



GCSE Science Year 11

Faculty Team Leader: Mrs Spacey
Deputy Faculty Team Leader: Miss
Smith



GCSE Science Year 10

Faculty Team Leader: Mrs Spacey
Deputy Faculty Team Leader: Miss
Smith



2024 Top GCSE results

9 to 4

National trilogy

57%

2023

53%

2024

60%

2025

60%

National Chemistry

91%

2023

100%

2024

100%

2025

98%

9 to 4

National Biology

89%

2023

93%

2024

100%

2025

100%

National Physics

90%

2023

98%

2024

100%

2025

100%

To **aspire**, **endeavour** and **thrive** together.



Science route year 11

Separate science

Double Science



Biology 4 lessons; 1
GCSE



Combined science
Trilogy



Chemistry 4 lessons; 1
GCSE



10 lessons



Physics 4 lessons; 1
GCSE



2 GCSE's



Science: Separates

The students will sit **6 exams**

1 hour and 45 minutes each

- 2 biology
- 2 chemistry
- 2 physics

The students will be awarded 1 GCSE for each science, graded 1 to 9.

For example:

- They could achieve a grade **5** in Biology
- They could achieve a grade **7** in Chemistry
- They could achieve a grade **9** in Physics



Science: Trilogy/ Combined

The students will sit **6 exams**

1 hour and 15 minutes each

- 2 biology
- 2 chemistry
- 2 physics

The students will be awarded 2 GCSE

- If they achieve a high grade 5 = **5 - 6**
- If they achieve a medium grade 5 = **5 - 5**
- If they achieve a low grade 5 = **5 - 4**



Trilogy student checklist		21 Practicals
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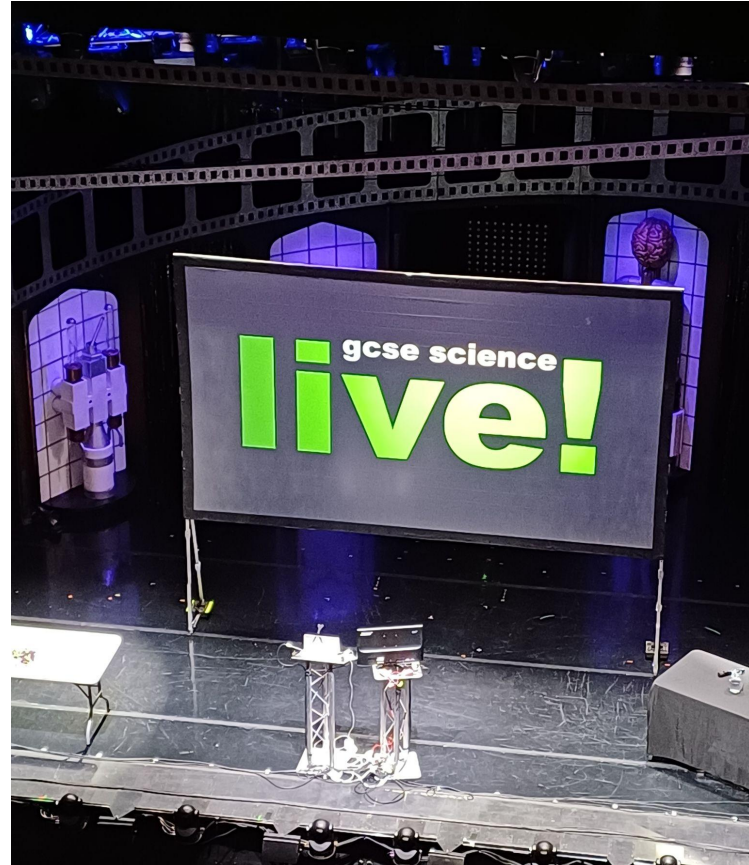
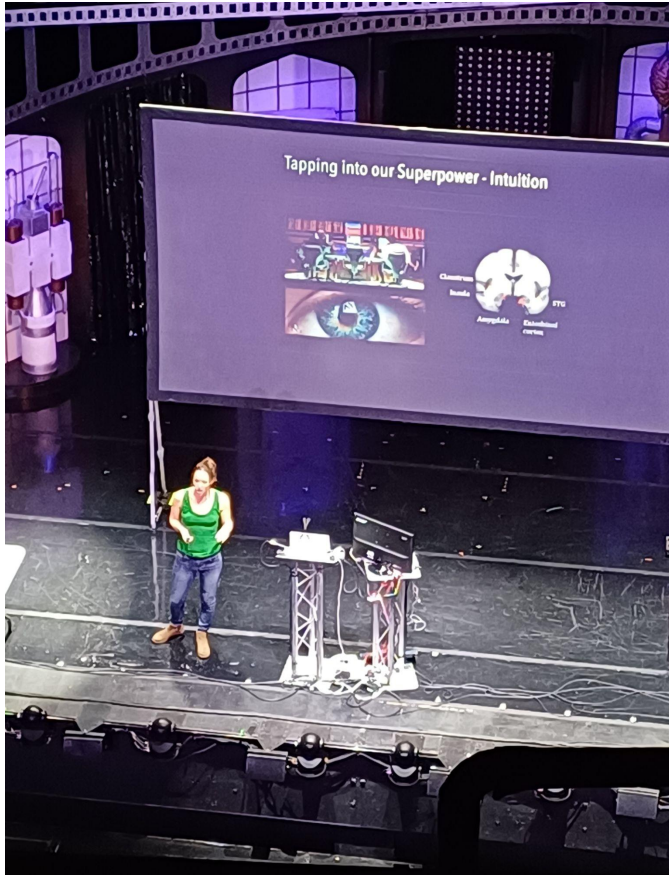
10.2.1	Microscope	
10.2.2	Osmosis	
10.2.3	Enzymes	
10.2.4	Food tests	
10.2.5	Photosynthesis	
10.2.6	Reaction time	
10.2.7	Field Investigation	
10.2.8	Making Salts	
10.2.9	Electrolysis	
10.2.10	Temperature change	
10.2.11	Rate of reaction.	
10.2.12	Chromatography	
10.2.13	Water purification.	
10.2.14	Specific heat capacity	
10.2.15	Resistance.	
10.2.16	I–V characteristics	
10.2.17	Density	
10.2.18	Force and extension	
10.2.19	Acceleration.	
10.2.20	Waves	
10.2.21	Radiation and absorption	



