

Make an edible model of DNA

Who says science can't be yummy? Make this model of DNA and then enjoy eating the results!

www.guesthollow.com

Parents & teachers, please provide supervision for this activity.



Supplies:

- 2 pieces of licorice
- 12 toothpicks

From a bag of colored, small marshmallows:

- pink marshmallows, which will represent adenine
- green marshmallows, which will represent thymine
- yellow marshmallows, which will represent guanine
- orange marshmallows, which will represent cytosine

Step 1: Build one side of your DNA molecule.

- Get a piece of licorice and lay it down vertically on your work surface, like the side of a ladder.
- Now, you are going to make the rungs of the ladder. Poke 12 toothpicks, evenly spaced, into the licorice, so that the tips barely show through the other side.
- Choose a sequence for one side of your DNA molecule. The capital letters in the sequences stand for the chemical base pairs contained in a DNA molecule. Those chemical bases are adenine, thymine, cytosine, and guanine.

Sequence 1: T A C T A G A A G T C C

-or-

Sequence 2: T G A C T T T A C A A C

-or-

Make up your own sequence!

Write your sequence here (use capital letters to represent the chemical bases):

- Poke a marshmallow through the center onto each toothpick and slide it over until it reaches the licorice. You can follow one of the sequences listed above, or you can make up your own sequence.

Step 2: Build the 2nd side of your DNA molecule.

- Match up the chemical base pairs. Cytosine always pairs with guanine, and adenine always pairs with thymine! Poke the colored marshmallow for the matching chemical base on the other end of each toothpick.

Step 3: Finish building your DNA model.

- Attach the 2nd licorice backbone. Your model will look like a ladder.
- Twist the DNA model until it makes a double helix shape like the picture on page 1.

OPTIONAL:

- You can label your model, if you want to! Be creative in how you can label the parts. You should at least be able to point out which marshmallows represent adenine, thymine, cytosine, and guanine!
- Take a picture of you and your model for your science notebook!

Now, edit it up!

Circle your rating of this activity:

5 stars - I LOVED it!

4 stars - I liked it!

3 stars - It was O.K.

2 stars - I didn't really like it.

1 star - It was horrible and I never want to do something like this again.

Write a short summary about what you learned from this activity, or glue a picture of your model below: