

# Subject: GCSE Physics

## Year 10 (Modules, Topics)

| Term 1   | Term 2   | Term 3   |
|--|--|--|
| Density<br>States of matter<br>SHC<br>Atoms and radiation<br>Discovery of the nucleus<br>Changes in the nucleus<br>Alpha, beta and gamma<br>Activity and half life<br>Nuclear radiation and medicine<br>Nuclear fission<br>Nuclear fusion<br><br><b>Resources:</b><br>AQA Physics Textbook<br><br><b>Assessment:</b><br>Summative assessment: Particles<br>Summative assessment: Atoms and radioactivity<br>Required practical: Density<br>Required practical: SHC | Electric circuits<br>Current and charge<br>Potential difference and resistance<br>Component characteristics<br>Series and parallel circuits<br>AC current<br>Cables and plugs<br>Power and PD<br>Currents and energy transfer<br>Appliances and efficiency<br><br><b>Resources:</b><br>AQA Physics Textbook<br><br><b>Assessment:</b><br>Summative assessment: Electricity Test 1<br>Summative assessment: Electricity Test 2<br>Required practical: Series and Parallel Circuits<br>Required practical: Length of wire and Resistance<br>Required practical: Component Graphs | Waves properties<br>The nature of waves<br>Reflection and refraction<br>Sound waves<br>Electromagnetic spectrum<br>Light<br>Colour<br><br><b>Resources:</b><br>AQA Physics Textbook<br><br><b>Assessment:</b><br>Summative assessment: Waves 1<br>Summative assessment: Waves 2<br>Required practical: Waves on a string<br>Required practical: Ripple Tank<br>Required practical: Infrared<br>Required practical: Refraction (Triple) |

**Year 11**  
**(Modules, Topics)**

| Term 1  | Term 2  | Term 3   |
|---|---|--|
| <p>Vectors and resultant forces<br/>Parallelogram of forces<br/>Speed distance time graphs<br/>Velocity and acceleration<br/>Weight and terminal velocity<br/>Forces and braking<br/>Momentum<br/>Forces and elasticity<br/>Pressure</p> <p><b>Resources:</b><br/>AQA Physics Textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Forces<br/>Summative assessment: Motion<br/>Required practical: Acceleration<br/>Required practical: Hooke's Law</p> | <p>Magnetic fields<br/>Electromagnets<br/>The motor effect<br/>AC generator<br/>Transformers<br/>Formation of the solar system<br/>Life history of a star<br/>Planets, satellites and orbits<br/>Expanding universe</p> <p><b>Resources:</b><br/>AQA Physics Textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Magnets and Electromagnets<br/>Summative assessment: Space<br/>Summative assessment: Mock papers<br/>Required practical: None</p> | <p>Revision</p> <p><b>Resources:</b><br/>Exam Papers<br/>AQA Physics Textbook</p> <p><b>Assessment:</b><br/>Mock papers<br/>Final exam</p> |

# Subject: GCSE Chemistry

## Year 10 (Modules, Topics)

| Term 1  | Term 2  | Term 3  |
|---|---|---|
| Structure and bonding<br>Chemical calculations<br><br><b>Resources:</b><br>AQA Chemistry Textbook<br><br><b>Assessment:</b><br>Summative assessment: Structure and bonding test<br>Summative assessment: Mole test<br>Required practical: titration<br>Homework : ionic bonding<br>Homework: covalent bonding<br>Homework: nanoparticles<br>Homework: mole calculations<br>Homework: calculating concentration<br>Homework: titration | Chemical changes<br>Electrolysis<br><br><b>Resources:</b><br>AQA Chemistry Textbook<br><br><b>Assessment:</b><br>Summative assessment: Chemical changes test<br>Summative assessment: Electrolysis test<br>Required practical: Electrolysis<br>Required practical: Prepare a salt from a base<br>Homework: Extracting copper from copper sulphate<br>Homework: Neutralisation<br>Homework: Strong and weak acids<br>Homework: Electrolysis<br>Homework: Extraction of aluminium | Energy changes<br>Rates and equilibrium<br><br><b>Resources:</b><br>AQA Chemistry Textbook<br><br><b>Assessment:</b><br>Summative assessment: Energy changes and rates test<br>Summative assessment: Rates and equilibrium test<br>Required practical: Rates of reaction with temperature and concentration<br>Homework: Bond energy calculations<br>Homework: Chemical cells and batteries<br>Homework: Collision theory<br>Homework: Effect of temperature, concentration, catalysts and surface area of rate |