To **aspire**, **endeavour** and **thrive** together.



Excellence in Science



To **aspire**, **endeavour** and **thrive** together.



Science: Homework

- Retrieval based - flash cards, mind maps, brain dumps then a google quiz to complete
- Once every two weeks per subject (Biology, Chemistry and Physics).

This will be set on Bromcom.

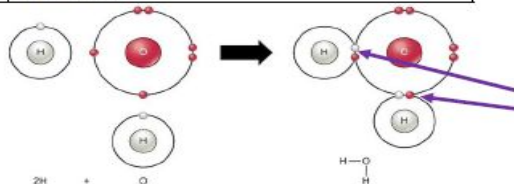
<https://docs.google.com/document/d/1fjAriksAv5y3nXC8-vE4mESJJK038ukCxXcimpAdrFM/edit?tab=t.0>



Knowledge Organisers

Chemistry Topic 2: Bonding, Structure, and the properties of matter

1. Keywords	
Ionic bond	When a metal donates electrons to a non-metal forming opposite charged ions that are attracted to each other
Covalent bond	A shared pair of electrons between two non-metals
Metallic bond	Positive metal ions in a 'sea' of delocalised electrons
Ions	Charged atoms which have either gained or lost electrons
Electrons	Negative particles found in the shells of atoms
Group 0	The unreactive 'noble gases' all elements aim to get to group 0 electron configuration when they react
Dot and cross diagrams	The simplest way we show the bonding in atoms
Polymer	A long chain molecule made up of repeating monomers
Monomer	The small molecules that join together to make polymers
Delocalised	Electrons which are free to move anywhere
Alloy	A mixture of a metal and another element to change its properties



Make sure both electrons are in the overlap of the outer shells

2. The process of ionic bonding					
No	Name	Electron movement	Charge	Electron configuration	Does it have a full outer shell?
1	Sodium atom	0	0	2,8,1	No
2	Chlorine atom	0	0	2,8,7	No
3	Sodium ion	Lost 1	+1	2,8	Yes
4	Chloride ion	Gained 1	-1	2,8,8	Yes

3. The process of covalent bonding

1	Non metals share their outer unpaired electrons
2	Now all outer shell spaces appear full
3	There is no change in charge. They remain uncharged



