


DNA

• DNA + RNA •

RNA

• Sugar called Deoxyribose

• Double helix 

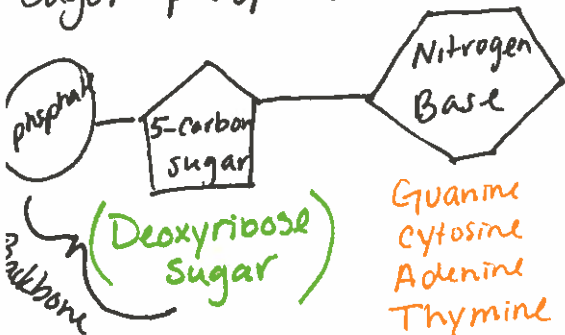
4 Nitrogen bases:

Guanine, Adenine, Thymine, Cytosine

Thymine only found in DNA

All living things have DNA

Sugar-phosphate backbone



• GCAT ← 4 Bases

• G-C/A-T

• Sugar called Ribose

• Single strand

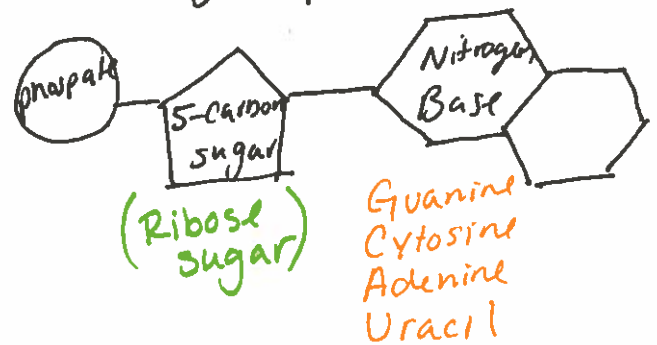
• 4 Nitrogen bases:

Guanine, Cytosine, Uracil, Adenine

• Uracil is only found in RNA

• Helps make protein with the help of ribosomes.

• Sugar-phosphate backbone

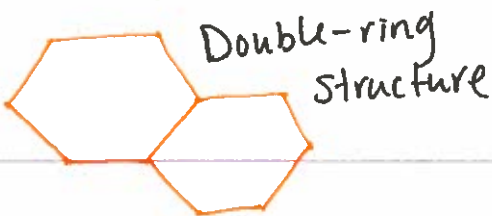


• GCAU

• G-C/A-U

2 groups of Bases: Purines + Pyrimidines

Purines



- Adenine
- Guanine

Pyrimidines

Single ring structure



- Cytosine
- Thymine
- Uracil

(1) Replication → DNA → DNA: Nucleus

Original DNA : TAC GAC TCA ATC GCA ACT
 Copy : ATG C T G A G T T A G C G T T G A

G/C/A/T

(2) Transcription: DNA → RNA: Cytoplasm/Nucleus

Original DNA : TAC G A C T C A A T C G C A A C T
 mRNA : AUG C U G A G U A G C G U U G A

G/C/A/U

(3) Translation: RNA → Protein: Ribosome

mRNA : AUG C U G A G U A G C G U U G A

codon
G C A U

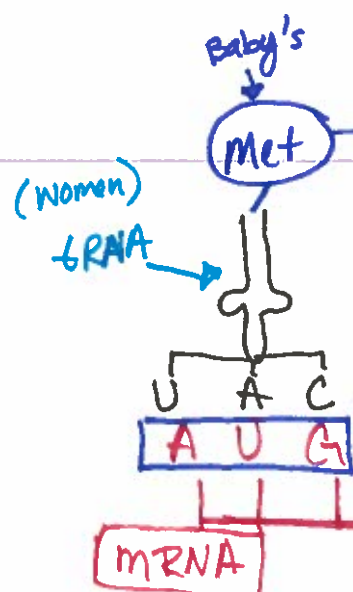
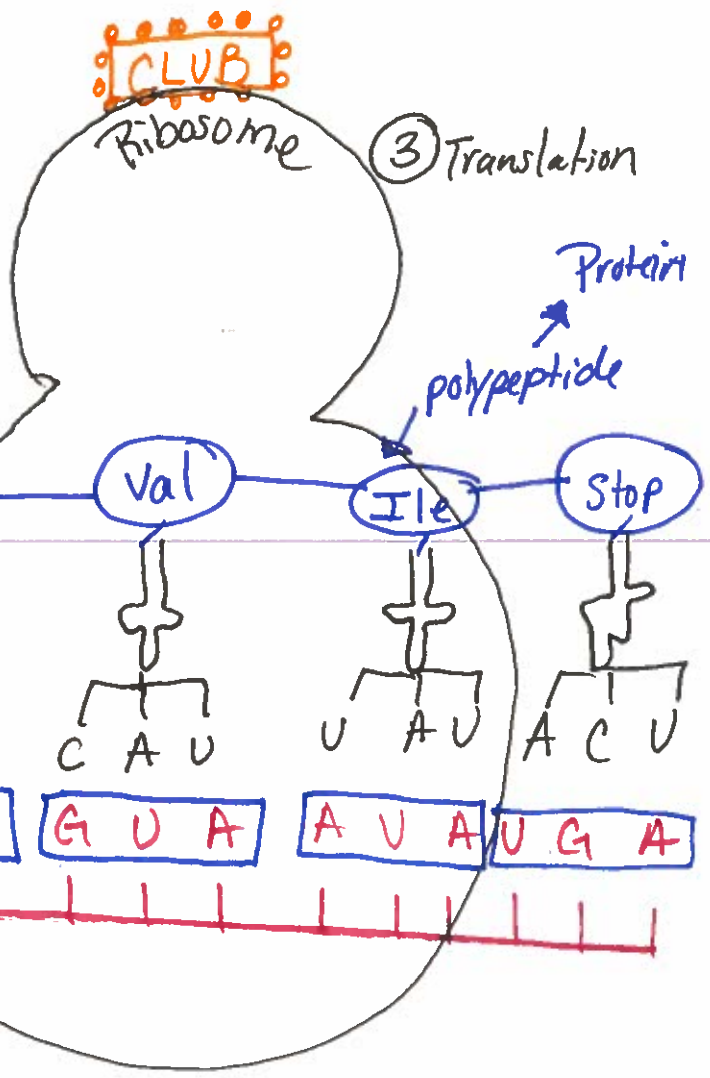
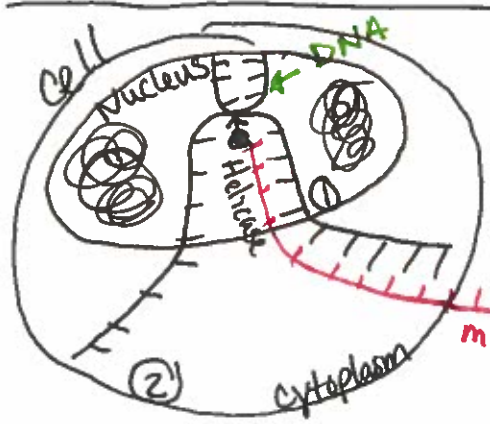
tRNA : U A C C A C U C A A U C C C A A C U

3 bases = anticodon
NOT

Amino Acid

Met (start) - Leu - Ser - Stop - Arg - Stop

polypeptide → Protein



mRNA