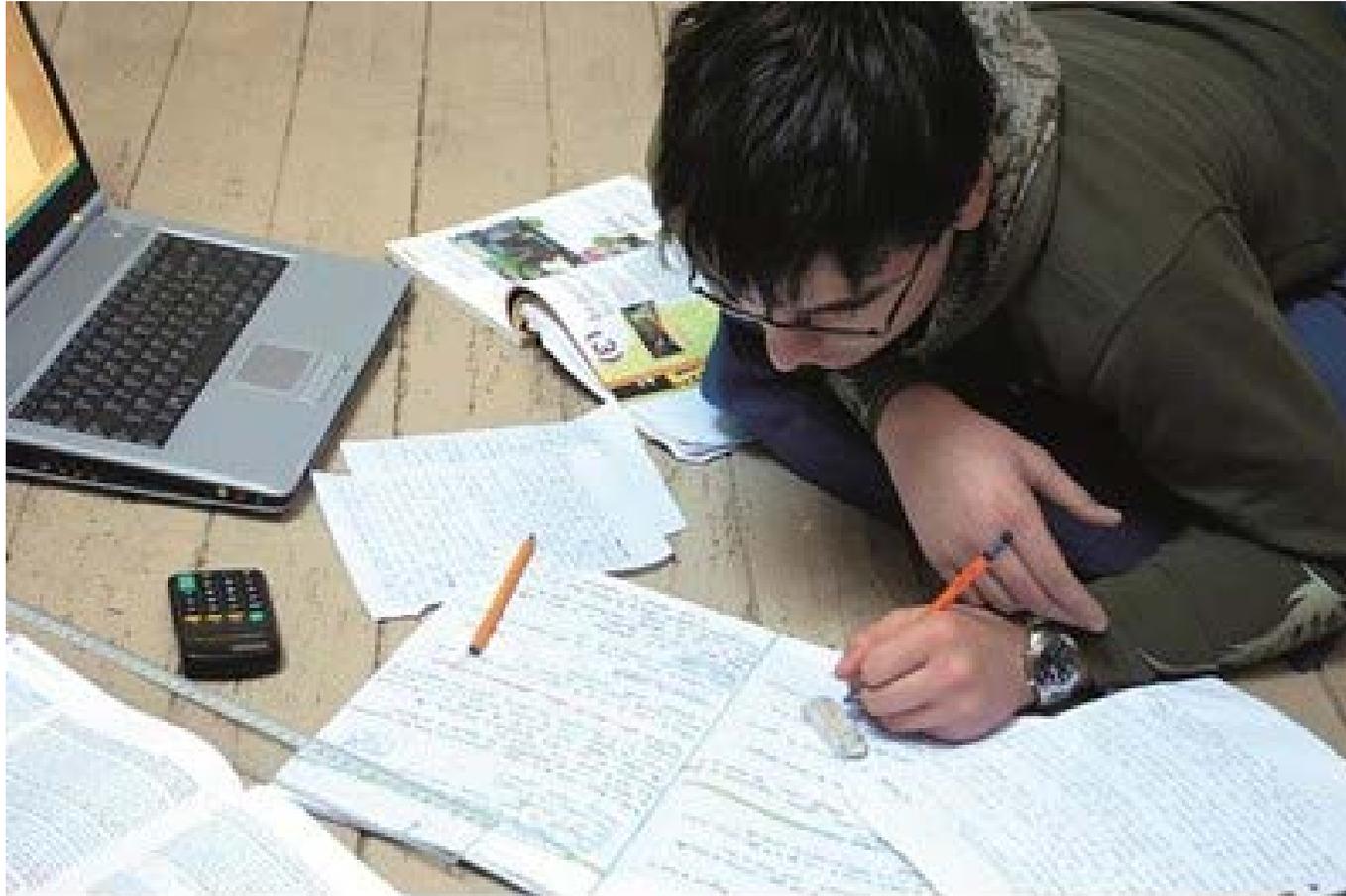


Drop Everything and Revise



Today we will:



