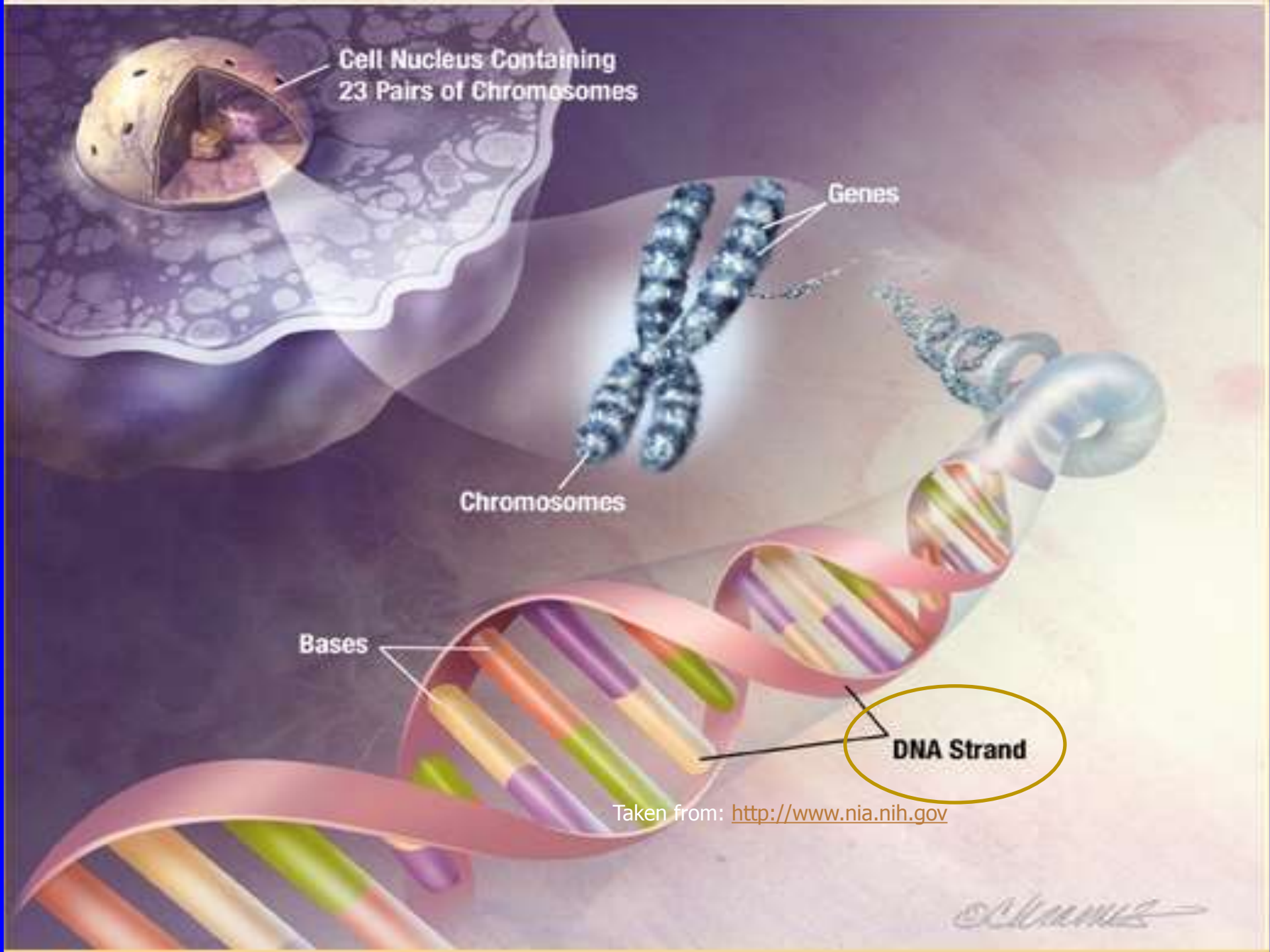


DNA Structure

Learning Outcome

- To be able to describe the structure of DNA



Cell Nucleus Containing
23 Pairs of Chromosomes

Genes

Chromosomes

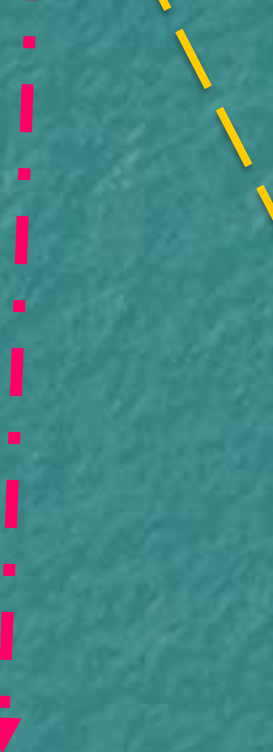
Bases

DNA Strand

Taken from: <http://www.nia.nih.gov>

© 2002 NIA

