



Be World Class

**Autumn Term
Term 1**

Triple Science

Year 11

Name: _____

Tutor: _____

Year 11 Homework Timetable

Monday	English Exam Question	English Sparx	Maths Sparx
Tuesday	Option A Exam Question	Science Carousel	Science Sparx
Wednesday	Option B Exam Question	Option A Carousel	Maths Sparx
Thursday	Option C Exam Question	Option B Carousel	Science Sparx
Friday	Science Exam Question	Option C Carousel	Catch Up Sparx

Sparx Science

- Complete 100% of their assigned homework each week

Sparx Maths

- Complete 100% of their assigned homework each week

Option A (EBACC)	Option B	Option C
Computer Science	Business Studies	Art
Languages	Hospitality and Catering	Business Studies
Geography	Drama	Hospitality and Catering
History	Music	Computer Science
	Geography	Drama
	Health and Social Care	Photography
	ICT	Science (Triple)
	Media Studies	Sport
	Music	
	Sport	
	Travel and Tourism	

Half Term 1 (7 weeks) - Year 11

Week / Date	Homework task 1 Carousel Quiz	Homework task 2 Exam Question	Homework Task 3 - Triple Exam Question
Week 1 7th September 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 2 14th September 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 3 21st September 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 4 28th September 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 5 5th October 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 6 12th October 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 7 19th October 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%

Half Term 1 (6 weeks) - Year 11			
Week / Date	Homework task 1 Carousel Quiz	Homework task 2 Exam Question	Homework Task 3 - Triple Exam Question
Week 8 9th November 2026	Mock Exams	Mock Exams	Mock Exams
Week 9 16th November 2026	Mock Exams	Mock Exams	Mock Exams
Week 10 23rd November 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 11 30th November 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 12 7th December 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%
Week 13 14th December 2026	Complete the questions on Carousel, these will be tested in your LSQ	Complete the exam question. Ensure Sparx & Carousel are both at 100%	Complete the exam question. Ensure Sparx & Carousel are both at 100%

Week 1 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Cells are the basic units of all forms of life.

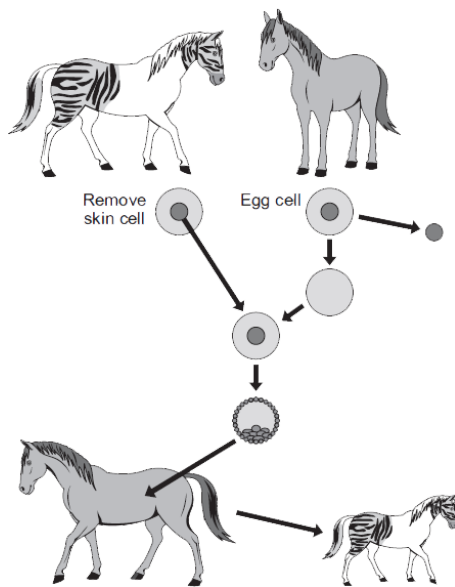
Describe four differences between a bacterial cell and a plant cell (4 marks).

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Improvement Work: Cells are the basic units of all forms of life.

Describe four differences between a bacterial cell and a plant cell (4 marks).

Week 1 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.



Use information from the diagram and your own knowledge to describe how adult cell cloning could be used to clone a zorse (6)

[illegible]This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Improvement Work: Use information from the diagram and your own knowledge to describe how adult cell cloning could be used to clone a zorse (6)

Week 2 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Explain the trend in the reactivity of the Group 1 metals (4 marks).

Improvement Work: Explain the trend in the reactivity of the Group 1 metals (4 marks).

Week 2 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

A person with late stage HIV infection has AIDS.

Scientists have produced monoclonal antibodies for HIV.

The monoclonal antibodies can prevent a person infected with HIV developing AIDS.

Describe how the monoclonal antibody for HIV can be produced (4)

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Improvement Work: Describe how the monoclonal antibody for HIV can be produced (4)

[illegible]

Week 3 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Fossil fuels are burned in car engines and in power stations.

