

# How to Pass Science

Biology, Chemistry, Electronics & Physics

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# Assessment format

- N5 Electronics only – 70% project (ongoing throughout year), 30% exam
- N5 Bio/Chem/Phys – 20% assignment (in class research then 1.5 hour write up) 80% exam (2.5 hours)
- Higher Bio/HumBio/Chem/Phys – 20% assignment (in class research then 2 hour write up) 80 % exam (3 hours total)
- Advanced Higher Bio/Chem/Phys – 25% project (written up over period of time) 75% exam (3 hours)

# Resources available:

Teams

OneNote

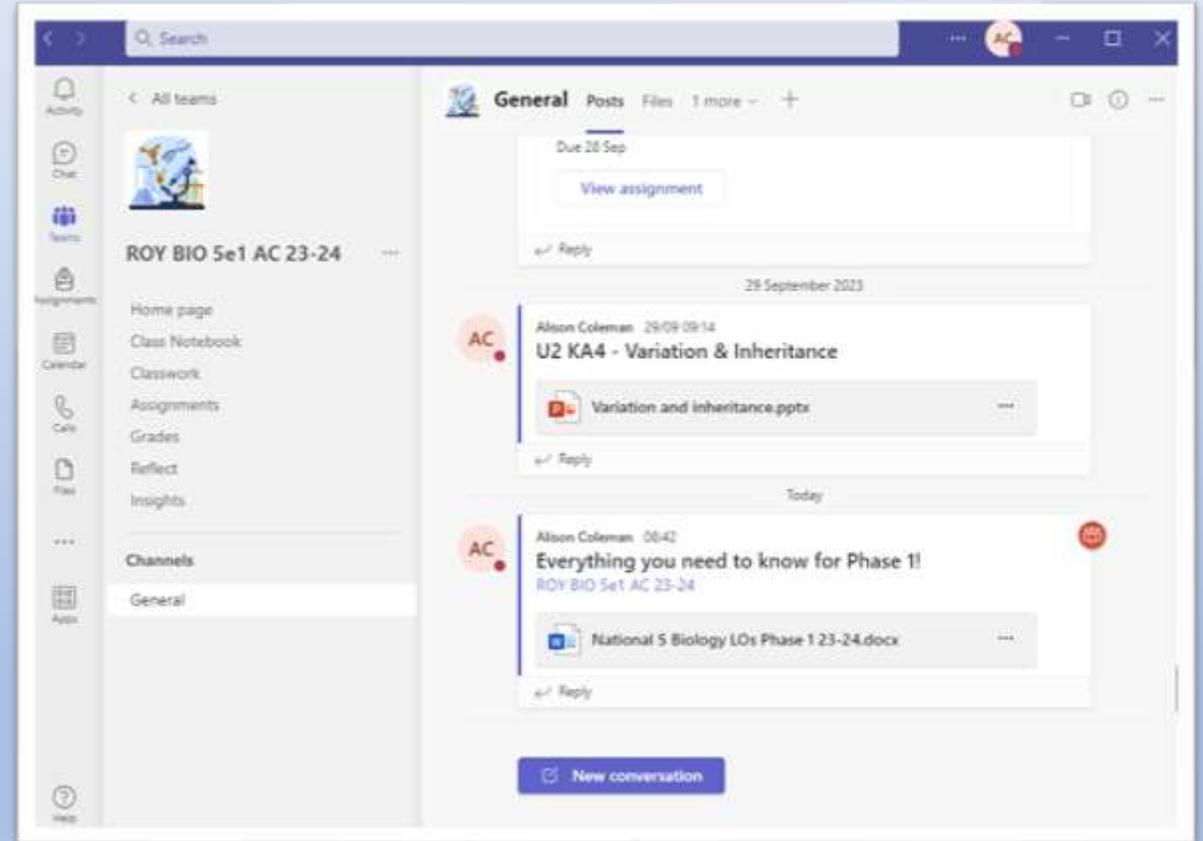
Scholar

BBC Bitesize

Command Words

Achieve from Hashtag Learning

SQA Understanding Standards



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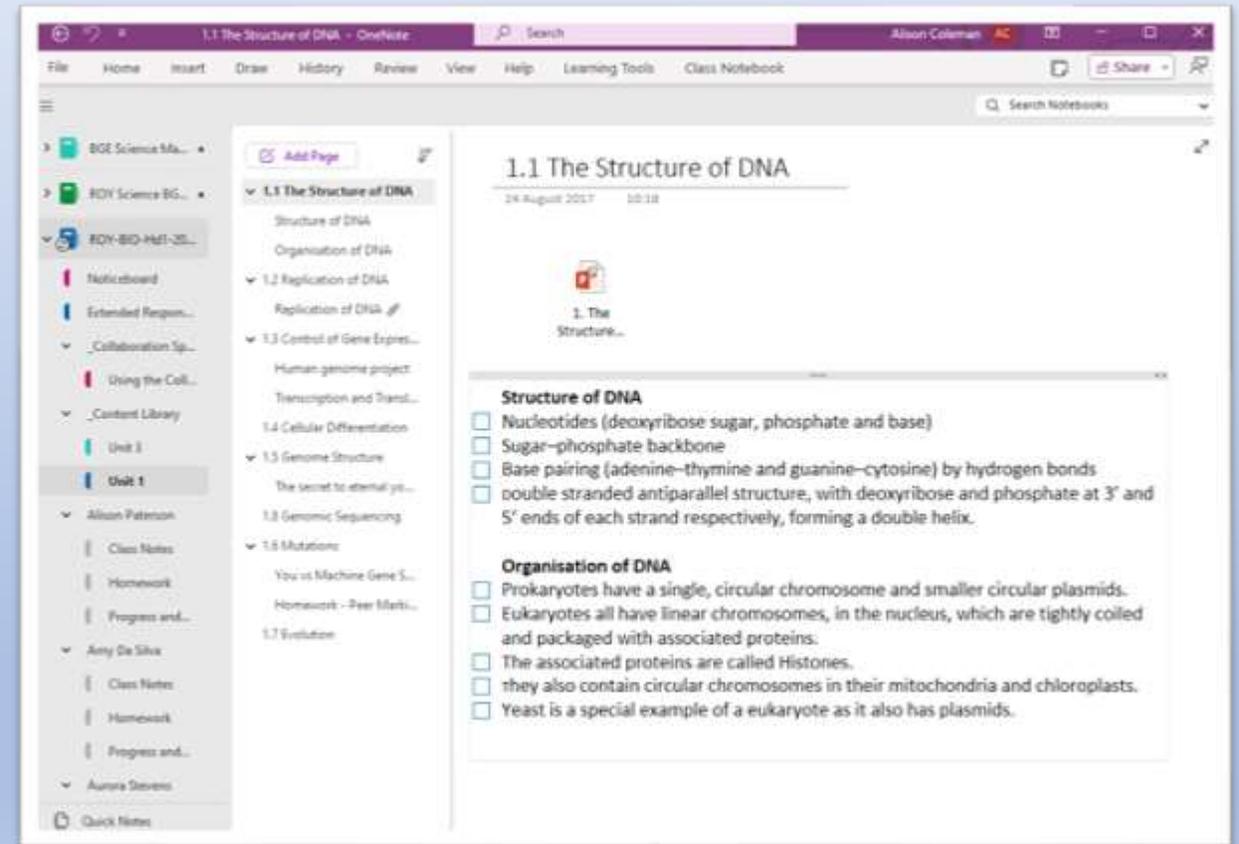
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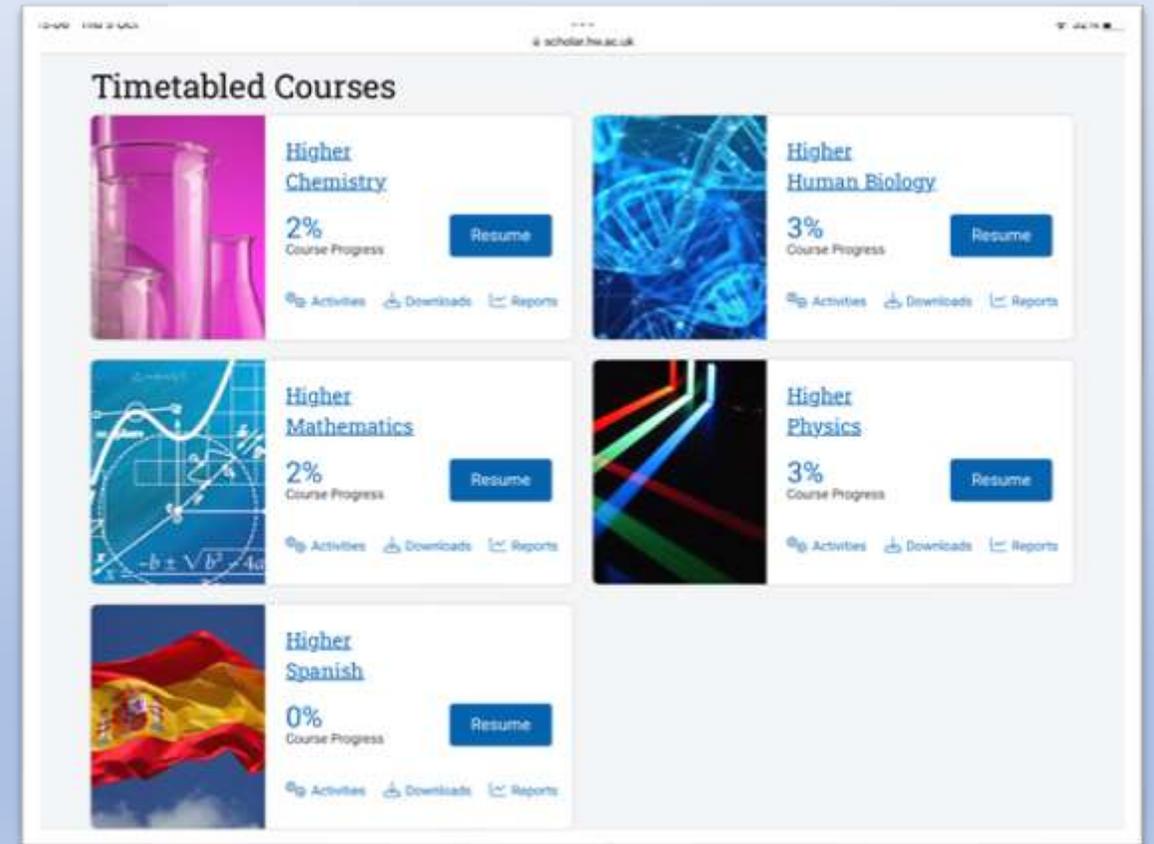
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The screenshot displays the 'Timetabled Courses' section of the Scholar platform. It features a grid of course cards for Higher Chemistry, Higher Human Biology, Higher Mathematics, Higher Physics, and Higher Spanish. Each card includes a representative image, the course title, the current course progress percentage, and a 'Resume' button. Below the progress indicator, there are icons for 'Activities', 'Downloads', and 'Reports'.