RESULTS DAY
Friday 15th Dec

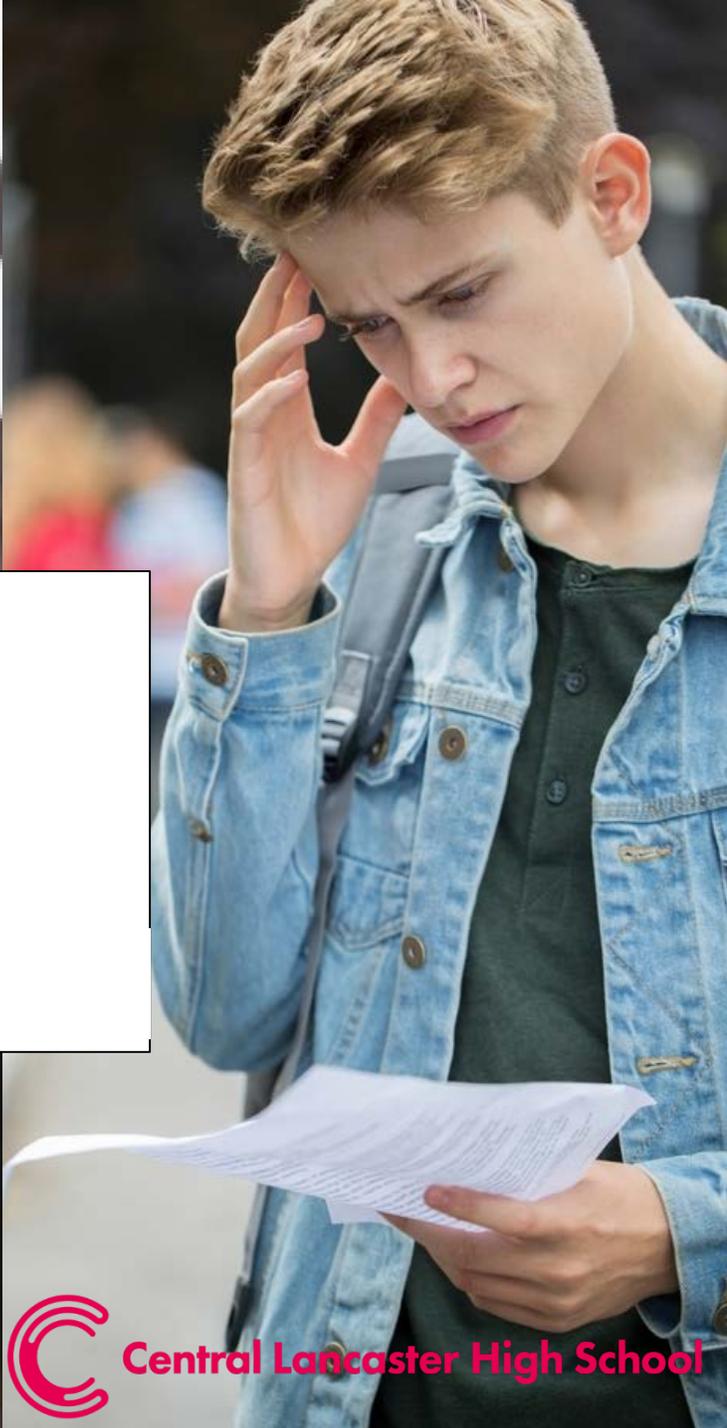


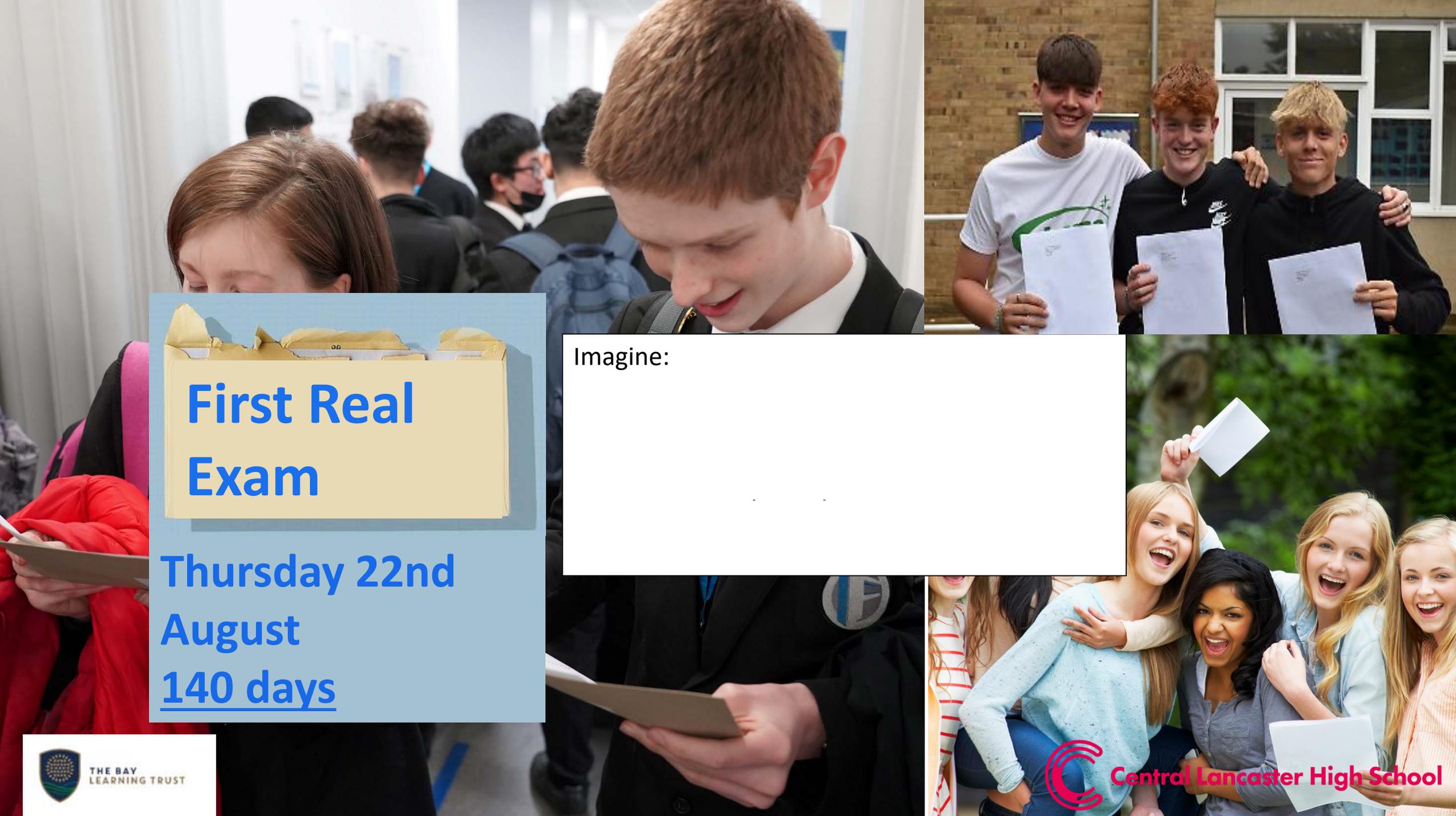
60 school days





Imagine:





First Real Exam

Thursday 22nd
August
140 days

Imagine:

Where do you go mentally when things are hard?

**PAIN
FROM
LOSS**

**PLEASURE
FROM
GAIN**

British Cycling

1 x Olympic medal since 1903

Zero Tour De France wins in 110 years

Bike manufacturers wouldn't sell their bikes to the British team as they thought it would harm sales



Sir Dave Brailsford was hired as head coach to improve British Cycling in 2003

2004 Olympics – 2 x Gold

2008 Olympics – 8 x Gold

2012 Olympics – 8 x Gold

Tour De France, 5 wins in 6 years

Dominated Tour De France for a decade





The whole principle came from the idea that if you broke down everything you could think of that goes into riding a bike, and then improved it by 1%, you will get a significant increase when you put them all together.

Slightly more comfortable seat

Heated shorts to maintain muscle warmth

Slightly lighter and more aerodynamic helmet

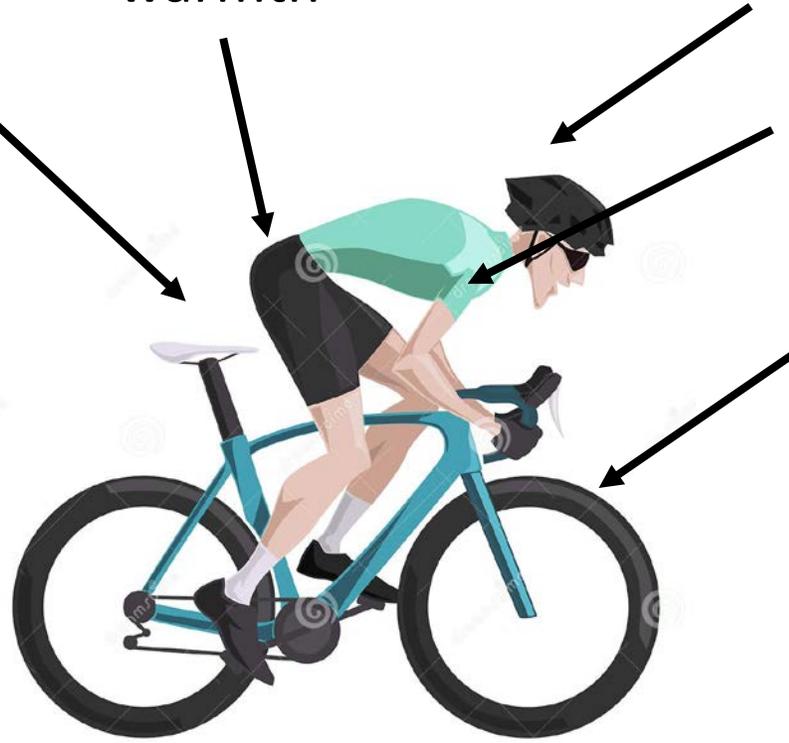
Lighter racing suit

Rubbed alcohol on tyres to make it grippier

Took the same pillows, duvets and mattresses to races.

Painted the insides of their trucks white so they could see any dust

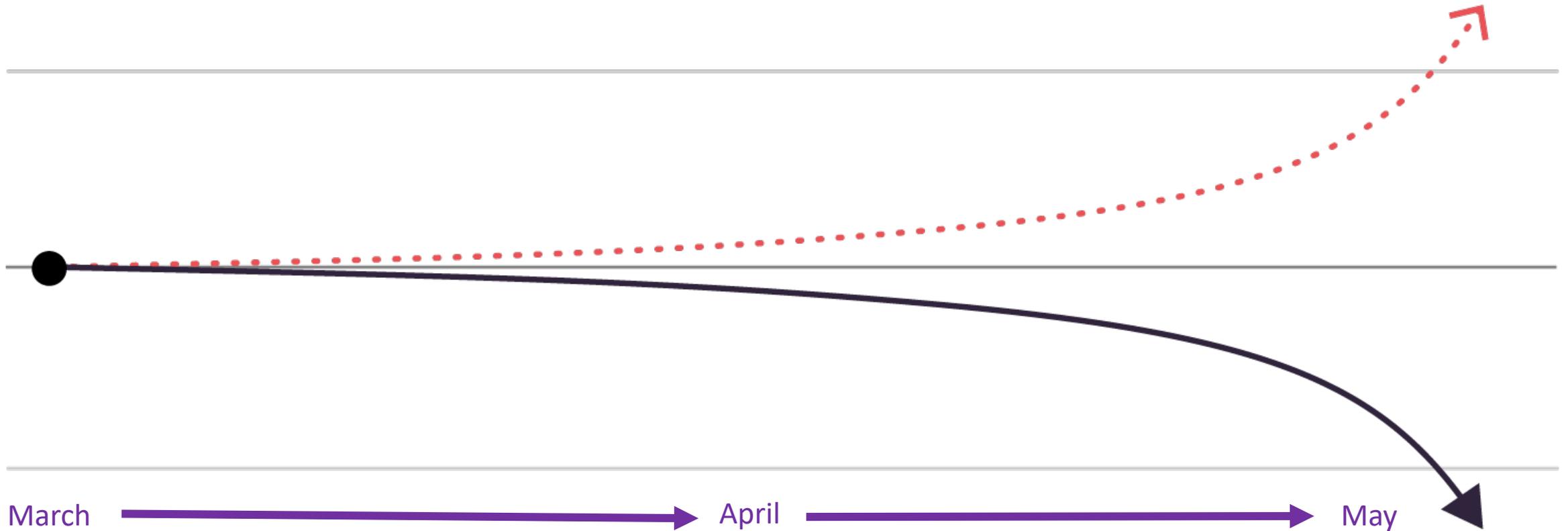
Learned how to wash hands correctly, to prevent the chances of getting colds



