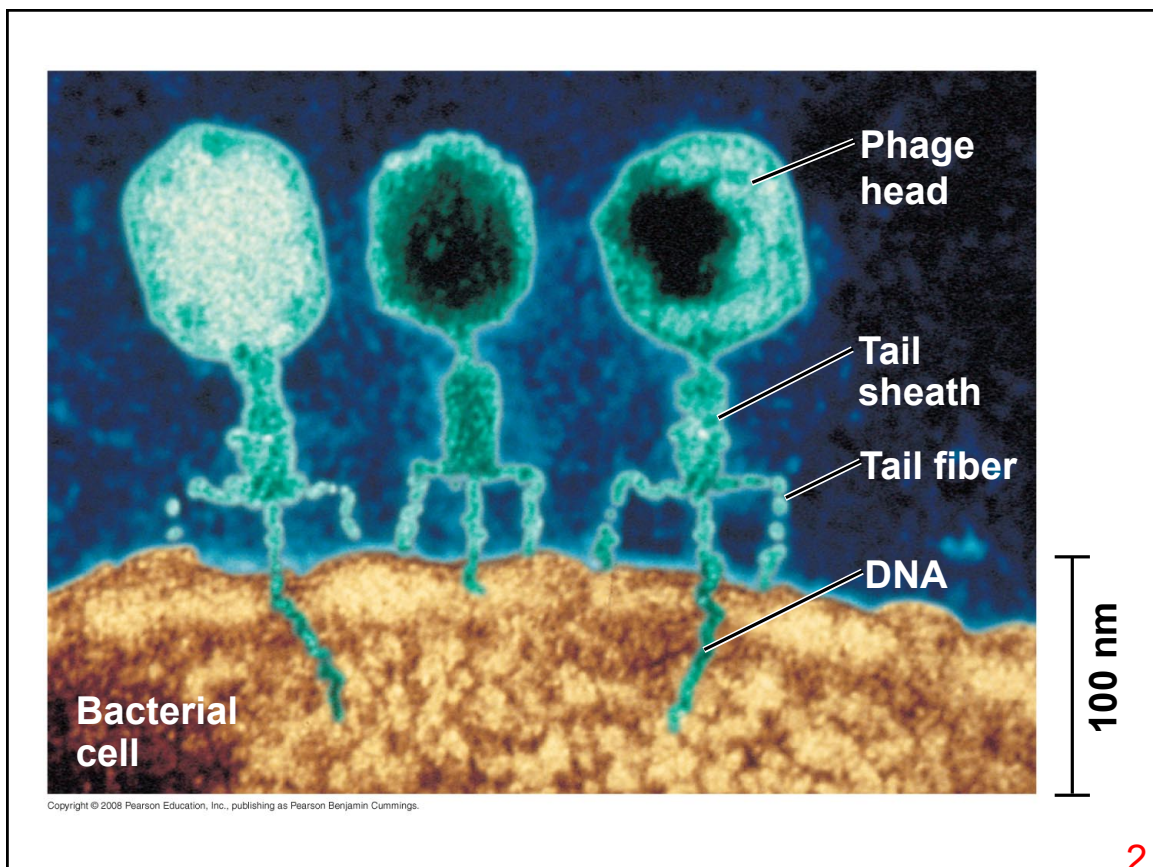
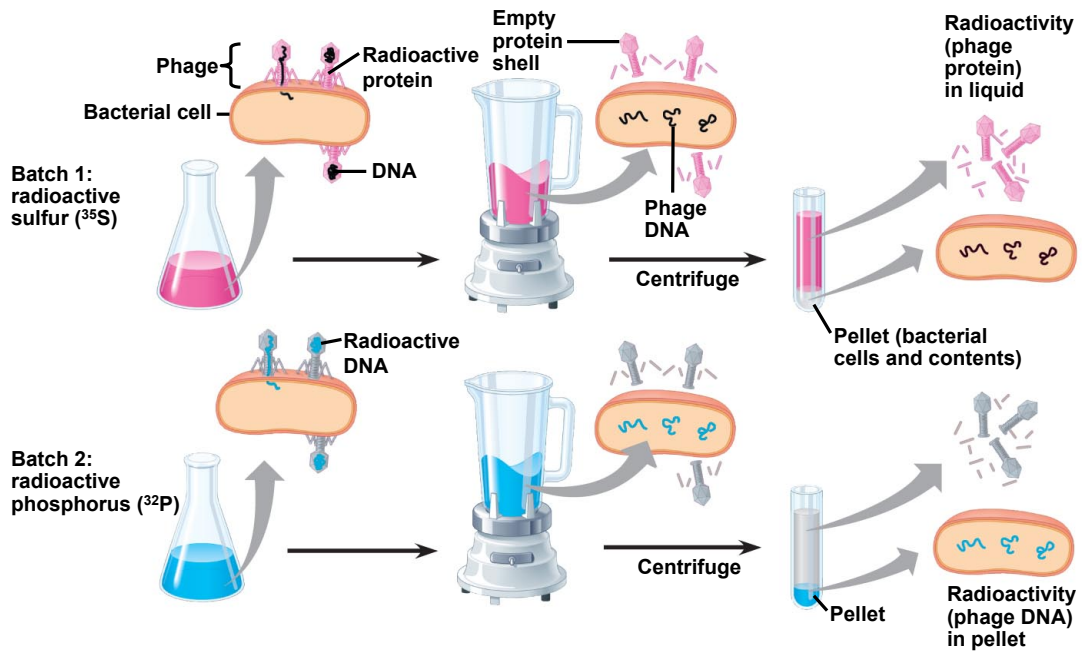


