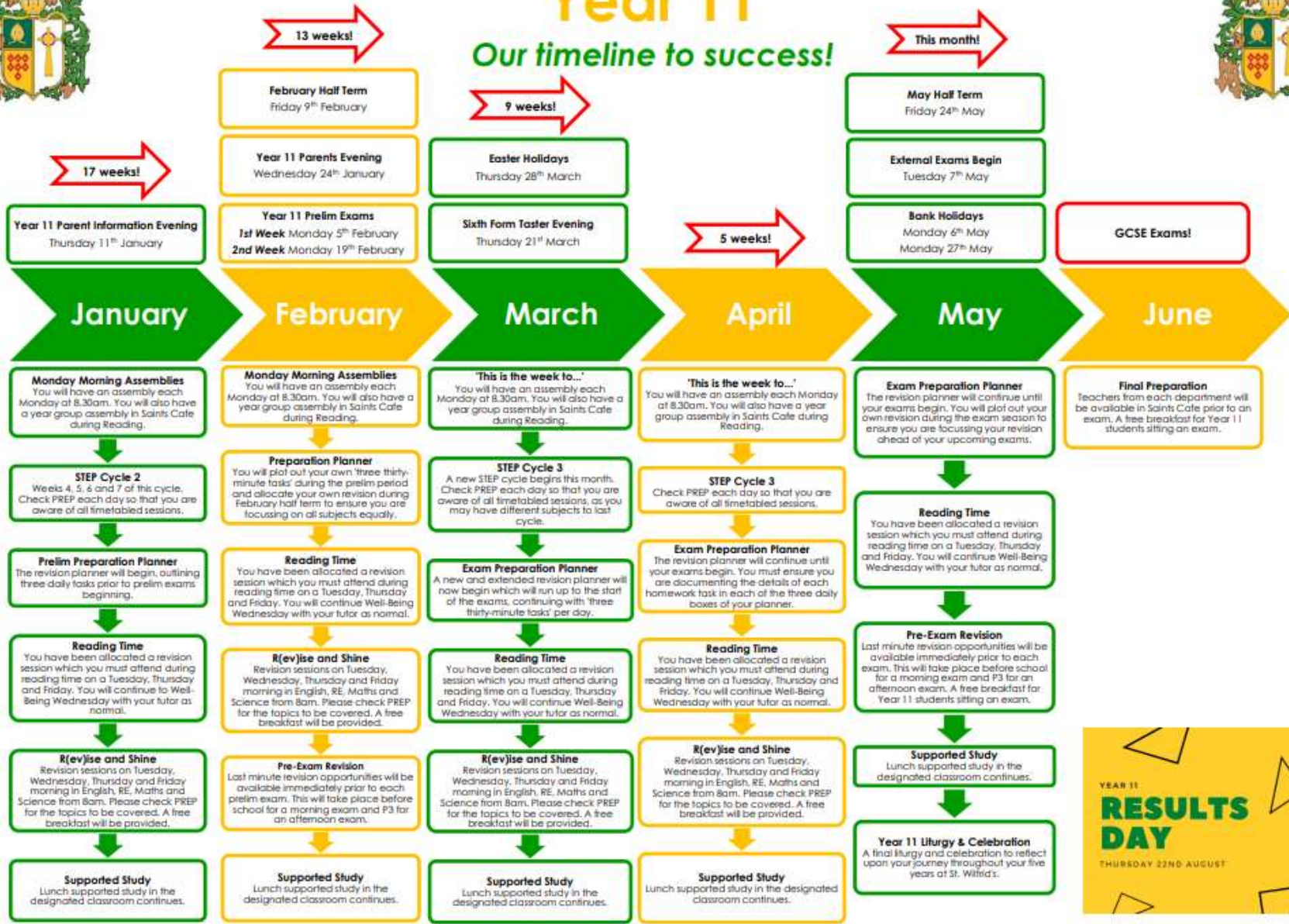


Year 11 Strategies



Year 11

Our timeline to success!



YEAR 11
RESULTS DAY
 THURSDAY 22ND AUGUST

STEP and Supported Study

- After school intervention sessions on a Tuesday, Wednesday and Thursday evening.
- A space for students to work independently at lunch/after school.