How Marginal Gains Can Add Up Over Time

1% Improvement 

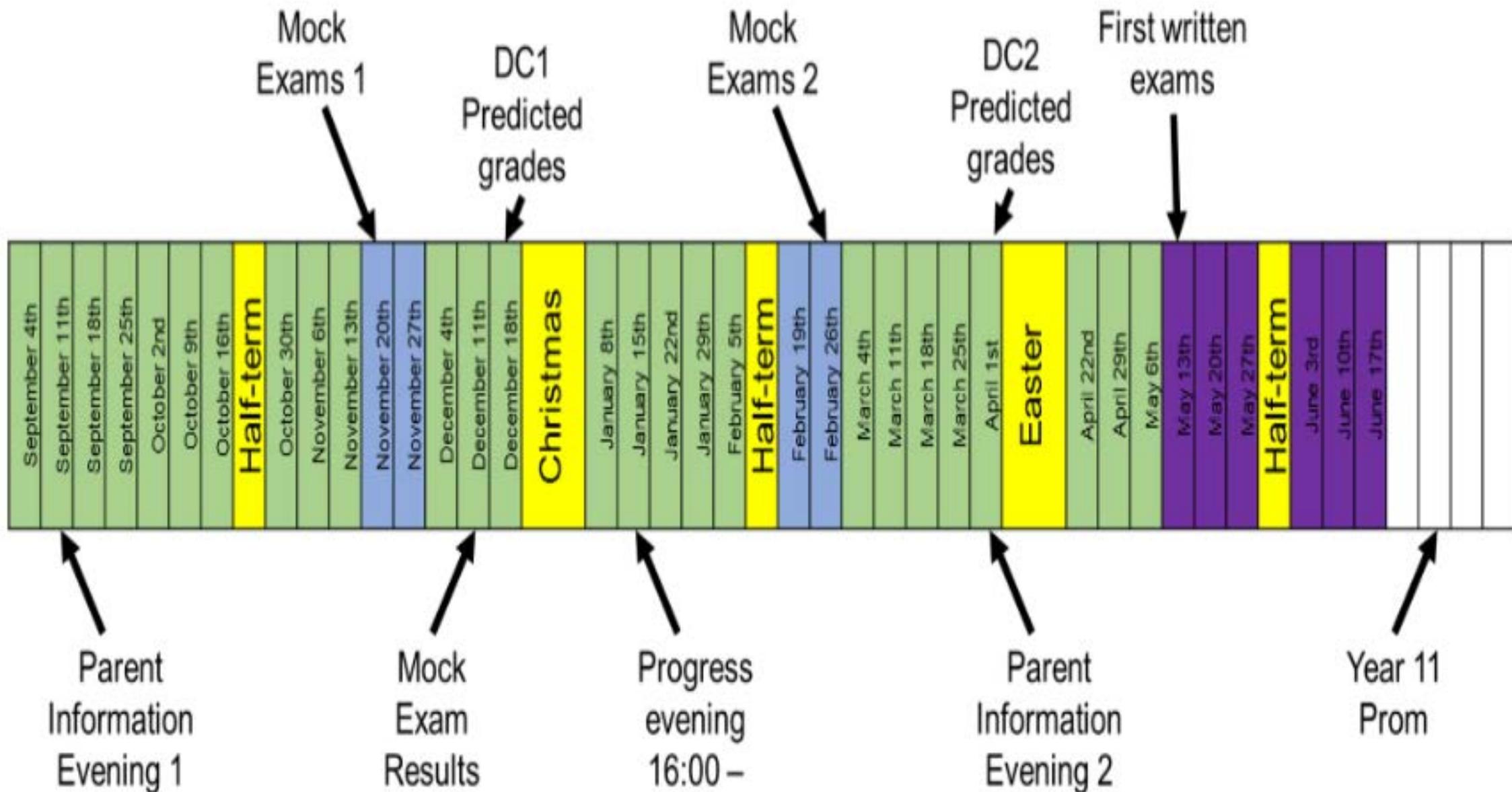
1% Decline 



How could you make small gains over the next two months?

1. Have a long term overview of when your exams are
2. Know exactly what to study for each subject
3. Create a detailed revision plan, reviewed each week
4. Understand and use scientifically proven revision strategies
5. Nutrition
6. Sleep
7. Exercise
8. Stress

Key Dates for Year 11



Exam Timetable 2023 – Y11 Nov PPE

Sept				Oct				Nov				
4 Mon A	11 Mon B	18 Mon A	25 Mon B	2 Mon A	9 Mon B	16 Mon A	23 Mon	30 Mon B	6 Mon A	13 Mon B	20 Mon A Science Biology 1 (AM)	27 Mon B Maths 2 (Calc) AM
5 Tue	12 Tue	19 Tue	26 Tue	3 Tue	10 Tue	17 Tue	24 Tue	31 Tue	7 Tue	14 Tue	21 Tue Maths 1 (non-calc) AM	28 Tues Science Physics (AM)
6 Wed	13 Wed	20 Wed	27 Wed	4 Wed	11 Wed	18 Wed	25 Wed	1 Wed	8 Wed	15 Wed	22 Wed English Lit (AM) A Christmas Carol An Inspector Calls Unseen Poetry	29 Wed English Lang(AM) Fiction reading & Prose writing
7 Thu	14 Thu	21 Thu	28 Thu	5 Thu	12 Thu	19 Thu	26 Thu	2 Thu	9 Thu	16 Thu	23 Thu	30 Thu
8 Fri	15 Fri	22 Fri	29 Fri	6 Fri	13 Fri	20 Fri	27 Fri	3 Fri	10 Fri	17 Fri	24 Fri Science Chemistry (AM)	1 Fri (Dec) Maths 3 (Calc) AM
9 Sat	16 Sat	23 Sat	30 Sat	7 Sat	14 Sat	21 Sat	28 Sat	4 Sat	11 Sat	18 Sat	25 Sat	
120Sun	17 Sun	24 Sun	1 Sun (Oct)	8 Sun	15 Sun	22 Sun	29 Sun	5 Sun	12 Sun	19 Sun	26 Sun	

HALF TERM – EASTER BREAK

Date Week A	Morning - 9.00am	Afternoon - 1.05pm
Monday 20th November	Biology 1 Hour 15 Minutes / 1 Hour 45 Minutes	
Tuesday 21st November	Maths: Paper 1 (Non-calculator) 1 Hour 30 Minutes	French: Listening Exam sat during French lesson - P4
Wednesday 22nd November	English Literature: An Inspector Calls, A Christmas Carol and Unseen Poetry 2 Hours 30 Minutes	
Thursday 23rd November	History: Civil Rights and Vietnam 1 Hour 20 Minutes	French: Writing (H/F) 1 Hour 15 Minutes / 1 Hour 30 Minutes
Friday 24th November	Chemistry 1 Hour 15 Minutes / 1 Hour 45 Minutes	

Date Week B	Morning - 9.00am	Afternoon - 1.05pm
Monday 27th November	Maths: Paper 2 (Calculator) 1 Hour 30 Minutes	
Tuesday 28th November	Physics 1 Hour 15 Minutes / 1 Hour 45 Minutes	
Wednesday 29th November	English Language: Fiction Reading and Prose Writing 1 Hour 45 Minutes	
Thursday 30th November	Geography: River Landscapes, Tectonic Hazards, Hot Deserts & Tropical Rainforests 1 Hour	French: Reading (H/F) 1 Hour / 1 Hour 15 Minutes
Friday 1st December	Maths: Paper 3 (Calculator) 1 Hour 30 Minutes	

French Speaking exams will take place after the two week mock examination period. Students will be allocated a 25 minute timeslot via their French teacher.

TASK:

1. Tick off all of your Core Subjects:

- **English** (language & literature)
- **Maths** (calculator & non-calculator)
- **Science** (Biology, Chemistry, Physics)

2. You are left with your other options subjects.

Add these to your A3 “**Exam Timetable 2023**”.