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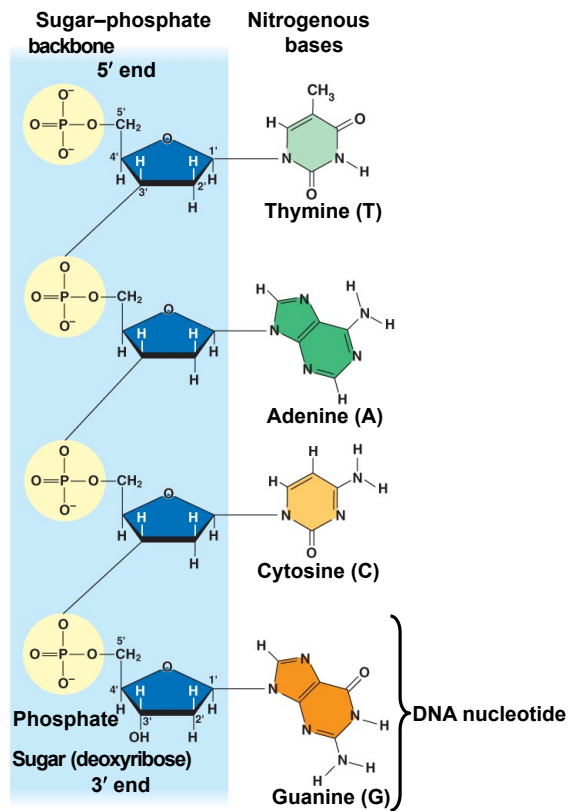
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EXPERIMENT



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3

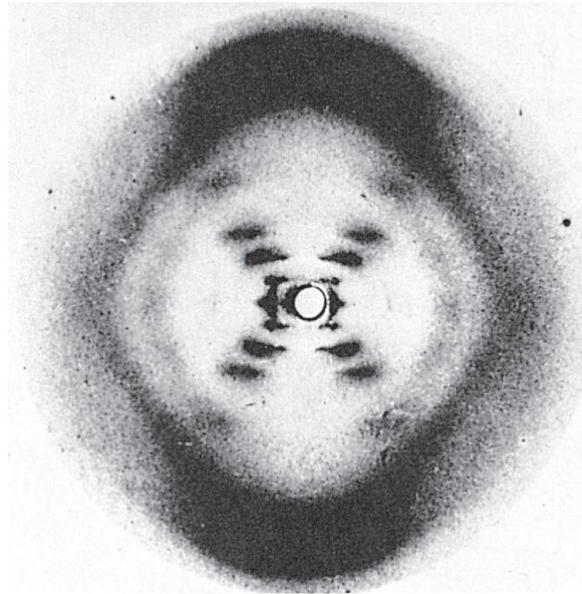


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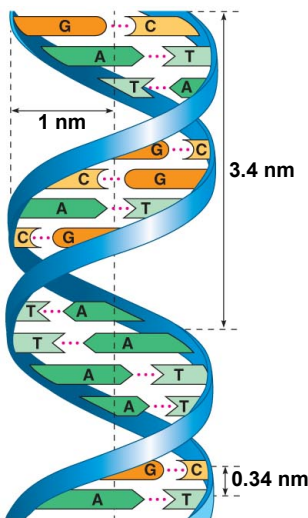
(a) Rosalind Franklin



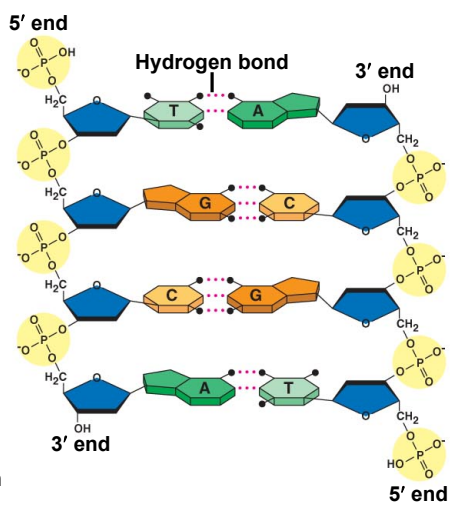
(b) Franklin's X-ray diffraction photograph of DNA

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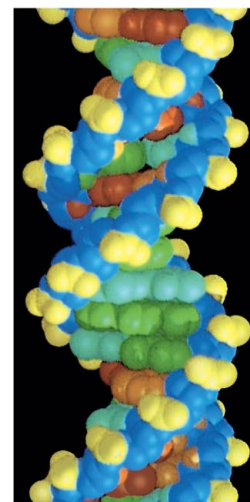
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(a) Key features of DNA structure



