

Year 7 Summer CE Revision (optional)

Topics covered this year

Biology	Chemistry	Physics
Cells, Tissues and Organs	Acids and bases	Energy and resources
Breathing and Respiration	Simple Chemical Reactions	Electricity and magnetism
Microbes and disease	Solid, liquids and gases	Space
Environment and Ecology	Separation Techniques (will be completed in YR8)	Forces and Speed

Click on the links below to help with revision

[Biology Bitesize](#)

Living Organisms, Respiration and Gas Exchange, Ecosystems and Habitats and Health and disease.

[Chemistry Bitesize](#)

States of Matter, Chemical Reactions and Tests, and Acids, Bases and Salts

[Physics Bitesize](#)

Energy, Electricity, Forces and Movement and Space

[Sciences Quizzes](#) to test your understanding

Revision notes

Use your books and revision guide to help you make revision notes or cards on the following:

Physics:

Forces and speed

- Balanced and unbalanced forces Explain the effect of forces on an object.
- Name 3 forces
- Work out the size of a force from how an object is moving.
- Speed Recall the formula that links speed, distance and time
- Calculate speed e.g. if an object takes 30 seconds to travel 90 metres what is the average speed?
- Friction Describe two ways of reducing friction
- Explain how a parachute works.

Space

- The planets Name the planets in order
- Link the planets temperature and orbital time to its distance from the sun.
- Day, Night and Seasons Explain why we have day and night
- Explain why we get seasons
- Satellites Describe what satellites are used for.
- Why don't satellites fly off into space?

Electricity and magnetism

- Electricity Draw circuit symbols and simple series and parallel circuits correctly.
- Identify materials as conductors and insulators.
- State some reasons why a circuit wouldn't work.

- Energy resources and transfers

Energy and resources

- Where does most of the Earth's energy come from?
- What are fossil fuels?
- Name three renewable energy resources.
- Draw a diagram to show how energy is generated from coal.
- Energy transfers List 5 different forms of energy.
- State the energy transformation for a television.
- Describe how energy is lost from a house.
- Explain why energy conservation is important

Biology:

Cells, tissues and Organs

- Life processes and cells
- Life Processes What does “MRS GREN” stand for?
e.g. M=Movement
- Plant and animal cells Draw and label diagrams of the two types of cell.
- Which organelles do they have in common?
- What does each part do in the cell?
- Specialised cells Name 3 specialised animal and 3 specialised plant cells.
- Explain how their structure helps with their job.
- Organisation Cell, tissue, organs, system, organism
- Name 5 Organs and describe what they do?
- Identify what body systems they belong to?

Breathing and Respiration

- Respiratory system - major organs
- Circulatory system - major organs
- Explain gas exchange in the alveoli
- Describe the route of blood around your body.
- Red blood cell
- Respiration - the reaction and where it happens in the cell

Microbes and disease

- What are micro-organisms? Examples
- How are diseases spread?
- How the body defends itself - the Immune System
- Vaccination - how it works
- Describe the effects of smoking, alcohol and lack of exercise on the body?

Environment and Ecology

- Name some different habitats and identify the plants and animals found there.
- Explain how the organisms are adapted to their environment.
- Draw a food chain or a food web.
- Sampling techniques: How to use a quadrat. Importance of random testing
- Use key terms correctly. (Predator, prey, producer, consumer, carnivore, herbivore etc)
- Describe how organisms are in competition for resources such as light, food & shelter.
- Explain why the population of a species may change. Include the effects of human activity

Chemistry:

Solids, liquids and gases and separation techniques

- Name three states of matter and describe how their particles are arranged.
- List the different properties of the three states of matter.
- Use key terms correctly, evaporation, sublimation, condensation, freezing etc
- Explain gas pressure and diffusion in terms of particles.
- Atoms and elements Describe what is meant by an atom and element.
- Give the chemical symbols of common elements (copper, lead, oxygen, hydrogen etc)
- Describe some of the properties of common elements e.g. it's a conductor
- Explain the difference between a compound and a mixture.
- Explain how a mixture can be separated by filtration, evaporation, chromatography and distillation

Simple chemical Reactions

- Physical and chemical change Identify physical and chemical changes.
- Explain observations made of a chemical change, e.g. if bubbles are seen
- Explain dissolving in terms of particles
- Define solvent, solute, solution, solubility correctly
- Explain factors which affect solubility e.g. temperature

- Word equations What are reactants and products?
- Write the word equations for simple reactions e.g. metal & oxygen, metal & acid, acid & alkali
- How to protect iron and steel from rusting
- The combustion reaction

Acid and bases

- Name some acids and alkalis (home and lab)
- Indicators - litmus, universal and red cabbage
- Use the pH scale and locate acid, alkali and neutral on it.
- Describe how acids can be neutralised.
- Write word equations for neutralisation reaction
- Difference between base and alkali
- Useful neutralisation reactions