St. Wilfrid's
R.C. College

Year 11 Lunch – Study Space

Monday

Tuesday

Wednesday

Thursday

Friday

Week 1

1.86

1.86

1.02

1.02

1.02

Week 2

1.84

1.84

1.84

1.84

1.02

Available from 12.40pm every day.

A credit will be awarded for each session you attend.

Independent Study Support

- Prelim Preparation Planner



**St. Wilfrid's
R.C. College**

Year 11 Prelim Preparation Planner January – February 2024

Name -	Tutor Group -
--------	---------------

- This booklet organises your homework from Monday 8th January until your Prelims begin.
- Your homework will be chunked into three 30-minute tasks that you must complete that day.
- During the first week of this half term you have been allocated three thirty-minute slots each day where you must plot out your own independent homework.
- You may be given a preparation task set by your subjects for Cycle 2, or it may be independent revision or time dedicated to catch up.
- From Monday 15th January you will receive set tasks from your subjects which have been designed to prepare you for your prelims which begin in four weeks, on Monday 5th February.
- There are no tasks set on a Saturday. Please get your planner signed by your parent/carer and your tutor each week.
- Remember, if you would like to complete your homework in school, you can use the lunch time supported study classroom and/or Saints Café after school.
- Throughout the programme, your teachers and tutors will monitor your progress.
- If they are concerned about your progress, they may contact your Head of House.

Option A	Option B	Option C

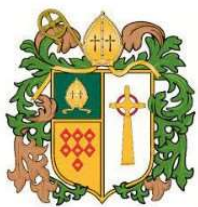
Monday 15 th January	Maths (1) 😊 😐 😞	English (1) 😊 😐 😞	Biology (1) 😊 😐 😞
Tuesday 16 th January	Chemistry (1) 😊 😐 😞	Option A (1)	Option B (1)
Wednesday 17 th January	Option C (1) 😊 😐 😞	Maths (2) 😊 😐 😞	English (2) 😊 😐 😞
Thursday 18 th January	RE (1) 😊 😐 😞	Physics (1) 😊 😐 😞	Biology (2) 😊 😐 😞
Friday 19 th January	Chemistry (2) 😊 😐 😞	Maths (3) 😊 😐 😞	English (3) 😊 😐 😞

R(ev)ise and Shine

- A voluntary revision session in Nichols Hall/Saints Cafe, 8-8.30am.
- English – Tuesday
- RE – Wednesday
- Maths – Thursday
- Science – Friday

Assemblies and Registration

- Monday Morning Assemblies
- 'This is the week to...'



YEAR 11 PARENT INFORMATION EVENING

YEAR 11 KEY DATES 2024

- **WEDNESDAY 24TH JANUARY – YEAR 11 PARENTS EVENING**
- **MONDAY 5TH FEBRUARY – FEBRUARY PRELIMS (FIRST WEEK)**
- **MONDAY 19TH FEBRUARY – FEBRUARY PRELIMS (SECOND WEEK)**
- **THURSDAY 21ST MARCH – SIXTH FORM TASTER EVENING**
- **TUESDAY 7TH MAY – EXTERNAL EXAMINATIONS BEGIN**
- **WEDNESDAY 19TH JUNE – YEAR 11 PROM, RAMSIDE HALL**
- **THURSDAY 22ND AUGUST – GCSE RESULTS AND SIXTH FORM SIGN UP**

What does effective revision look like?

Ineffective revision:

- Copying notes
- Highlighting
- Spending more time on how it looks

Quality over quantity

Effective revision:

- 30 minute sessions maximum
- Regular breaks
- No more than 3 blocks of 30 minutes a day

Do Not:	What good revision looks like:
<ul style="list-style-type: none">• Copy notes• Make flashcards with long paragraphs of information• Highlight information• Focus on the topics you enjoy revising	<ul style="list-style-type: none">• Going through flashcards until information is memorised• Look-cover-write-check• Brain dump• Mind maps from memory• Self-testing• Teach someone else• Exam questions and self-assessing• Essay planning• Prioritise the topics you are the least confident in

Coping with Exam Stress

- Exam season can be incredibly stressful for students of all ages. Here's a few tips and tricks to help them cope with exam stress.
- These are just a few techniques to try, what really matters is finding what works best for your child.