Course Title	Course Progress	Resume Button
Higher Chemistry	2%	Resume
Higher Human Biology	3%	Resume
Higher Mathematics	2%	Resume
Higher Physics	3%	Resume
Higher Spanish	0%	Resume

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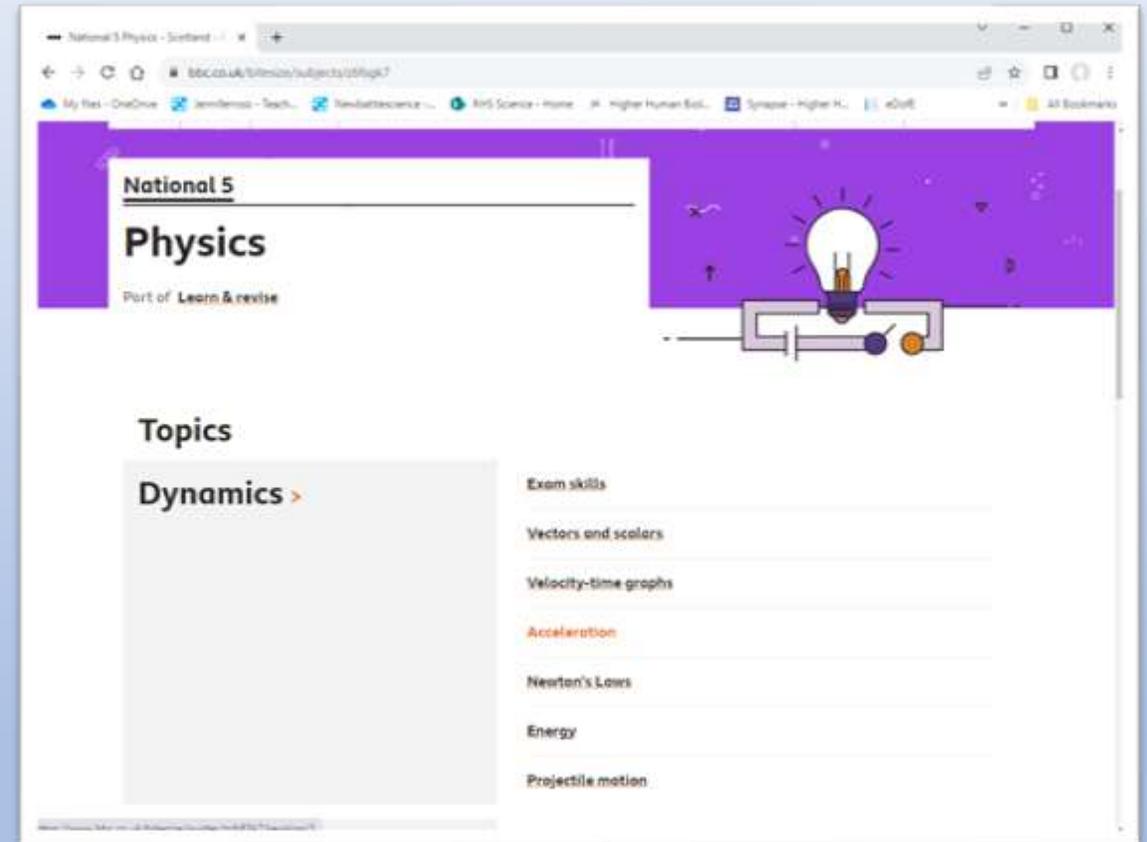
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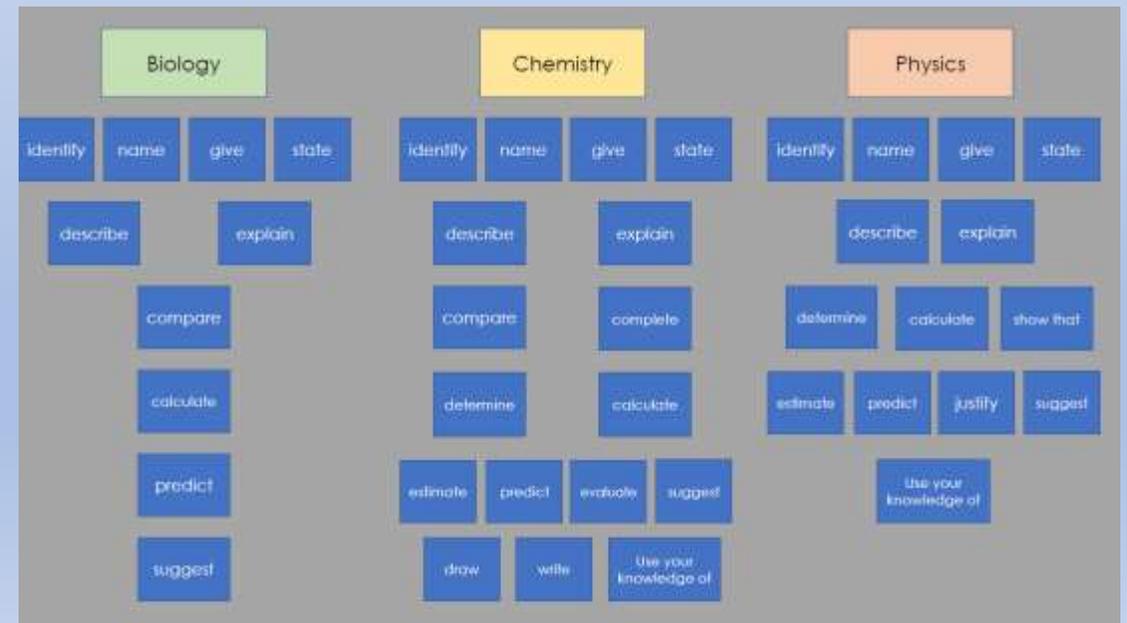
BBC Bitesize

