

Science Combined Foundation Paper

| Content Overview | | Free Science Lessons | BBC Bitesize | Bitesize Quiz | GCSE Pod link |
|--------------------------|---|--------------------------------------|--------------------------|----------------------|--|
| Biology Paper 1 Part 1 | Small Steps | | | | |
| | How cells divide for growth and repair | Free Science Lessons | Bitesize | Quiz | Cell Division |
| | Levels of organisation; animal cells, tissues, organs and organ systems. | Free Science Lessons | Bitesize | Quiz | Levels of organisation |
| | Communicable diseases caused by bacteria, viruses, fungi and protists. | Free Science Lessons | Bitesize | Quiz | Communicable Diseases |
| Biology Paper 1 Part 2 | Photosynthesis | Free Science Lessons | Bitesize | Quiz | Photosynthesis |
| | Required practical; use of a light microscope | Free Science Lessons | Bitesize | | RPA Light Microscope |
| | Required practical; test for carbohydrate, lipids and proteins | Free Science Lessons | Bitesize | | RPA Food Tests |
| Chemistry Paper 1 Part 1 | Required practical; the effect of light on rate of photosynthesis | Free Science Lessons | Bitesize | | RPA Light Intensity effect on Photosynthesis |
| | History and structure of the periodic table | Free Science Lessons | Bitesize | Quiz | The Periodic Table |
| | Bonding and structure relating to properties of substances | Free Science Lessons | Bitesize | Quiz | Bonding and structure |
| | Structure and bonding of carbon | Free Science Lessons | Bitesize | Quiz | Structure and bonding of carbon |
| | Reactivity series and reactivity of metals | Free Science Lessons | Bitesize | Quiz | Reactivity series |
| | Reactions with acids | Free Science Lessons | Bitesize | Quiz | Reactions with acids |
| Chemistry Paper 1 Part 2 | Separation of elements with electrolysis | Free Science Lessons | Bitesize | Quiz | Separation of elements using electrolysis |
| | Required practical; Preparation of a pure dry salt from oxide or carbonate. | Free Science Lessons | Bitesize | | RPA Preparation of a pure dry salt |
| | Required practical; electrolysis of aqueous solutions | Free Science Lessons | Bitesize | | RPA Electrolysis of an aqueous solution |
| Physics Paper 1 Part 1 | Required practical; Temperature changes in reactions | | Bitesize | | |
| | Energy stores and changes in a system | Free Science Lessons | Bitesize | Quiz | Energy changes in a system |
| | National and global energy resources | Free Science Lessons | Bitesize | Quiz | National and global energy resources |
| | Current, potential difference and resistance | Free Science Lessons | Bitesize | Quiz | Current, potential difference and resistance |
| | Change of state and the particle model. | Free Science Lessons | Bitesize | Quiz | Changes of state and particle model |
| | Atomic Structure | Free Science Lessons | Bitesize | Quiz | Atoms and nuclear radiation |

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| | Radioactive decay | Free Science Lessons | Bitesize | Quiz | Radioactive decay |
| Physics Paper 1 part 2 | Required practical; determine the specific heat capacity of a material | Free Science Lessons | Bitesize | | RPA measuring specific heat capacity |
| | Required practical; Construct circuits to investigate IV characteristics of components | Free Science Lessons | Bitesize | | RPA Current and voltage graphs |
| Biology Paper 2 Part 1 | Hormonal control in humans | Free Science Lessons | Bitesize | Quiz | Hormonal Control in humans |
| | Reproduction | Free Science Lessons | Bitesize | Quiz | Reproduction |
| | Adaptations, interdependence and competition | Free Science Lessons | Bitesize | Quiz | Adaptation and interdependence |
| | Organisation of an ecosystem. | | | | |
| Biology Paper 2 Part 2 | Required practical; Measure the size of a population in a habitat | Free Science Lessons | Bitesize | | RPA Population Sampling |
| Chemistry Paper 2 Part 1 | Rate of reaction | Free Science Lessons | Bitesize | Quiz | Rate of reaction |
| | Reversible reactions and dynamic equilibrium | Free Science Lessons | Bitesize | Quiz | Reversible reactions and dynamic equilibrium |
| | Carbon compounds as fuels and feedstock | Free Science Lessons | Bitesize | Quiz | Carbon compounds as fuels and feeds |
| | Purity, formulations and chromatography | Free Science Lessons | Bitesize | Quiz | Purity, formulations and chromatography |
| | Composition and evolution of the Earths atmosphere | Free Science Lesson | Bitesize | Quiz | Composition of the Earths atmosphere |
| | Atmospheric pollutants and their sources. | Free Science Lessons | Bitesize | Quiz | Common atmospheric pollutants |
| | Using Earths resources and obtaining potable water | Free Science Lessons | Bitesize | | Earths resources and potable water |
| Chemistry Paper 2 Part 2 | Required practical; investigate the effect of concentration on rate of reaction | Free Science Lessons | Bitesize | | RPA Effect of concentration on rate of reaction |
| | Required practical; use chromatography to separate coloured substances, calculate Rf | Free Science Lessons | Bitesize | | |
| Physics Paper 2 Part 1 | Forces and their interactions | Free science lesson time... | Revision | Quiz | Forces and their interactions |
| | Describing motion along a line | Free science lesson time... | Revision | Quiz | Describing motion along a line |
| | forces, accelerations and Newtons Laws of motion. | Free science lesson acceleration | Revision | Quiz | Forces, acceleration and Newtons laws |
| | Forces and braking | Free science lesson braking distances | Revision | Quiz | Forces and braking |
| | Electromagnetic waves | Free science lessons EM waves | Revision | Quiz | Electromagnetic waves |

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| | Permanent and induced magnetism, magnetic forces and fields. | Free Science Lessons magnetic fields | Revision | Quiz | Permanent and induced magnetism |
| | The motor effect | Free science lesson motor effect | Revision | Quiz | The motor effect |
| Physics Paper 2 part 2 | Required practical; Investigate how the nature of a surface affects the amount of infra-red radiation absorbed or radiated. | Free science lessons IR practical | Revision | Quiz | |
| Handling Data | Interpreting data | | | | |
| | Mode, mean (average), range and median | | | | |
| | Plotting data | | | | |
| | Anomalies | | | | |
| Working Scientifically | Variables in practical planning | | | | |
| | Methodology writing | | | | |
| | Reproducibility & repretability | | | | |
| | Hypothesis, predictions and aims | | | | |
| | Errors - systematic, zero, human and random | | | | |
| | Resolution, calibration and accuracy | | | | |
| | Justification and evaluation | | | | |