Take a break

- Scheduling regular breaks and being able to recognise when they need a break when they're feeling stressed or overwhelmed, can be really helpful.
- This can be really difficult, especially when they're under pressure and may feel like a waste of time or bring up feelings of guilt.
- However a change of scenery may make their time revising afterwards feel fresher and more productive.

Mapping out their studies

It may also help to try out a few ways to feel more on top of their studies.

This might include:

- In the lead up to the prelims, follow the preparation planner and the three thirty minute tasks outlined, to provide clear structure.
- During prelim weeks, writing down what they feel they know well and the areas they'd like to know better to plan their independent revision.
- Or, if they're feeling creative, they could draw a pathway towards exams and out the other side, where they can chart their progress along the way.

Support is always on hand to help students map out their studies to provide structure to both their revision and their breaks.

Taking a moment

- Taking a moment when they feel especially frazzled or anxious to calm themselves can be a useful one to master both during revision and exams.
- For some, meditation, grabbing a cup of tea, deep breathing or taking a few minutes outside in nature even if only for a couple of minutes, can be beneficial.

Taking care of their needs

- Drink plenty of water and try to eat regular meals. Staying hydrated really can help them feel better, both physically and mentally, as it's important they meet their brain's energy needs.
- Especially during times of revision, where they're reading and straining their mind a lot, water is important to help avoid dehydration headaches. While regular meals can help them maintain a good routine.

Switching off

- Avoid screens at least an hour before bedtime. Switching off can go a long way in helping them to fall and stay asleep which will help keep their mind fresh for their exams and can help them manage or reduce their stress level.
- If possible, having an environment where to rest or relax which is different to where they study, can help them switch off.

Moving their body

- Encourage 'shaking it out', or getting up from their desk and doing some light stretches. Moving their body is a great way to avoid stiffness and to better concentrate well for longer periods of time overall.

Talking about what's on their mind

- Talk to you, a friend or other trusted person about how they're feeling. Sometimes just venting it out can be such a destressor!
- Encourage them to reach out to their tutors, teachers and pastoral team if they're struggling. It may be that they could apply for a deadline extension for a piece of work or find some help with time management or study skills.

Positive affirmations

- Try repeating some positive affirmations to them, such as “You're doing your best,” “You can do this,” or “Just keep swimming!”
- Get them to say the same – the more positive comments you/they make along the way the better.

Journaling and music

- Writing down what's on their mind in a journal or listening to some calming music are great ways to get tensions and anxieties out of their body.
- Whatever they choose to do, encourage them to be kind to themselves. They must give themselves some space to do the things that might help them feel calmer or help them gain a bit of perspective.

Ask us for help

- This is a team effort – we are here for you and your child.
- Our pastoral team will help.
- We have access to counsellors on site daily.
- We can signpost to free, safe and anonymous mental health and wellbeing support on [Kooth.com](https://www.kooth.com) too.

CAREERS PROVISION



St. Wilfrid's
R.C. College

- PSHE
- DISPLAYS AROUND SCHOOL
- CAREERS INTERVIEWS
- YEAR 11 TASTER DAYS
- CAREERS FAYRES
- EXTERNAL SPEAKER
- WORK EXPERIENCE
- VISITS
- WEEKLY DROP-IN SESSION
- YEAR GROUP TEAMS CHAT
- PARENTAL BULLETIN
- WEBSITE

YEAR GROUP TEAMS CHAT

The screenshot shows a Microsoft Teams chat window for a team named '2023-TWS-Year11'. The interface includes a left-hand navigation pane with options like 'Home page', 'Class Notebook', and 'Channels'. The main chat area shows two messages from 'Paul Given' (PG) dated 29/11 13:12 and 22:09. The first message includes a file attachment 'Sixth Form Open Evening - Nov'23.docx'. The second message includes a file attachment 'North East Apprenticeships.xlsx'. At the top of the chat area, there are two buttons: 'Upload Class Materials' and 'Set up Class Notebook'. The date '29 November 2023' is displayed between the messages.

< All teams

TY **General** Posts Files About +

2023-TWS-Year11 ...

