

## 12.2 Notes: The Structure of DNA



The **STRUCTURE** of a thing determines its **FUNCTION**!



Hammer Structure:

Flat end with mass  
behind it; scissor like end  
with space smaller than  
nail head

Hammer Function:

Hammers nails; pull nails

## DNA Structure



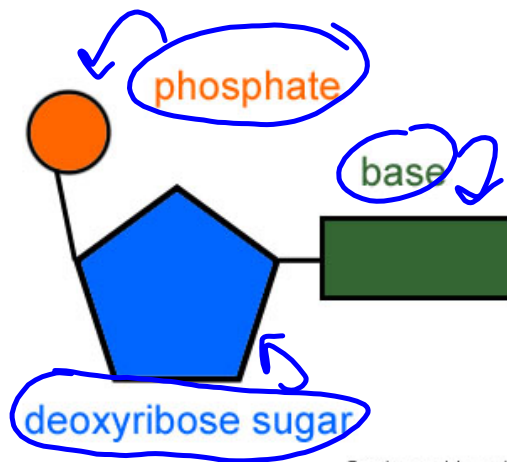
## DNA Function

- 1) storing information
- 2) copying information
- 3) transmitting information

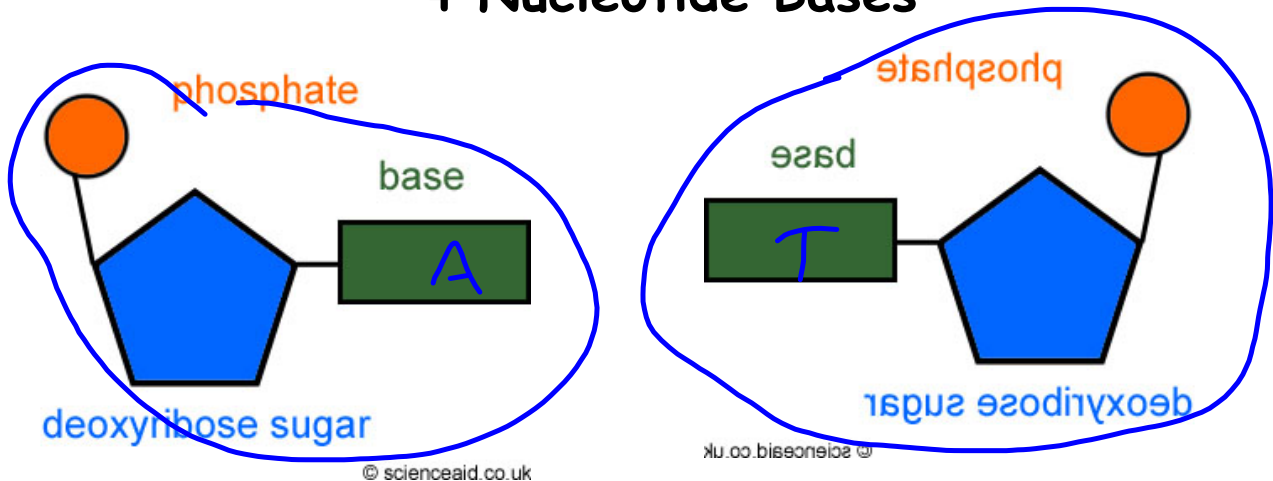
## DNA Structure

- Made of a substance called nucleic acids.  
"deoxyribose nucleic acid."
- Nucleic acids are of repeating subunits called nucleotides.

- 1 nucleotide =



## 4 Nucleotide Bases



Adenine = A  $\longleftrightarrow$  Thymine = T

Guanine = G  $\longleftrightarrow$  Cytosine = C

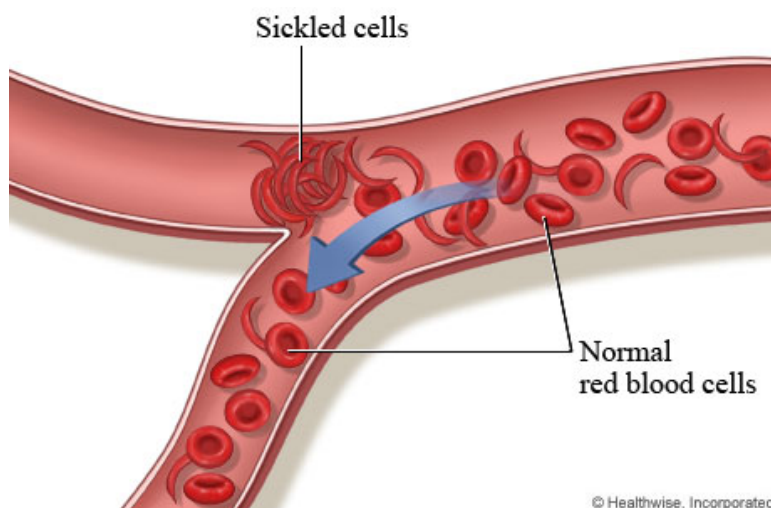


Different sequences of bases code for different genes!

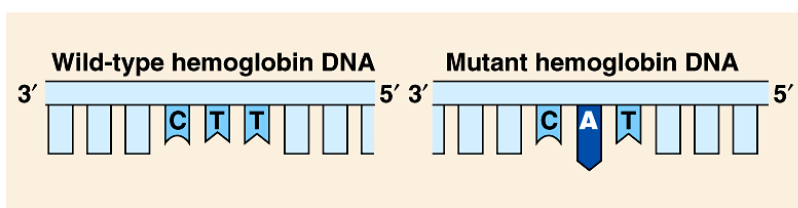


Different sequences of bases code for different variations of genes!

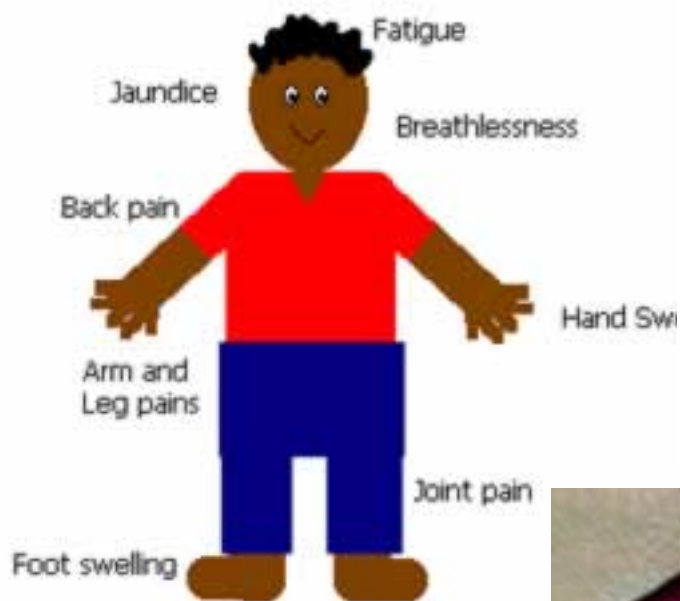
## Example: Sickle Cell Anemia



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### Did You Know?

Sickle cell anemia may be the result of a genetic mutation that happened in malaria-prone regions like Africa thousands of years ago. People with sickle cell trait may have been more likely to survive malaria epidemics - and because they survived when others did not, this allowed the trait to be passed down through generations.

