

Hello Year 6,

A warm welcome from The Arthur Terry Science Department!

We are really looking forward to meeting you on the 3<sup>rd</sup> July. Until then we have a video introducing what you can expect from your science lessons in September and a challenge for you to make an origami model of DNA.

In science, when carrying out practicals we follow a 'method', which is a set of step-by-step instructions. Today, you are going to practice following a method and will hopefully produce a model of DNA like the image below.



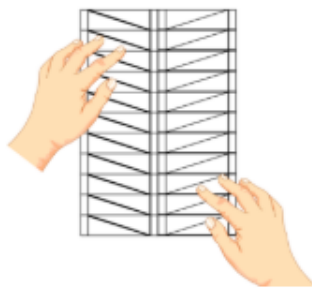
The role and function of DNA is to carry all our genetic information. It can be found inside all of our cells and is the blueprint for how to make YOU! You will learn more about DNA in your lessons in September.

Before starting the origami, please print and then cut out the model on the last page of this document, cutting along only the outer line, and colour your model in.

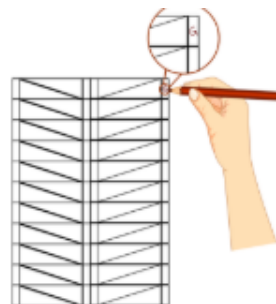
Once you have done this, follow the step-by-step instructions below.

We hope that you have enjoyed making your DNA model!

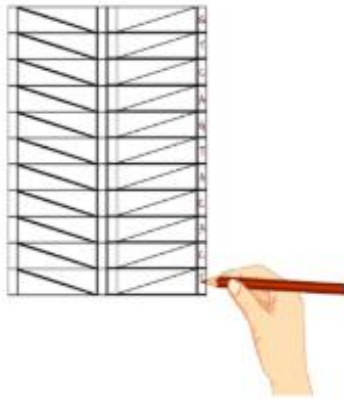
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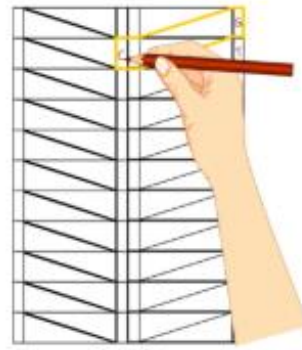
- 1 Lay out the blank DNA origami template on the table.



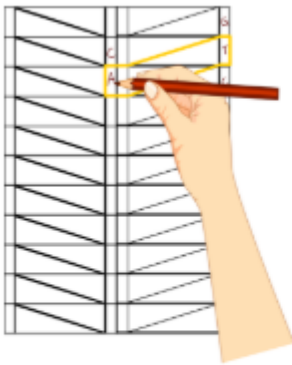
- 2 Start by writing the first letter of your DNA sequence (A, C, G or T) in the top right corner.
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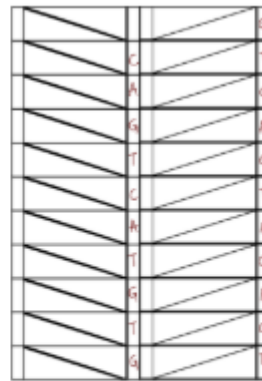
- 3 Continue your sequence down the column on the right.



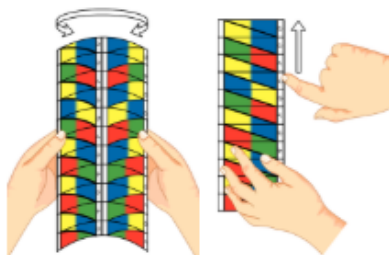
- 4 Write the corresponding complementary bases in boxes diagonally across from your sequence as shown.



- 5 Continue the complementary sequence until you reach the bottom; and fill in the top box of that column with any letter.



- 6 That's it! Now you are ready to colour and fold your DNA!



- 1 Fold in half lengthwise. Make all creases as firm as possible (use your fingernail!)



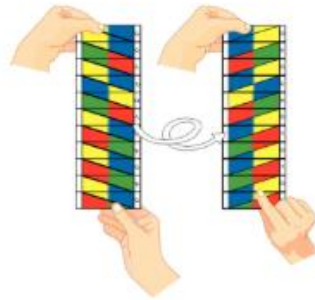
- 2 Hold the paper so that the thick lines are diagonal and the thin lines are horizontal. Fold the top segment down and then unfold.



- 3 Fold the top two segments down along the next horizontal line. Unfold.



4 Repeat for all segments.



5 Turn the paper over.



6 Fold along the first diagonal line. Unfold and fold along the second diagonal line. Repeat for all diagonal lines.



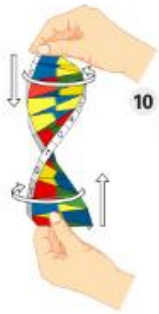
7 Fold the white edge without letters up.



8 Fold the other edge away from you. Partly unfold both edges.



9 You can now see how the model is starting to twist.

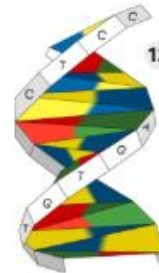


10 Twist and turn the paper while pushing the ends towards each other.

Be brave!



11 Now let go!



12 Admire your completed DNA double helix!

Only another 2,999,999,989 (or so) more to complete your whole genome!

