

# Drop Everything and Revise



**Today we will:**



**RESULTS  
DAY**

**Friday 15<sup>th</sup> Dec**

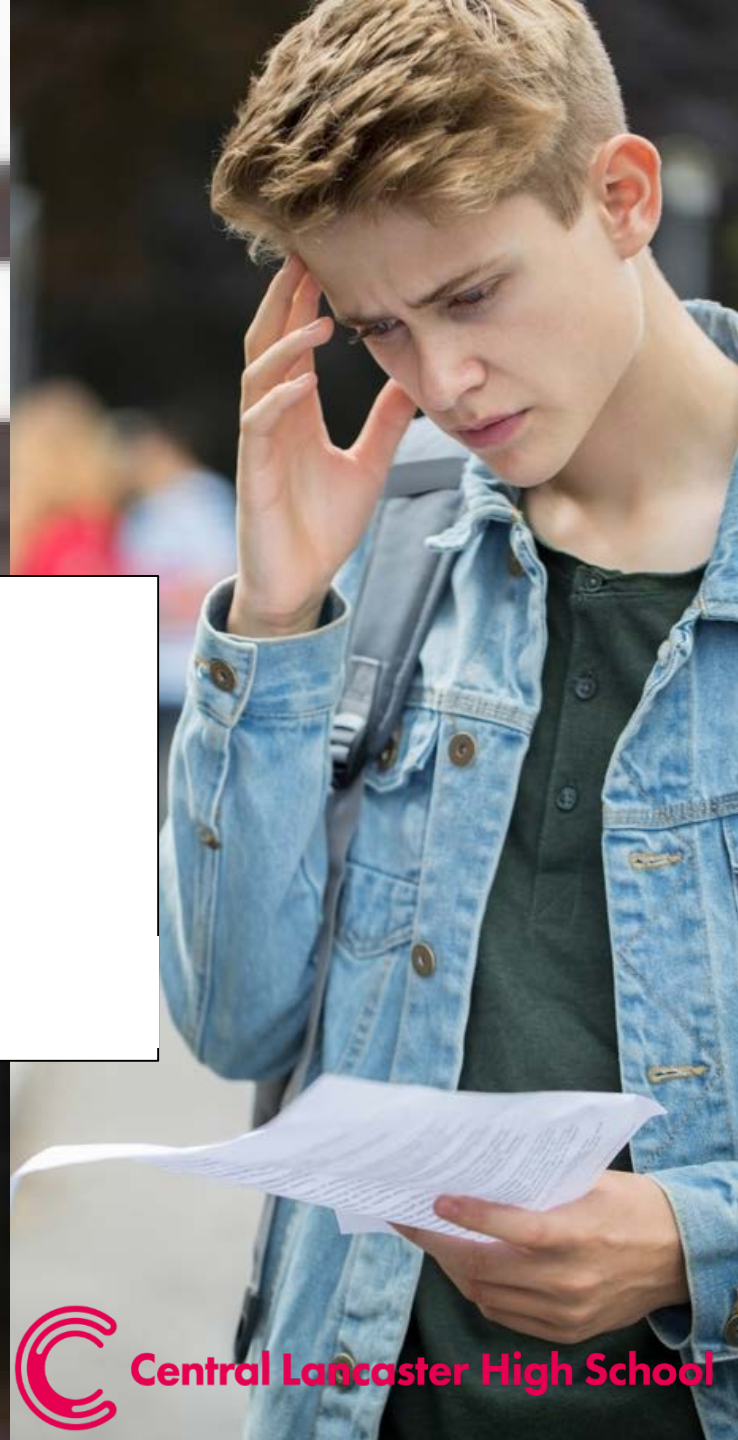
**60 school days**







Imagine:



THE BAY  
LEARNING TRUST



Central Lancaster High School



# First Real Exam

Thursday 22nd  
August  
140 days

Imagine:



THE BAY  
LEARNING TRUST



Central Lancaster High School



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

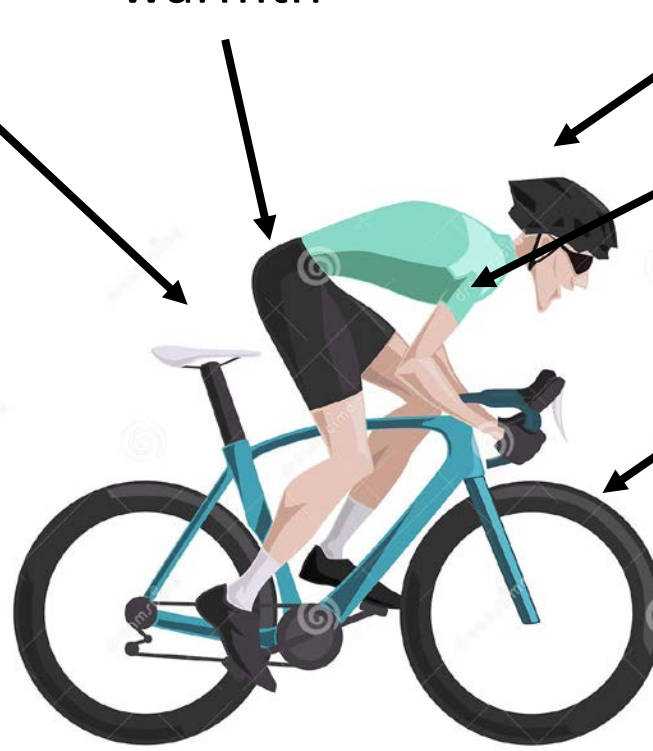
Lighter racing suit

Rubbed alcohol on tyres to make it grippier

Took the same pillows, duvets and mattresses to races.