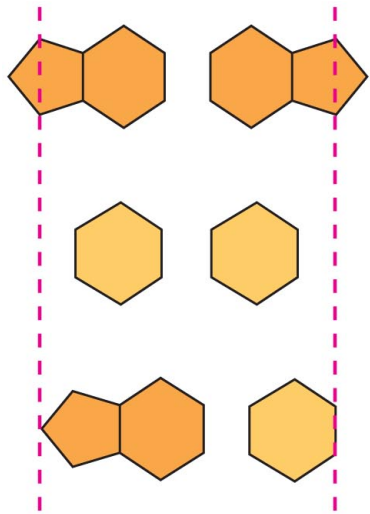
(b) Partial chemical structure



(c) Space-filling model

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6



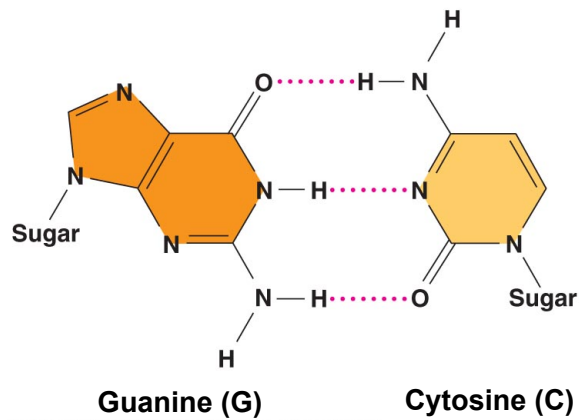
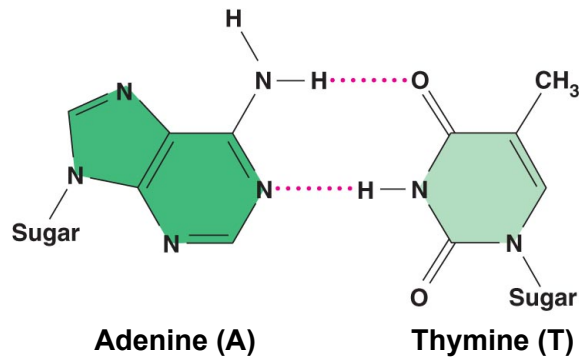
Purine + purine: too wide

Pyrimidine + pyrimidine: too narrow

Purine + pyrimidine: width consistent with X-ray data

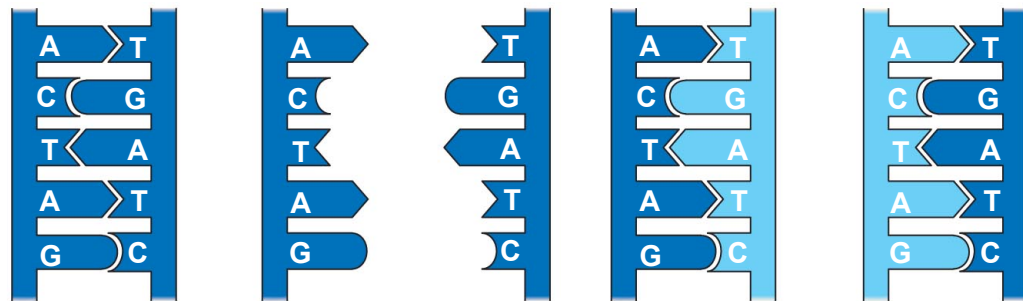
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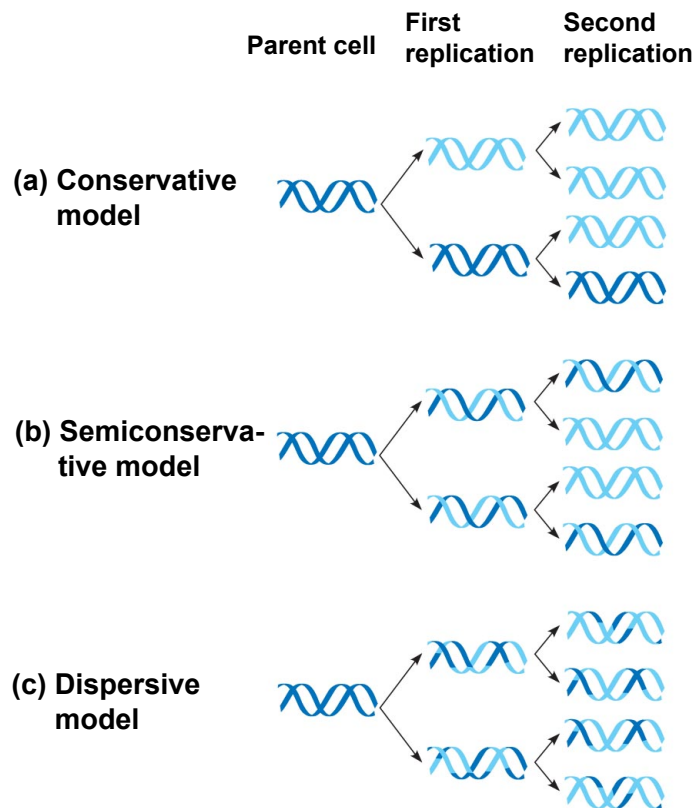


(a) Parent molecule

(b) Separation of strands

(c) "Daughter" DNA molecules, each consisting of one parental strand and one new strand

