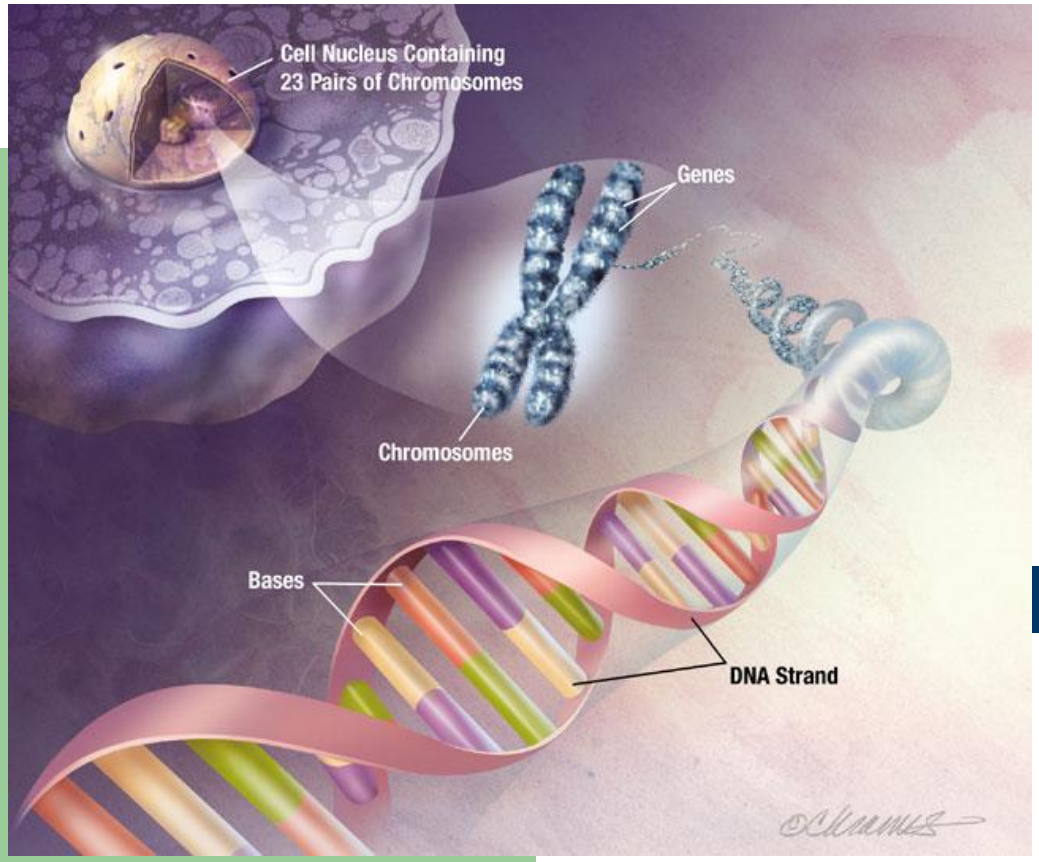
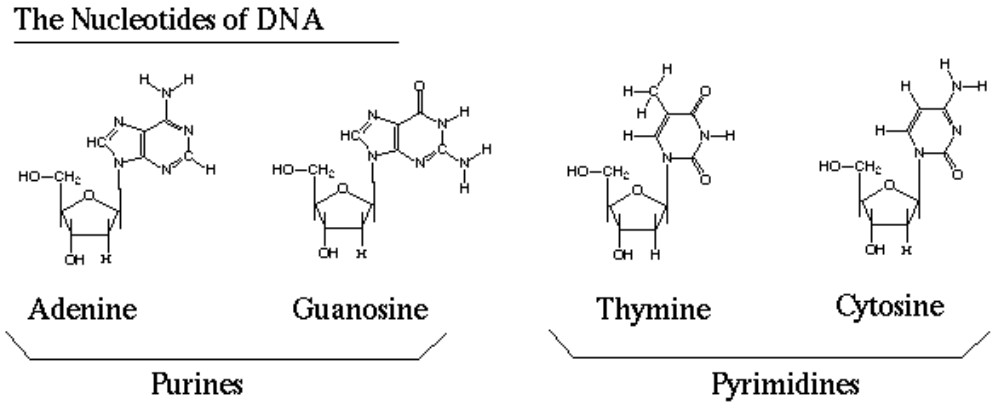
DNA Structure and Transcription