Key questions

C2a Key Questions

1	What is the relative charge on a group 1 ion?	+1
2	Why does sodium metal conduct electricity when solid?	Delocalised electrons carry charge
3	What types of elements are reacting when magnesium reacts with chlorine?	Metal and non-metal
4	What holds the ions together in sodium chloride?	Electrostatic attractions
5	Solid sodium chloride does not conduct electricity. Give 2 ways in which sodium chloride can be made to conduct electricity	Heat until molten (a liquid), dissolve in water
6	What type of bonds are there between the atoms of oxygen in an oxygen molecule?	Covalent
7	What type of forces exist between molecules of oxygen?	Intermolecular
8	Write the formulae of the ions in sodium chloride (NaCl)	Na ⁺ , Cl ⁻
9	What type of bonding is present in calcium oxide (CaO)?	Ionic
10	What is the definition of the word 'molecule'?	A covalently bonded particle
11	How are covalent bonds represented in a diagram of a molecule?	A straight line
12	How many electrons are in one covalent bond?	2
13	Why does solid sodium chloride not conduct electricity?	The ions are fixed
14	Why does molten sodium chloride conduct electricity?	The ions are mobile
15	What type of substance is carbon?	Element



Google quiz

B1a quiz - Yr 11

B *I* U  

Form description

First name *

Short-answer text

Last name *

Short-answer text

Which Science group are you in? *

Pick one

☐ 11X/Bi

☐ 11X/Ch

☐ 11AXPh

☐ 11X/SC2

☐ 11X/sc4



Retrieval quizzes

B1a Cell Structure GCSE Retrieval quiz

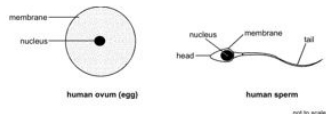
Name:

Multiple choice section:

1. How many micrometers are there in 1 millimeter?

- a) 10
- b) 100
- c) 1000
- d) 10,000

2. The diagrams below show a human ovum (egg) and a human sperm.



(a) What are eggs and sperm?
Tick the correct box.

animals ☐ cells ☐ organs ☐ 1 mark

Q1.

A life cycle assessment (LCA) is done to assess the environmental impact of a product.

(a) An LCA has four stages.

Draw **one** line from each LCA stage to the description of what happens to the product at that stage.

LCA stage

Stage 1

Stage 2

Stage 3

Stage 4

Description

Disposal at end of useful life

Extracting and processing
raw materials

Manufacturing and packaging

Use and operation during
lifetime

(3)



Key dates - Yr 11

- Week 8 - 9 Monday 10th November
- Week 21–22 Monday 23rd February
- All science assessments are cumulative.
- They started GCSE in year 9 so will be assessed on these modules.

Paper 1 content:

All information has been shared on your child's Bromcom.



Key dates - Yr 10

Mocks: Week commencing 9th February and 8th June 2026

Paper 1 content:

All information has been shared on your child's Bromcom.



Revision guides

Combined revision guide: £6.50

Single science: £3.50

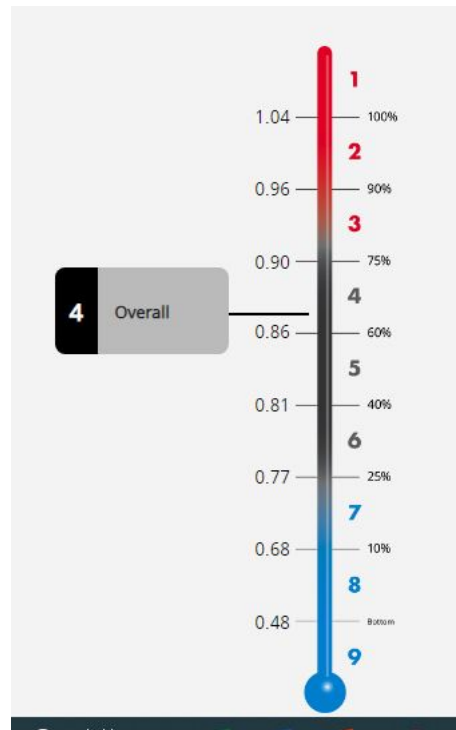
Please pay on parent pay and
collect from the Y11 office



Sixth Form Pathway

All three sciences are offered at A level:

- Biology
- Chemistry
- Physics





Biology Field Course



Students do field work at Chunal Moor and Glossop Old Stream.