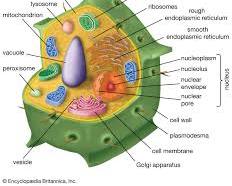
**Important Biology Diagrams for Your Exam**

**Cell Structure**

**1. Plant Cell**

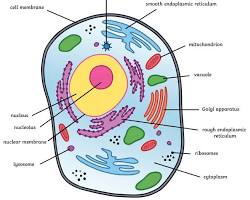
* **Key features:** Cell wall, chloroplasts, large central vacuole

[Opens in a new window[](https://www.britannica.com/science/plant-cell)www.britannica.com](https://www.britannica.com/science/plant-cell)

plant cell

**2. Animal Cell**

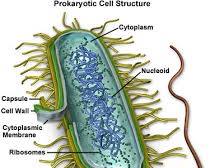
* **Key features:** No cell wall, centrioles, smaller vacuoles

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animal cell

**3. Bacterial Cell**

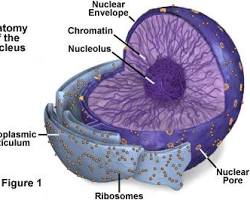
* **Key features:** Prokaryotic, no nucleus, single circular chromosome

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bacterial cell

**4. Nucleus**

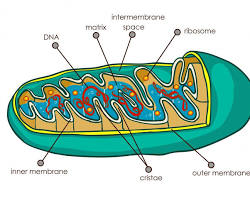
* **Key features:** Control center of the cell, contains DNA

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nucleus

**5. Mitochondria**

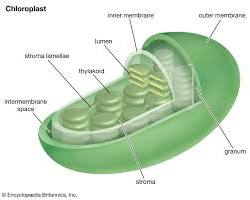
* **Key features:** "Powerhouse of the cell," produces ATP through cellular respiration

[Opens in a new window[](https://www.medicalnewstoday.com/articles/320875)medicalnewstoday.com](https://www.medicalnewstoday.com/articles/320875)

mitochondria

**6. Chloroplasts**

* **Key features:** Found in plants, perform photosynthesis to produce glucose

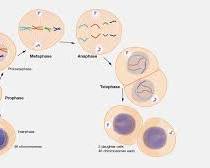
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chloroplasts

**Cell Processes**

**7. Mitosis**

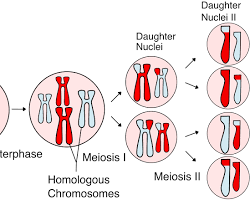
* **Key features:** Cell division resulting in two identical daughter cells

[Opens in a new window[](https://www.genome.gov/genetics-glossary/Mitosis)www.genome.gov](https://www.genome.gov/genetics-glossary/Mitosis)

mitosis

**8. Meiosis**

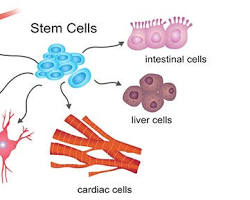
* **Key features:** Cell division resulting in four genetically different daughter cells

[Opens in a new window[](https://en.wikipedia.org/wiki/Meiosis)en.wikipedia.org](https://en.wikipedia.org/wiki/Meiosis)

meiosis

**9. Cell or Tissue Differentiation**

* **Key features:** Process by which cells specialize to perform specific functions

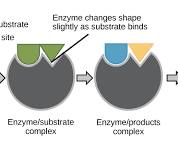
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cell differentiation

**Molecular Biology**

**10. Enzyme - Substrate Reaction**

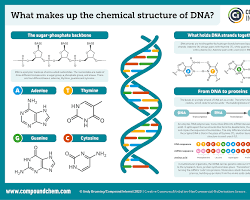
* **Key features:** Lock-and-key model, enzyme catalyzes a chemical reaction

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enzymesubstrate reaction

**11. DNA Structure**

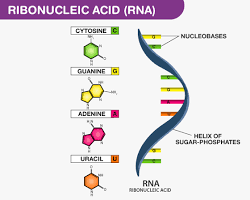
* **Key features:** Double helix, composed of nucleotides (adenine, thymine, guanine, cytosine)

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DNA structure

**12. RNA Structure**

* **Key features:** Single-stranded, composed of nucleotides (adenine, uracil, guanine, cytosine)

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RNA structure