Y11
GCSE Separate Science
Revision Toolkit

Liskeard School & Community College
achieving more together
Science Faculty
Building Success, Curiosity & Resilience

Revision Tip: Little and often!

30–40 minute revision sessions, broken up by 10 minute breaks.
Briefly repeat what you have just done after a break – it is good for your brain!
Do a little revision every day – get into the habit now!

It's a good time to remember the advantages of choosing Separate (Triple science)…

Advantages

✓ Easier transition into **A-level at Liskeard School!** Because the course covers more content, students wishing to study sciences at A-level may be better prepared than combined science students.

✓ Some students find having more content & detail aids their understanding of the overall topic.

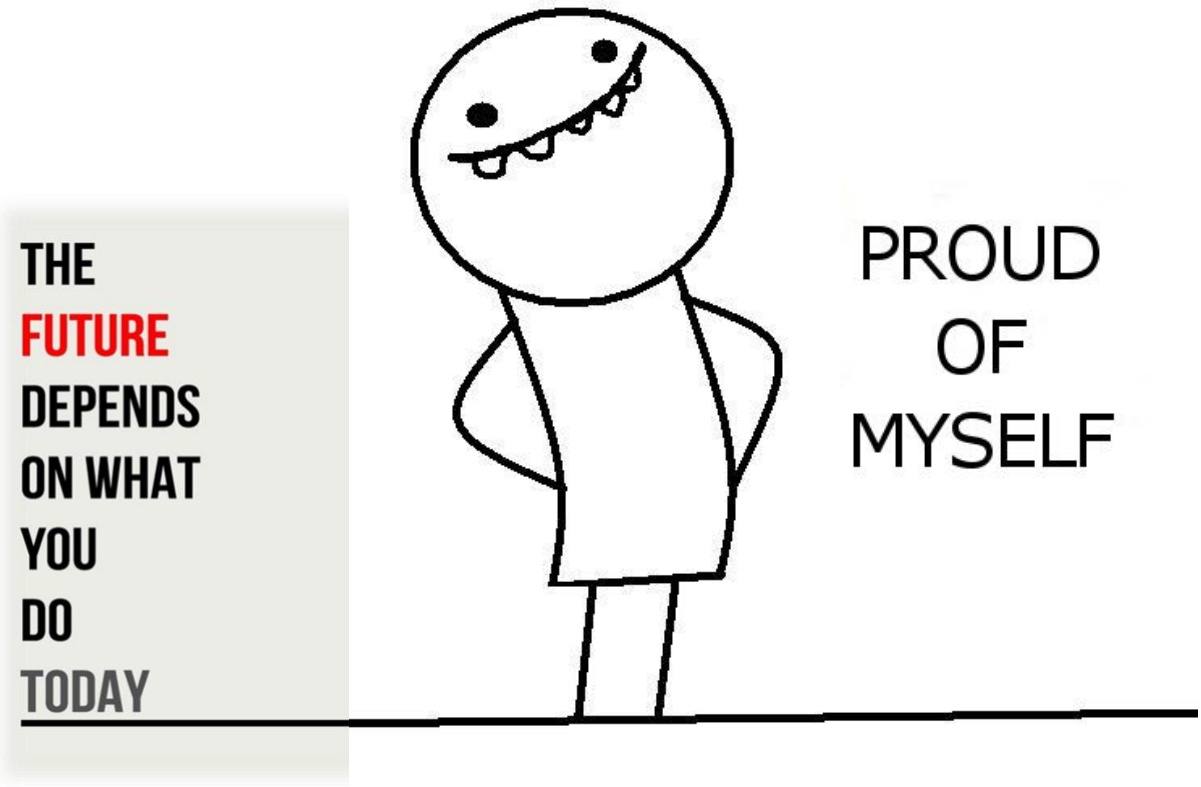
✓ Although students have a greater science workload, most combined science students take a non-science GCSE to compensate, so the workload may work out the same!

✓ The course can be favoured by employers & FE Institutions: If you are planning to study a science-related subject at A-level and university then doing separate sciences may be better as some employers and further education institutions may prefer this.

Things to be aware of:

- ☐ Triple science means you are taking an extra option subject, you have to work extra for this option, same as other students doing different subjects!
- ☐ The exam style and questions are **not** more difficult than combined trilogy.
  They are the same level- GCSE level!
- ☐ Triple science does explore some different and interesting scientific ideas, some of these are complex. This gives students a chance to learn/ try new challenges and gives an opportunity to gain a greater understanding.
- ☐ Only a small number of students tend to take this course in the country…grade boundaries can sometimes be higher than in combined science.
  This means: You need to put the right amount of time into revision!

Bottom line: You need to be **better prepared** than students in any other school!



Aim:

The science department at Liskeard care about you and your future! We want you to:

- To understand science.
- Be curious about science and the world around you.
- Be Resilient and ultimately Successful in science.

By using this toolkit, following teacher guidance and putting the revision time in- you will see improvements and increased confidence going into your exams.

1

Please follow your teacher's guidance and always try your best!
Your teachers will support you through your revision by providing you with detailed revisions lists and simple steps to follow, (making sure your revision is a success). If you need help or are ever unsure, please ask! We want to help!
<u>In return we simply need your time and positivity!</u>

2

Overview of the course & Exams

All pupils at Liskeard School start their GCSE course at the beginning of Autumn term of Year 9. Over the course of three years, they will complete the curriculum. Pupils will cover either GCSE Combined Science (or Trilogy) and Separate Science, (also called Triple Science) (GCSE Biology, GCSE Chemistry & GCSE Physics).