Home page

Class Notebook

Classwork

Assignments

Grades

Reflect

Insights

Channels

General

Upload Class Materials

Set up Class Notebook

29 November 2023

PG Paul Given 29/11 13:12

Hi, Don't forget that it is the Sixth Form Open Evening tomorrow from 6:00pm until 8:00pm. All welcome.

Sixth Form Open Evening - Nov'23.docx

Reply

Today

PG Paul Given 22:09

Hi, Open the file below to search for available apprenticeships throughout the North East. Thanks. Mr. Given

North East Apprenticeships.xlsx

Reply

PARENTAL BULLETIN



Students are invited to join this virtual law event with The University of Law, one of the leading institutions in the UK for legal studies, where top law professionals will be sharing their experience of careers in the legal industry, as well as sharing their key tips on their panel discussion to give pupils a real insight into their world of work.

The breadth of industry knowledge and insight that will be shared throughout the evening will provide students with real clarity to help them decide on their future career path. There will also be Q&A opportunities throughout the evening so they can ask any burning questions they have, or simply find out more about the industry from the most experienced law professionals!

Apprenticeships update:

Please follow the link below to view the most recent apprenticeship vacancy report for South Tyneside.

<https://www.st-wilfrids.org/wp-content/uploads/2023/11/South-Tyneside-06-Nov-2023.xlsx>

This has been generated from [Find an apprenticeship - GOV.UK \(www.gov.uk\)](https://www.gov.uk) and is one of the many platforms highlighting apprenticeship opportunities. We also encourage a broader search including reviewing training provider and employer websites plus the many online job's boards.

SCHOOL WEBSITE - ONLINE CAREERS RESEARCH



St. Wilfrid's
R.C. College

[Letters for Parents](#) | [Staff/Pupil Login](#) | [ParentPay](#) | [Vacancies](#) | [Contact Us](#)

[Our School](#)

[Curriculum](#)

[School Life](#)

[SEND](#)

[Sixth Form](#)

[News & Events](#)

Careers Programme

CEIAG and PSHE at St Wilfrid's RC College

CEIAG is an integral part of the curriculum within St. Wilfrid's RC College as students are timetabled one period per week throughout the academic year. CEIAG is predominantly delivered within our PSHE programme and is designed to give students the 'tools' to develop their personal career ambitions independently, working on the principle of 'making informed decisions'.

Within our PSHE (Personal, Social, Health and Economic) education programme, years 7 - 11 receive modules focussing on 'work related learning' equipping students with the knowledge to help them make informed decisions later in their life. Sixth form students have a wide range of CEIAG integrated at key times during the year, again to help them to make informed decisions about their future.

Year 11 students receive a 1:1 careers guidance interview from a qualified independent and impartial careers adviser; Careerwave is our current provider. This service is available to all students and is timetabled over the period of Year 11. At the end of the interview each student is given a personal careers action plan. Students can request further interviews / email contact and can update their plan. From the point of issuing the plan, students then take ownership of this. Students with an EHCP receive further guidance from their case worker.

School Life

Careers Programme

[Career Research Links](#)

[Careers Policy](#)

[Careers Presentations](#)

[Careers Programme Overview](#)

[Employers](#)

[Labour Market Information](#)

[Preparing For Future Pathways](#)

[Provider Access Policy](#)

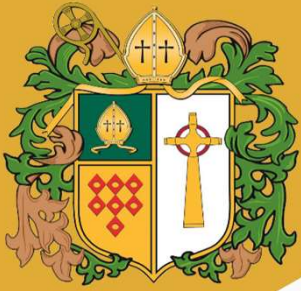
[Why Choose University?](#)



St Wilfrid's R.C College Sixth Form

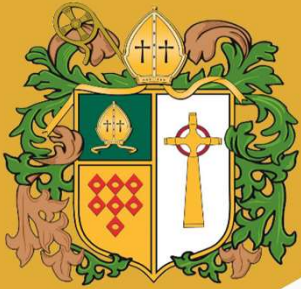


St. Wilfrid's RC College



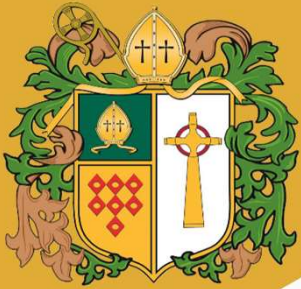
St. Wilfrid's 6th Form

- We are a caring Catholic community, we know the pupils well and want them to do as well as possible in the future.
- Our Sixth Form is relatively small, so we can give individual help and advice.
- We have a strong academic focus, weekly monitoring, regular assessment.
- We have lots of extra curricular opportunities e.g. links with Universities, (HE+, Futures, Partners, Progression), employers, retreat, committees, World challenge, Christmas meal, visits, outside speakers, etc...