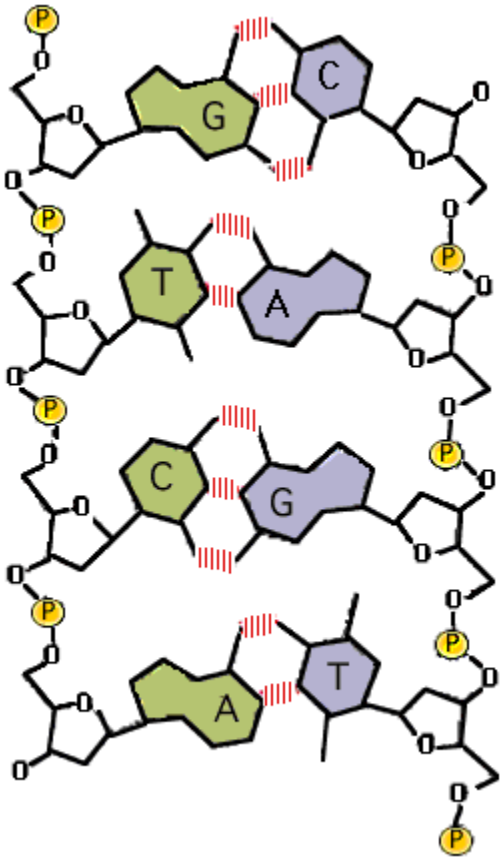
DNA Bases

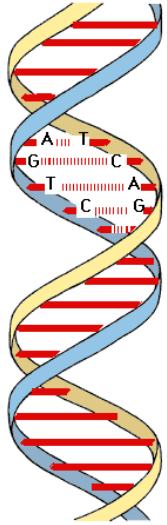
- Only four bases in DNA
- A – adenosine
- C – cytosine
- G – guanine
- T – thymine



DNA Base Pairs

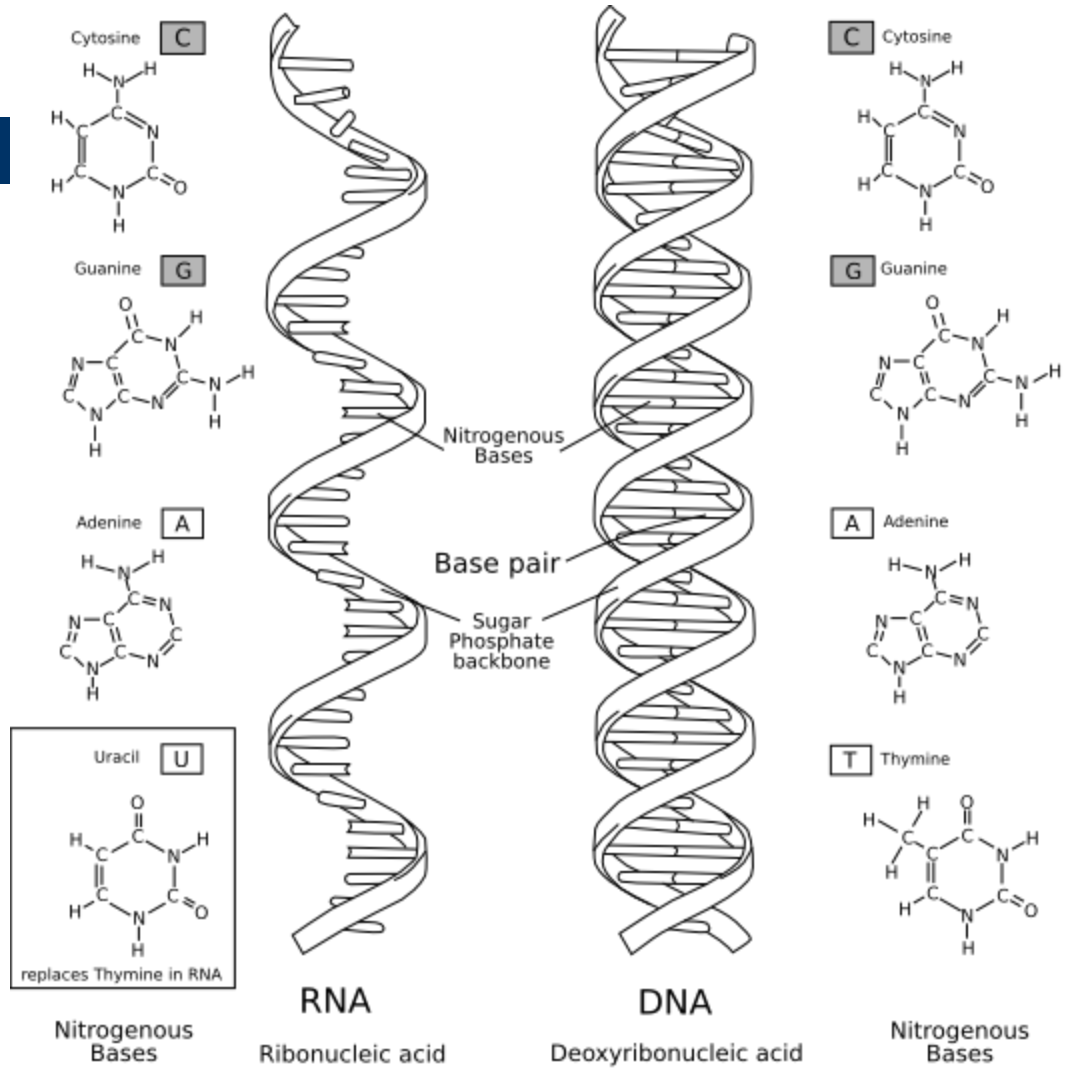
- DNA bonds in a double helix
- A always pairs with T
- C always pairs with G
- Pyramidine + Purine





RNA Bases

- Four bases – one different from DNA
- U – Uracil



DNA Transcription

- DNA gets copied to mRNA
- DNA A pairs with RNA U
- DNA C pairs with RNA G
- DNA G pairs with RNA C
- DNA T pairs with RNA A
- mRNA strand is complementary to transcribed DNA strand; identical to the sister DNA strand
- Work done by an enzyme – RNA polymerase
- transcription describes the process through which a strand of DNA is copied into its associated mRNA strand
- complementary refers to the fact that the mRNA strand is the "opposite" of the DNA strand - each RNA base is the opposite of each DNA base