If you are doing Combined Trilogy, you will follow a pathway similar to those doing GCSE Separate/Triple Science and complete a total of 24 topics across the 3 science disciples.
This will look like:

GCSE Combine Science Trilogy	**GCSE Separate Sciences/Triple**
6 Exam papers 1 hr 15 min each 70 marks = 2 GCSEs	6 Exam papers 1 hr 45 min each 100 marks = 3 GCSEs

The Separate/Triple Science route covers mostly the same topics; however they will explore some of those topics in more depth. Regardless of what pathway you are following everyone will study all 3 Sciences – Biology, Chemistry and Physics.

In Y9 & 10 our aim is to cover many topics within the course by the end of Y10, with understanding being checked in class, through end of topic tests, as well as mock exams. The emphasis in Y11, changes to a synoptic approach and pre-public exam support and preparation.
The Y9 & 10 cause is taught in discrete smaller topics, in Combined Trilogy these rotate around Biology, Chemistry and Physics. Teaching aims to build upon and add depth to knowledge studied in KS3. The holistic approach in Y11 aims to build links between key ideas within each science discipline. We don't aim to finish the course really early and then simply 'revise'. Instead choosing to put a large focus on retrieval of prerequisite knowledge before continuing learn the remaining new content. Y11 also provides all students opportunities to both practice and close any historical knowledge gaps. Additionally, paper 2 content in science often requires fundamental understanding of core concepts from paper 1.
Our holistic approach with recap, modelling, and practice of knowledge for each whole exam, aim to build:

- confidence
- resilience
- success for our students

This enables students to be ready for the GCSE Examinations to begin.

3 A summary of each course:

GCSE Combined Science: Trilogy	GCSE Separate (Triple) Science
Combined Science: Trilogy pupils will sit SIX GCSE exam papers (two in each Science) in May. Each exam will be 75min, worth 70 marks and count towards 16.7% of the GCSE. Students will be awarded two grades using the 9-1 grading system. For example, 5-5, 5-4,7-6, 6-6, 4-4, 4-3, 9-8.	Triple scientist will cover the same topics as the Combined Scientist; however will cover some of the topics in more depth. Triple science pupils will sit six GCSE exam papers (two in each Science) in May/ June. Each exam will be 105min, worth 100 marks and count towards 50% of the GCSE. These exams are longer than the combined award as they are assessing extra content. Students will be awarded grades using the 9-1 grading system for each subject. For example: Biology – 8, Chemistry – 7, Physics – 6.
Biology 1. Cell biology 2. Organisation 3. Infection and response 4. Bioenergetics 5. Homeostasis and response 6. Inheritance, variation and evolution 7. Ecology	**Biology** 1. Cell biology 2. Organisation 3. Infection and response 4. Bioenergetics 5. Homeostasis and response 6. Inheritance, variation and evolution 7. Ecology
Chemistry 8. Atomic structure and the periodic table 9. Bonding, structure, and the properties of matter 10. Quantitative chemistry 11. Chemical changes 12. Energy changes 13. The rate and extent of chemical change 14. Organic chemistry 15. Chemical analysis 16. Chemistry of the atmosphere 17. Using resources	**Chemistry** 1. Atomic structure and the periodic table 2. Bonding, structure, and the properties of matter 3. Quantitative chemistry 4. Chemical changes 5. Energy changes 6. The rate and extent of chemical change 7. Organic chemistry 8. Chemical analysis 9. Chemistry of the atmosphere 10. Using resources
Physics 18. Energy 19. Electricity 20. Particle model of matter 21. Atomic structure 22. Forces 23. Waves 24. Magnetism and electromagnetism	**Physics** 1. Energy 2. Electricity 3. Particle model of matter 4. Atomic structure 5. Forces 6. Waves 7. Magnetism and electromagnetism 8. Space physics (physics only)

4 Exam Dates & a summary of each paper

Summary of each paper:	Summary of each paper:
Biology Paper 1 : Topics 1- 4 Paper 2 : Topics 5 - 7 Chemistry Paper 1 : Topics 8 - 12 Paper 2 : Topics 13 - 17 Physics Paper 1 : Topics 18 - 21 Paper 2 : Topics 22 - 24	Biology Paper 1 : Topics 1- 4 Paper 2 : Topics 5 - 7 Chemistry Paper 1 : Topics 1 - 5 Paper 2 : Topics 6 - 10 Physics Paper 1 : Topics 1 - 4 Paper 2 : Topics 5 - 8
Dates of each paper Biology Paper 1 : 16 May 2023 am Chemistry Paper 1 : 22 May 2023 am Physics Paper 1 : 25 May 2023 am Biology Paper 2 : 09 June 2023 pm Chemistry Paper 2 : 13 June 2023 am Physics Paper 2 : 16 June 2023 am	

Revision Tip: Little and often!

- 30 to 40 minute sessions, broken up by 10 minute breaks
- Briefly repeat what you have just done after a break – it is good for your brain!
- Do a little every day – get into the habit now!

