



EDIBLE DNA MODEL

Build a colourful and tasty model of a DNA strand

WHAT YOU NEED

- ◆ 2 different coloured long candy or liquorice cords with a fondant centre
- ◆ 1 large packet of midget gems or similar sized sweets
- ◆ 1 box of cocktail sticks
- ◆ Needle and thread

WHAT TO DO

1. Take the two candy cords and cut them into 2-3 cm pieces
2. Using the needle and thread string half the candy pieces together lengthwise, alternating every two colours to form a chain.
3. Do the same with the rest of the candy pieces to form a second chain of the same length
4. Lay the two chains down side by side so pieces of the same colour are opposite each other
5. Pick one colour (this will represent the pentose sugar molecules in DNA) and count the number of pieces of that colour you have in one chain (you should have the same number in both chains). Take this number of cocktail sticks.
6. Divide the packet of midget gems into four colours. Give names to each of the four colours to represent the building blocks which make up DNA. These are called adenine, cytosine, guanine and thymine.
7. The midget gems have to be paired up on cocktail sticks. Adenine always pairs with thymine and guanine always pairs with cytosine, so make sure you get the right colours together.
8. Push each end of a cocktail stick into the sugar candy pieces lying opposite each other. The cocktail sticks should join the two chains together so they look like the rungs of a ladder.
9. Hold the end of each chain and twist slightly and you get the double helix effect of your DNA model.

WHY

The strings of alternating candy cord pieces represent pentose sugar and phosphate molecule that make up the 'back bone' of DNA. Between these two backbones are the bases – the midget gems. The cocktail sticks represent hydrogen bonds that hold the structure together.

