

# SCIENCE YEAR 7 - TERM 1.2



## I ANALYSE

(Interpreting data, comparing, explaining relationships)

1. Compare the structures of plant and animal cells and describe how each part supports its function
2. Examine how friction affects motion in different conditions
3. Explore how the arrangement of particles explains the properties of solids, liquids, and gases
4. Analyse how balanced and unbalanced forces influence how things move
5. Investigate how specific features of cells help them carry out their roles (e.g., root hair cells, nerve cells)



## I PRACTICE

(Hands-on tasks and investigative work)

1. Safely use a microscope to view and focus on prepared cell slides
2. Collect and record temperature changes during changes in state and present in a graph
3. Investigate how surface texture affects friction on moving objects
4. Observe and record diffusion of particles in a liquid over time
5. Investigate how repeated movement affects muscle fatigue



## I EVALUATE

(Making judgments, reviewing effectiveness, using evidence)

1. Judge the success of heart transplants by comparing past and present outcomes
2. Assess how mass affects gravitational force using measurements from a newton meter
3. Critically examine the evidence that supports particle theory
4. Reflect on the reliability of experimental methods and suggest improvements
5. Evaluate the relationship between particle collisions and gas pressure



## I APPLY

(Using formulas, applying knowledge in new situations)

1. Use particle theory to explain how matter behaves in different states
2. Calculate density using the appropriate formula for regular and irregular objects
3. Apply the speed = distance ÷ time formula to solve motion problems
4. Classify forces as contact or non-contact based on their effects
5. Suggest ways to make adventure sports safer using knowledge of forces and motion

## I READ

BBC Bitesize - [Forces, Reproduction](#)

Scientific Literacy—Beyond Science

## I LEARN

### SCIENTIFIC SKILLS

**PHYSICS - FORCES** — Contact and non contact forces, Friction and Investigating friction, Balanced and Unbalanced forces, Mass and weight - Investigating How Mass Affects the Force of Gravity

**BIOLOGY — REPRODUCTION** — Puberty, Fertilisation, Health and Pregnancy, Menstrual Cycle

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## I READ

BBC Bitesize - [Cells Tissues and Organs](#), [States of Matter and Particle Theory](#),

[Introduction to Scientific Skills](#), [CGP Revision Guide](#) – Page No 1 to 7, Page 55 to 59.

[Scientific Literacy—Beyond Science](#)

## I LEARN

### BIOLOGY - Cells

Introduction to Cells  
Specialised Cells  
Microscopy  
Levels of Organisation

1. The Scientific Method
2. Designing an Investigation
3. Lab Apparatus
4. Lab Safety and Hazard Signs

### CHEMISTRY – ATOMS and the PERIODIC TABLE

1. Solids, Liquids and Gases
2. Atoms and Elements
3. The Periodic Table
4. Compounds and Naming Compounds