St. Wilfrid's 6th Form

- We offer a suite of A-level and BTEC subjects that are able to open many doors as you move forwards in your education
- We support our students to succeed moving forward by supporting them to get into further study or finding employment
- Our students enjoy Sixth Form, and learn from a team of dedicated specialist teachers who are experts in their fields
- Our results are consistently strong



St. Wilfrid's 6th Form

Post 16 outcomes are consistently strong at St Wilfrid's RC College

- The average grade of students studying an A-Level with us is a **grade B**
- One in three A-Level grades achieved at St Wilfrid's is a **grade A**
- Our average A-Level points score (grade) is in the **top 20%** of schools Nationally
- Our average Vocational points score is in the **top 15%** of schools Nationally
- 96% of our students go on to Higher Education, employment or training



St. Wilfrid's 6th Form

Important Events

- 21st March 4:30pm to 6:30pm – Sixth Form Taster Evening
- Sixth Form sign up day - Year 11 Results day.

English, Maths, Science Carousel

Parent Information Evening

English Language and Literature

What do the exams look like?

- Two GCSEs- two certificates
- Either Literature or Language is considered a 'pass' for English now
- 4 papers in total-

AQA

Please write clearly in block capitals.

Centre number Candidate number

Surname

Forename(s)

Candidate signature

I declare this is my own work.

GCSE
ENGLISH LANGUAGE
Paper 2: Writers' viewpoints and perspectives

Time allowed: 1 hour 45 minutes

Materials
For this paper you must have:
• Source A and Source B – provided as a separate insert.

Instructions

- Answer all questions.
- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- You must answer the questions in the spaces provided.
- Do not write outside the box around each page or on blank pages.
- If you need extra space for your answers, use the lined pages at the end of this book. Write the question number against your answers.
- Do all rough work in this book. Cross through any work you do not want to be marked.
- You must refer to the insert booklet provided.
- You must not use a dictionary.

Information

- The marks for questions are shown in brackets.

For Examiner's Use	
Question	Mark
1	
2	
3	
4	
5	
TOTAL	

English Language

Paper 1- fiction- 1:45

Paper 2- non-fiction- 1:45

Spoken Language

Presentation (completed in class)

English Literature

Paper 1- Shakespeare and the 19th Century Novel-1:45

Paper 2- Modern texts and poetry- 2:15

AQA

GCSE
ENGLISH LITERATURE
Paper 2: Modern texts and poetry

Thursday 21 May 2020 Morning Time allowed: 2 hours 15 minutes

Materials
For the paper you must have:
• an AQA 16-page Answer Book.

Instructions

- Use black ink or black ball-point pen. Do not use pencil.
- Write the information required on the front of your answer book. The Paper Reference is 87022.
- Answer one question from Section A, one question from Section B and both questions in Section C.
- You must not use a dictionary.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- AQA will be assessed in Section A. There are 4 marks available for AQA in Section A in addition to 30 marks for answering the question. AQA assesses the following skills: use a range of vocabulary and sentence structures for clarity, purpose and effect, with accurate spelling and punctuation.
- There are 30 marks for Section B and 32 marks for Section C.

How are Y11 being supported?

- Exam preparation homework for Literature and Language- 1 booklet (these will change after Easter)
- All content is now covered- focus in lessons is on revision and exam skills
- STEP sessions are ongoing - if pupils aren't selected but want to attend, they can speak to their English teacher or Mrs Vasey
- Voluntary revision sessions

What can y11 do at home?