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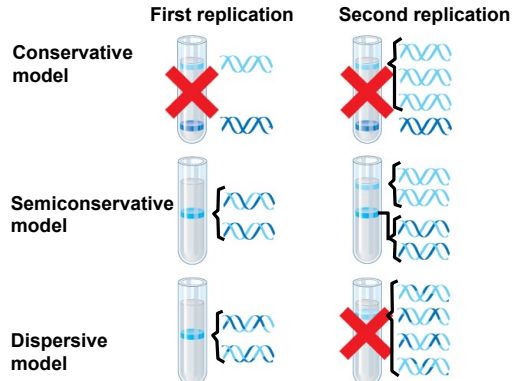
EXPERIMENT

- 1 Bacteria cultured in medium containing ^{15}N
- 2 Bacteria transferred to medium containing ^{14}N

RESULTS

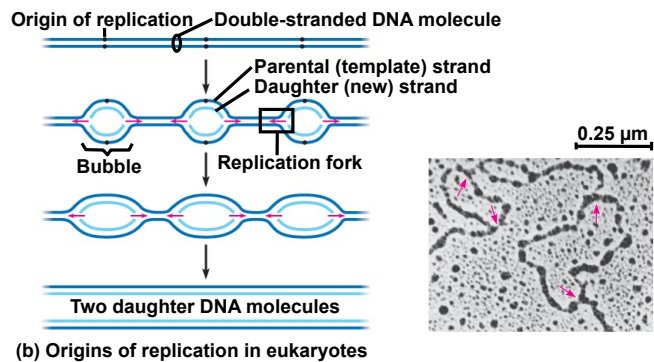
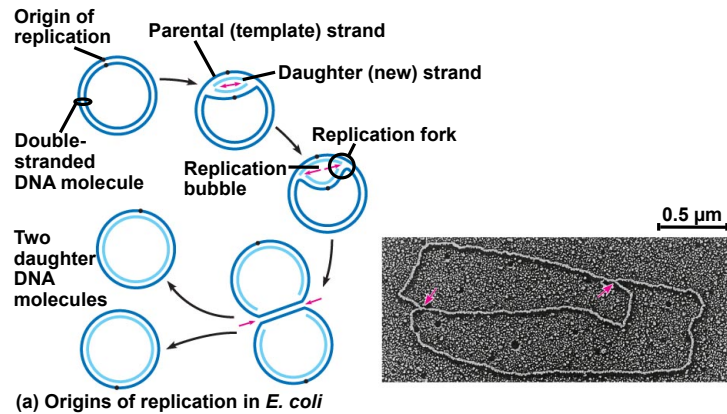
- 3 DNA sample centrifuged after 20 min (after first application)
 - 4 DNA sample centrifuged after 40 min (after second replication)
- Less dense
More dense

CONCLUSION



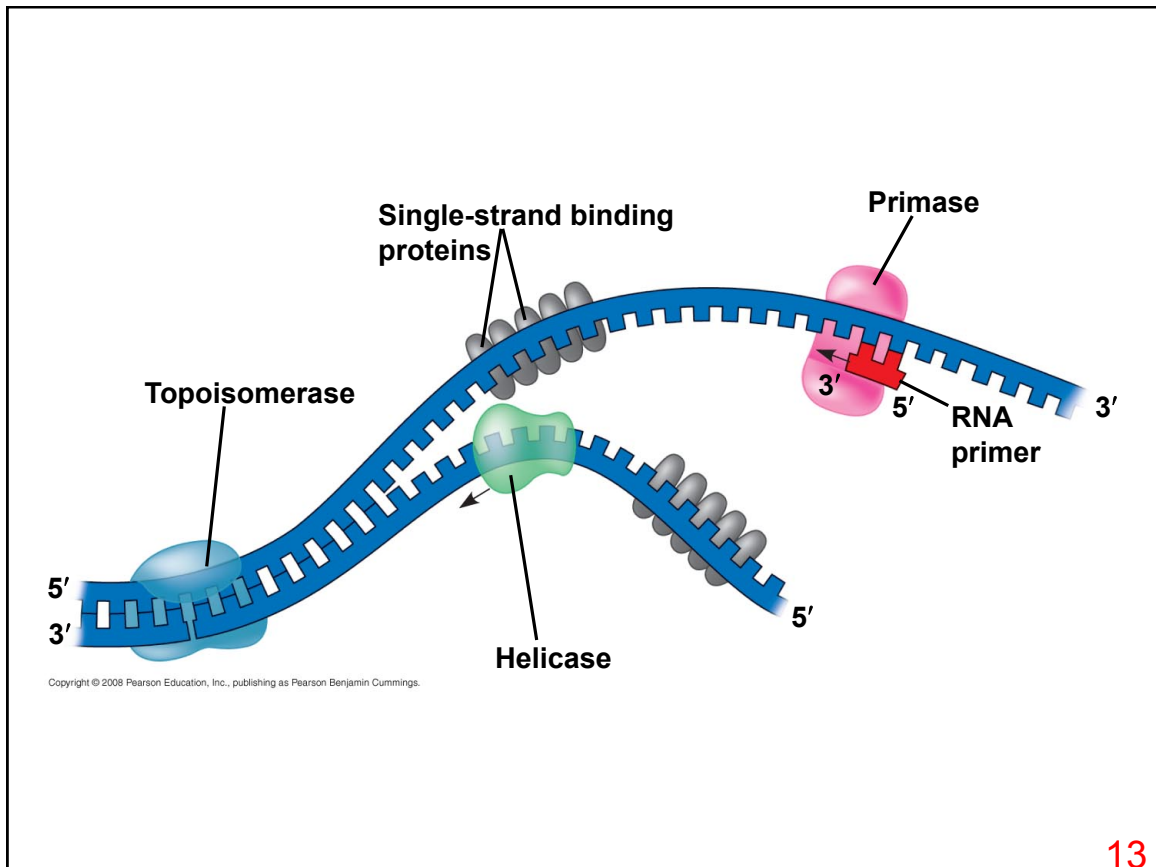
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11

