

Bramcote College

A member of The White Hills Park Trust

Workshop: Revising Science

Applying knowledge to exam questions





Useful for revision ...



GCSE:

Youtube channels

- Mygcscience
- Primrose Kitten
- Christopher Thornton
- Freesciencelessons

Learning platforms:

- Century.tech
- Seneca learning

A – LEVEL:

Youtube channels:

- SnapRevise
- Miss Estruch Biology
- Primrose Kitten

Learning platforms:

Seneca learning





The key to success

The screenshot shows the AQA website interface. At the top, there are navigation links: "Contact us", "About us", "Join us", "Log in", and a "Site search" box. Below these are menu items: "2021 exam changes", "Subjects", "Qualifications", "Professional development", and "Exams administration". The main content area features a large banner for "Summer 2021 consultation decisions published" with a "Find out more" button. Below the banner is a grid of navigation options: "Subjects", "Dates and timetables", "Past papers", "Results days", "Grade boundaries", and "Lost certificates". At the bottom, there is a cookie consent message and a system tray with various application icons.

Past papers (and mark schemes) are essential for:

- Checking revision has worked
- Understanding what the examiners are looking for
- Getting the terminology right

How to access past papers:

www.aqa.org.uk

Choose the "Past papers" option

Find past papers and mark schemes for your exams, and specimen papers for new courses.

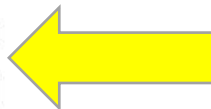
Find papers

Subject

Qualification

Specification

Series

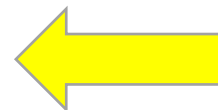


Complete the subject and the qualification.

exampro Search [past paper question banks](#) and easily create custom material for teaching, homework and assessment.

June 2018

- [Mark scheme \(Foundation\): Paper 1 June 2018 \(236.8 KB\)](#)
- [Mark scheme \(Foundation\): Paper 2 June 2018 \(280.3 KB\)](#)
- [Mark scheme \(Higher\): Paper 1 June 2018 \(340.5 KB\)](#)
- [Mark scheme \(Higher\): Paper 2 June 2018 \(271.2 KB\)](#)
- [Question paper \(Foundation\): Paper 1 June 2018 \(627.9 KB\)](#)
- [Question paper \(Foundation\): Paper 2 June 2018 \(1000.3 KB\)](#)
- [Question paper \(Higher\): Paper 1 June 2018 \(1.8 MB\)](#)
- [Question paper \(Higher\): Paper 2 June 2018 \(7.0 MB\)](#)



Choose the paper and mark scheme you want.

Specimen papers and mark schemes

When **new exams** are introduced, there are no past papers. We provide **specimen papers** and mark schemes to help teachers and students prepare for new exams.

- [Assessment materials: maths skills in GCSE sciences Sample set 1 \(1.1 MB\)](#)
- [Mark scheme \(Foundation\): Paper 1 Sample set 1 \(181.2 KB\)](#)
- [Mark scheme \(Foundation\): Paper 2 Sample set 1 \(220.0 KB\)](#)
- [Mark scheme \(Higher\): Paper 1 Sample set 1 \(232.9 KB\)](#)



How to revise science...

Issues:

Lots of content

Lots of processes

Lots of methods



A useful technique:

1. Read the information
2. Highlight important sections
3. Create a list of key words from the highlighted sections
4. Use the list of keywords to try to recall the information
5. Turn the information into a series of pictures
6. Describe to someone else what the pictures represent
7. Turn the pictures back into text and compare to the original





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Application of knowledge questions...

What is application of knowledge?

Applying your knowledge and understanding of scientific ideas, processes, techniques and procedures.

Why is it important to be able to tackle these questions?

40-45% of the total A-Level marks are allocated to these types of questions.

40% of the total GCSE marks are allocated to these types of questions





Why do students struggle with these questions?...

Unfamiliar Context – they see a question about something they haven't been taught....and panic!

or

They don't have the basic recall of facts to be able to answer the question.

How do we solve these problems...



Prepare...

How...

How to make sure they can answer these questions:

SECURE SUBJECT KNOWLEDGE

Active recall consolidation

....what does this mean?

➤ Revise, revise, revise

Thorough revision of all of the basic facts

➤ Practice, practice, practice

Do lots of practice application questions and note the common key phrases



Tackling the questions...

Step 1 – identify the topic or the practical that the unknown info links to.

Step 2 – recall the key words/phrases (this will only come from lots of active recall and practice questions).

Step 3 – Work out how to include those key words to fit the question.

Step 4 – Identify which information from the question to include in your answer (this links the key words/phrases to the context of the question)

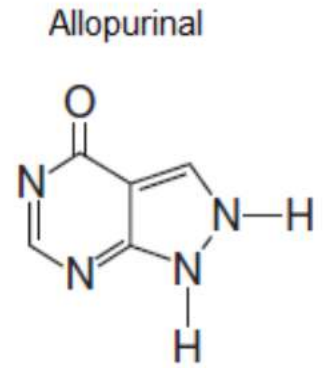
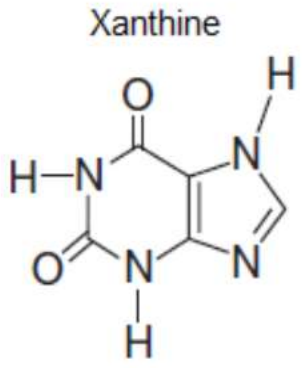


(b) Gout is a disease caused by the build-up of uric acid crystals in joints. Uric acid is produced from xanthine in a reaction catalysed by the enzyme xanthine oxidase.

Xanthine oxidase

Xanthine -----> uric acid

Allopurinol is a drug used to treat gout. The diagram shows the structures of xanthine and allopurinol.



Use this information to suggest how allopurinol can be used to treat gout.

1. Identify the topic

3. Include the key words/phrases

4. Identify information from the question to use in the answer:

- Equation
- Build up of uric acid
- Structures of xanthine and allopurinol

2. Key words/phrases:

- Unique shaped active site
- Active site complementary to shape of substrate
- Enzyme substrate complexes
- Competitive/non-competitive inhibition