5 Other resources:

Aside from Accelerated Revision Sheets on Satchel One, here are some other useful websites:

1. How to make a flash card:
   https://www.youtube.com/watch?v=mzCEJVtED0U

2. Loads of extra past papers & mark schemes…
   To access the next 3 links you must use your school email only. No other emails/ requested for access will be granted.
   Extra Exam Paper Practice

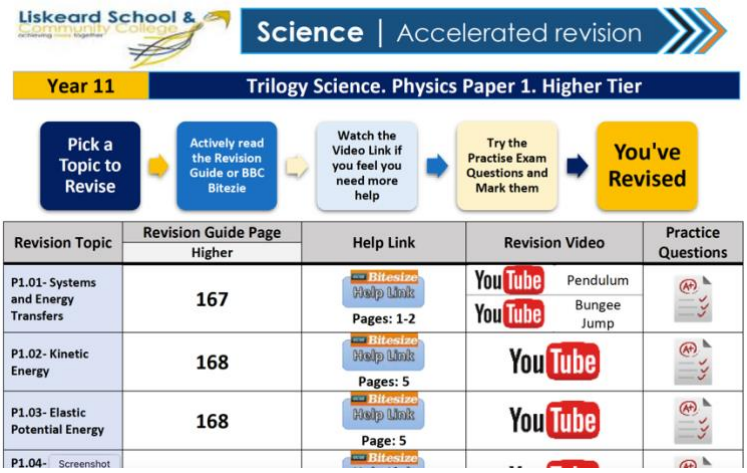
3. PiXL Summary resources and practice questions
   PiXL Resources

4. Copies of the accelerated revision sheets
   All Accelerated Revision Sheets

Science | Accelerated revision

6 Y11 Study Pack & How to use

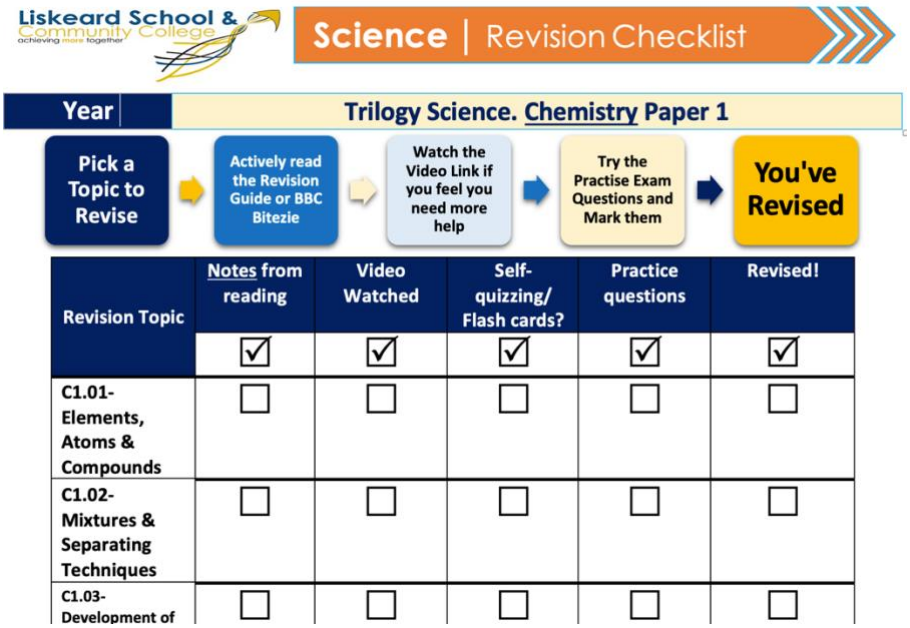
satchel: one



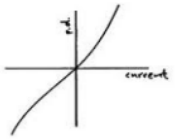
- Go to SatcheOne (SMHW) & open up one of the Accelerated Revision Sheets.
- Pick a topic to revise.
- Read through & Make notes from the topic information in a Revision Guide/
- Watch the video if you need more help.
- Try self-quizzing or using Flash cards.
- Try the Practise Exam Question & mark them.

Succes

Update your revision checklist in this booklet!



GCSE Command Words in Science

Command Word	Definition	Example Question	Example Answer
State, give, name, write down	Short answer only and does not require an explanation.	**State** the units for acceleration.	m/s^2
Describe (not graphs or practical)	Recall facts, events or process in an accurate way.	**Describe** how quadrats should be used to estimate the number of plants in a field.	Place a large number of quadrats randomly in the field. Count the number of plants in the quadrat. Calculate the mean number in each quadrat then use the area of the quadrat and field to estimate the number of plants.
Describe (graphs)	Identify the pattern in the graph and use numbers from the graph to make this clear.	**Describe** the pattern of tooth decay in Figure 3 for water without fluoride.	The percentage of tooth decay increases with age by 4% for each age group in figure 3.
Describe (practical)/ Plan	Write the method for the practical or the results that you would expect to see.	**Plan** an experiment to test the hypothesis "the higher the temperature, the faster the rate of reaction".	Measure the rate of reaction by adding a set amount of metal to set type, volume and concentration of acid and time how long it takes to stop fizzing. Repeat the experiment at 5 different temperatures.
Determine	Use given data or information to obtain and answer.	**Determine** the half-life of a sample if it decreases from 1000g to 250g in 2.6million years.	1.3 million years
Explain	Make something clear or state the reasons for something happening. You will need to state what is happening and then say why it happens.	**Explain** why soot forms.	Soot forms during incomplete combustion when not enough oxygen is present.
Evaluate	Use the information supplied and your own knowledge to consider the evidence for and against a point. You may also be required to include a *justified conclusion*.	A company stated: 'A Life Cycle Assessment shows that using plastic bags has less environmental impact than using paper bags'. **Evaluate** this statement.	Paper bags are made from a renewable resource whereas plastic bags are made from finite resources. However, paper bags are bad because they produce much more solid waste and more CO_2 is released when they are produced therefore the negative impacts of paper bags outweigh the problem of plastic coming from a finite resource.
Compare	Describe the similarities and/or differences between things. Avoid writing about just one.	**Compare** the differences between cracking and distillation.	Cracking involves a catalyst *whereas* distillation does not.
Sketch	Draw approximately.	**Sketch** a current–potential difference graph for a filament lamp.	