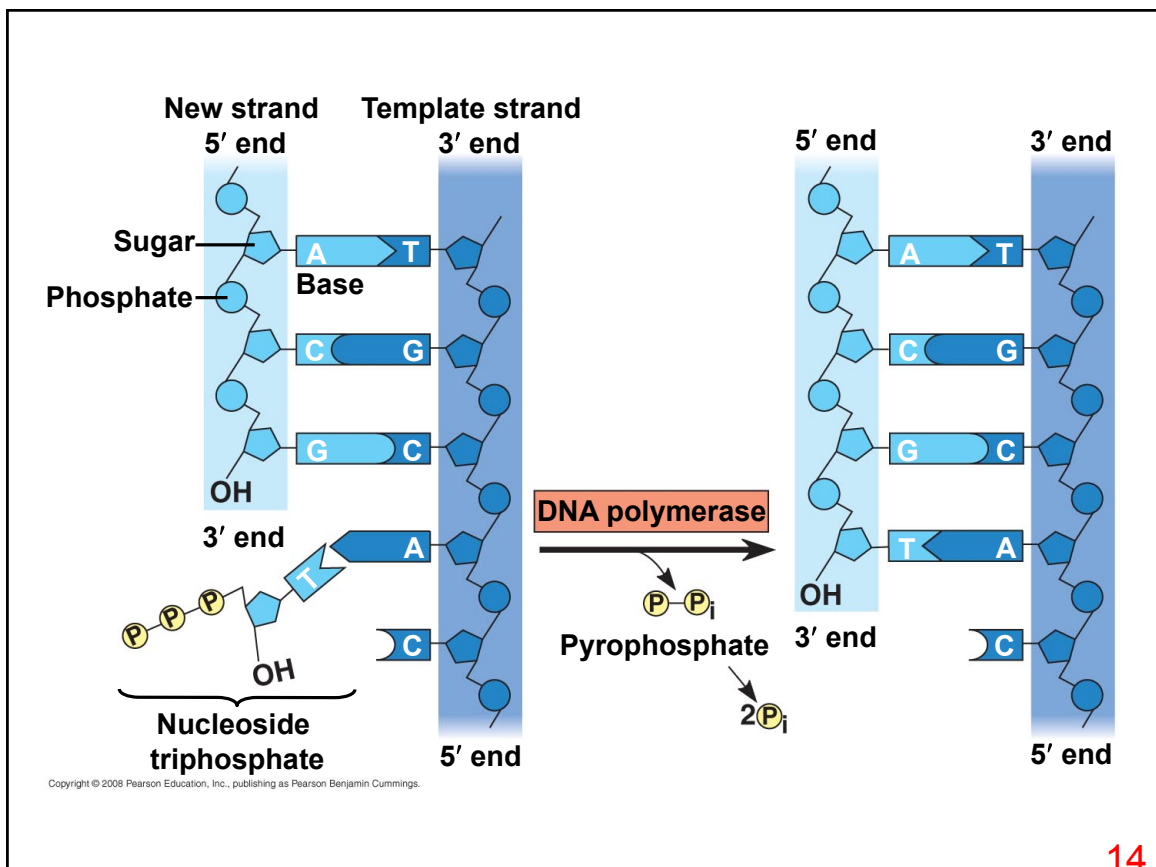


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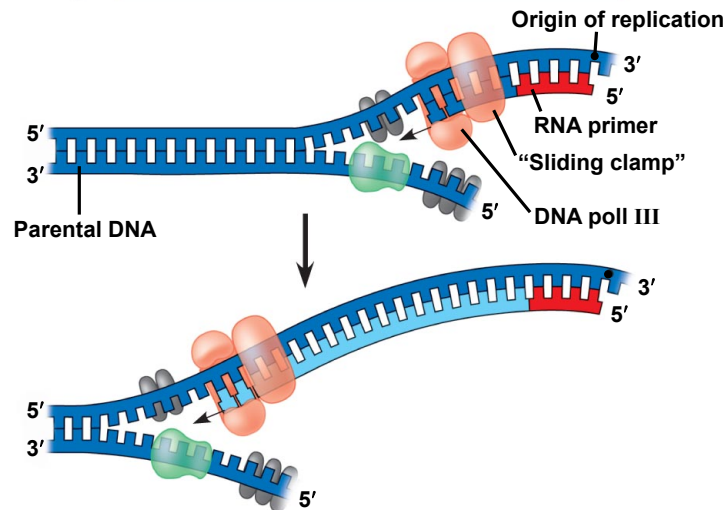
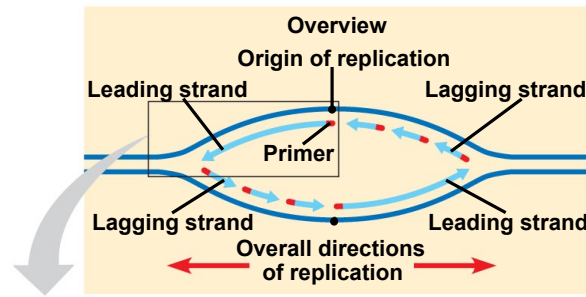
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