## Year 11 (Modules, Topics)

| Term 1   | Term 2   | Term 3  |
|--|--|---|
| <p>Equilibrium<br/>Crude oil and fuels<br/>Organic reactions<br/>Polymers</p> <p><b>Resources:</b><br/>AQA Chemistry Textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Rates and equilibrium test<br/>Summative assessment: Organic test<br/>Homework: Fractional distillation<br/>Homework: Alcohols, carboxylic acids and esters<br/>Homework: Polymerisation</p> | <p>Chemical analysis<br/>Earth's atmosphere</p> <p><b>Resources:</b><br/>AQA Chemistry Textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Analysis test<br/>Summative assessment: Atmosphere and the earth test<br/>Required practical: Testing anions and cations<br/>Required practical: Purify and test water<br/>Required practical: Chromatography<br/>Homework: Tests for anions and cations<br/>Homework: Atmospheric pollutants<br/>Homework: Treating waste water</p> | <p>Using our resources</p> <p><b>Resources:</b><br/>AQA Chemistry Textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Resources test<br/>Summative assessment: Rates and equilibrium test<br/>Homework: Haber process<br/>Homework: Past paper questions</p> |

# Subject: GCSE Biology

## Year 10 (Modules, Topics)

| Term 1   | Term 2   | Term 3   |
|--|--|--|
| <p>Cell division<br/>Stem cells<br/>Heat and circulation<br/>Organising animals and plants<br/>non communicable diseases – cancer, smoking, heart disease, alcohol</p> <p><b>Resources:</b><br/>AQA Biology textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Heart and circulation<br/>Summative assessment: Cell division<br/>Summative assessment: non-communicable diseases</p> | <p>Preventing and treating disease<br/>Vaccinations<br/>Discovery and development of drugs<br/>Monoclonal antibodies<br/>Respiration<br/>Photosynthesis</p> <p><b>Resources:</b><br/>AQA biology textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Respiration<br/>Summative assessment: Photosynthesis<br/>Summative assessment: communicable diseases and their prevention<br/>Required practical: Photosynthesis<br/>Required practical: Antibiotics</p> | <p>The human nervous system<br/>Reflexes and the synapse<br/>The brain<br/>The Eye<br/>Homeostasis in action<br/>Hormonal coordination</p> <p><b>Resources:</b><br/>AQA biology textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Nervous system<br/>Summative assessment: Homeostasis and hormonal coordination<br/>Required practical: Reaction Time<br/>Required practical: Plant seedling growth and hormones</p> |

**Year 11**  
**(Modules, Topics)**

| Term 1  | Term 2   | Term 3  |
|---|--|---|
| <p>Hormonal communication (cont.)<br/>Homeostasis<br/>Body temperature<br/>Removing waste<br/>The kidney<br/>Dialysis<br/>Kidney transplants<br/>Reproduction<br/>DNA and protein synthesis</p> <p><b>Resources:</b><br/>AQA biology textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Nervous system<br/>Summative assessment: Homeostasis and hormonal coordination<br/>Required practical: Plant seedling growth and hormones</p> | <p>Variation and evolution<br/>Natural selection<br/>Selective breeding<br/>Gen engineering/Cloning<br/>Theories of evolution<br/>Evolution and speciation<br/>Evidence for evolution/ fossils and extinction<br/>Antibiotic resistant bacterial<br/>Classification<br/>Competition<br/>Adaptations<br/>Feeding relationships and cycles</p> <p><b>Resources:</b><br/>AQA biology textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Variation and evolution<br/>Summative assessment: Genetics<br/>Summative assessment: Adaptations<br/>Required practical: Population size<br/>Required practical: Milk decay</p> | <p>Biodiversity in ecosystems<br/>Pollution and biomass transfers</p> <p><b>Resources:</b><br/>AQA biology textbook</p> <p><b>Assessment:</b><br/>Summative assessment: Mock papers</p> |

## Subject: GCSE Combined Science

### Year 10 (Modules, Topics)

| Term 1  | Term 2  | Term 3   |
|---|---|--|
| <p>Cell division<br/>Organising animals and plants<br/>non communicable diseases – cancer, smoking, heart disease, alcohol<br/>Structure and bonding<br/>Chemical calculations<br/>Density<br/>States of matter<br/>SHC<br/>Atoms and radiation<br/>Discovery of the nucleus<br/>Alpha, beta and gamma<br/>Activity and half life</p> <p><b>Resources:</b><br/>AQA biology, chemistry and physics textbooks</p> <p><b>Assessment:</b><br/>Summative assessment: Particles<br/>Summative assessment: Atoms and radioactivity<br/>Summative assessment: cell division and diseases<br/>Summative assessment: Structure and bonding test</p> | <p>Communicable diseases – viral and bacterial infections<br/>Preventing and treating disease<br/>Respiration<br/>Chemical changes<br/>Electrolysis<br/>Electric circuits<br/>Component characteristics<br/>Series and parallel circuits<br/>AC current<br/>Cables and plugs<br/>Power and PD<br/>Currents and energy transfer<br/>Appliances and efficiency</p> <p><b>Resources:</b><br/>AQA biology, chemistry and physics textbooks</p> <p><b>Assessment:</b><br/>Summative assessment: Electricity Test 1<br/>Summative assessment: Electricity Test 2<br/>Summative assessment: communicable diseases and their prevention<br/>Summative assessment: Respiration</p> | <p>Photosynthesis<br/>The human nervous system<br/>Waves properties<br/>The nature of waves<br/>Energy changes<br/>Rates and equilibrium<br/>Reflection and refraction<br/>Electromagnetic spectrum</p> <p><b>Resources:</b><br/>AQA biology, chemistry and physics textbooks</p> <p><b>Assessment:</b><br/>Summative assessment: Waves<br/>Summative assessment: Photosynthesis<br/>Summative assessment: Energy changes and rates test</p> |