- All Y11 students have access to SENECA- to help support them with literature revision- your email can be added to their account so that you can see the work they are completing
- Complete mock papers- lots are available online [AQA](#)
- Planning responses to questions- lists of questions have been shared by teachers- creating a detailed plan is often the most helpful way of preparing for the different combinations of questions for Literature
- BBC Bitesize
- Mr Bruff videos on YouTube



ST WILFRID'S RC COLLEGE - MATHS





Maths-

Each paper is 1 hour 30 minutes in length

- Thursday 16th May 2024 – First paper (Edexcel, OCR & AQA)
- Monday 3rd June 2024 – Second paper (Edexcel, OCR & AQA)
- Monday 10th June 2024 – Third paper (Edexcel, OCR & AQA)

The marks for all three papers are added together and a grade is produced from the total.

Teacher use-

		Average Marks																																			
		1	1	1	1	3	2	3	3	3	1	2	2	5	1	4	3	3	2.9	0.8	0.9	1	4	2.6	0.6	0.3	1.5	1.2	1	0.6	0.9	0.9	0.5	2.9	1.8	0.5	0.9
June 2022 Paper 2H		Enter Class Name																																			
Question:		1	2	3	4	5	6	7	8	9a	9b	10	11	12	13a	13b	14a	14b	15	16a	16b	17	18	19	20	21	22	23	24	25	26	27	28	29			
1		1	1	1	1	3	2	3	3	1	2	2	5	1	4	2	3	1	2	1	4	1	2	2	4	1	1	2	4	1	1	3	4	3	72		
2		1	0	0	0	3	2	3	3	0	2	2	5	1	4	1	3	1	2	1	4	1	0	1	0	1	1	1	1	1	0	0	0	0	45		
3		1	0	0	1	3	2	1	3	1	2	2	5	1	4	3	3	1	2	0	0	1	0	3	0	1	1	2	0	0	3	3	0	3	52		
4		1	1	0	1	3	2	3	3	0	2	2	5	1	4	3	3	1	2	0	4	0	0	3	4	1	1	1	2	2	0	3	0	1	59		
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6		1	0	1	1	3	2	2	3	1	2	2	5	1	4	2	3	1	1	1	2	0	0	1	0	1	0	0	1	0	4	0	0	3	48		
7		1	1	0	1	3	2	3	3	1	2	2	5	0	4	1	3	0	0	0	0	1	0	2	0	1	1	2	4	0	4	3	0	2	52		
8		1	0	0	0	3	2	3	3	1	2	2	5	1	4	3	3	1	1	1	4	0	0	0	4	1	1	2	2	2	4	3	0	2	61		
9		1	0	0	0	2	2	3	3	1	1	2	2	0	4	2	2	1	0	1	0	0	0	2	4	1	1	0	4	0	4	0	0	0	43		
10		1	0	0	1	3	2	2	3	0	0	1	5	0	2	0	2	1	0	0	1	1	0	1	0	1	0	0	0	0	3	0	0	3	33		
11		1	0	0	1	1	2	3	3	1	2	2	5	0	4	0	3	0	2	0	4	0	0	0	0	0	0	0	0	0	4	0	0	0	38		
12		0	1	0	0	3	2	1	3	1	2	2	3	0	4	0	3	0	1	1	4	1	0	1	0	1	0	2	0	0	4	0	0	0	40		
13		1	0	0	1	0	2	3	3	0	1	2	0	0	2	0	3	1	0	1	4	1	0	1	0	0	0	0	0	0	4	3	0	0	33		
14		1	1	1	0	3	2	3	3	1	2	2	5	0	4	2	3	1	2	1	4	1	0	3	0	1	0	2	0	3	4	3	0	1	59		