- (a) Describe how different energy stores change in a car engine when a fossil fuel is burned. (2 marks)
- (b) Renewable energy resources can have a negative impact on the environment. Give one negative environmental impact of hydro-electric power and of wind power. (2 marks)

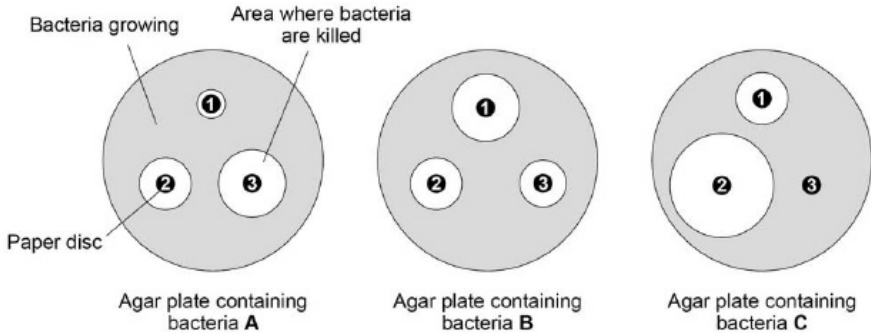
This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Improvement Work:

- (a) Describe how different energy stores change in a car engine when a fossil fuel is burned. (2 marks)
- (b) Renewable energy resources can have a negative impact on the environment. Give one negative environmental impact of hydro-electric power and of wind power. (2 marks)

and Carousel are both completed to 100%.

Figure 1



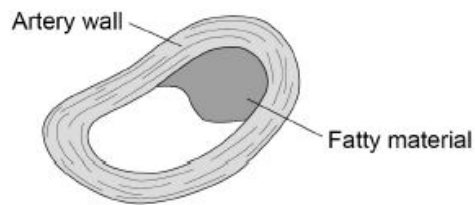
Compare the effectiveness of the three antibiotics at killing the different types of bacteria (6)

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Improvement Work: Compare the effectiveness of the three antibiotics at killing the different types of bacteria (6)

Week 4 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

The diagram below shows a coronary artery of someone with CHD.



Explain how CHD can cause a heart attack. (3)

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Improvement Work: Explain how CHD can cause a heart attack. (3)

Week 4 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Plan an investigation to show how the concentration of the sodium thiosulfate solution affects the rate of the reaction with dilute hydrochloric acid. (6)

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Improvement Work: Plan an investigation to show how the concentration of the sodium thiosulfate solution affects the rate of the reaction with dilute hydrochloric acid. (6)

Week 5 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

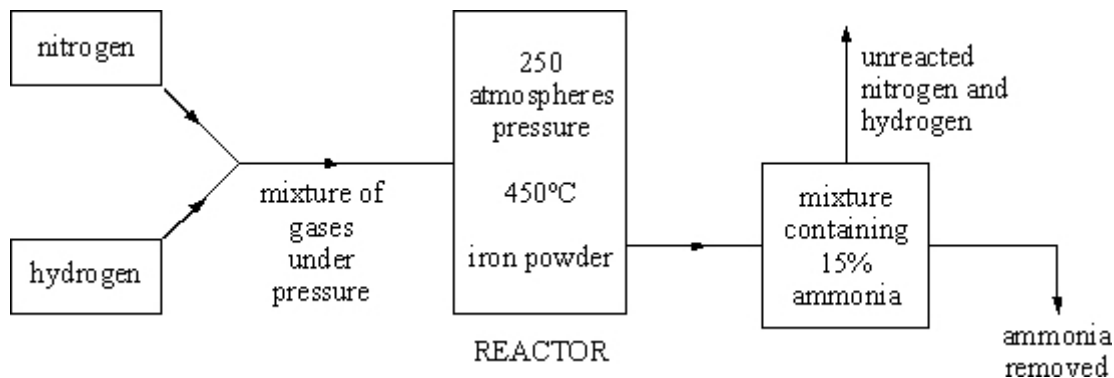
- (a) Describe the plum pudding model of the atom
- (b) Give two conclusions that were made from Rutherford's alpha scattering experiment

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Improvement Work:

- (a) Describe the plum pudding model of the atom
- (b) Give two conclusions that were made from Rutherford's alpha scattering experiment

Week 5 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.



Ammonia is manufactured from nitrogen and hydrogen in the Haber Process. The diagram shows some details of the manufacturing process.

Explain, as fully as you can, why

- the yield of ammonia decreases with increase in temperature,
- despite this fact, a comparatively high temperature of 450°C is used for the industrial process
- iron powder is added to the reactor. (4)

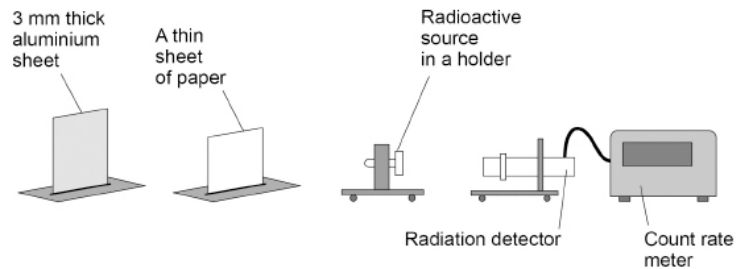
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Improvement Work: (See question above) (4)

Week 6 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

A teacher wants to demonstrate that the radioactive source emits alpha, beta and gamma radiation.