|   |  |   |
|---|--|---|
| <p>Summative assessment: Mole test<br/>         Required practical: titration<br/>         Required practical: Density<br/>         Required practical: SHC<br/>         Homework : ionic bonding<br/>         Homework: covalent bonding<br/>         Homework: nanoparticles<br/>         Homework: mole calculations<br/>         Homework: calculating concentration<br/>         Homework: titration</p> | <p>Summative assessment: Chemical changes test<br/>         Summative assessment: Electrolysis test<br/>         Required practical: Electrolysis<br/>         Required practical: Prepare a salt from a base<br/>         Required practical: Series and Parallel Circuits<br/>         Required practical: Length of wire and Resistance<br/>         Required practical: Component Graphs<br/>         Required practical: Effect of exercise on breathing/heart rate<br/>         Homework: Extracting copper from copper sulphate<br/>         Homework: Neutralisation<br/>         Homework: Strong and weak acids<br/>         Homework: Electrolysis<br/>         Homework: Extraction of aluminium</p> | <p>Summative assessment: Rates and equilibrium test<br/>         Required practical: Rates of reaction with temperature and concentration<br/>         Required practical: Waves on a string<br/>         Required practical: Ripple Tank<br/>         Required practical: Infrared<br/>         Required practical: Photosynthesis<br/>         Homework: Bond energy calculations<br/>         Homework: Chemical cells and batteries<br/>         Homework: Collision theory<br/>         Homework: Effect of temperature, concentration, catalysts and surface area of rate</p> |
|---|--|---|

**Year 11  
(Modules, Topics)**

| Term 1   | Term 2  | Term 3  |
|--|---|---|
| <p>Hormonal communication<br/>           Homeostasis<br/>           Reproduction<br/>           Equilibrium<br/>           Crude oil and fuels<br/>           Forces and motion</p> <p><b>Resources:</b><br/>           AQA biology, chemistry and physics textbooks</p> | <p>Variation and evolution<br/>           Genetics and evolution<br/>           Adaptations, interdependence and completion<br/>           Organising and Ecosystem<br/>           Magnets and electromagnets<br/>           Chemical analysis<br/>           Earth's atmosphere</p> <p><b>Resources:</b><br/>           AQA biology, chemistry and physics textbooks</p> | <p>Biodiversity in ecosystems<br/>           Revision for GCSE</p> <p><b>Resources:</b><br/>           AQA biology, chemistry and physics textbooks</p> |



|  |  |  |
|--|--|--|
| <p><b>Assessment:</b><br/> Summative assessment: Homeostasis test<br/> Summative assessment: Reproduction test<br/> Summative assessment: Forces test<br/> Summative assessment: Motion test<br/> Summative assessment: Rates and equilibrium test<br/> Summative assessment: Crude oil test<br/> Required practical: Acceleration<br/> Required practical: Hooke's Law<br/> Homework: Hormones of the menstrual cycle<br/> Homework: Temperature homeostasis<br/> Homework: Kidney dialysis v transplant<br/> Homework: Reproduction and inheritance<br/> Homework: Fractional distillation<br/> Homework: Burning hydrocarbon fuels<br/> Homework: Cracking hydrocarbons</p> | <p><b>Assessment:</b><br/> Summative assessment: Analysis test<br/> Summative assessment: Atmosphere and the earth test<br/> Summative assessment: magnets and electromagnets<br/> Summative assessment: variation and genetics<br/> Required practical: Testing anions and cations<br/> Required practical: Purify and test water<br/> Required practical: Chromatography<br/> Homework: Tests for anions and cations<br/> Homework: Atmospheric pollutants<br/> Homework: Treating waste water<br/> Homework: Cloning<br/> Homework: Theories of evolution<br/> Homework: Fossils and extinction<br/> Homework: Food chains and webs</p> | <p><b>Assessment:</b> Practice exam revision</p> |
|--|--|--|