BUG every question!

Box the command word

Underline or highlight key words/ data

Go over the question- once answer written.

NEVER HAVE I EVER

...said 'it', 'they', 'fair test' in an exam. Only use **'amount'** of substance for number of particles.

Graphs

Suitable scale - Axis must go up in a regular interval (e.g. 2, 4, 6, … or 10, 20, 30, …, etc).
Label axis doesn't mean put an X or Y! Label X axis means= copy the independent variable from a table! WITH UNITS Label Y axis means= copy the dependent variable from a table! WITH UNITS
Plot with CROSSES not dots. ½ square tolerance
A LINE OF BEST FIT: Must follow pattern you see. Either a straight line (RULER) or SMOOTH CURVE. Might not go through origin (0,0). NO dot to dot or Sketchy lines!

Maths is 10-30% all exams

Formula- write the equation.

Insert values- add the numbers to the right places.

Fine tune- convert values or rearrange. (Not always needed)

Answer- write answer & units.

Practical- Write methods in steps.

1. Start a method using AQA:

Apparatus- Name the equipment used (measuring cylinder)

Quantity- 25cm^3 1M HCl

Action- What do you do with it? Pour into beaker

2. Check Variables:

INDEPENDENT: What you change.
DEPENDENT: What you measure.
CONTROL: What you keep the same.

3. Finish method in style:

'Repeat X times, remove anomalies and calculate the mean, to reduce the chance of random errors.'

4. Types of errors:

Random= make more measurements & calculate mean. Systematic= repeat with different equipment. Zero Error= reset a device that was not at zero to start!

Break it down!

1-3 marks = Use KEY TERMS! Can bullet point.
4-6 marks = Break question down into 2-3 smaller ones. Answer each in turn. BUG: Go back over the question after!

TIP: If you don't know GUESS! You may be lucky and get some marks. Leaving it BLANK: ALWAYS gets ZERO!

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Science | Revision Checklist

Year 11 — **Separate (Triple) Science. Biology Paper 1**

Pick a Topic to Revise → **Actively read the Revision Guide or BBC Bitezie** → **Watch the Video Link if you feel you need more help** → **Try the Practise Exam Questions and Mark them** → **You've Revised**

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B1.01- Prokaryotic & Eukaryotic Cells	☐	☐	☐	☐	☐
B1.02- Cell Differentiation	☐	☐	☐	☐	☐
B1.03- Specialised Cells	☐	☐	☐	☐	☐
B1.04- Light vs. Electron Microscopes	☐	☐	☐	☐	☐
B1.05- Magnification RP	☐	☐	☐	☐	☐
B1.T01- Aseptic Technique & Bacteria Growth RP	☐	☐	☐	☐	☐
B1.06- Cell Cycle & Mitosis	☐	☐	☐	☐	☐
B1.07- Stem Cells in Animals & Plants	☐	☐	☐	☐	☐
B1.08- Uses of Stem Cells	☐	☐	☐	☐	☐
B1.26- Types of Pathogens & Diseases	☐	☐	☐	☐	☐
B1.27- Non-specific Defences	☐	☐	☐	☐	☐
B1.28- White Blood Cells and Immunity	☐	☐	☐	☐	☐
B1.29- Vaccinations & Herd Immunity	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B1.30- Antibiotics & Painkillers	☐	☐	☐	☐	☐
B1.31- Drug Discovery & Testing	☐	☐	☐	☐	☐
B1.T02- Monoclonal Antibodies Production	☐	☐	☐	☐	☐
B1.T03- Uses of Monoclonal Antibodies	☐	☐	☐	☐	☐
B1.19- Respiratory System & Gas Exchange	☐	☐	☐	☐	☐
B1.20- Structure of the Heart	☐	☐	☐	☐	☐
B1.21- Blood & Blood Vessels	☐	☐	☐	☐	☐
B1.22- Coronary Heart Disease & Treatments	☐	☐	☐	☐	☐
B1.23- Health & Disease	☐	☐	☐	☐	☐
B1.24- Non-Communicable Disease	☐	☐	☐	☐	☐
B1.25- Cancer	☐	☐	☐	☐	☐
B1.12- Hierarchy of organisation	☐	☐	☐	☐	☐
B1.13- Human Digestive System	☐	☐	☐	☐	☐
B1.14- Enzymes & Factors affecting enzyme activity	☐	☐	☐	☐	☐
B1.15- Enzymes in the digestive system	☐	☐	☐	☐	☐
B1.16- Role of Bile in the	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
digestive system					
B1.17- Food Tests RP	☐	☐	☐	☐	☐
B1.18- Investigate how pH affect amylase activity RP	☐	☐	☐	☐	☐
B1.09- Diffusion & Factors affecting rate of diffusion	☐	☐	☐	☐	☐
B1.10a- Process of Osmosis	☐	☐	☐	☐	☐
B1.10b- Osmosis Investigation RP	☐	☐	☐	☐	☐
B1.11- Active Transport	☐	☐	☐	☐	☐
B1.32- Photosynthesis & Limiting Factors	☐	☐	☐	☐	☐
B1.33- Structure of a Leaf	☐	☐	☐	☐	☐
B1.34- Transport Systems in Plants	☐	☐	☐	☐	☐
B1.35- Factors affecting Transpiration	☐	☐	☐	☐	☐
B1.36- RP Investigating Photosynthesis	☐	☐	☐	☐	☐
B1.T04- Detecting & Identifying Plant Diseases	☐	☐	☐	☐	☐
B1.T05- Ions and Plant Growth	☐	☐	☐	☐	☐
B1.T06- Plant Defence Mechanisms	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B1.37- Uses of Glucose	☐	☐	☐	☐	☐
B1.38- Aerobic & Anaerobic Respiration	☐	☐	☐	☐	☐
B1.39- Response to Exercise	☐	☐	☐	☐	☐
B1.40- Respiration in Plants & Yeast	☐	☐	☐	☐	☐
B1.41- Metabolism	☐	☐	☐	☐	☐