Date Week A	Morning - 9.00am	Afternoon - 1.05pm
Monday 20th November	 Biology 1 Hour 15 Minutes / 1 Hour 45 Minutes	
Tuesday 21st November	 Maths: Paper 1 (Non-calculator) 1 Hour 30 Minutes	French: Listening Exam sat during French lesson - P4
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Date Week B	Morning - 9.00am	Afternoon - 1.05pm
Monday 27th November	 Maths: Paper 2 (Calculator) 1 Hour 30 Minutes	
Tuesday 28th November	 Physics 1 Hour 15 Minutes / 1 Hour 45 Minutes	
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Friday 1st December	 Maths: Paper 3 (Calculator) 1 Hour 30 Minutes	

Science: Biology (Paper 1)

Topic T4.1 Cell biology

Topic T4.2 Organisation

Topic T4.3 Infection and response

Topic T4.4 Bioenergetics

4.1.1/Cell structure



4.1/Cell biology
Biology 1 Titles - 4 Pods

4.1.1/Cell structure - 4 Pods

- Bacterial Growth**
00:00 / 04:28
- Cell Differentiation**
00:00 / 03:07
- Unspecialised Plant Cells**
00:00 / 03:09
- Cell Structures and Microscopes**
00:00 / 04:56



AQA TRILOGY Biology (8464) from 2016 Topic T4.1 Cell biology		BEFORE		
Topic	Student Checklist	R	A	G
4.1.1 Cell structure	Use the terms 'eukaryotic' and 'prokaryotic' to describe types of cells			
	Describe the features of bacterial (prokaryotic) cells			
	Demonstrate an understanding of the scale and size of cells and be able to make order of magnitude calculations, inc standard form			
	Recall the structures found in animal and plant (eukaryotic) cells inc algal cells			
	Use estimations and explain when they should be used to judge the relative size or area of sub-cellular structures			
	<i>Required practical 1: use a light microscope to observe, draw and label a selection of plant and animal cells</i>			
	Describe the functions of the structures in animal and plant (eukaryotic) cells			
	Describe what a specialised cell is, including examples for plants and animals			
	Describe what differentiation is, including differences between animals and plants			
	Define the terms magnification and resolution			
	Compare electron and light microscopes in terms of their magnification and resolution			
	Carry out calculations involving magnification using the formula: magnification = size of image/ size of real object -inc standard form			
	<i>Required practical 2: investigate the effect of antiseptics or antibiotics on bacterial growth using agar plates and measuring zones of inhibition</i>			
4.1.2 Cell Division	Describe how genetic information is stored in the nucleus of a cell (inc genes & chromosomes)			
	Describe the processes that happen during the cell cycle, including mitosis (inc recognise and describe where mitosis occurs)			
	Describe stem cells, including sources of stem cells in plants and animals and their roles			
	Describe the use of stem cells in the production of plant clones and therapeutic cloning			
	Discuss the potential risks, benefits and issues with using stem cells in medical research/treatments (inc diabetes and paralysis)			
4.1.3 Transport in cells	Describe the process of diffusion, including examples			
	Explain how diffusion is affected by different factors			
	Define and explain "surface area to volume ratio", and how this relates to single-celled and multicellular organisms (inc calculations)			
	Explain how the effectiveness of an exchange surface can be increased, inc examples of adaptations for small intestines, lungs, gills roots & leaves			
	Describe the process of osmosis (inc calculation of water uptake & percentage gain and loss of mass of plant tissue)			
	<i>Required practical 3: investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue</i>			
4.1.3 Transport in cells	Describe the process of active transport, including examples - gut and roots			
	Explain the differences between diffusion, osmosis and active transport			

REVISION PLANNER

Week Commencing

Mon 13th March

Key Events
(school & persona)

- PPE2 results - Fri 17th March
- Friends birthday Thurs
- Art exam preparation

Focus Areas for the Week

English Literature		English Language	
Macbeth characters learn		20 th C fiction reading	
Maths			
Algebra			
Physics	Chemistry	Biology	
Energy	Atomic structure & periodic table	4.1 Cell Biology	
Geography		History	
River Landscapes – Long profile & upper middle lower		Norman Conquest Part 1	

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Before School	GCSEpod x 1 Cell biology			Remember birthday card	PPE results today	AM 20 C fiction REVISIT Football	AM
1							
2							
3							
4							
5							
After School	4.1.1 Cell Structure 20 mins Macbeth characters 20 mins	4.1.1 Cell Structure REVISIT 4.1.2 Cell Division 20 mins	20 th C fiction reading 20 mins Algebra REVISIT	4.1.2 Cell Division REVISIT 4.1.3 Transport In Cells 20 mins	4.1.1 4.1.2 4.1.3 REVISIT ALL & PRACTICE EXAM Q's	PM	PM Choice of topic I had most difficulty with GCSEPODS
Evening	Algebra 20 mins	Macbeth characters REVISIT	River Landscapes 20 mins	Norman Conquest 20 mins	River Landscapes REVISIT Norman Conquest REVISIT		

Key Revision Strategies

Remember revision is often getting information 'out' from memory, not always putting more information 'in'.



Practice questions/answers



Flash cards



Practice timed exam questions

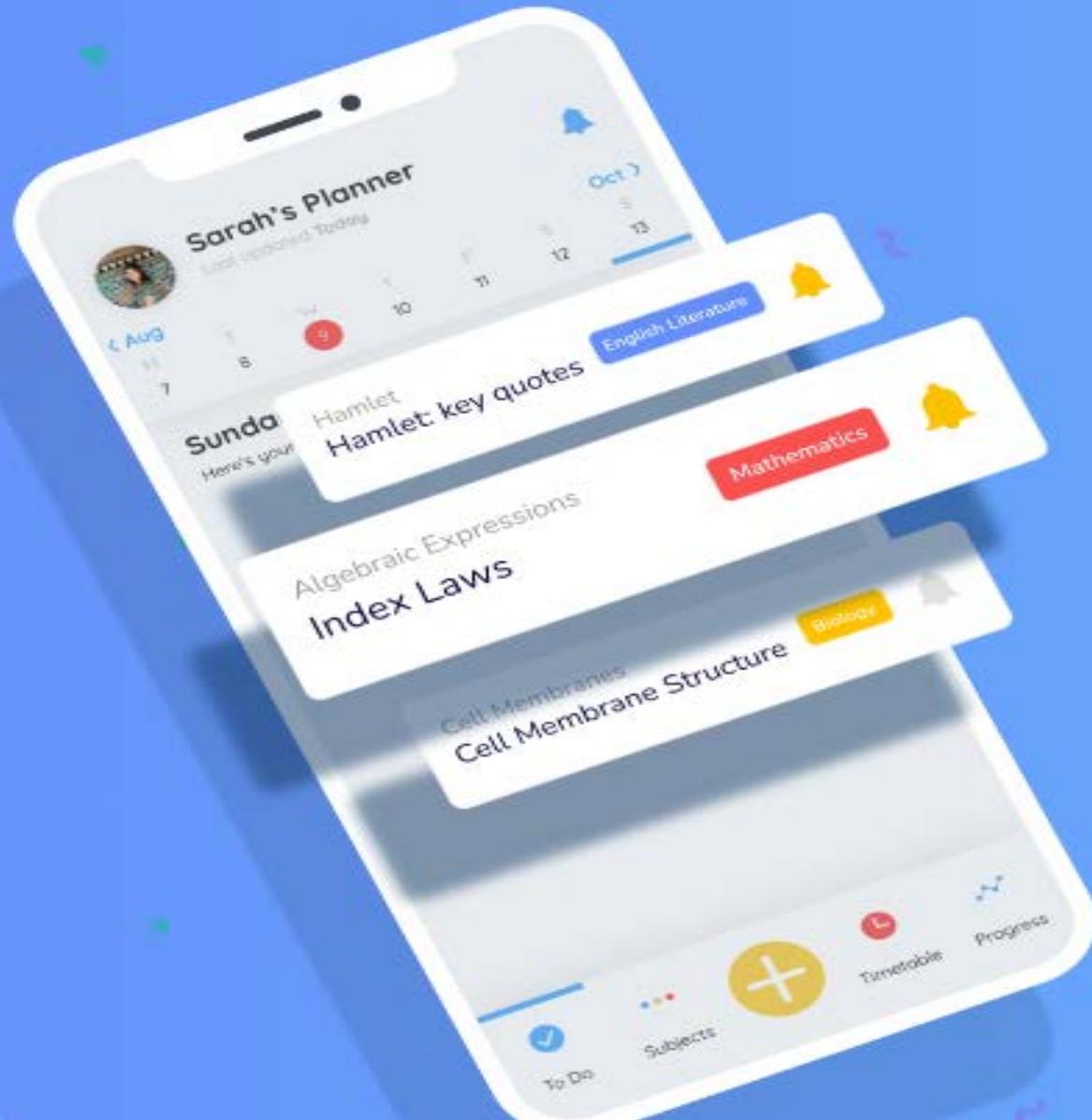


Online (e.g. GCSEpod)



Creating mind maps

The option of digital planners



The revision timetable that does it all for you.

Everyone's talking about it.