## Command Words

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Command words in Physics	
<b>Use your knowledge of Physics</b> Pull together different areas of Physics to answer an open-ended question	<b>Justify</b> Support your statement by referring to physics principles
<b>Estimate/predict</b> Give a sensible value by following the trend	<b>Suggest</b> Give a short explanation for why something may have happened or an improvement to an experiment
<b>Describe</b> Give the key features or characteristics of a physics concept/application - <b>What</b> is it/ <b>what</b> happens/ <b>how</b> does it do that?	<b>Explain</b> Make the relationship between two things clear - relate cause and effect - <b>Why</b> does that happen?
<b>Show that</b> Give all the steps of a calculation starting with the correct equation and ending with the value and unit given in the question	
<b>Determine</b> Carry out a calculation given some data	<b>Calculate</b> Carry out a calculation using an equation from the Relationship Sheet
<b>Identify, give name, state</b> Answer with a brief statement, either a simple explanation or a definition.	



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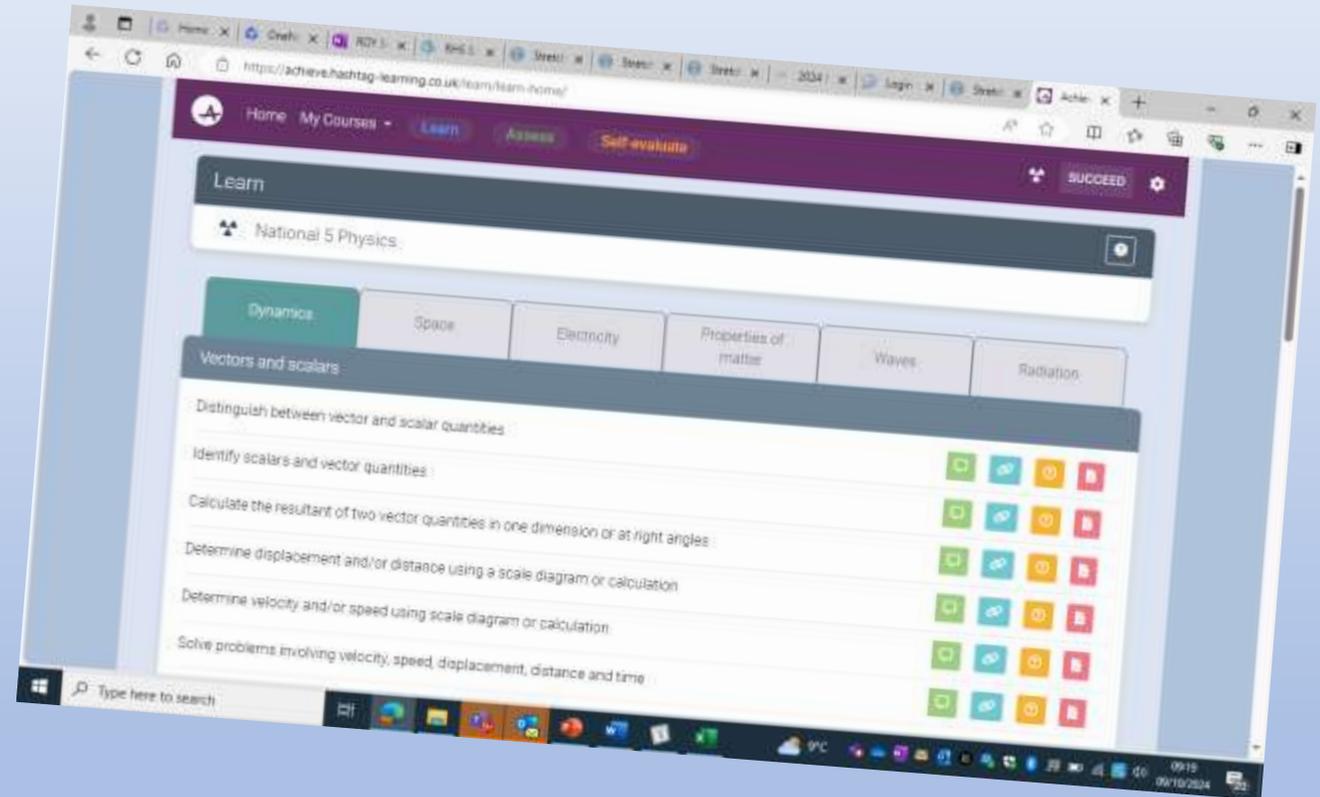
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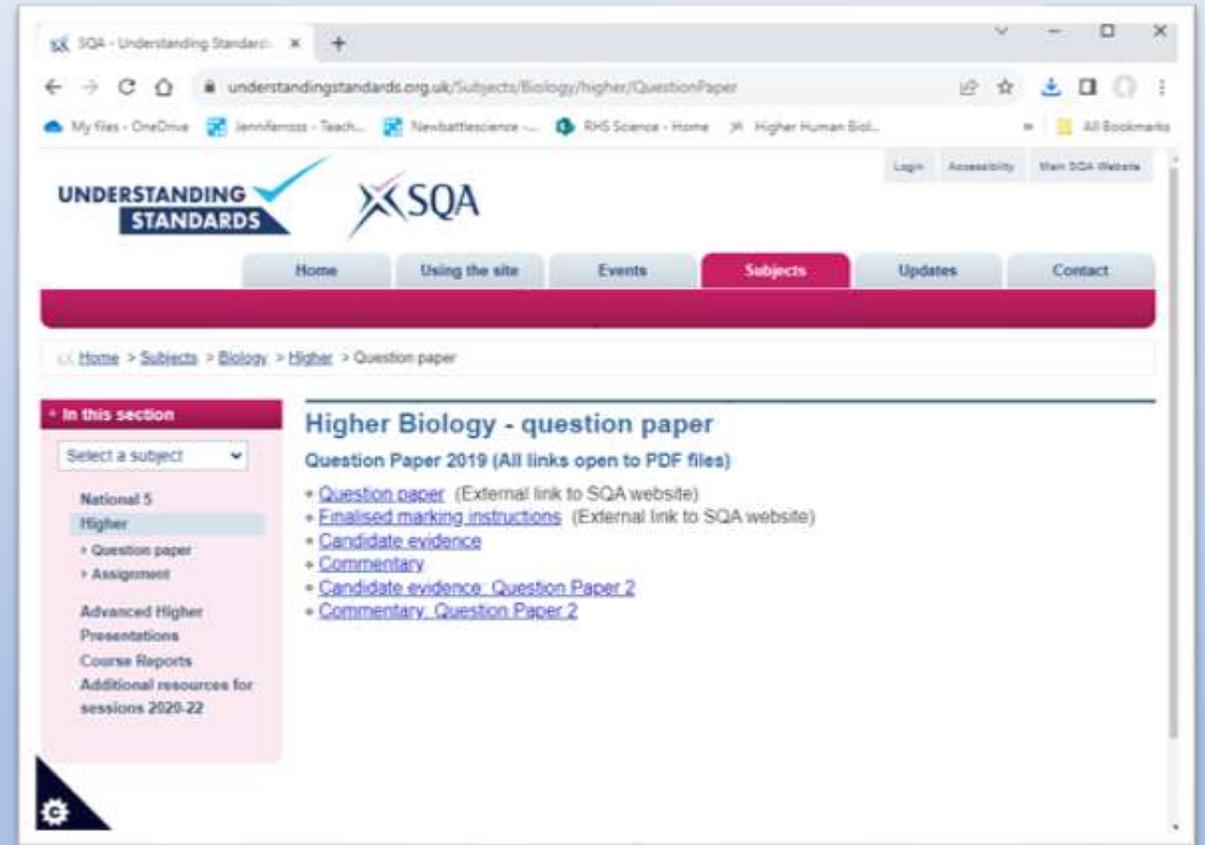
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SQA Understanding Standards



