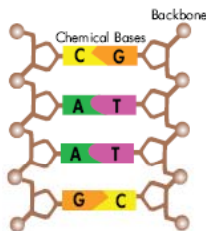


## Materials

- Licorice
- Coloured mini marshmallows  
OR fruit
- Toothpicks

## What is DNA? What is its structure?

DNA is an abbreviation which stands for **d**eoxyribo**n**ucleic **a**cid. DNA is present in all living things. Also, the structure of the DNA molecule is the same in all living things. When isolated from a cell and stretched out, DNA looks like a twisted ladder (double helix). The sides of the DNA ladder are called the backbone and the rungs of the ladder are pairs of small chemicals called bases.

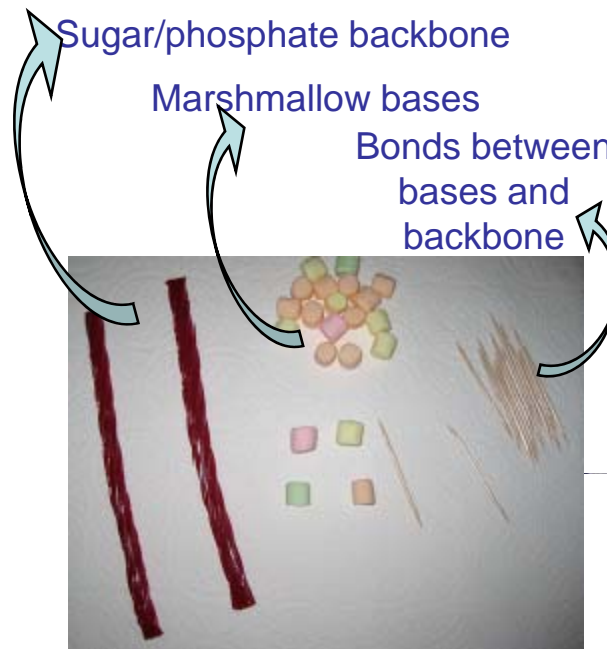


There are 4 chemical bases in DNA:

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

**A always binds with T, and G with C**

## Make an edible DNA model



Guanine (G) = Green  
Cytosine (C) = Pink  
Adenine (A) = Yellow  
Thymine (T) = Orange

**For a healthier alternative try using fruit instead of marshmallows!**

Guanine (G) = Green grape  
Cytosine (C) = Purple grape  
Adenine (A) = Yellow pineapple  
Thymine (T) = Red strawberry

**1. Create one DNA strand** by attaching the marshmallows with a toothpick to one licorice piece.

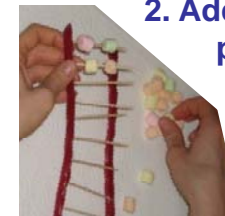


- Place toothpicks into the licorice
- Push the marshmallow or fruit onto the toothpick close to the licorice, leaving enough room for the second matching DNA strand to be attached

For the adventurous....  
create the following DNA strand:

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

**2. Add the matching base pairs.**



**Do you remember how the base pairs partner up?**

**3. Complete your DNA model.**

Attach the other backbone (licorice) so your model looks like a ladder.



**4. Carefully twist your DNA model** so that it looks like a double helix. Enjoy!