Download on the
App Store

GET IT ON
Google Play

Things to consider when creating a revision timetable

Your action plan

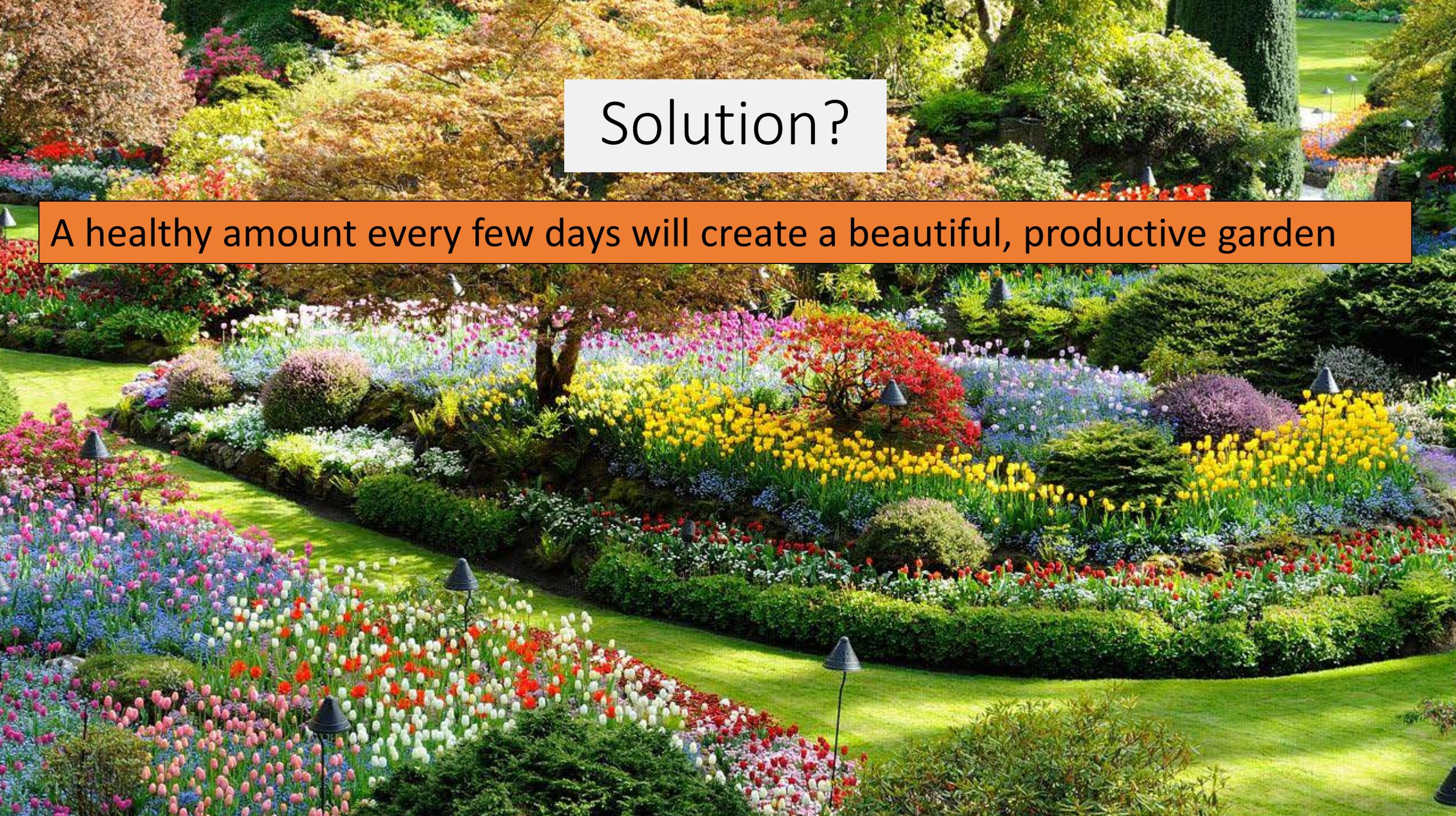
What would happen if I watered my garden once a month for the full day?



It might look greener for a few hours but.....

Too much water
= drowned plants
=dead garden

Water and time is wasted,
and nothing grows

A lush, multi-tiered garden with a variety of colorful flowers, including tulips in shades of pink, blue, yellow, and red. The garden is set on a hillside with green grass and is surrounded by trees with autumn foliage. Several black garden lights are visible throughout the scene.

Solution?

A healthy amount every few days will create a beautiful, productive garden

What would happen if I worked out in the gym once a month for the full day?



The first hour might be fine but I'd soon get tired.

The next day I would be exhausted and probably get ill.

I definitely wouldn't be getting fitter.

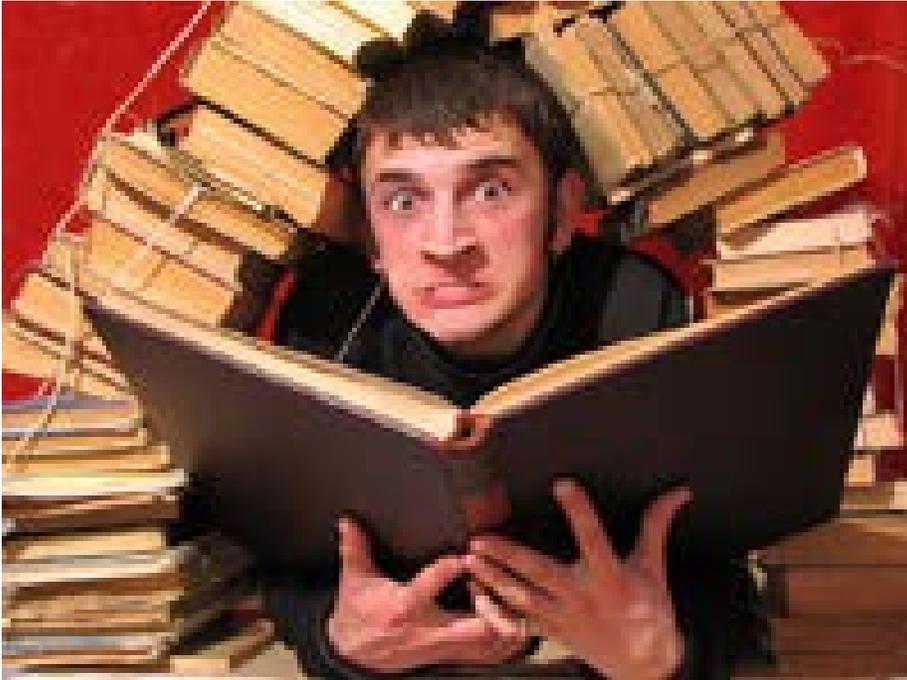
Solution?

A healthy amount every few days will create a strong and healthy body



Worked out the link between the two examples and learning?

Cramming = unproductive and destructive



It may feel like you're learning, for a while. You'll become exhausted and actually retain very little information.

Result? Poor performance in exams.

Reading
Highlighting
Watching
Listening
Conversation



KNOWLEDGE



Brain dump
Quizzing
Talking
Exam Question Practice
FINAL EXAMS

There is no perfect way to revise,
but there are proven strategies.

People have success with different
strategies.

1. Make a start.
2. Do some every day.

You could start with getting out what you already know – Brain dump.

Check your learning checklist, and empty your brain

But if you don't know anything, that can be demoralising.

AQA TRILOGY Biology (8464) from 2016 Topic T4.1 Cell biology		BEFORE		
Topic	Student Checklist	R	A	G
4.1.1 Cell structure	Use the terms 'eukaryotic' and 'prokaryotic' to describe types of cells			
	Describe the features of bacterial (prokaryotic) cells			
	Demonstrate an understanding of the scale and size of cells and be able to make order of magnitude calculations, inc standard form			
	Recall the structures found in animal and plant (eukaryotic) cells inc algal cells			
	Use estimations and explain when they should be used to judge the relative size or area of sub-cellular structures			
	<i>Required practical 1: use a light microscope to observe, draw and label a selection of plant and animal cells</i>			
	Describe the functions of the structures in animal and plant (eukaryotic) cells			
	Describe what a specialised cell is, including examples for plants and animals			
	Describe what differentiation is, including differences between animals and plants			
	Define the terms magnification and resolution			
4.1.2 Cell Division	Compare electron and light microscopes in terms of their magnification and resolution			
	Carry out calculations involving magnification using the formula: magnification = size of image/ size of real object -inc standard form			
	<i>Required practical 2: investigate the effect of antiseptics or antibiotics on bacterial growth using agar plates and measuring zones of inhibition</i>			
	Describe how genetic information is stored in the nucleus of a cell (inc genes & chromosomes)			
4.1.3 Transport in cells	Describe the processes that happen during the cell cycle, including mitosis (inc recognise and describe where mitosis occurs)			
	Describe stem cells, including sources of stem cells in plants and animals and their roles			
	Describe the use of stem cells in the production of plant clones and therapeutic cloning			
	Discuss the potential risks, benefits and issues with using stem cells in medical research/treatments (inc diabetes and paralysis)			
	Describe the process of diffusion, including examples			
	Explain how diffusion is affected by different factors			
4.1.3 Transport in cells	Define and explain "surface area to volume ratio", and how this relates to single-celled and multicellular organisms (inc calculations)			
	Explain how the effectiveness of an exchange surface can be increased, inc examples of adaptations for small intestines, lungs, gills roots & leaves			
	Describe the process of osmosis (inc calculation of water uptake & percentage gain and loss of mass of plant tissue)			
	<i>Required practical 3: investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue</i>			
	Describe the process of active transport, including examples - gut and roots			
	Explain the differences between diffusion, osmosis and active transport			

Topic 1 — Cell Biology

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Our first revision session was about Cell Biology, specifically Cell Structure.