Student use-

Questions	Question Title	Score	Clip Number
1	Convert percentages to fractions	1 / 1	82
2	Sets and Venn diagrams	0 / 1	374
3	Important sequences	0 / 1	261
4	Writing inequalities	0 / 1	266
5	Solve equations with x on both sides	3 / 3	185
6	Prime factorisation, prime and cube numbers	2 / 2	28,30,100
7	Direct proportion	3 / 3	341
8	Mean	3 / 3	407
9a	Experimental probability and relative frequency	0 / 1	356
9b	Expectation	2 / 2	355
10	Percentage increase or decrease	2 / 2	90
11	Area of compound shapes with triangles, Pythagoras Theorem	5 / 5	558,501
12	Change the subject of the formula, convert fractions to percentages	1 / 1	280,76
13a	Compound volume	4 / 4	582
13b	Volume of similar shapes	1 / 3	618
14a	Interpreting pie charts	3 / 3	429
14b	Interpreting pie charts	1 / 1	429
15	Multiply whole number by fractions, multiply fractions	2 / 2	67,69
16a	Mean	1 / 1	406
16b	Share in a given ratio, money problem solving	4 / 4	332,753
17	Plans and elevations, 3D shapes	1 / 1	837,829
18	Solving using the quadratic formula	0 / 2	241
19	Coordinates problem solving, ratio	1 / 3	204,333
20	Percentage increase or decrease	0 / 4	90
21	Equation of a circle - centre origin	1 / 1	778
22	Reciprocal of fractions, laws of indices	1 / 1	71,104
23	Factorise quadratic expressions	1 / 2	228
24	Straight line graphs (perpendicular)	1 / 4	216
25	Inverse functions	1 / 4	296
26	Pressure, share in a given ratio	0 / 4	734,735,333
27	Error intervals	0 / 3	776,777
28	Angles in polygons, angles around a point	0 / 4	562,812
29	Find the turning point of quadratic graphs	0 / 3	256
	Total	45 / 80	



Independent revision

Useful revision websites-

[SparxMaths](#)

[AQA GCSE Maths Nov 2021 | Yorkshire Maths Tutor](#)

[5-a-day GCSE 9-1 – Corbettmaths](#)

[DrFrostMaths.com](#)

[Revision Resources - Access Maths](#)

[Maths Genie - Free Online GCSE and A Level Maths Revision](#)

Science

Preparing year 11 for their examinations

Miss Russell

How will my child be examined?

Combined science

- Paper B1 – 1 hour 10 minutes
- Paper C1 – 1 hour 10 minutes
- Paper P1 – 1 hour 10 minutes

60
marks
each

Separate science

Biology

Paper 1 – 1 hour 45 minutes

Paper 2 – 1 hour 45 minutes

Chemistry

Paper 1 – 1 hour 45 minutes

Paper 2 – 1 hour 45 minutes

Physics

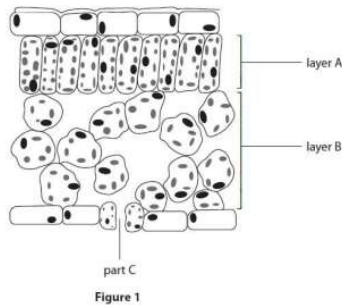
Paper 1 – 1 hour 45 minutes

Paper 2 – 1 hour 45 minutes

What can my child use to revise?

Q8.

Figure 1 shows a cross section of a leaf.



(i) What is the name of layer A?

(1)

- A spongy mesophyll
- B palisade mesophyll
- C upper epidermis
- D waxy cuticle

(ii) Explain the function of the spaces between the cells in layer B.

(2)

.....

.....

.....

.....

- To be successful you **MUST** practice past exam questions
- You can find all of these, arranged by topic and full practice papers, on physics and maths tutor
- You don't even need to print them! Just have them on your phone/computer screen and write your answers on paper. All of the mark schemes are at the bottom!

What can my child use to revise?

GCSE Biology Prelim preparation booklet

Foundation

Name _____

Class _____

Track your progress

Task	Topic	Complete?
1	Microscopes (B1)	
2	Osmosis (B1)	
3	Photosynthesis (B6)	
4	Transport in plants (B6)	
5	Carbon and water cycle (B9)	

Instructions

- When you have a slot for biology in your revision planner you must complete the tasks in this booklet
- Each task is numbered e.g. session 1 you will complete task 1
- Exam questions must be self-assessed using the mark schemes in a different colour pen!
- Do not leave any gaps – use your revision guide or see your teacher for help!
- These booklets have been designed to best prepare you for your February prelim examinations so try your best!

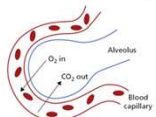
- Bespoke tasks
- Opportunities to reflect on answers
- Specific to tiers

Task 6 - Transport

Define the term diffusion

Which is the correct description of the movement of a substance by active transport?

