



## Year 7 January Assessment Revision List

Your January Science Assessment will test all of the ideas you have studied since the start of the year. Use this as a checklist to make sure you have covered all of the topics you need to revise.

### Topic 1: Cells

- **Microscopy**

Know the different parts of the microscope

Describe the functions of the different parts of the microscope

- **Plant and Animal cells**

Know the structures in plants and animal cells.

Describe the functions of the organelles

Identify the 7 life processes

- **Specialised Cells and Unicellular Cells**

Identify the different specialised cells and unicellular cells

Describe the functions of specialised cells

- **Diffusion**

Define the term diffusion

Describe the role of diffusion in the movement of materials including oxygen, carbon dioxide and glucose.

### Topic 2: Forces

- **Types of Forces**

Identify the different forces acting on objects

The effect of drag on a moving object

- **Measurement of Force**

Identify the units used to measure force

Describe how it varies with mass



## Topic 3: Particles

- **States of Matter**

Identify substances as Solids, Liquids and Gases and draw particle diagrams  
Recall the properties of Solids, Liquids and Gases

- **Changes of State**

Identify the changes of state  
Describe the changes of state with reference to the particle model  
Define melting and boiling points and interpret data on these.

- **Diffusion**

Describe diffusion using the particle model  
Explain how temperature affects the speed of diffusion

## Topic 4: Scientific Skills

- **Planning and Safety**

Identify the independent and dependent variables in an experiment  
Identify the control variables  
Be familiar with hazards and hazard symbols

- **Measurements and Interpretation**

Draw an accurate graph for given data  
Create a labelled table of results for a given hypothesis  
Identify appropriate equipment  
Interpret data in graphs



## Year 8 January Assessment Revision List

Your January Science Assessment will test all of the ideas you have studied since the start of the year. Use this as a checklist to make sure you have covered all of the topics you need to revise.

### Topic 1: Ecology and Environment

- **Interdependence**

Describe what food webs and food chains show

Explain how bioaccumulation occurs and its impact

- **Sampling**

Recall sampling techniques (quadrats and transects)

Describe how to carry out sampling techniques

- **Factors that affect organisms and their environment**

Use data to evaluate human impacts on the environment

Describe how animals are adapted to their environment

### Topic 2: Atomic Structure

- **Elements and Compounds**

Identify elements using the periodic table

Describe the difference between an element and a compound

Properties of metals and non-metals

- **Atomic Structure**

Identify the location of electrons, neutrons and protons in an atom

Identify the proton and electron number for different elements

- **Chemical Reactions**

Describe how to carry out a test tube reaction (Iron and Sulphur)

Represent reactions using word and symbol equations



## Topic 3: Heat and Energy

- **Kinetic Theory and Thermal Energy**

Identify the particle arrangement of solids, liquids and gases

Describe how changes in energy will affect the motion of particles

- **Heat Transfers**

Describe and explain how conduction, convection and radiation occur

Identify surfaces that emit and reflect radiation

Identify what objects conduct and insulate

- **Energy**

State the different forms of energy

Recognise how energy can change from one form to another

- **Efficiency**

Calculate the efficiency of energy being transferred

Know that wasted energy is transferred to the surroundings as heat

Draw and interpret a Sankey diagram based on given data

## Topic 4: Light and Sound

- **Sound**

Explain how the ear can hear sound

Describe how sound waves can be represented using a wave diagram

Describe the effect of changing frequency and wavelength on sound

- **Light**

Describe refraction, reflection and dispersion

Identify that white light is made up of all colours in the visible spectrum

Explain how filters work to produce different colours of light

## Topic 5: Scientific Skills

- **Planning and Safety**

Identify the independent and dependent variables in an experiment

Identify the control variables

Be familiar with hazards and hazard symbols

- **Measurements and Interpretation**

Draw an accurate graph for given data

Create a labelled table of results for a given hypothesis

Identify appropriate equipment

Interpret data in graphs

# KS3 SCIENCE