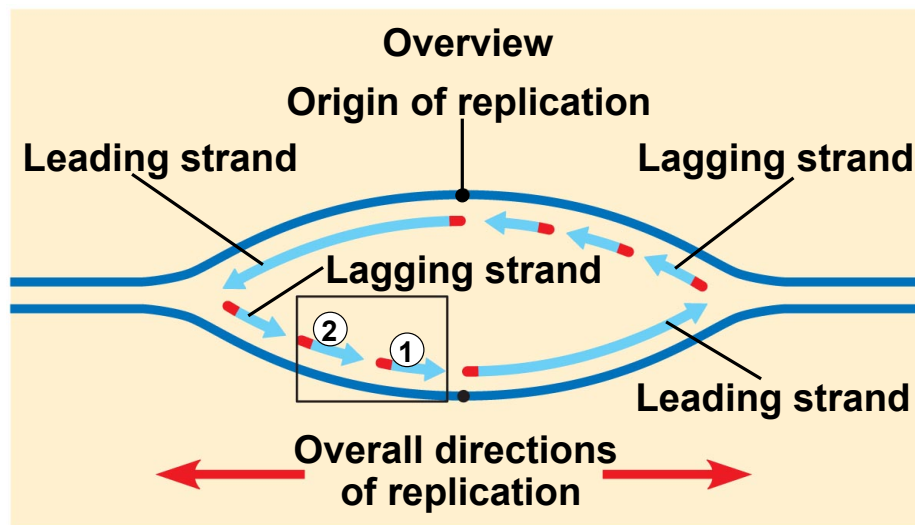


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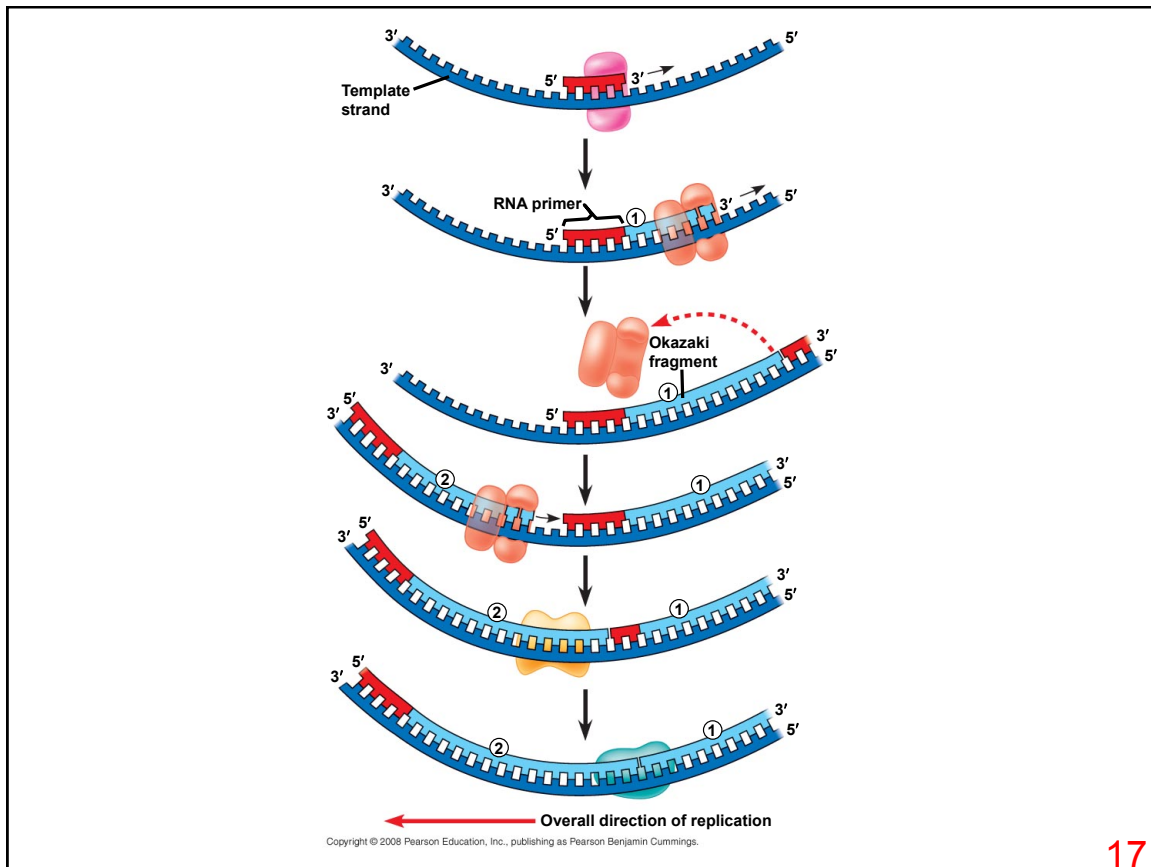
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15

