you do not have the color marshmallows listed below you may substitute your color and assign each marshmallow a chemical base designation.

\* Please note: use miniature marshmallows.

### ***Ingredients:***

**2 pieces of rope red licorice (or other candy) - backbone**  
**12 toothpicks—fasteners**  
**10 pink marshmallows—base A**  
**10 yellow marshmallows—base C**  
**10 green marshmallows—base G**  
**10 white marshmallows—base T**

**1: Choose a DNA sequence:**

**T A C G T A T G A A A C**

-or-

**T G G T T T A G A A T T**

**2: Make your DNA molecule one side at a time.**

Use one piece of licorice to represent the backbone. Place a toothpick all the way through a marshmallow (chemical base) on one end so the toothpick can anchor the marshmallow to one end of the licorice. Choose the correct color marshmallows to represent the chemical bases.

After you are finished, carefully twist your "DNA" rope to create a double helix (you may only be able to do this one time unless you have very long rope licorice!) Take a picture of your creation before you eat it! Then, eat it and enjoy!