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Science | Revision Checklist

Year 11 — **Separate (Triple) Science. Biology Paper 2**

Pick a Topic to Revise → **Actively read the Revision Guide or BBC Bitezie** → **Watch the Video Link if you feel you need more help** → **Try the Practise Exam Questions and Mark them** → **You've Revised**

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B2.01 Homeostasis and Control Systems	☐	☐	☐	☐	☐
B2.02 Features of the Nervous System	☐	☐	☐	☐	☐
B2.T01 Structure and function of the Brain	☐	☐	☐	☐	☐
B2.03 Synapses	☐	☐	☐	☐	☐
B2.04 Reflex Actions and Pathways	☐	☐	☐	☐	☐
B2.05 Human Reaction Times RP	☐	☐	☐	☐	☐
B2.T02 Controlling Body Temperature	☐	☐	☐	☐	☐
B2.T03 Parts of the Eye	☐	☐	☐	☐	☐
B2.T04 Eye adjusting to different light	☐	☐	☐	☐	☐
B2.T05 Eye Accommodation and Correction	☐	☐	☐	☐	☐
B2.06 Endocrine System and Glands	☐	☐	☐	☐	☐
B2.07 Controlling Blood Glucose	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B2.08 Comparing Types 1 & 2 Diabetes	☐	☐	☐	☐	☐
B2.09 Reproductive Hormones	☐	☐	☐	☐	☐
B2.10 Contraception	☐	☐	☐	☐	☐
B2.11 Fertility Treatments (HT)	☐	☐	☐	☐	☐
B2.T06 Controlling Water and Urea	☐	☐	☐	☐	☐
B2.T07 Kidney Failure and Dialysis	☐	☐	☐	☐	☐
B2.12 Negative Feedback (HT)	☐	☐	☐	☐	☐
B2.T08 Uses of Plant Hormones	☐	☐	☐	☐	☐
B2.T09 Plant Growth and Auxin	☐	☐	☐	☐	☐
B2.13 Sexual and Asexual Reproduction	☐	☐	☐	☐	☐
B2.T10 Examples of asexual and sexual repro.	☐	☐	☐	☐	☐
B2.14 Meiosis	☐	☐	☐	☐	☐
B2.15 Structure and Function of DNA & Genome	☐	☐	☐	☐	☐
B2.T11 Protein Synthesis	☐	☐	☐	☐	☐
B2.T12 Cloning	☐	☐	☐	☐	☐
B2.16 Genetic Inheritance	☐	☐	☐	☐	☐
B2.17 Cystic Fibrosis & Polydactyly	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B2.18 Determining Sex	☐	☐	☐	☐	☐
B2.19 Causes of Variation with Organisms	☐	☐	☐	☐	☐
B2.20 Evolution by Natural Selection	☐	☐	☐	☐	☐
B2.21 Speciation	☐	☐	☐	☐	☐
B2.T13 Wallace and Darwin	☐	☐	☐	☐	☐
B2.T14 Gergor Mendel and Genetics	☐	☐	☐	☐	☐
B2.22 Selective Breeding	☐	☐	☐	☐	☐
B2.23 Genetic Modification	☐	☐	☐	☐	☐
B2.24 Fossil Formation & Evolution Evidence	☐	☐	☐	☐	☐
B2.25 Extinction	☐	☐	☐	☐	☐
B2.26 Antibiotic Resistance	☐	☐	☐	☐	☐
B2.27 Classification Systems	☐	☐	☐	☐	☐
B2.28 Biotic & Abiotic Factors	☐	☐	☐	☐	☐
B2.29 Feeding Relationships in Ecosystem	☐	☐	☐	☐	☐
B2.30 Distribution of Organisms RP	☐	☐	☐	☐	☐
B2.31 Carbon Cycle	☐	☐	☐	☐	☐
B2.32 Water Cycle	☐	☐	☐	☐	☐
B2.T15 Factors affecting decay RP	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
B2.33 Biodiversity	☐	☐	☐	☐	☐
B2.34 Land Use and Waste Production	☐	☐	☐	☐	☐
B2.35 Consequences of Global Warming	☐	☐	☐	☐	☐
B2.36 Improving and Maintaining Biodiversity	☐	☐	☐	☐	☐
B2.T16 Pyramids of Biomass	☐	☐	☐	☐	☐
B2.T16 Factors affecting Food Security	☐	☐	☐	☐	☐

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Science | Revision Checklist

Year 11 | **Separate (Triple) Science. Chemistry Paper 1**

Pick a Topic to Revise → **Actively read the Revision Guide or BBC Bitezie** → **Watch the Video Link if you feel you need more help** → **Try the Practise Exam Questions and Mark them** → **You've Revised**