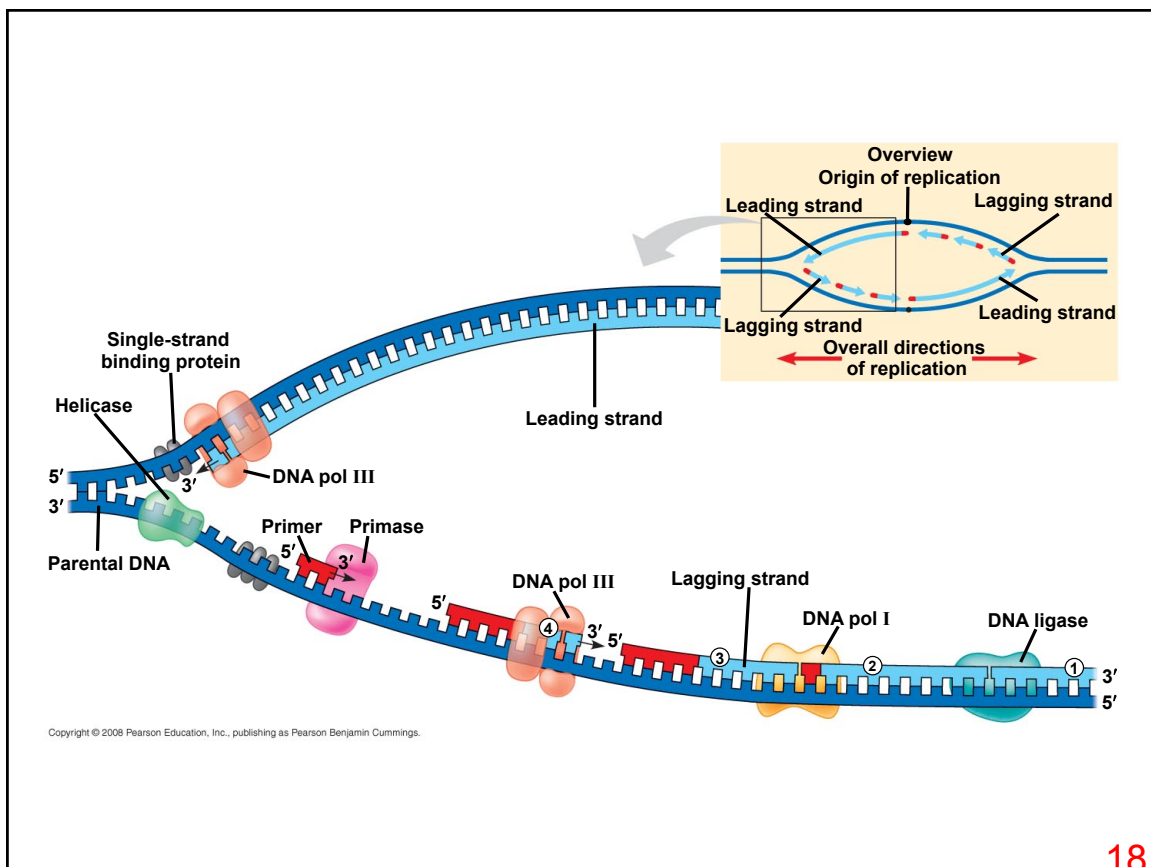


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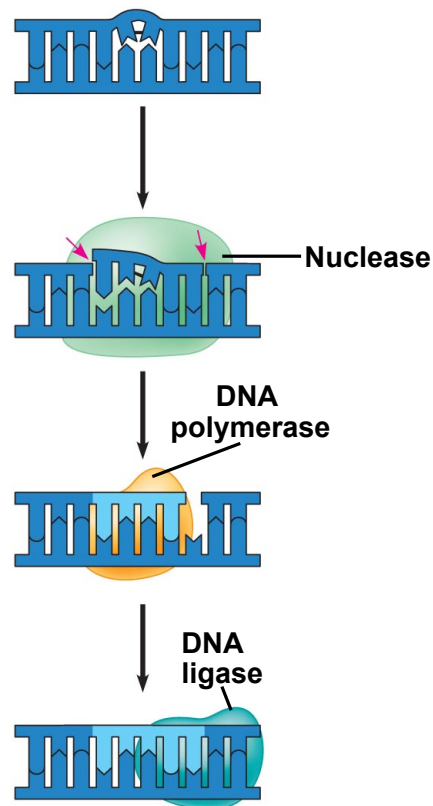
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17