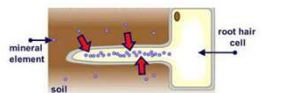
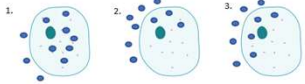
- A against a concentration gradient using energy
- B down a concentration gradient using energy
- C against a concentration gradient without using energy
- D down a concentration gradient without using energy



Look at the diagram. Oxygen is in a higher concentration in the alveolus than in the blood. Explain how oxygen will be transported into the blood capillary (2)

Define the term active transport

Look at the cells below. Draw arrows on them to show which direction glucose will diffuse into them
● = glucose

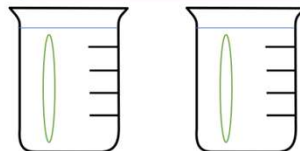


Look at the diagram above. Explain why the mineral ions will move into the root hair cell by active transport (1)

Watch this video about osmosis

<https://www.youtube.com/watch?v=4Eq8rO3fABM>

Define the term osmosis



Outside solution – distilled water
Inside solution – 10% sucrose

What will happen to the chip and why?

Outside solution – 35% sucrose
Inside solution – 65% sucrose

What will happen to the chip and why?

Task 6 - Transport

Mark Scheme

Q1.

Question number	Answer	Mark
	B	(1)

Q2.

Question number	Answer	Additional guidance	Mark
(i)	<ul style="list-style-type: none"> Used as a control / to compare with the results of the other tubes 		(1) AO1.2

Question number	Answer	Mark
(ii)	<p>Any two variables from:</p> <ul style="list-style-type: none"> temperature (1) age / variety of potato (1) {size / volume / length / width / shape / mass / surface area} of chip (before investigation) (1) volume of solution (1) time left in solutions (1) 	(2) AO1.2

Q1.

Osmosis is one method that single-celled organisms, such as bacteria, use to obtain molecules from their environment.

Which of the following is a correct description of a process involving the transport of molecules? (1)

- A Diffusion is used to transport molecules against the concentration gradient
- B Active transport is used to obtain molecules in a low concentration environment
- C Active transport moves substances along the concentration gradient
- D Diffusion uses energy to transport molecules into cells

Q2.

A student wanted to investigate the movement of water into and out of cells in potatoes.

The student had the equipment shown in Figure 8.



Figure 8

The test tubes in the rack contain different concentrations of sodium chloride solution.

The solutions were 0.1 M, 0.2 M, 0.3 M, 0.4 M and 0.5 M sodium chloride solution.

The test tube in the beaker contains distilled water.

There are three potato chips in each of the six test tubes.

(i) State why the test tube in the beaker only contains distilled water and three potato chips.

(ii) State two variables that need to be controlled in this investigation.

1

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(iii) Explain why the chips in the 0.5 M sodium chloride solution lost mass.

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Question number	Answer	Mark
(iii)	<p>An explanation including:</p> <ul style="list-style-type: none"> There is a higher concentration of sodium chloride outside (the cell) than inside / higher concentration of water molecules inside (the cell) than outside (1) water moves out of (cells / chips) / into (sodium chloride) solution (1) by osmosis (1) 	(3) AO1.2

Question Number	Answer	Additional guidance	Mark
(i)	$(2 \times 5.0 \times 2.0) + (2 \times 5.0 \times 2.0) + (2 \times 2.0 \times 2.0)$ 8 (1) 48.0	allow full marks for correct final answer	(2) AO 1.1

Question Number	Answer	Additional guidance	Mark
(ii)	<ul style="list-style-type: none"> chip B has greater surface area (1) therefore more water (absorbed / moved into the potato chip) (1) 	accept chip B is bigger / has more cells	(2) AO 3.2a AO 3.2b

Question Number	Answer	Additional guidance	Mark
(iii)	<p>An explanation that links the following:</p> <ul style="list-style-type: none"> {cells} lose water / become plasmolysed (1) {water moves out} by osmosis (1) from a high concentration of water molecules (in the potato) to a low concentration of water molecules (in the solution) / through the partially permeable membrane (to the salt solution) (1) 	accept get smaller/shrink/lose mass accept from low solute concentration to a high solute concentration accept from high to low water potential	(3) AO 1.1

