

AQA Advance Information- June 2022

Foundation Level- Combined Science

Exams are going ahead this year. However, exam boards have made some changes to the exams to compensate for the disruption students have experienced during the pandemic.

For Combined Science, exam boards have released advance information on the topics that will be tested in the exams. The below provides a summary of these topics. (Students have also been issued with a paper copy of the information in school). To aid with their revision, students can log onto Seneca and choose to work through the relevant topics. Students will also be issued with information in school over the coming weeks to help with their revision.

BIOLOGY

Biology 1F

- Cell Division
- Animal Tissues, organs and organ systems
- Communicable Diseases
- Photosynthesis

Required Practicals:

Use of a light microscope- Practical 1

Use of reagents to test for carbohydrates, lipids and proteins- Practical 3

Investigating the effect of light on the rate of photosynthesis of an aquatic plant such as pondweed- Practical 5

Biology 2F

- Hormonal control in humans
- Reproduction
- Adaptations, interdependence and competition
- Organisation of an ecosystem

Required Practicals:

Measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species- Practical 7

CHEMISTRY

Chemistry 1F

- The Periodic Table
- How bonding and structure are related to the properties of substances
- Structure and bonding of Carbon
- Reactivity of metals
- Reactions of acids
- Electrolysis

Required Practicals:

Preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate-
Practical 8

Investigate what happens when aqueous solutions are electrolysed using inert electrodes-
Practical 9

Investigating the variables that affect temperature changes in reacting solutions e.g. acid plus metals, acid plus carbonates, neutralisations, displacement of metals- Practical 10

Chemistry 2F

- Rate of reaction
- Reversible reactions and dynamic equilibrium
- Carbon compounds as fuels and feedstock
- Purity, formulations and chromatography
- The composition and evolution of the Earth's atmosphere
- Common atmospheric pollutants and their sources
- Using the Earth's resources and obtaining potable water

Required Practicals:

Investigating how changes in concentration affect the rates of reaction by a method involving measuring the volume of gas produced and a method involving a change in colour or turbidity- Practical 11

Investigating how paper chromatography can be used to separate and tell the difference between coloured substances. Students should calculate R_f values- Practical 12

PHYSICS

Physics 1F

- Energy changes in a system and the ways energy is stored before and after such changes
- National and global energy resources
- Current, potential difference and resistance
- Changes of state and the particle model
- Atoms and Nuclear Radiation

Required Practicals:

An investigation to determine the specific heat capacity of one or more materials. The investigation will involve the decrease of one energy store (or work done) to increase the temperature and subsequent increase in thermal energy stored- Practical 14

Use circuit diagrams to construct appropriate circuits to investigate the I-V characteristics of a variety of circuit elements, including filament lamp, a diode and a resistor at constant temperature- Practical 16

Physics 2F

- Forces and their interactions
- Describing motion along a line
- Forces, accelerations and Newton's Laws of motion
- Forces and breaking
- Electromagnetic Waves
- Permanent and Induced magnetism, magnetic forces and fields
- The motor effect

Required Practicals:

Investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface- Practical 21