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# 1 | Nucleic Acids

## 1.1 | Nucleic Acids

d-Oxy Ribone Nucleic Acid: DNA Ribone Nucleic Acid: RNA

**All nucleic acids are comprised of monomer units that's synthesized together into polymers.** => Just like [KBhBIO101Carbs](#) or [KBhBIO101AminoAcids](#)

## 1.2 | 3 basic parts of a Nucleic Acid

- Backbone
  - phosphate group
  - sugar (Ribos => sugar in RNA, di-oxy Ribos => sugar in HNA)
    - In di-oxy Ribos: a OH pair is replaced with a hydrogen **only in one position**. Hence "di-oxy"
- nitrogenous base
  - Bases in DNA
    - A, T, G, C
  - Bases in RNA
    - A, U, G, C

## DNA vs. RNA structure and synthesis

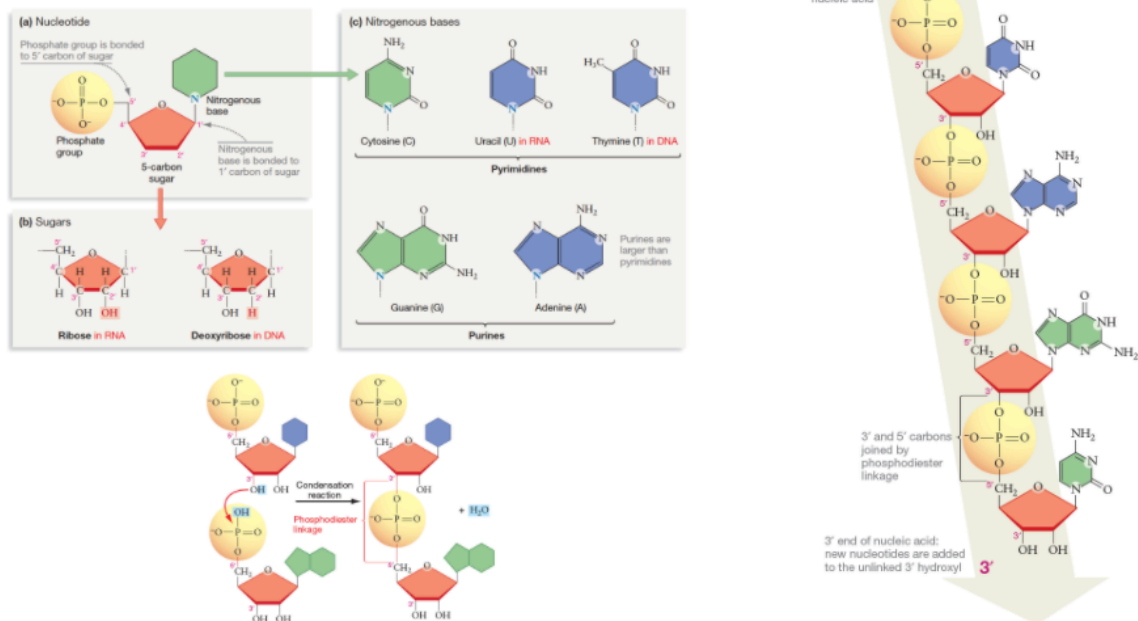


Figure 1: DNARNA\_nucleic.png

How do we make nucleic acids? Can you guess? Huh? **Dehydration synthesis!** #TODO make that actually a note, at this point

5' => one end of an RNA/DNA part

3' => another end of a RNA/DNA part

- DNA is supposed to be double stranded
- RNA is supposed to be single stranded

DNA is *anti-parallel* to each other => 5' to 3' backbone parallel to 3' to 5' backbone

Temp copies of genome is RNA, permanent record in DNA