Before reading new information, practice what you will need to do in your exam and put your brain under some strain to extract information

TASK 1:

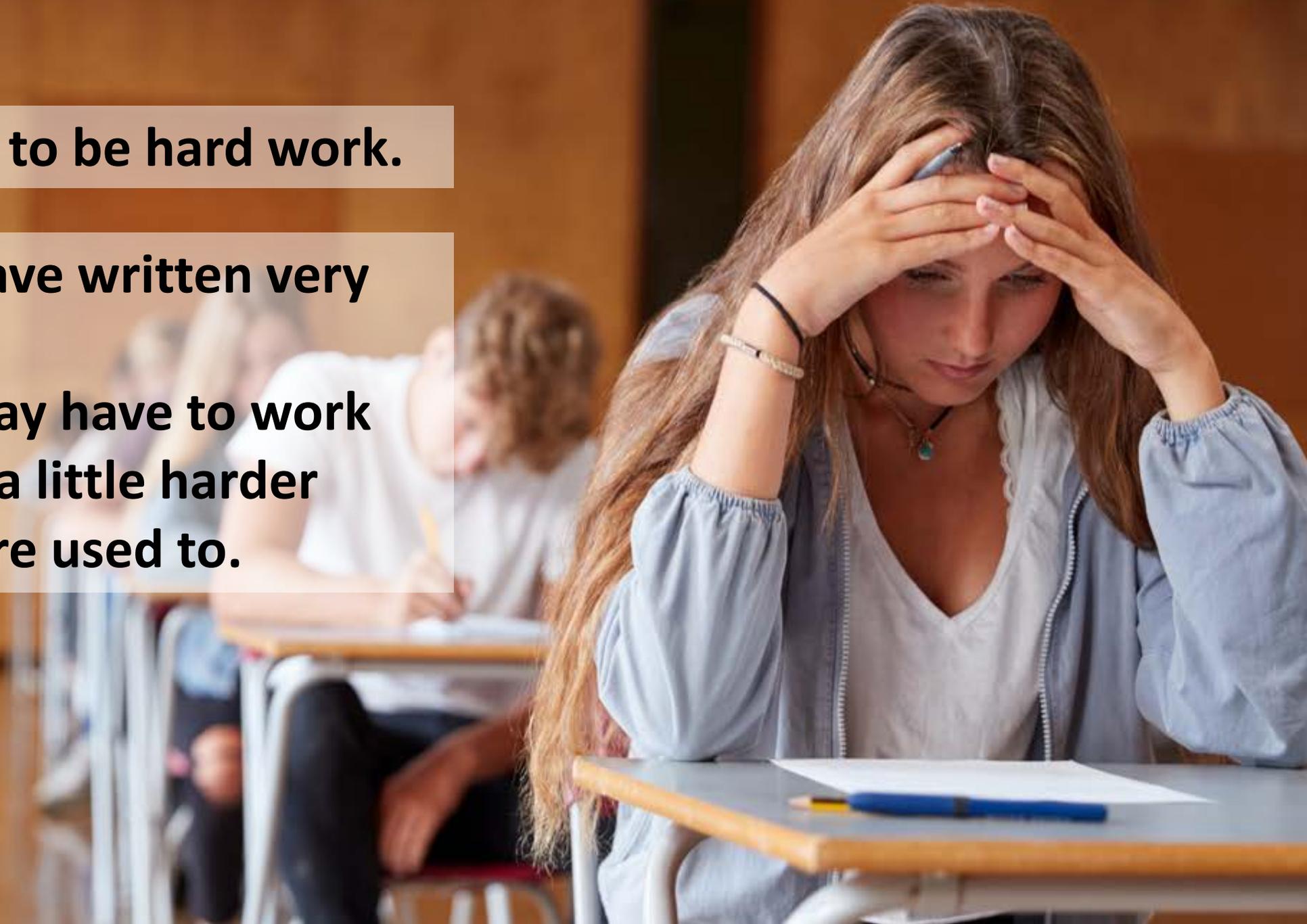
Take **two** minutes to write down everything you can remember about cell structure

	Monday	Tuesd
Before School	GCSEpod x 1 Cell biology	
1		
2		
3		
4		
5		
After School	4.1.1 Cell Structure 20 mins Macbeth characters 20 mins	4.1.1 Ce Structur REVISIT 4.1.2 Ce Division 20 mins
Evening	Alegbra 20 mins	Macbeti characte REVISIT

Expect this to be hard work.

You may have written very little.

You also may have to work your brain a little harder than you are used to.



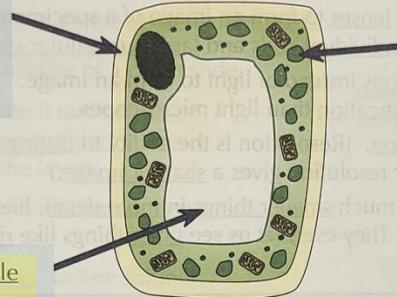
Cells

Plant Cells

Plant cells usually have all the bits that animal cells have, plus a few extra things that animal cells don't have:

The cells of algae (e.g. seaweed) also have a rigid cell wall and chloroplasts.

1) Rigid cell wall — made of cellulose. It supports the cell and strengthens it.



3) Chloroplasts — these are where photosynthesis occurs, which makes food for the plant (see page 101). They contain a green substance called chlorophyll, which absorbs the light needed for photosynthesis.

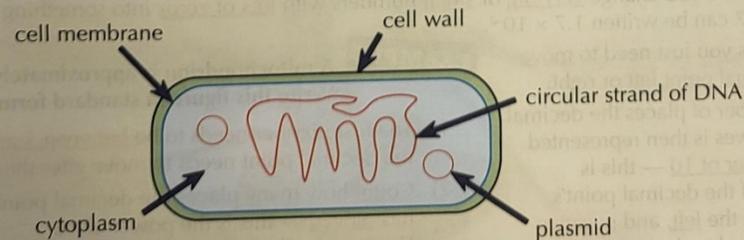
2) Permanent vacuole — contains cell sap, a weak solution of sugar and salts.

You could get asked to estimate the area of a subcellular structure. If you do, treat it as a regular shape. For example, if it's close to a rectangle, use the area formula 'area = length x width'.

Bacterial Cells Are Much Smaller

- 1) Bacteria are prokaryotes.
- 2) Bacterial cells don't have a 'true' nucleus — instead they have a single circular strand of DNA that floats freely in the cytoplasm.
- 3) They may also contain one or more small rings of DNA called plasmids.
- 4) Bacteria don't have chloroplasts or mitochondria.

Here's what a bacterial cell might look like:



Cells

When someone first peered down a microscope at a slice of cork and drew the boxes they saw, little did they know that they'd seen the building blocks of every organism on the planet...

Organisms can be Prokaryotes or Eukaryotes

1) All living things are made of cells.

2) Cells can be either prokaryotic or eukaryotic. Eukaryotic cells are complex and include all animal and plant cells. Prokaryotic cells are smaller and simpler, e.g. bacteria (see next page).

You might see the sizes of cells written in standard form — see p.18 for more on this.

3) Eukaryotes are organisms that are made up of eukaryotic cells.

4) A prokaryote is a prokaryotic cell (it's a single-celled organism).

Plant and Animal Cells have Similarities and Differences

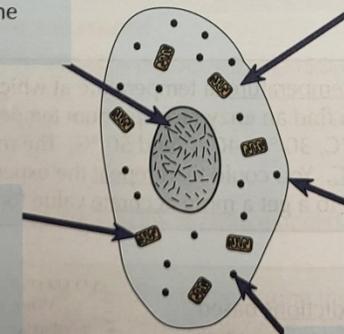
Animal Cells

The different parts of a cell are called subcellular structures. Most animal cells have the following subcellular structures — make sure you know them all:

1) Nucleus — contains genetic material that controls the activities of the cell.

3) Cytoplasm — gel-like substance where most of the chemical reactions happen. It contains enzymes (see page 47) that control these chemical reactions.

2) Mitochondria — these are where most of the reactions for aerobic respiration take place (see page 112). Respiration transfers energy that the cell needs to work.



4) Cell membrane — holds the cell together and controls what goes in and out.

5) Ribosomes — these are where proteins are made in the cell.

How do we now get this to go in?

Read? Highlight?