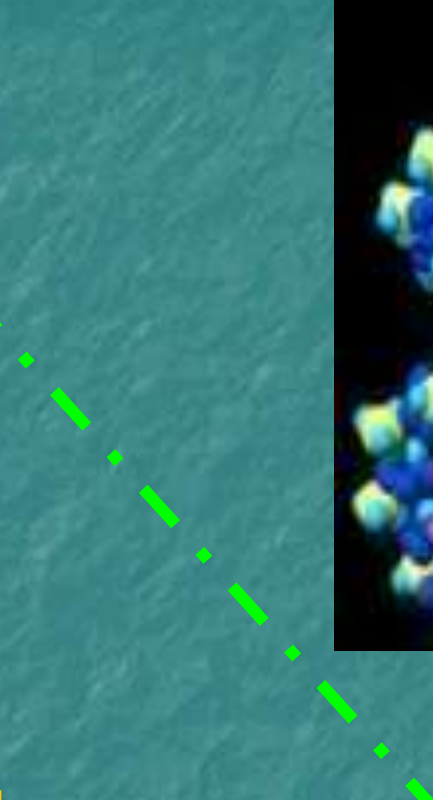
DNA



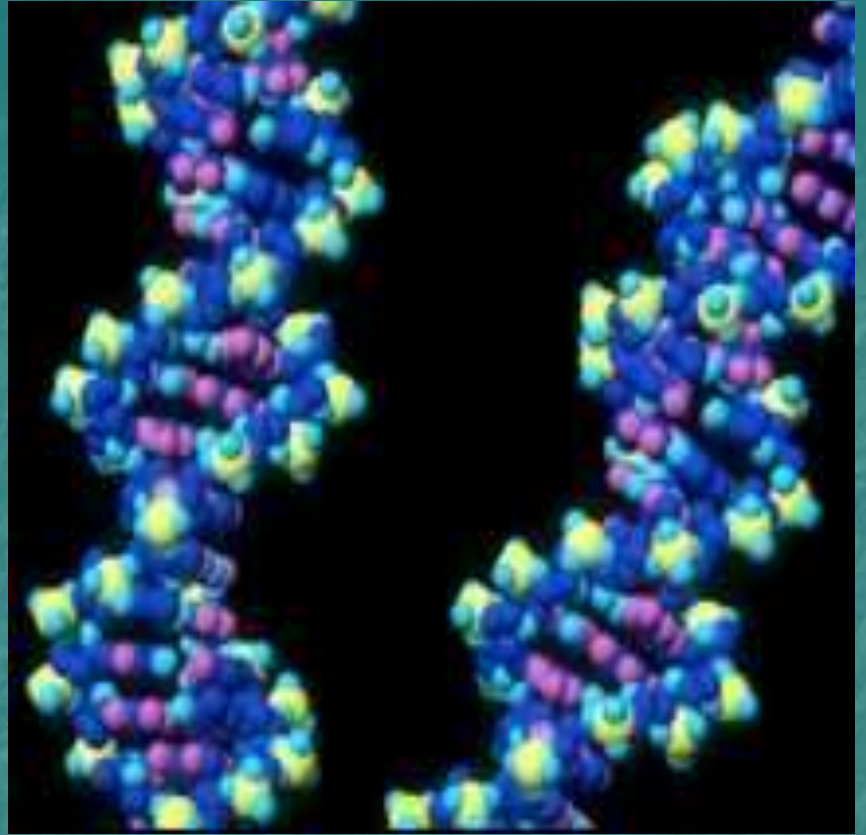
Deoxyribo



Nucleic

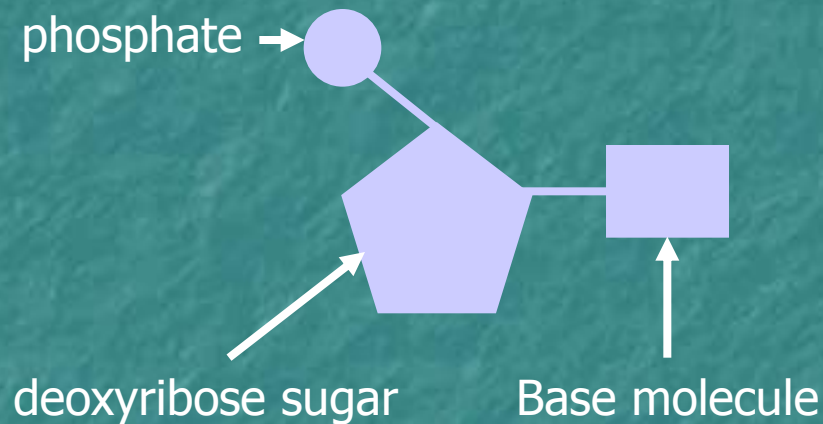


Acid



DNA Structure

- DNA is a large molecule made up of smaller units called nucleotides



Structure of a nucleotide

Different nucleotide

