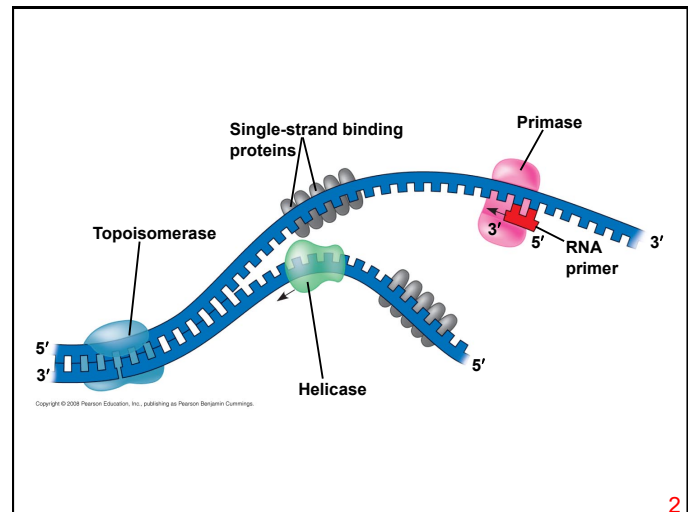


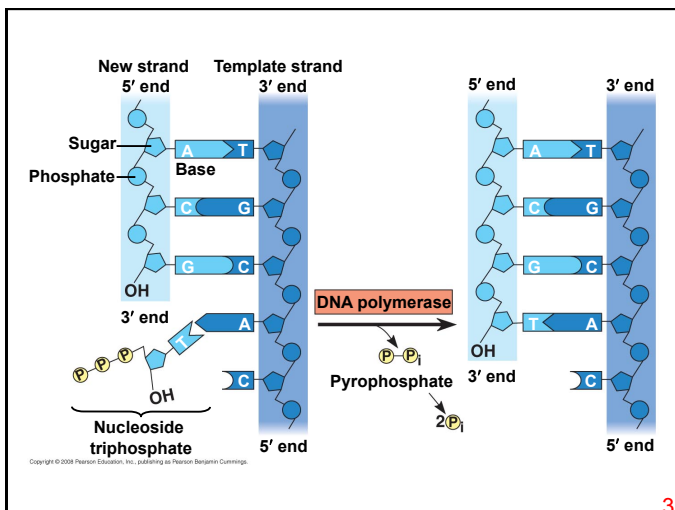
# Polymerase Chain Reaction (PCR)

- Used to amplify a sample of DNA
- Many applications, including:
  - DNA sequencing
  - Phylogeny
  - Diagnosis of genetic disorders
  - Identity for forensics or paternity
- Amplification is exponential
- Requires thermal cycling
- DNA is doubled each cycle
- Typically used to amplify DNA fragments about 10 kb in length
- Usually uses 20 to 40 thermal cycles

1



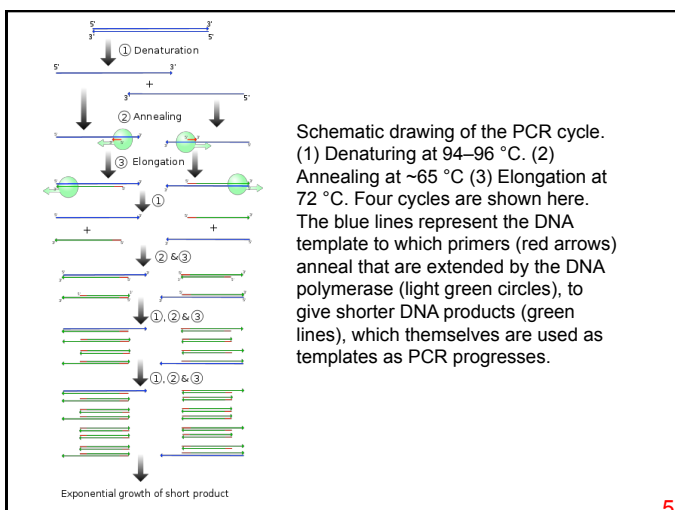
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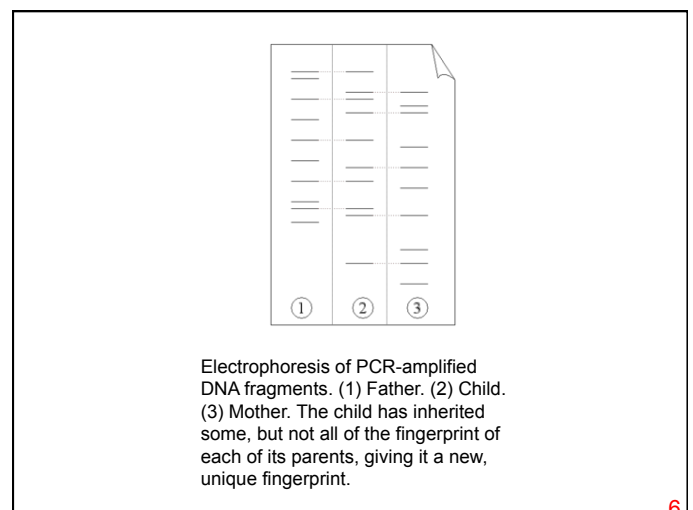
3

Nitrogenous base	Nucleoside	Deoxynucleoside
Adenine	Adenosine A	Deoxyadenosine dA
Guanine	Guanosine G	Deoxyguanosine dG
Thymine	5-Methyluridine mU	Thymidine dT
Uracil	Uridine U	Deoxyuridine dU
Cytosine	Cytidine C	Deoxycytidine dC

4



5



6