

Fold the sugar-phosphate 'backbones' where indicated by dotted lines. These folds must be made in the directions shown on the diagram in the PDF file. Take care not to make left-handed DNA!

Cut 25 mm lengths of drinking straw. You will need one less piece of straw than you have nucleotide pairs.

Glue the phosphate group on one cut-out onto the deoxyribose on the next. Do the same with the opposite sugar-phosphate strand. Remember that the sugar-phosphate chains run in opposite (anti-parallel) directions. The orientation of the letters on the card should help you to assemble the model correctly.

Hold a piece of drinking straw between the holes in the cut-outs, and thread the string through them.

Repeat steps 5-8 for as many nucleotide pairs as desired.

Cut out the genetic code, and glue the two sides together onto the string at the bottom of the model. This will help the model to stand vertically.

ACKNOWLEDGEMENTS

The model upon which this one is based was brought to the John Schollar's attention by Dr Cheong Kam Khoo of the Singapore Science Centre. It was devised by Van Rensselaer Potter in 1958 and appeared the following year in his book *Nucleic Acid Outlines*. Sadly, Dr Potter, a bioethicist and oncologist at the **University of Wisconsin-Madison**, died in 2001 before we learnt that he had devised the original model. Many thanks to Kevin Fraser for alerting us to the origin of the model.