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

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**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 and 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