The figure below shows the equipment the teacher has.



Describe a method the teacher could use. (6)

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Improvement Work: Describe a method the teacher could use. (6)

Week 6 Task 3 -Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Another method of extracting copper from low-grade ores is bioleaching.

A solution of copper sulfate (CuSO_4) produced by bioleaching has a concentration of 0.319 g/dm^3

Relative atomic masses (A_r): Cu = 63.5 O = 16 S = 32

Calculate the number of moles of copper that can be produced from 1 dm³ of this solution (3)

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Improvement Work: Calculate the number of moles of copper that can be produced from 1 dm³ of this solution (3)

Week 7 Task 2 - Complete the exam question then fill the remainder of the page with retrieval quizzing on your Red and Amber questions. Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

The different components of the blood can be used to treat different medical conditions.

The table below gives information about:

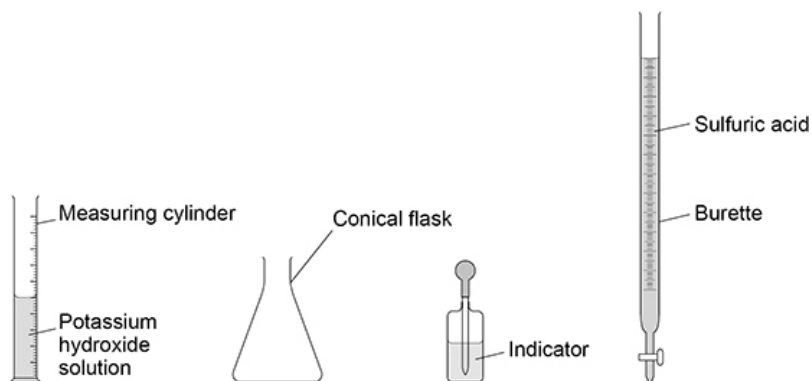
- blood from blood donation by volunteers
- the production of red blood cells from stem cells in laboratories.

Blood from blood donation	Production of red blood cells from stem cells
It can take 10 minutes to collect blood from a vein in the arm. A person can donate blood every 12 weeks. Blood can be stored for 35 days. Blood can be separated into different blood components and plasma.	Red blood cells can be produced when needed in small quantities. It takes 28 days to produce red blood cells. A patient’s own stem cells can be used to make red blood cells.

Evaluate the use of blood donation to provide blood components compared with using stem cells to provide blood components. Use information from the table above and your own knowledge.

Improvement Work: Evaluate the use of blood donation to provide blood components compared with using stem cells to provide blood components

Week 7 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.



Describe how the student would use the equipment in the figure above to complete the titration

(5)

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Improvement Work: Describe how the student would use the equipment in the figure above to complete the titration (5)

Week 8 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Describe what happens when a potassium atom reacts with a chlorine atom to produce potassium chloride (4 marks)

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Improvement Work: Describe what happens when a potassium atom reacts with a chlorine atom to produce potassium chloride (4 marks)

Week 8 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

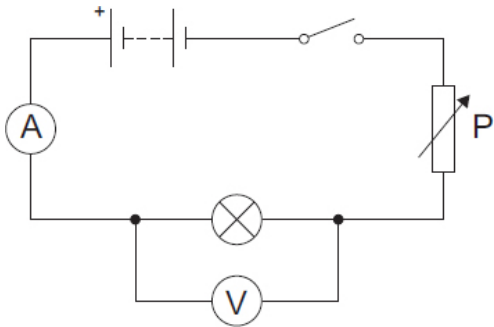
Over the next 10 years, more than 300 kilometres of new high voltage transmission cables are to be added to the National Grid. Most of the new cables will be suspended from pylons and run overhead while the rest will be buried underground.

Outline the advantages and disadvantages of both overhead transmission cables and underground transmission cables (6)

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Improvement Work: Outline the advantages and disadvantages of both overhead transmission cables and underground transmission cables (6)

Week 9 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.



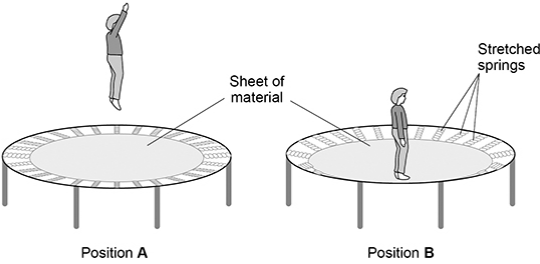
The student measured different values of potential difference and the corresponding values of current for the filament lamp.