There are 4 different base molecules



Cytosine nucleotide



Guanine nucleotide



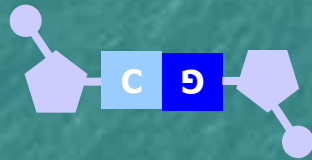
Adenine nucleotide



Thymine nucleotide

Each base can be represented by a different shape or colour

Base pairing

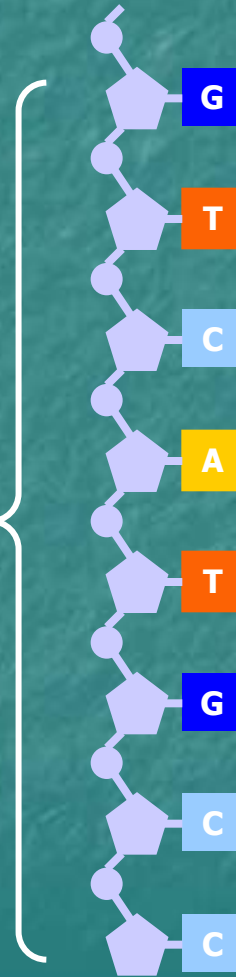


Cytosine pairs with guanine

Adenine pairs with thymine

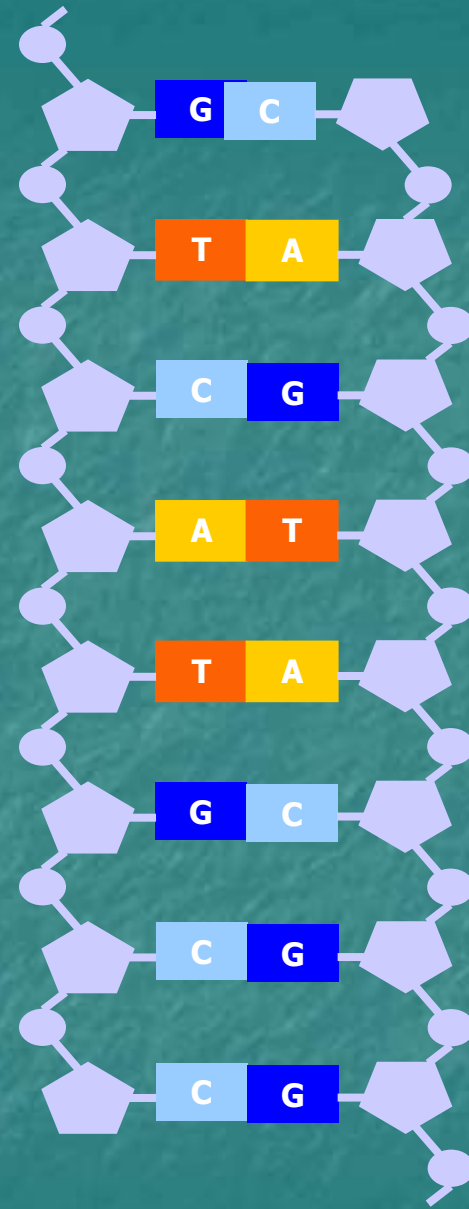
A single strand of DNA nucleotides

Nucleotides can join together to form a chain.



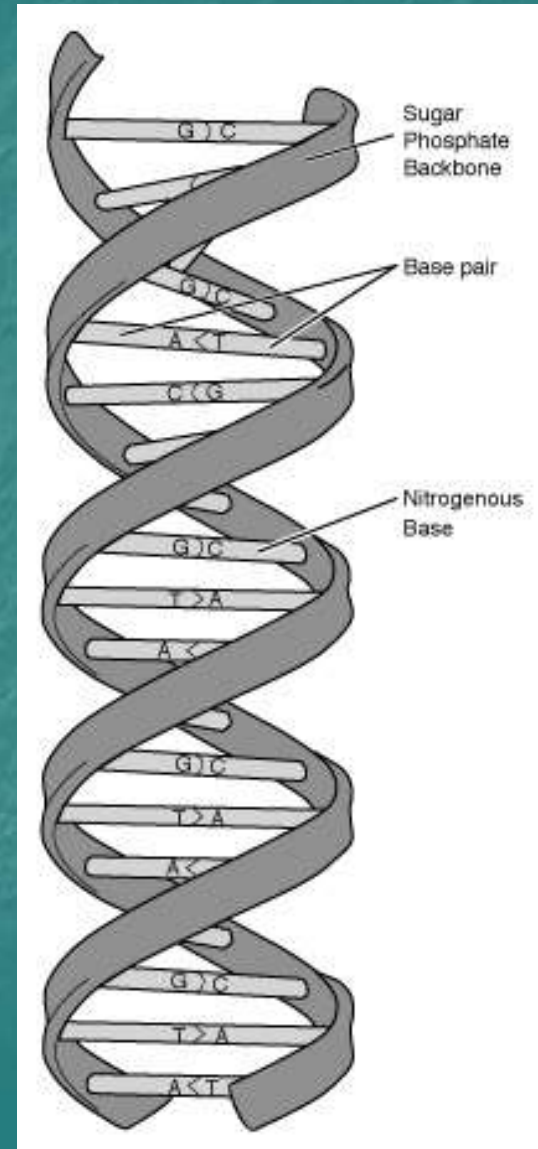
DNA is made of two strands of nucleotides.

The two strands are held together by weak hydrogen bonds between base pairs.

