

# Structure of DNA

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## Nucleus

- surrounded by the **nuclear membrane** which allows materials (**RNA**) to pass in/out of the nucleus.
- contains **chromosomes** that direct all the activities of the cell.

## Chromosomes

- made of DNA (deoxyribonucleic acid)
- DNA is a long molecule shaped like a twisted ladder
- DNA is made of 2 strands of smaller molecules called **nucleotides**
- sides of the DNA are **sugar** and **phosphate** molecules
- the rungs of the ladder are made of pairs of **nitrogenous bases**, one from each of the strands.
- each nucleotide has 1 of the 4 bases:
  - (A) adenine = thymine (T)
  - (G) guanine = cytosine (C)
- each nucleotide has 1 of these bases connected to a **sugar** and **phosphate**
- DNA has the ability to replicate/copy itself.