The screenshot shows a web browser window displaying the SQA Understanding Standards website. The URL is [understandingstandards.org.uk/Subjects/Biology/higher/QuestionPaper](https://understandingstandards.org.uk/Subjects/Biology/higher/QuestionPaper). The page features the SQA logo and a navigation menu with options: Home, Using the site, Events, Subjects (highlighted), Updates, and Contact. A breadcrumb trail reads: Home > Subjects > Biology > Higher > Question paper. On the left, a sidebar titled "In this section" includes a "Select a subject" dropdown menu and a list of subjects: National 5, Higher (selected), and Advanced Higher. Under "Higher", there are links for "Question paper" and "Assignment". Under "Advanced Higher", there are links for "Presentations", "Course Reports", and "Additional resources for sessions 2020-22". The main content area is titled "Higher Biology - question paper" and includes the text "Question Paper 2019 (All links open to PDF files)". Below this, there are several links: "Question paper" (External link to SQA website), "Finalised marking instructions" (External link to SQA website), "Candidate evidence", "Commentary", "Candidate evidence - Question Paper 2", and "Commentary - Question Paper 2". A gear icon is visible in the bottom-left corner of the page.

# Organisation is key...

Hyperlinked\_N5\_Biology\_PPQs (1) (1).pdf

National 5 Past Papers - Section 2 Qs					
Unit	Topic	2016	2017	2018	2019
Unit 1 Cell Biology	Cell Structure		1ai	1	1a
	Membrane transport	1	1aii 1b	2	2
	DNA		3	3	
	Proteins	2	4	4 6	3
	Genetic engineering	3a			15
	Respiration	4	5	5	1b(ii) 4a
2 Multicellular	Producing cells		2	7	5(a-c)
	Control and comm.	9	9 10		6
	Reproduction		6b	8	
	Variation & Inheritance	6	6	11	7
	Treatment plants			12	

# Assignments to keep up to date:

The screenshot shows the Microsoft Teams interface for a team named "ROY BIO 5e1 AC 23-24". The "Assignments" tab is active, displaying a list of assignments categorized by date. The interface includes a search bar at the top, a navigation pane on the left, and a main content area with assignment cards. Each card shows the assignment title, due date, and a "Ready to grade" button with a count of items.

Date	Assignment Title	Due Date	Ready to grade
21 Sept Thursday	Nat 5 Biology Unit 2 - KA 2 (Control and Communication) (Copy)	Due at 23:59	2
17 Aug Thursday	N5 Unit 1 - Cell Structures	Due at 23:59	2
17 Aug Thursday	Nat 5 Biology Unit 1 - KA 5 (Genetic Engineering) (Copy)	Due at 23:59	2
17 Aug Thursday	Nat 5 Biology Unit 1 - KA 6 (Respiration) (Copy)	Due at 23:59	1
17 Aug Thursday	Nat 5 Biology Unit 1 - KA2 (Transport Across Cell Membranes) (Copy)	Due at 23:59	1

# Feedback

## Physics Assessment Wrapper

Name		Score	
Assessment			

## Revision time investment

How much time did you spend revising for this assessment?	
When did you start revising for this assessment?	
Was this enough time?	

## Revision activities

Revision technique	Used	% of revision time	Revision environment	Used
Past paper questions			Created a revision timetable and stuck to it	
Mind-map creation and use			Created a distraction-free environment	
Flashcard creation and use			Attended supported study	
Rereading notes			Asked questions in private channel	
Reading Achieve/Scholar			Studied with a friend/group of friends	
Answering questions on Achieve/Scholar			Other;	
Other;				

## Where were marks lost and why?

Reason	Question(s)	Number of marks
Rounding/wrong unit/significant figures/prefix error		
Didn't read the question properly		
Used wrong physics in my answer		
Didn't know how to do this question		
Didn't include enough detail		
Ran out of time		

Which question(s) did I find most challenging?

Why did I find this/these most challenging?