Describe how the student could use the circuit above to make these measurements (4 marks).

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Improvement Work: Describe how the student could use the circuit above to make these measurements

Week 9 Task 3 -Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.



A trampoline is made from a sheet of material held in place by stretched springs.

Position A shows the child’s maximum height above the trampoline. Position B shows the lowest position reached by the child when landing on the trampoline.

Describe the changes to the stores of energy of the child, springs and surroundings as the child moves from position A to position B. (4)

Improvement Work: Describe the changes to the stores of energy of the child, springs and surroundings as the child moves from position A to position B. (4)

Week 10 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Describe the similarities and differences between benign tumours and malignant tumours (4 marks)

[illegible]

Improvement Work: Describe the similarities and differences between benign tumours and malignant tumours (4 marks)

Week 10 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

The specific heat capacity of aluminium can be determined by experiment.

- (a) Draw a labelled diagram showing how the apparatus used to determine the specific heat capacity of aluminium should be arranged.(3)

(b) Describe how you could use the apparatus you drew in part (a) to determine the specific heat capacity of aluminium. (6)

(c) Methods used to determine the specific heat capacity of aluminium may give a value greater than the actual value. Explain why (2)

[illegible]

Improvement Work: See questions above

Week 11 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

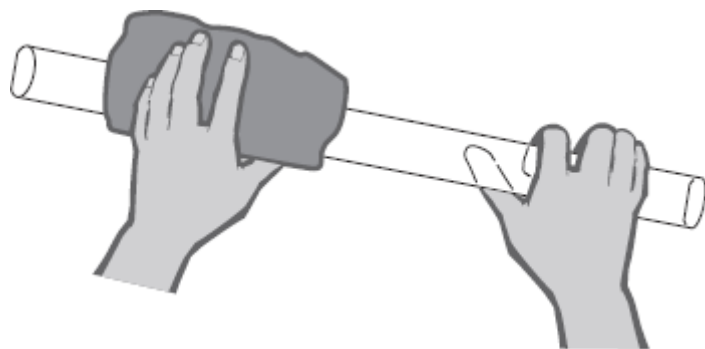
Describe a method to investigate how the temperature changes when different masses of ammonium nitrate are dissolved in water. You do not need to write about safety precautions.(6)

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Improvement Work: Describe a method to investigate how the temperature changes when different masses of ammonium nitrate are dissolved in water. You do not need to write about safety precautions.(6)

Week 11 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

The diagram shows a polythene rod being rubbed with a woollen cloth.



The polythene rod becomes negatively charged.

Explain how this happens (2)

Improvement Work: The polythene rod becomes negatively charged. Explain how this happens (2)

Week 12 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Explain how using step-up transformers makes the national grid efficient (3 marks)

Explain why step down transformers are needed in the national grid (2 marks)

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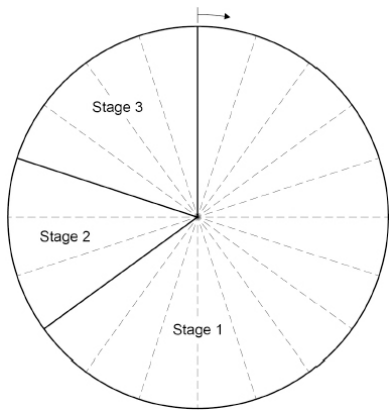
Improvement Work:

Explain how using step-up transformers makes the national grid efficient (3 marks)

Explain why step down transformers are needed in the national grid (2 marks)

Week 12 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

Describe what happens during each stage of the cell cycle (4)



Improvement Work: Describe what happens during each stage of the cell cycle (4)

Week 13 Task 2 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

The human digestive system breaks down protein and fat in the drink.

Describe how protein and fat are digested (6 marks)

You should include:

- the enzymes involved
- where the enzymes are produced

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Improvement Work: Describe how protein and fat are digested (6 marks)

Week 13 Task 3 - Complete the exam question using full sentences. Then ensure Sparx and Carousel are both completed to 100%.

In 2014 the Ebola virus killed almost 8000 people in Africa.

Drug companies have developed a new drug to treat Ebola.

Explain what testing must be done before this new drug can be used to treat people (6)

[illegible]

Improvement Work: In 2014 the Ebola virus killed almost 8000 people in Africa.

Drug companies have developed a new drug to treat Ebola.

Explain what testing must be done before this new drug can be used to treat people (6)
