



GCSE Science

Information for Parents



GCSE Science Course



The Exams

Six papers:

2 Biology

2 Chemistry

2 Physics

Duration:

All exam papers are 1 hour and 15 minutes.

Triple science 1 hour 45 minutes





Revising Science



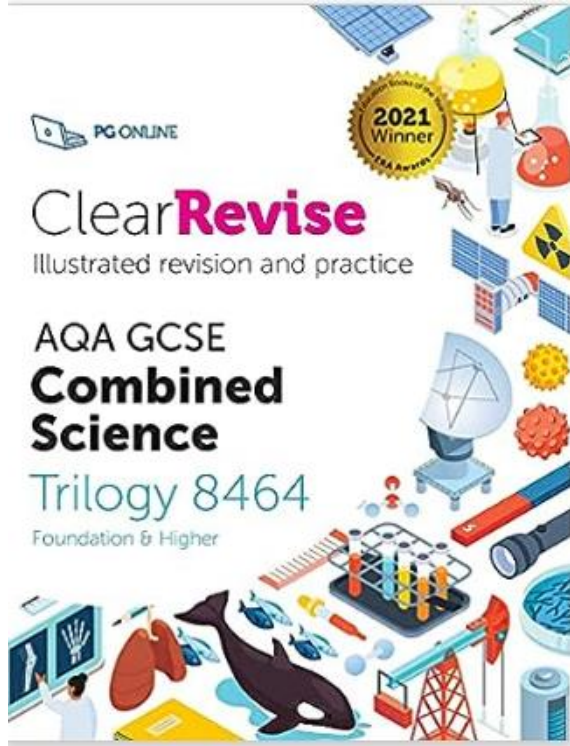
Knowledge



Retrieval



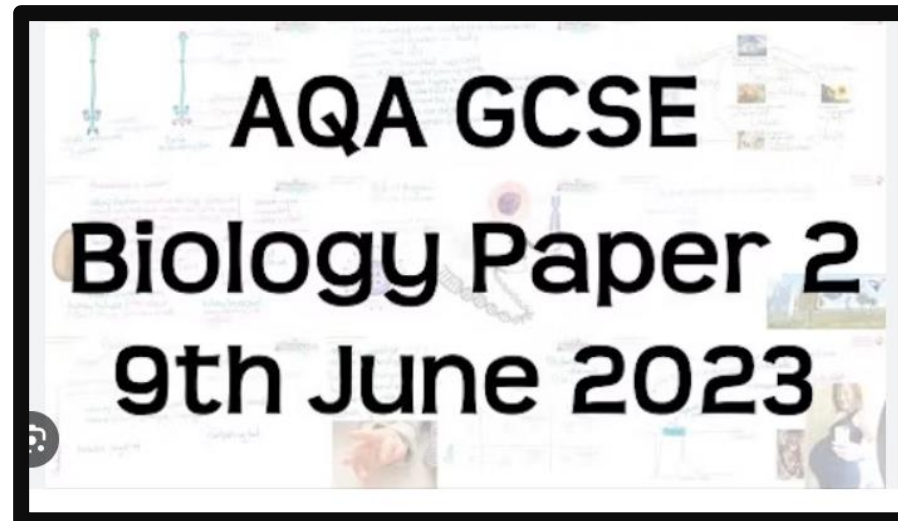
Practice



The key subject specific content.



- Workbooks
- Knowledge organisers



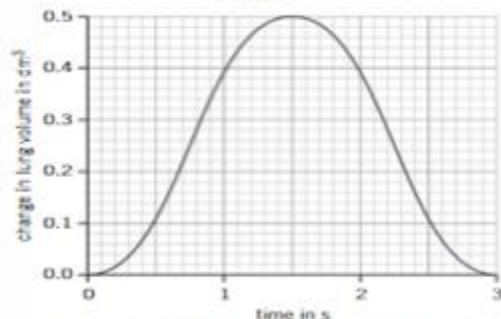


Exam-style questions

- 01** An athlete's lung volume was measured over a period of time. The data for one respiratory cycle is shown in **Figure 1**.



Figure 1



- 01.1** Describe how the athlete's lung volume changes over the three-second period shown. **[2 marks]**

- 01.2** Use **Figure 1** to determine the volume of air taken in when the athlete inhales. **[1 mark]**

_____ dm³

- 01.3** The athlete's total lung volume before inhalation was 5.00 dm³. Calculate their total lung volume after inhalation. **[2 marks]**

_____ dm³

- 01.4** Calculate how many respiratory cycles will take place in 60 s. **[3 marks]**

_____ cycles

Exam Tip

For this question you need to use the data and describe the shape of the line and how it changes.

- 01.5** Select which of the following changes take place in the athlete's chest cavity between 0 and 1.5 s. **[2 marks]**

Tick **two** boxes.

rib cage moves in and down

rib cage moves up and out

diaphragm contracts and moves down

diaphragm relaxes and moves up

Exam Tip

Read the question carefully, **01.5** only refers to the first part of the graph not all of it.

- 02** A student carried out a number of food tests on an unknown sample. Their results are shown in **Table 1**.



Table 1

Nutrient tested for	Reagent used	Result
starch	Y	yellow-orange
sugar	Benedict's solution	blue
protein	Biuret reagent	purple
X	ethanol	cloudy white layer formed

Exam Tip

A reagent is a chemical or solution that is used in a practical.

- 02.1** Identify nutrient X that is detected by adding ethanol to the food sample. **[1 mark]**

- 02.2** Identify reagent Y that is used to test a food sample for starch. **[1 mark]**

- 02.3** Biuret reagent is corrosive. Suggest **one** safety precaution that the student should have taken when using Biuret reagent. **[1 mark]**

Exam Tip

Make sure your suggestion is related to the practical.

- 02.4** The student thought that the food sample contained starch, sugar and protein. Is the student correct? **[3 marks]**

Circle **one** answer for each of the statements below.

The food sample contains starch. yes no

The food sample contains sugar. yes no

The food sample contains protein. yes no



Scientific language

- Over 3700 subject specific words students should be able to define.

Key terms Make sure you can write a definition for these key terms.

alveoli amylase aorta artery atrium bronchi bronchiole capillary cardiac muscle
coronary artery double circulatory system lipase organ organ system plasma platelet
protease pulmonary artery pulmonary vein tissue vein vena cava ventricle

B4 Knowledge 33

- Working scientifically vocabulary such as **variables, accuracy, reliable, conclusion, precision, evaluation etc.**



Command words

Command words are the words and phrases used in exams that tell students how they should answer a question.

Most common: Describe, Explain, Compare, Define, Evaluate, Justify, suggest.....



(b) Scientists have genetically engineered a variety of wheat to be resistant to herbicides.

The herbicide resistant variety of wheat will give a higher yield than the non-herbicide resistant variety.

Explain why.

Response requires:

- Giving reasons how or why something has happened
- Giving reasons how or why 2 factors are related
- Giving reasons how or why a process works

(3)