Three things I will do differently next time are:

# Active Revision



Memorizing content before starting past paper questions



Start with a blank page and use retrieval practice to help you memorise processes



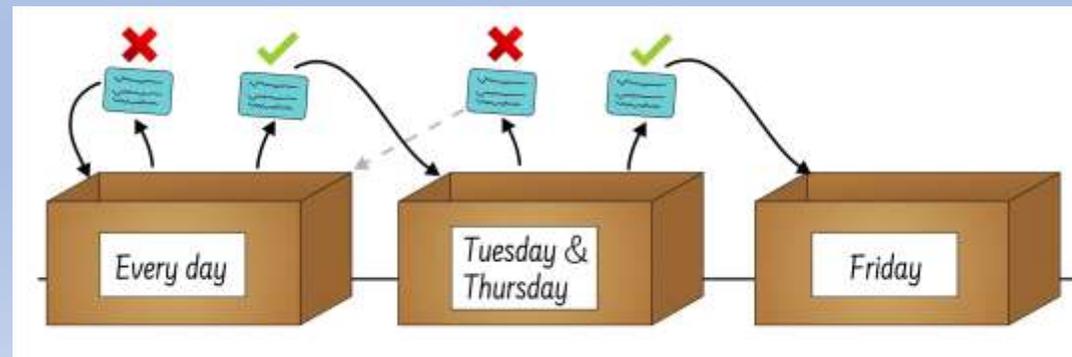
Use diagrams and doodles (dual coding)



Flash cards are great for learning specific wording – try Leitner method

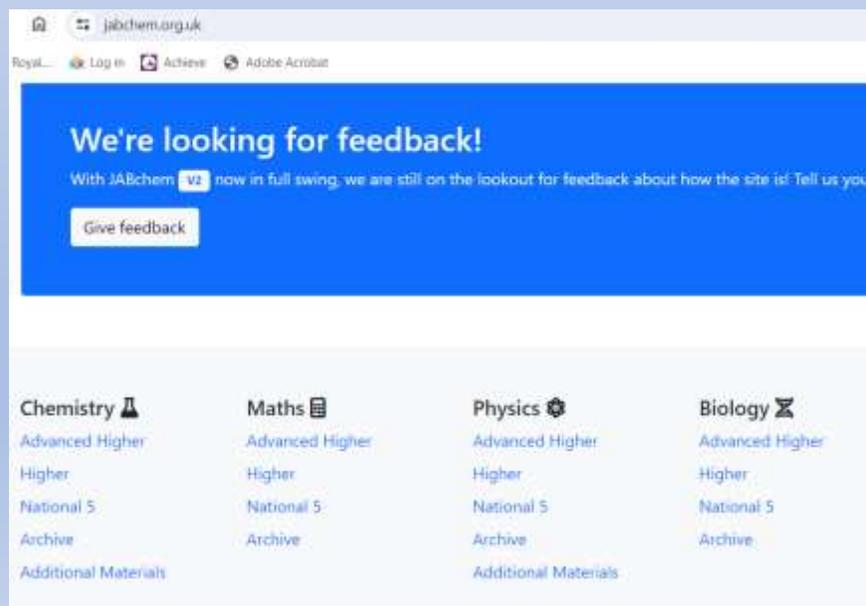


Little and often is best – don't cram!



# Where to find past papers

- Recent years – SQA subject page
- Additional – jabchem.org.uk
- Recommend tackling each question then rigorously comparing to marking instructions – especially additional guidance column



Question	Expected response	Max mark	Additional guidance
4. (a)	$W = mg$ $W = 67 \times 1.4$ $W = 94 \text{ N}$	(1) (1) (1)	3 Accept: 90 93.8 93.80
(b)	exposure to radiation OR pressure differential OR lower gravitational field strength OR extreme temperatures	1	Accept any other physics-related challenge.  Ignore non-physics-related challenges, eg 'lack of air/oxygen', 'lack of food/water',  Apply +/- rule for surplus answers.  Accept: Different gravitational field strength 'g' for 'gravitational field strength'  Do not accept: 'gravity' in place of 'gravitational field strength'.

# Help is available:

- Support sessions – too many to list – please ask your child to check with their teacher about session for their subject/level
- Private channels on Teams – excellent for when pupils have questions during their own revision at home, can screenshot past paper question for instance then have record of the answer to look back on