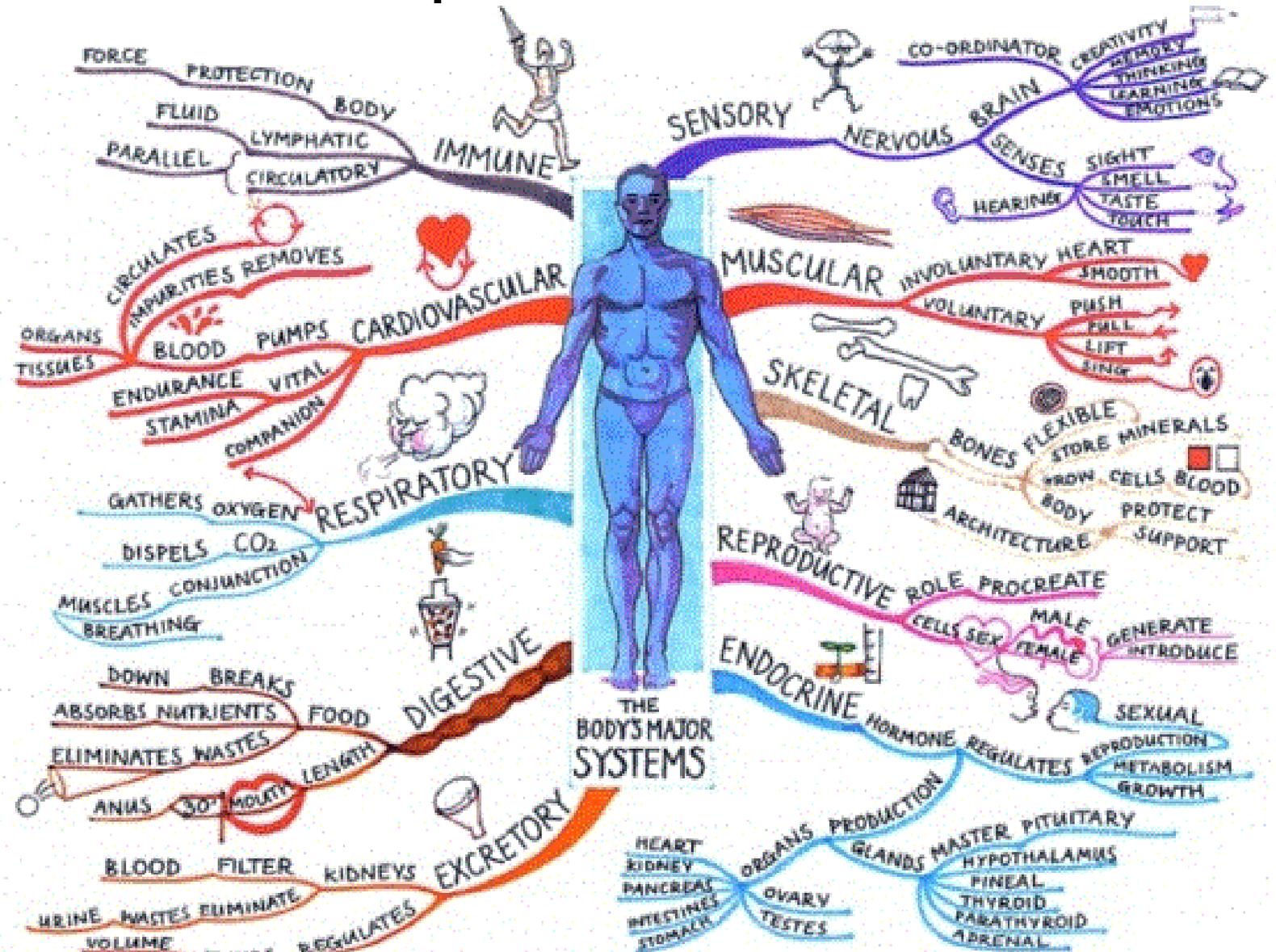
Mind map? Flashcards?

You have a choice Mind Maps

Large parts of a topic

Brief text with pictures

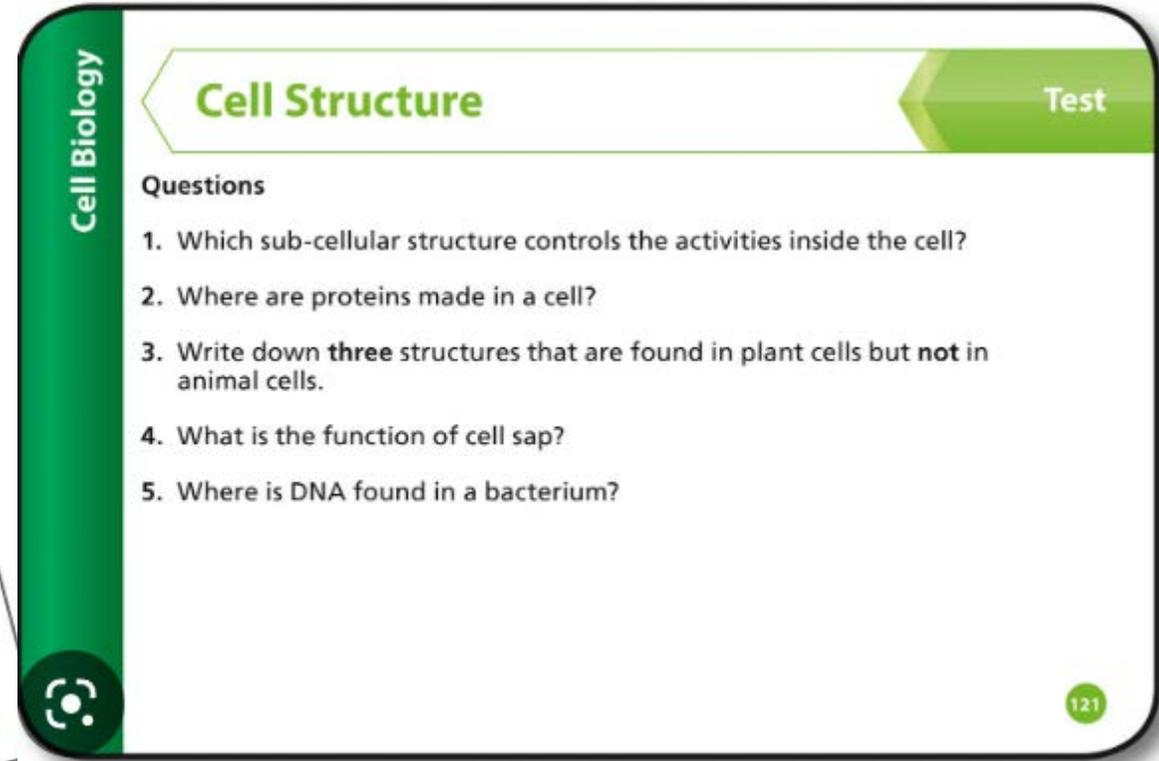
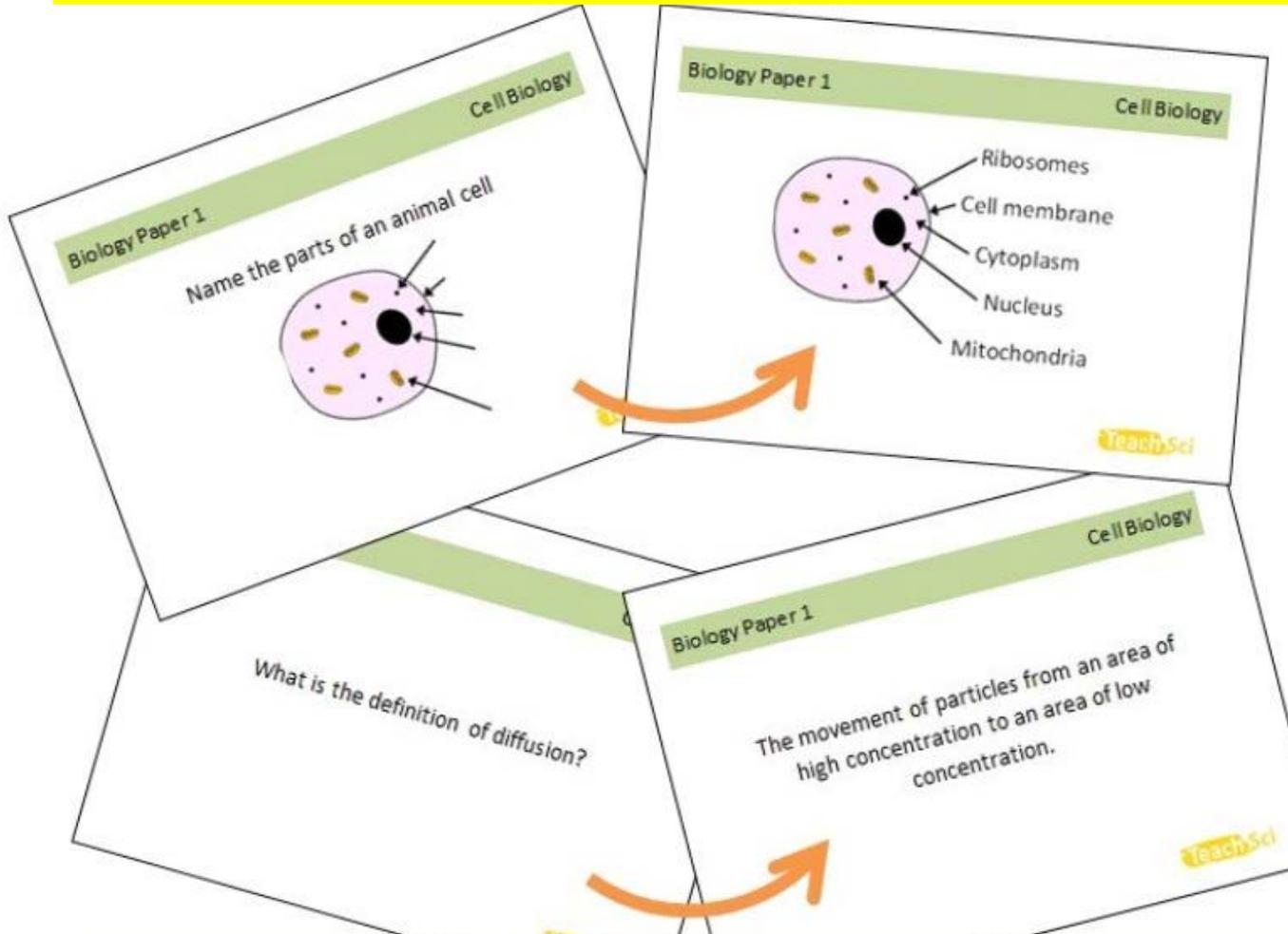
Stick it up
somewhere to
trigger strong
memories