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C1.01- Elements, Atoms & Compounds	☐	☐	☐	☐	☐
C1.02- Mixtures & Separating Techniques	☐	☐	☐	☐	☐
C1.03- Development of the Model of the atom	☐	☐	☐	☐	☐
C1.04- Structure of the atom & Periodic Table	☐	☐	☐	☐	☐
C1.05- Arrangement of the Periodic Table	☐	☐	☐	☐	☐
C1.06- Development of the Periodic Table	☐	☐	☐	☐	☐
C1.07- Group 0 Elements	☐	☐	☐	☐	☐
C1.08- Group 1 Elements	☐	☐	☐	☐	☐
C1.09- Group 7 Elements	☐	☐	☐	☐	☐
C1.T01- Transition Metals	☐	☐	☐	☐	☐
C1.10- Ionic Bonding & Properties of Ionic Compounds	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C1.11- Covalent Bonding & Properties of Covalent Compounds	☐	☐	☐	☐	☐
C1.12- Metallic Bonding & Properties of Metals	☐	☐	☐	☐	☐
C1.13- States of Matter and MPs & BPs	☐	☐	☐	☐	☐
C1.14- Polymers and Properties	☐	☐	☐	☐	☐
C1.15- Alloys and their Properties	☐	☐	☐	☐	☐
C1.16- Giant Covalent Structures	☐	☐	☐	☐	☐
C1.T02 Nanoparticles and their properties	☐	☐	☐	☐	☐
C1.T03- Uses of Nanoparticles	☐	☐	☐	☐	☐
C1.17- Conservation of Mass and Balanced Equations	☐	☐	☐	☐	☐
C1.18- Closed/Open Systems	☐	☐	☐	☐	☐
C1.19- Uncertainty in Measurements	☐	☐	☐	☐	☐
C1.20- Moles	☐	☐	☐	☐	☐
C1.21- Calculating Reacting Masses	☐	☐	☐	☐	☐
C1.22- Using Moles to Balance Equations	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C1.23- Limiting Reactants	☐	☐	☐	☐	☐
C1.24- Concentration of Substances	☐	☐	☐	☐	☐
C1.T04- Yields & Percentage Yield	☐	☐	☐	☐	☐
C1.T05- Atom Economy	☐	☐	☐	☐	☐
C1.T06- Concentration in mol/dm^3	☐	☐	☐	☐	☐
C1.T07- Titration Calculations	☐	☐	☐	☐	☐
C1.T08- Volumes & Moles of Gases	☐	☐	☐	☐	☐
C1.37- Exothermic & Endothermic Reactions	☐	☐	☐	☐	☐
C1.38- Investigating Temperature Changes RP	☐	☐	☐	☐	☐
C1.39- Reaction Profiles	☐	☐	☐	☐	☐
C1.40- Bond Energy Calculations	☐	☐	☐	☐	☐
C1.T10- Cells and Batteries	☐	☐	☐	☐	☐
C1.T11- Fuel Cells	☐	☐	☐	☐	☐
C1.25- Metal Displacement	☐	☐	☐	☐	☐
C1.26- Metal Extraction by Displacement	☐	☐	☐	☐	☐
C1.27- Oxidation and Reduction	☐	☐	☐	☐	☐
C1.28- Metals reacting with Acids	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C1.29- Reactions of Acids	☐	☐	☐	☐	☐
C1.30- Preparing a sample of a soluble salt RP	☐	☐	☐	☐	☐
C1.31- Neutralisation	☐	☐	☐	☐	☐
C1.T09- Titration Methodology RP	☐	☐	☐	☐	☐
C1.32- Strong & Weak Acids	☐	☐	☐	☐	☐
C1.33- Setting up Electrolysis	☐	☐	☐	☐	☐
C1.34- Electrolysis of Molten Compounds	☐	☐	☐	☐	☐
C1.35- Electrolysis of Aluminium Oxide	☐	☐	☐	☐	☐
C1.36- Electrolysis of Aqueous Solutions RP	☐	☐	☐	☐	☐

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Science | Revision Checklist

Year 11 — Separate (Triple) Science. Chemistry Paper 2

Pick a Topic to Revise → Actively read the Revision Guide or BBC Bitezie → Watch the Video Link if you feel you need more help → Try the Practise Exam Questions and Mark them → You've Revised