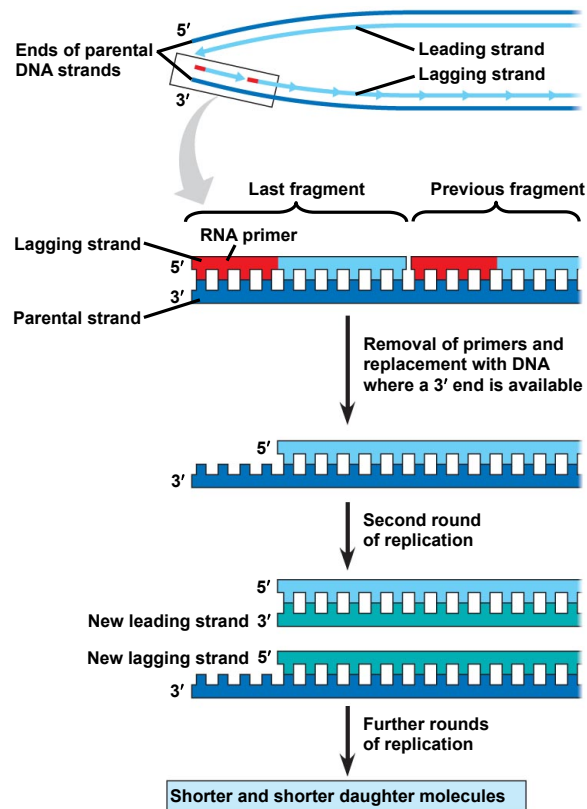


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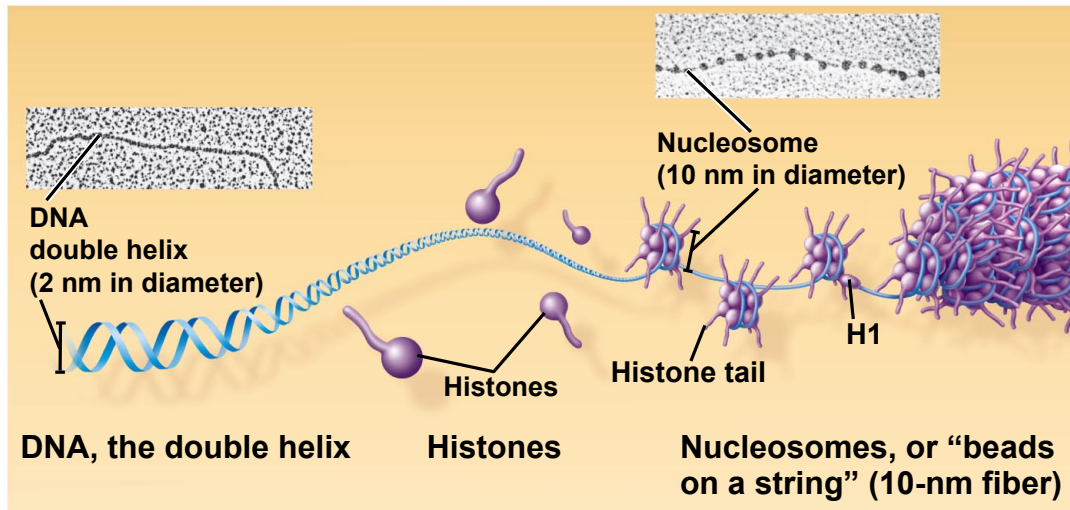
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19



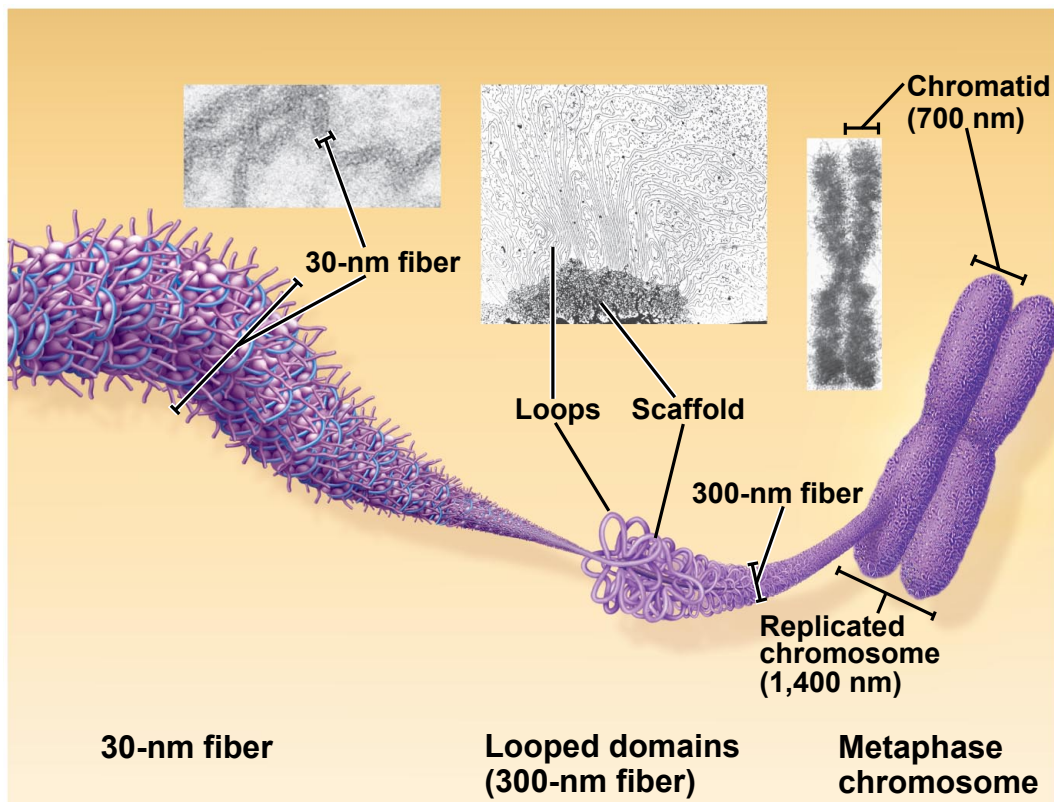
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