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

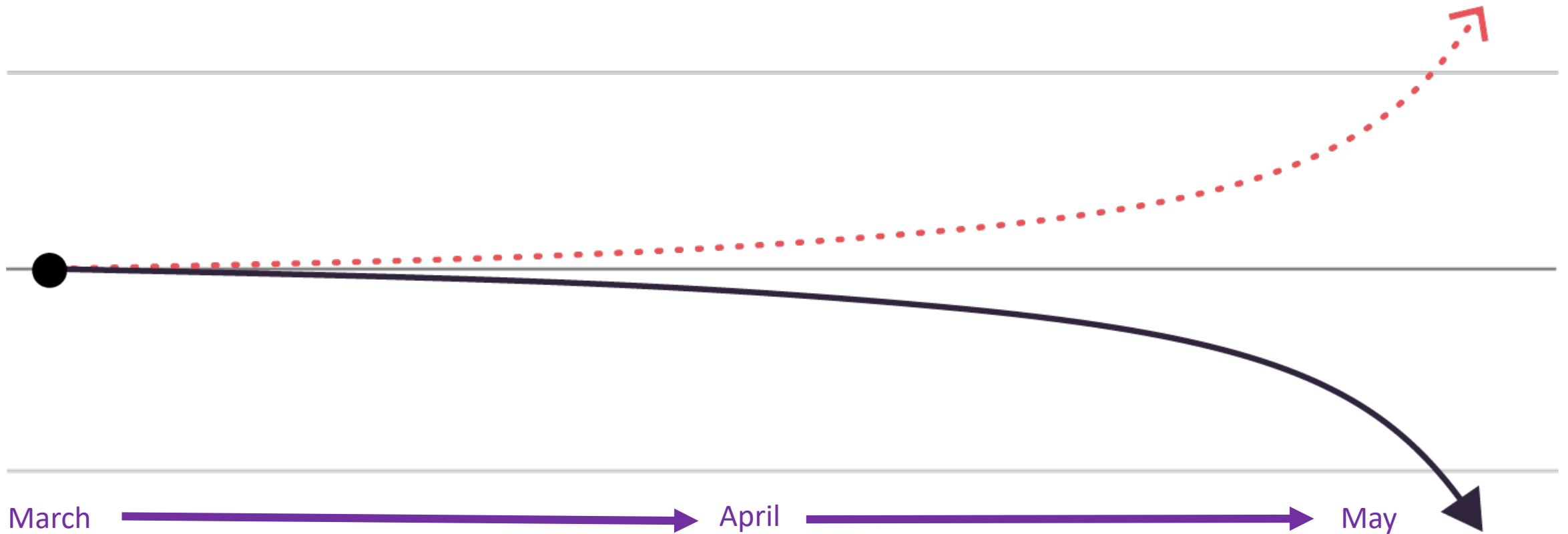
Painted the insides of their trucks white so they could see any dust



