

Class 9 Science

Summer Vacation Homework (NCERT 2026)

Physics - Chapter 1: Motion
Chemistry - Chapter 1: Matter in Our Surroundings
Biology - Chapter 1: The Fundamental Unit of Life (Cell)

General Instructions

- Write all answers neatly in your science notebook.
 - Draw labelled diagrams using pencil.
 - Practice numericals carefully in Physics.
 - Learn all definitions, formulas and keywords.
 - Complete the homework in your own handwriting.
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Physics - Chapter 1: Motion

Answer the Following Questions:

- 1 Define motion with examples.
- 2 Differentiate between distance and displacement.
- 3 What is speed? Write its SI unit.
- 4 Differentiate between speed and velocity.
- 5 Define acceleration.
- 6 What is uniform motion?
- 7 What is non-uniform motion?
- 8 Draw and explain distance-time graph.
- 9 Write the three equations of motion.
- 10 Define uniform circular motion with examples.
- 11 A car travels 150 km in 3 hours. Calculate its speed.
- 12 A train starts from rest and attains a velocity of 20 m/s in 10 seconds. Find acceleration.

Diagram / Drawing Work:

- Distance-Time Graph
 - Velocity-Time Graph
 - Uniform Circular Motion
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Chemistry - Chapter 1: Matter in Our Surroundings

Answer the Following Questions:

- 1 What is matter?
- 2 Write characteristics of particles of matter.
- 3 Explain diffusion with examples.
- 4 Differentiate between solids, liquids and gases.
- 5 Why do gases exert pressure?
- 6 Define evaporation.
- 7 What factors affect evaporation?
- 8 Why do we feel cool after sweating?
- 9 Explain latent heat of fusion and vaporization.
- 10 What is sublimation? Give examples.
- 11 Why can gases be compressed easily?
- 12 Explain change of state with temperature.

Diagram / Drawing Work:

- Arrangement of particles in solid, liquid and gas
 - Process of sublimation
 - Water cycle diagram
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Biology - Chapter 1: The Fundamental Unit of Life (Cell)

Answer the Following Questions:

- 1 Who discovered the cell?
- 2 Define cell theory.
- 3 What is a cell?
- 4 Differentiate between plant cell and animal cell.
- 5 Write functions of cell membrane.
- 6 What is the function of nucleus?
- 7 Explain the role of mitochondria.
- 8 What are plastids? Name their types.
- 9 Differentiate between prokaryotic and eukaryotic cells.
- 10 Why are lysosomes called suicidal bags?
- 11 Explain osmosis with examples.
- 12 Write functions of vacuoles.

Diagram / Drawing Work:

- Plant Cell

- Animal Cell
 - Osmosis experiment
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Extra Creative Work (Do Any One)

- Prepare a chart showing equations of motion.
- Make a model showing states of matter.
- Draw and label a large plant cell on chart paper.
- Write five real-life examples of motion.

Teacher's Note: Complete the homework neatly and submit after summer vacation.