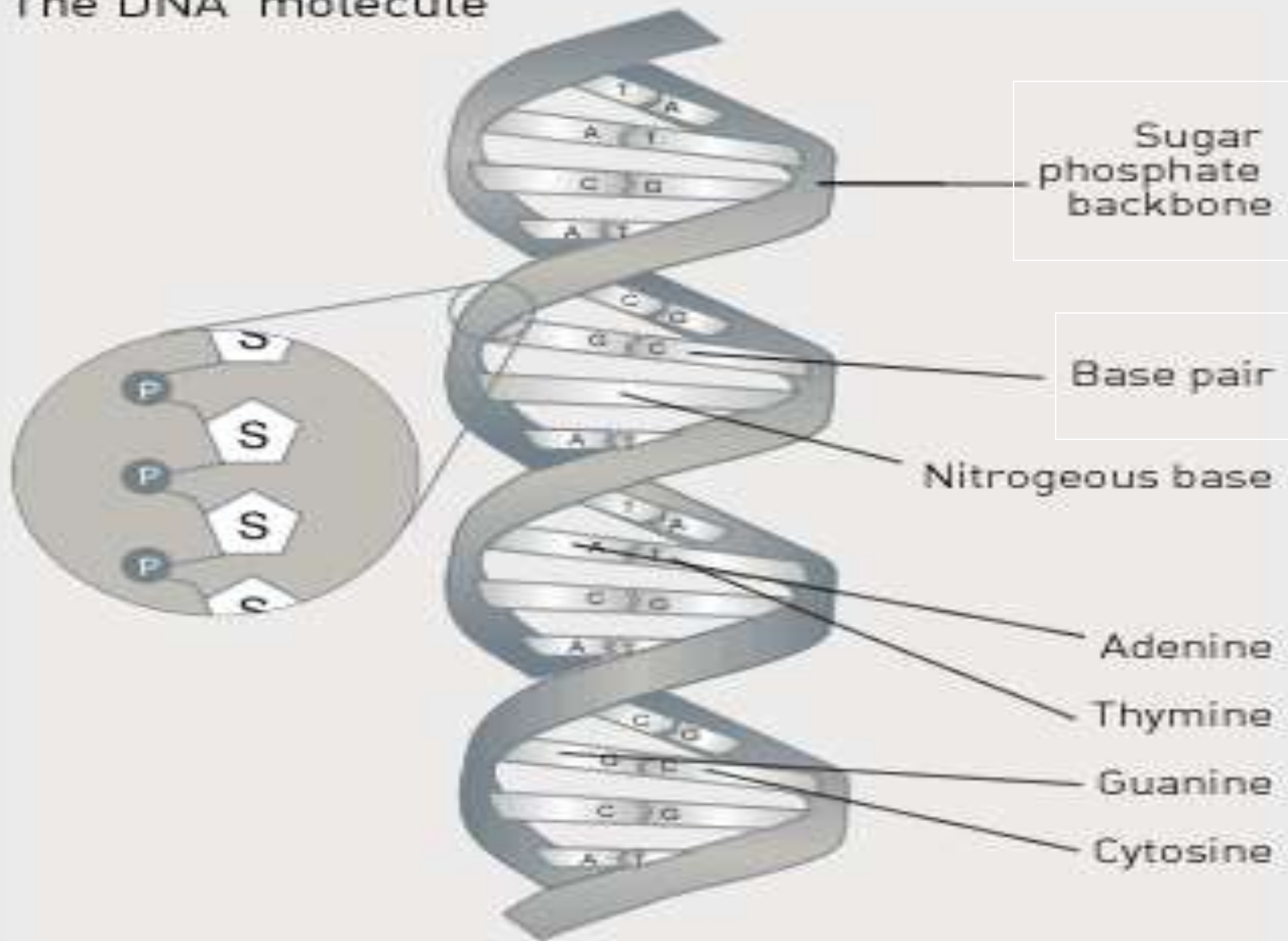


The double helix

DNA molecule twists into a double helix



The DNA molecule



Quick Questions

1. What shape is the DNA molecule?
2. What type of bonding holds the two DNA strands together?
3. Name the three components of a nucleotide.
4. Name the organic base which pairs with cytosine.
5. Name the organic base which pairs with thymine.