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C2.01- Collision Theory & Factors Affecting Rates of Reaction	☐	☐	☐	☐	☐
C2.02- Calculating the Rate of a Reaction	☐	☐	☐	☐	☐
C2.03- RP- Investigating the Rate of a Reaction	☐	☐	☐	☐	☐
C2.04- Catalysts and Activation Energy	☐	☐	☐	☐	☐
C2.05- Reversible Reactions	☐	☐	☐	☐	☐
C2.06- Equilibrium & Le Chatelier's Principle	☐	☐	☐	☐	☐
C2.07-a,b,c Factors affecting equilibrium	☐	☐	☐	☐	☐
C2.08- Crude Oil & Alkanes	☐	☐	☐	☐	☐
C2.09- Fractional Distillation	☐	☐	☐	☐	☐
C2.10- Properties of Hydrocarbons	☐	☐	☐	☐	☐
C2.T01- Structure and Reactions of Alkene	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C2.T02- Structure and Reactions of Alcohols	☐	☐	☐	☐	☐
C2.T03- Structure and Reactions of Carboxylic Acids	☐	☐	☐	☐	☐
C2.T04- Addition Polymerisation	☐	☐	☐	☐	☐
C2.T05- Condensation Polymerisation	☐	☐	☐	☐	☐
C2.T06- Amino Acids & DNA	☐	☐	☐	☐	☐
C2.T07- Natural Polymers	☐	☐	☐	☐	☐
C2.11- Cracking Hydrocarbons	☐	☐	☐	☐	☐
C2.12- Identifying Pure Substances	☐	☐	☐	☐	☐
C2.13- Gas Tests	☐	☐	☐	☐	☐
C2.14- RP- Chromatography	☐	☐	☐	☐	☐
C2.T08- RP- Flame Tests- (Metal Cation)	☐	☐	☐	☐	☐
C2.T09- RP- Chemical Precipitate Tests- (Metal Cation)	☐	☐	☐	☐	☐
C2.T10- RP- Chemical Precipitate Tests- (Non-Metal Anions)	☐	☐	☐	☐	☐
C2.T11- Instrumental Analysis Methods	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
C2.15- Composition & Evolution of the Atmosphere	☐	☐	☐	☐	☐
C2.16- Greenhouse Effect	☐	☐	☐	☐	☐
C2.17- Human Activities & Greenhouse Effect	☐	☐	☐	☐	☐
C2.18- Impacts of Climate Change	☐	☐	☐	☐	☐
C2.19- Carbon Footprints	☐	☐	☐	☐	☐
C2.20- Effects of Atmospheric Pollutants	☐	☐	☐	☐	☐
C2.21- Sustainable Development	☐	☐	☐	☐	☐
C2.22- Potable Water and Wastewater Treatment	☐	☐	☐	☐	☐
C2.23- Distillation of Water and Testing Purity	☐	☐	☐	☐	☐
C2.24- Life Cycle Assessment	☐	☐	☐	☐	☐
C2.25- Phytomining	☐	☐	☐	☐	☐
C2.26- Bioleaching	☐	☐	☐	☐	☐
C2.27- Recycling Metals	☐	☐	☐	☐	☐
C2.T12- Preventing	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
Corrosion of Metals					
C2.T13- Metals as Alloys	☐	☐	☐	☐	☐
C2.T14- Glass, Clay & Ceramic	☐	☐	☐	☐	☐
C2.T15- LD &HD Polyethene	☐	☐	☐	☐	☐
C2.T16- Thermosetting & Thermosoftening Polymers	☐	☐	☐	☐	☐
C2.T17- Composite Materials	☐	☐	☐	☐	☐
C2.T18- Haber Process & Ammonia	☐	☐	☐	☐	☐
C2.T19- NPK Fertilisers	☐	☐	☐	☐	☐
C2.T20- Chemicals Fertilisers	☐	☐	☐	☐	☐

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Science | Revision Checklist

Year 11 — Separate (Triple) Science. Physics Paper 1

Pick a Topic to Revise → **Actively read the Revision Guide or BBC Bitezie** → **Watch the Video Link if you feel you need more help** → **Try the Practise Exam Questions and Mark them** → **You've Revised**

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P1.01- Systems and Energy Transfers	☐	☐	☐	☐	☐
P1.02- Kinetic Energy	☐	☐	☐	☐	☐
P1.03- Elastic Potential Energy	☐	☐	☐	☐	☐
P1.04- Gravitational Potential Energy	☐	☐	☐	☐	☐
P1.05- Determining Specific Heat Capacity RP	☐	☐	☐	☐	☐
P1.06- Power	☐	☐	☐	☐	☐
P1.07- Energy Transfers in systems	☐	☐	☐	☐	☐
P1.T01- Insulation Required Practical	☐	☐	☐	☐	☐
P1.08- Efficiency of Energy Transfers	☐	☐	☐	☐	☐
P1.09- Global Energy Sources	☐	☐	☐	☐	☐
P1.10- Comparing Energy Sources	☐	☐	☐	☐	☐
P1.11- Electrical Circuit Symbols	☐	☐	☐	☐	☐
P1.12- Current and Charge	☐	☐	☐	☐	☐
P1.13- Potential Difference & Energy in circuits	☐	☐	☐	☐	☐
P1.14- Resistance & Ohms Law	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P1.15- Length of Wire and Resistance RP	☐	☐	☐	☐	☐
P1.16-Series and Parallel Circuits (Voltage & Current)	☐	☐	☐	☐	☐
P1.17- Resistance in Series and Parallel RP	☐	☐	☐	☐	☐
P1.18- RP- IV Characteristics of Diode, Filament Lamp and Resistor	☐	☐	☐	☐	☐
P1.19- Resistance of LDR and Thermistor	☐	☐	☐	☐	☐
P1.20- Changing Resistance	☐	☐	☐	☐	☐
P1.21- AC/DC and Mains Electricity	☐	☐	☐	☐	☐
P1.22- Electrical Cables and Plugs	☐	☐	☐	☐	☐
P1.23- Power Transfers in Circuits	☐	☐	☐	☐	☐
P1.24- Calculating Energy Transfers in Circuits	☐	☐	☐	☐	☐
P1.25- National Grid	☐	☐	☐	☐	☐
P1.T02- Static & Electrical Fields	☐	☐	☐	☐	☐
P1.26- Changes of States	☐	☐	☐	☐	☐
P1.27- Density RP	☐	☐	☐	☐	☐
P1.28- Internal Energy	☐	☐	☐	☐	☐
P1.29- Particle Motion in Gases	☐	☐	☐	☐	☐
P1.T03- Changes in Gas Pressure and Volume	☐	☐	☐	☐	☐
P1.30- Specific Heat and Specific Latent Heat	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P1.31- Structure of the Atom & Isotopes	☐	☐	☐	☐	☐
P1.32- Electrons and Energy Levels	☐	☐	☐	☐	☐
P1.33- Development of the Model of the Atom	☐	☐	☐	☐	☐
P1.34- Radioactive Decay	☐	☐	☐	☐	☐
P1.35- Radioactive Decay Equations	☐	☐	☐	☐	☐
P1.36- Properties of Alpha, Beta and Gamma Decay	☐	☐	☐	☐	☐
P1.37- Half Lives	☐	☐	☐	☐	☐
P1.38- Irradiation and Contamination	☐	☐	☐	☐	☐
P1.T04- Background Radiation	☐	☐	☐	☐	☐
P1.T05- Uses of Radiation	☐	☐	☐	☐	☐
P1.T06- Nuclear Fission	☐	☐	☐	☐	☐
P1.T07- Nuclear Fusion	☐	☐	☐	☐	☐

