Biological Processes Study Template

Title

Clearly state the biological process (e.g., photosynthesis)

Title:

Notes

Add key supporting ideas:

- Link structure to function
- Include inputs/outputs (e.g., glucose, ATP)
- Note conditions or factors affecting the process

Notes

Steps

Steps

Write the process in numbered steps:

- One clear idea per step
- Include what happens & where it happens
- Use key terms (e.g., diffusion, enzyme action)

Diagram

Diagram

Draw a flowchart or sequence:

- Show stages in order (use arrows)
- Include key structures (e.g., chloroplast, ribosome)
- Keep it clear and logical

Summary

Summary

Write 1–2 sentences explaining the overall process and its purpose

Maths & Science Skills

CRICOS 00103D | RTO 4909 | TEQSA PRV12151 (Aust)

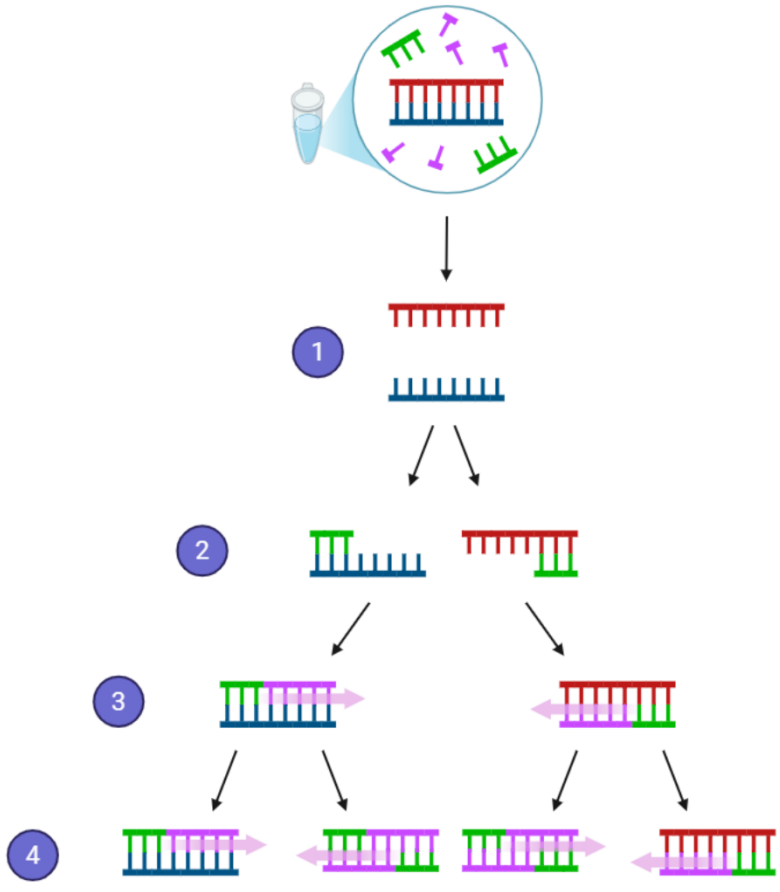
Title: Polymerase chain reaction (PCR)

- Technique to amplify (copy) a specific DNA sequence.
- Produces millions of identical DNA copies from initial sample.

Requires:

- Template DNA
- Primers (short DNA sequences)
- Taq polymerase
- Free nucleotides

Used in medical diagnosis, forensics, and genetic research.



1. Denaturation (≈95 °C)
   - Double-stranded DNA separates into single strands.
2. Annealing (≈50–65 °C)
   - Primers bind to complementary sequences on the DNA template.
3. Extension (≈72 °C)
   - DNA polymerase extends primers by adding nucleotides to form new strands.
4. One cycle doubles the DNA; repeated cycles cause exponential amplification.

PCR amplifies a target DNA sequence through repeated cycles of denaturation, annealing, and extension, allowing rapid production of large amounts of DNA from a small sample.

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