Cells

TASK 1: Create part of a flashcard for "Cell Structure"

These can be made, or can be bought



TASK 2: Swap your flashcard with the person next to you and try to answer their question

Exam practice

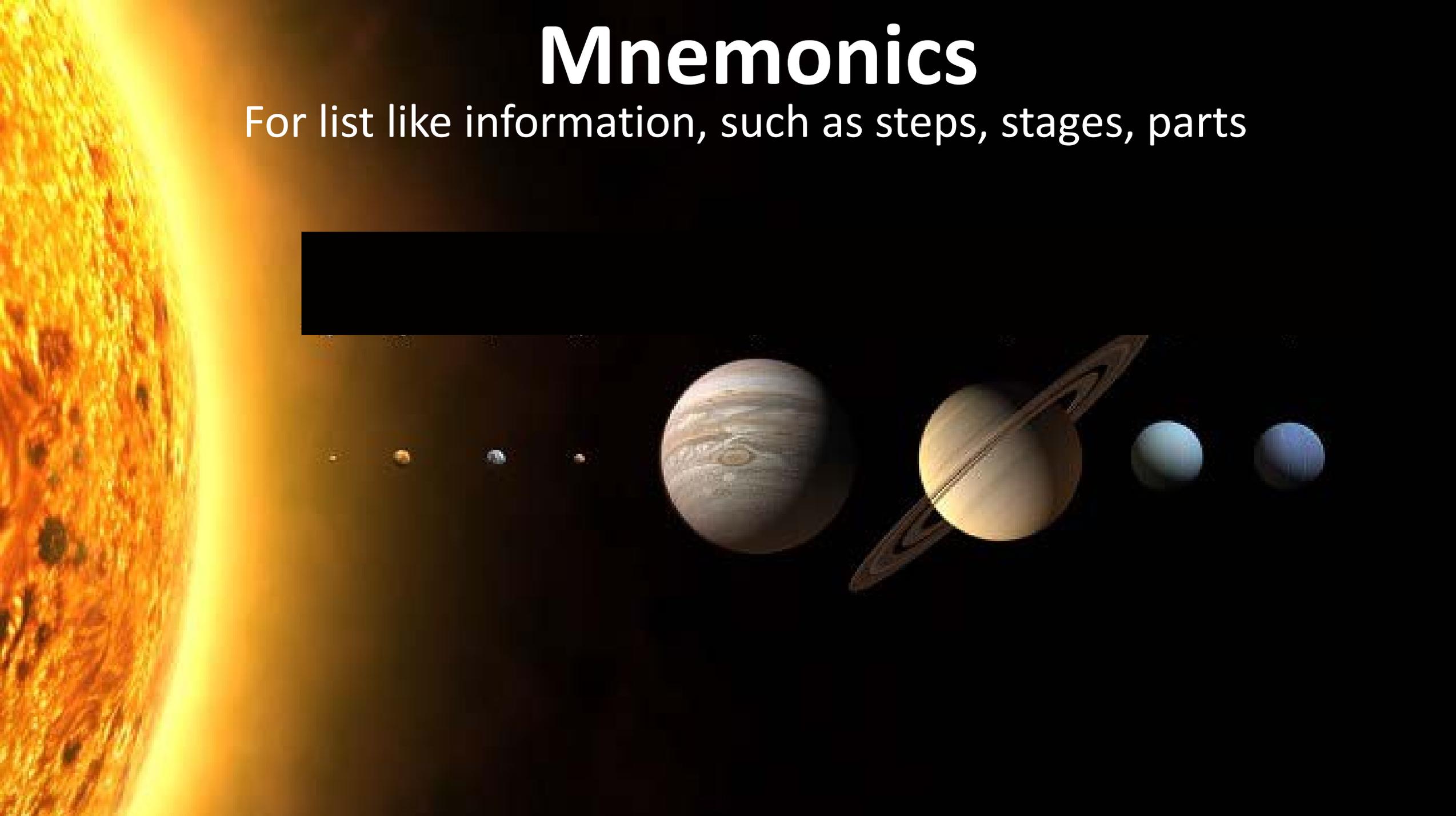
<https://revisionworld.com/gcse-revision/gcse-exam-past-papers>

Flashcards

<https://www.brainscape.com/learn/gcse-geography-aqa>

Mnemonics

For list like information, such as steps, stages, parts





4.1/Cell biology



Getting Ready for KS4 [GCSE]



4.2/Organisation



4.3/Infection and response



4.4/Bioenergetics



4.5/Homeostasis and response



4.6/Inheritance, variation and evolution



4.7/Ecology



Biology Practicals



Revision Skills and Tips - Biology



Getting Ready for KS5 [A Level]



Please don't open this until you are instructed.

This will be near the end of the period.

Thankyou

Q1.

This question is about cells.

(a) Figure 1 shows a cell.

Figure 1



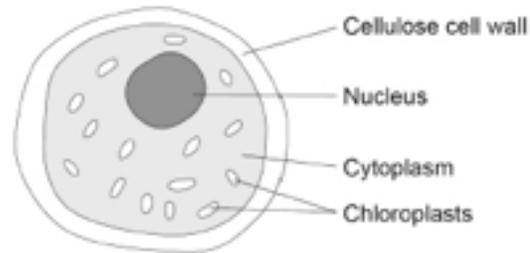
What type of cell is shown in Figure 1?

Tick (✓) one box.

- Animal
- Bacterium
- Plant

Figure 2 shows an algal cell.

Figure 2



(b) What is the function of the cell wall?

Tick (✓) one box.

- To contain the genetic material
- To stop the chloroplasts leaking out
- To strengthen the cell

(c) The algal cell is green.

Page 2 of 4

Which part of the algal cell makes it green in colour?

Tick (✓) one box.

- Cellulose
- Chloroplast
- Cytoplasm
- Nucleus

(d) Cells contain sub-cellular structures.

Draw one line from each structure to its function.

Structure	Function
Cell membrane	Controls transport of substances into the cell
Mitochondria	Where energy is released
Ribosomes	Where glucose is made
	Where photosynthesis takes place
	Where proteins are made

(1)

(3)

OVERVIEW

1. Know when your exams are
2. Add them to a timetable
3. Create a revision timetable each week with specific priorities, using your learning checklists and revision guides

REVISING

4. Attempt to learn material (**IN**) and test yourself (**OUT**):
 - Braindumps **OUT**
 - Mind maps or flashcards **IN**
 - Reading **IN**
 - GCSEpods **IN**
 - Testing (quizzes, exam questions) **OUT**

PERSONAL HABITS

5. Nutrition

6. Exercise

7. Sleep

Getting these right will have a HUGE impact on your stress/anxiety levels

GOOD REVISERS

POOR REVISERS

Good habits for
revising

Bad habits for
revising