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Science | Revision Checklist

Year 11 — **Separate (Triple) Science. Physics Paper 2**

Pick a Topic to Revise → **Actively read the Revision Guide or BBC Bitezie** → **Watch the Video Link if you feel you need more help** → **Try the Practise Exam Questions and Mark them** → **You've Revised**

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P2.01- Scalar and Vector Quantities	☐	☐	☐	☐	☐
P2.02- Mass & Weight- Gravity	☐	☐	☐	☐	☐
P2.02b- Contact & Non-Contact Forces	☐	☐	☐	☐	☐
P2.03- Resultant Forces	☐	☐	☐	☐	☐
P2.04- Resolving Forces at Angles (HT)	☐	☐	☐	☐	☐
P2.05- Work Done	☐	☐	☐	☐	☐
P2.06- Speed and Velocity	☐	☐	☐	☐	☐
P2.07- Hooke's Law Investigation	☐	☐	☐	☐	☐
P2.07b- Elastic Potential Energy	☐	☐	☐	☐	☐
P2.T01- Moments, Levers & Gears	☐	☐	☐	☐	☐
P2.T02- Pressure on Surfaces and in Fluid Columns	☐	☐	☐	☐	☐
P2.T03- Floating Objects	☐	☐	☐	☐	☐
P2.T04- Atmospheric Pressure	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P2.08- Distance-Time Graphs	☐	☐	☐	☐	☐
P2.09- Acceleration	☐	☐	☐	☐	☐
P2.09b- Velocity-Time Graphs	☐	☐	☐	☐	☐
P2.10- Falling Objects & Motion Calculations	☐	☐	☐	☐	☐
P2.11- Newton's First Law	☐	☐	☐	☐	☐
P2.12- Newtons Second Law	☐	☐	☐	☐	☐
P2.12b- Newton's Second Law Investigation	☐	☐	☐	☐	☐
P2.12c- Inertia	☐	☐	☐	☐	☐
P2.13- Newton's Third Law	☐	☐	☐	☐	☐
P2.14- Car Stopping Distances	☐	☐	☐	☐	☐
P2.15- Calculating Stopping Distances & Forces	☐	☐	☐	☐	☐
P2.T05- Using Kinetic Energy to determine stopping distances	☐	☐	☐	☐	☐
P2.16- Calculate the momentum of objects	☐	☐	☐	☐	☐
P2.16b- Explain the principle of conservation of momentum	☐	☐	☐	☐	☐
P2.T06- Changes of	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
Momentum- Crumple Zones					
P2.18- Waves: Transverse & Longitudinal	☐	☐	☐	☐	☐
P2.19- Wave Speed, Frequency	☐	☐	☐	☐	☐
P2.20- Determine the speed of a wave	☐	☐	☐	☐	☐
P2.21- EM Spectrum	☐	☐	☐	☐	☐
P2.22- Transmitting Radio Signal	☐	☐	☐	☐	☐
P2.23- IR Absorption Investigation	☐	☐	☐	☐	☐
P2.24- Refraction of Waves	☐	☐	☐	☐	☐
P2.T07- Investigating the Reflection & Refraction of Light	☐	☐	☐	☐	☐
P2.25- Microwaves	☐	☐	☐	☐	☐
P2.26- Dangers of UV, X-Ray & Gamma	☐	☐	☐	☐	☐
P2.T08- Sound Waves & Hearing	☐	☐	☐	☐	☐
P2.T09- Ultrasound & Echo Sounding	☐	☐	☐	☐	☐
P2.T10- Using Earthquakes waves	☐	☐	☐	☐	☐
P2.T11- Refraction of Earthquake Waves	☐	☐	☐	☐	☐
P2.T12- Lens & Ray Diagrams	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P2.T13- Images formed by Lenses	☐	☐	☐	☐	☐
P2.T14- Visible Light	☐	☐	☐	☐	☐
P2.T15- Black Body Radiation	☐	☐	☐	☐	☐
P2.27- Bar Magnets	☐	☐	☐	☐	☐
P2.28- Permanent and Induced Magnets	☐	☐	☐	☐	☐
P2.29- Magnetic Fields	☐	☐	☐	☐	☐
P2.30- Electromagnets	☐	☐	☐	☐	☐
P2.31- Fleming's Right Hand Rule	☐	☐	☐	☐	☐
P2.32- Solenoids	☐	☐	☐	☐	☐
P2.33- Fleming's Left Hand Law	☐	☐	☐	☐	☐
P2.T16- Loudspeakers	☐	☐	☐	☐	☐
P2.34- Electric Motors	☐	☐	☐	☐	☐
P2.T17- Electromagnetic Induction	☐	☐	☐	☐	☐
P2.T18- Generators & Dynamos	☐	☐	☐	☐	☐
P2.T19- Microphones	☐	☐	☐	☐	☐
P2.T20- Transformers	☐	☐	☐	☐	☐
P2.T21- Transformer Calculations	☐	☐	☐	☐	☐
P2.T22- Formation of the Solar System	☐	☐	☐	☐	☐

Revision Topic	Notes from reading	Video Watched	Self-quizzing/ Flash cards?	Practice questions	Revised!
	☑	☑	☑	☑	☑
P2.T23- Lifecyle of Stars	☐	☐	☐	☐	☐
P2.T24- Orbital Motion	☐	☐	☐	☐	☐
P2.T25- Red Shift & Big Bang	☐	☐	☐	☐	☐