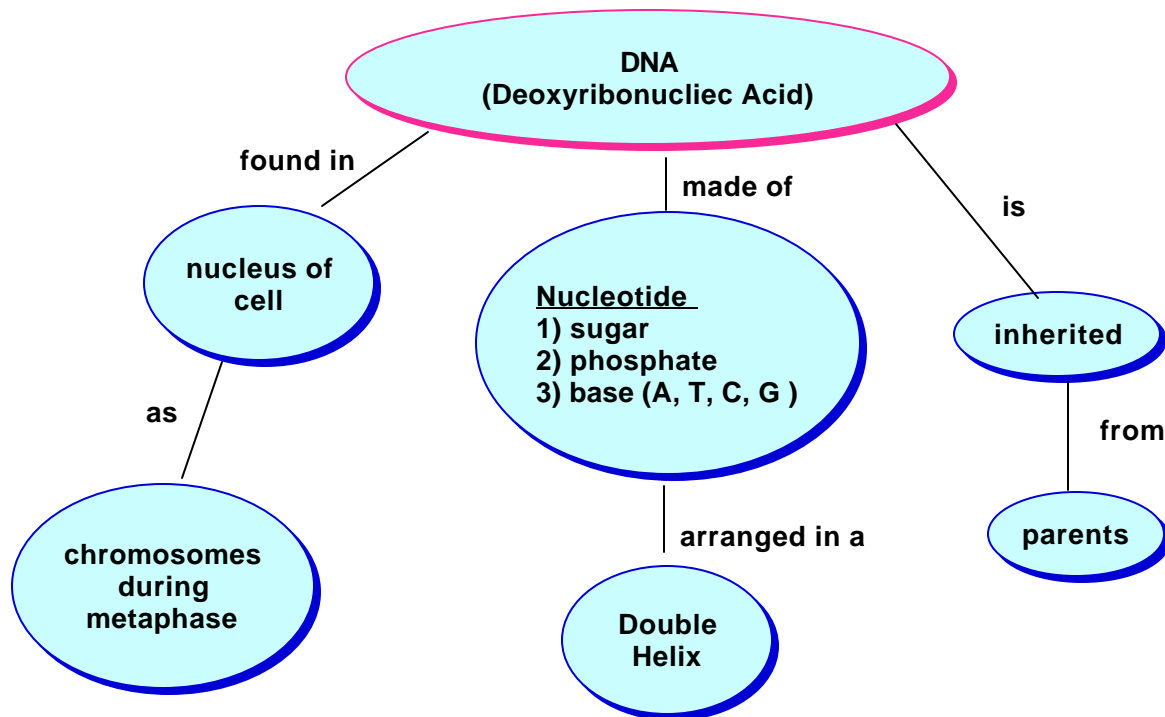


MODULE 1: ENGAGEMENT

DNA is like a twisting rope ladder...

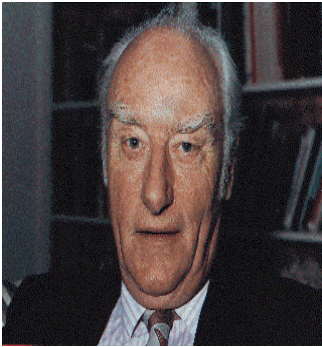
Think of [DNA] like sawing down through the middle of the wooden rungs of a rope ladder. The result is two single ropes with half-rungs hanging off each rope. Only one rope (one strand of the double helix) carries the genetic code. The other usually acts simply as a “keeper”, a complimentary strand that fits against the coding strand. In all DNA the rope part of the ladder is the same up and down its length – an alternation of sugar and phosphate molecules. The half-rungs, which stick out from the sugars, are the interesting parts. They serve as four letters of the genetic alphabet – four different kinds of molecules abbreviated A, T, G, and C for adenine, thymine, guanine, and cytosine. The four molecules are called bases (Rensberger, 1996).

DNA Graphic Organizer



Narrator*: The 1953 discovery by Dr. Francis Crick and James Watson of the structure of the huge DNA molecule, the molecule which we now know stores the genetic information for all life, has been cited by many scientists as the single most important development in biology of the 20th century. Watson and Dr. Francis Crick's breakthrough, and the ensuing investigations into the nature of the genetic code and its transmission of information from generation to generation, have redefined the study of genetics and virtually created the science of molecular biology. For their work James Watson and Dr. Francis Crick, along with physicist Maurice Wilkins, were awarded the [1962 Nobel Prize in Medicine](#). Dr. Francis Crick recalls the award with his characteristic good humor.

Dr. Francis Crick: Well, I certainly didn't think I would win the prize. It's unclear whether Jim was thinking about it. He says in his book he was, but he never in those years mentioned it to me or to any other of my colleagues that I know of. It never occurred to me that it was prize worthy until about three years later when someone mentioned it to me. And it indeed struck me this is just the sort of thing people get prizes for.



*Taken from www.accessexcellence.com