# How Marginal Gains Can Add Up Over Time

1% Improvement →

1% Decline →

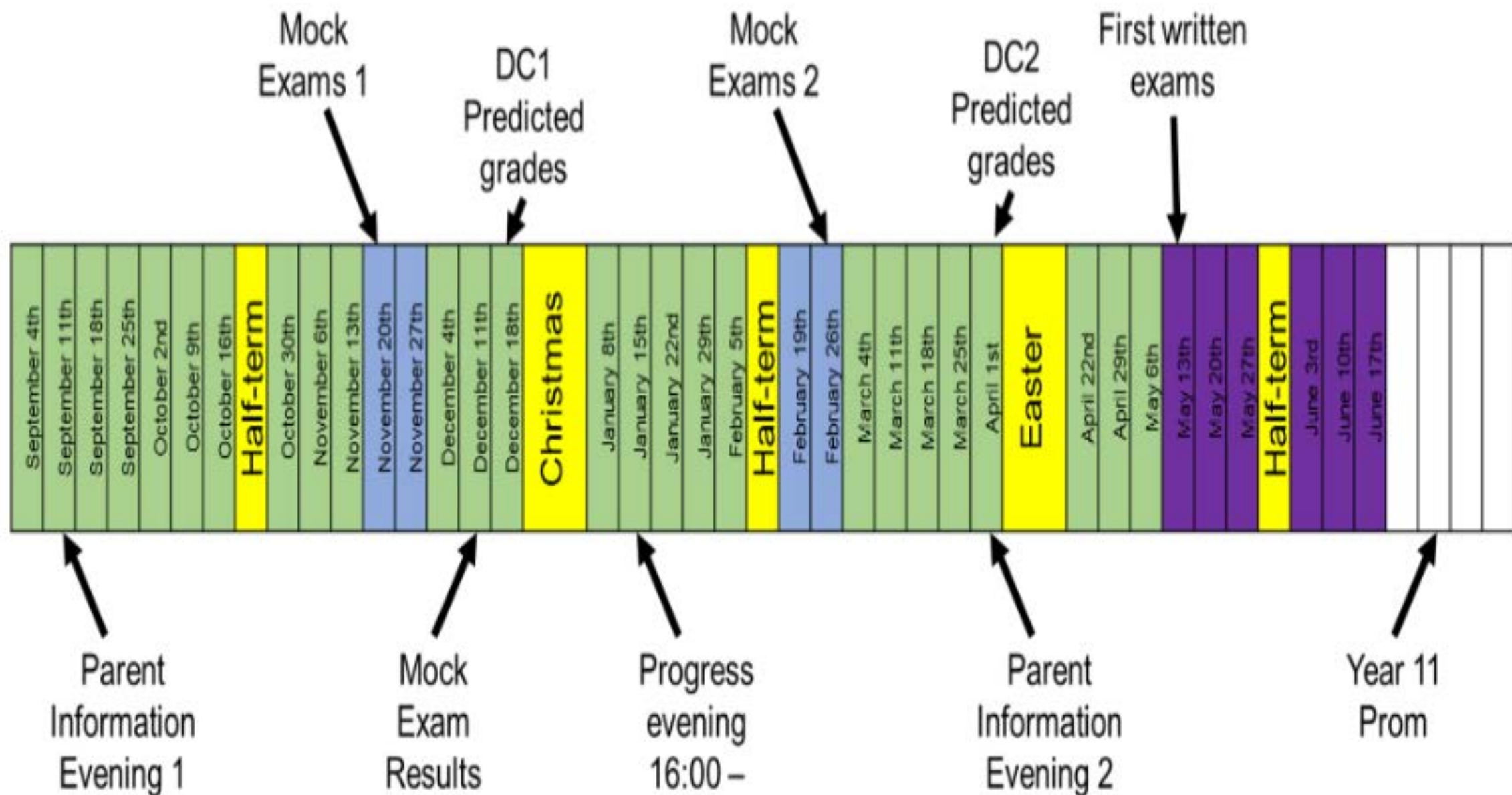




# How could you make small gains over the next two months?

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 <b>A</b>	11 Mon <b>B</b>	18 Mon <b>A</b>	25 Mon <b>B</b>	2 Mon <b>A</b>	9 Mon <b>B</b>	16 Mon <b>A</b>	23 Mon	30 Mon <b>B</b>	6 Mon <b>A</b>	13 Mon <b>B</b>	20 Mon <b>A</b> Science Biology 1 (AM)	27 Mon <b>B</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	<b>Biology</b>  1 Hour 15 Minutes / 1 Hour 45 Minutes	
Tuesday 21st November	<b>Maths:</b> Paper 1 (Non-calculator)  1 Hour 30 Minutes	<b>French:</b> Listening  Exam sat during French lesson - P4
Wednesday 22nd November	<b>English Literature:</b> An Inspector Calls, A Christmas Carol and Unseen Poetry  2 Hours 30 Minutes	
Thursday 23rd November	<b>History:</b> Civil Rights and Vietnam  1 Hour 20 Minutes	<b>French:</b> Writing (H/F)  1 Hour 15 Minutes / 1 Hour 30 Minutes
Friday 24th November	<b>Chemistry</b>  1 Hour 15 Minutes / 1 Hour 45 Minutes	

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

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# 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						
4.1.3 Transport in cells	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						
	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						



# REVISION PLANNER

Week  
Commencing

**Mon 13<sup>th</sup> March**

Key Events  
(school &  
persona)

- PPE2 results - Fri 17<sup>th</sup> March
- Friends birthday Thurs
- Art exam preparation

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<b>Before School</b>	GCSEpod x 1 Cell biology			Remember birthday card	PPE results today	AM 20 C fiction REVISIT Football	AM
1							
2							
3							
4							
5							
<b>After School</b>	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 <sup>th</sup> 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 Choice of topic I had most difficulty with GCSEPODS	PM
<b>Evening</b>	Alegbra 20 mins	Macbeth characters REVISIT	River Landscapes 20 mins	Norman Conquest 20 mins	River Landscapes REVISIT Norman Conquest REVISIT		

## Focus Areas for the Week

English Literature		English Language	
Macbeth characters learn		20 <sup>th</sup> 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	

## Key Revision Strategies

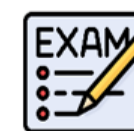
Remember revision is often getting information 'out' from memory, not always putting more information 'in'.



Practice questions/answers



Flash cards



Practice timed exam questions

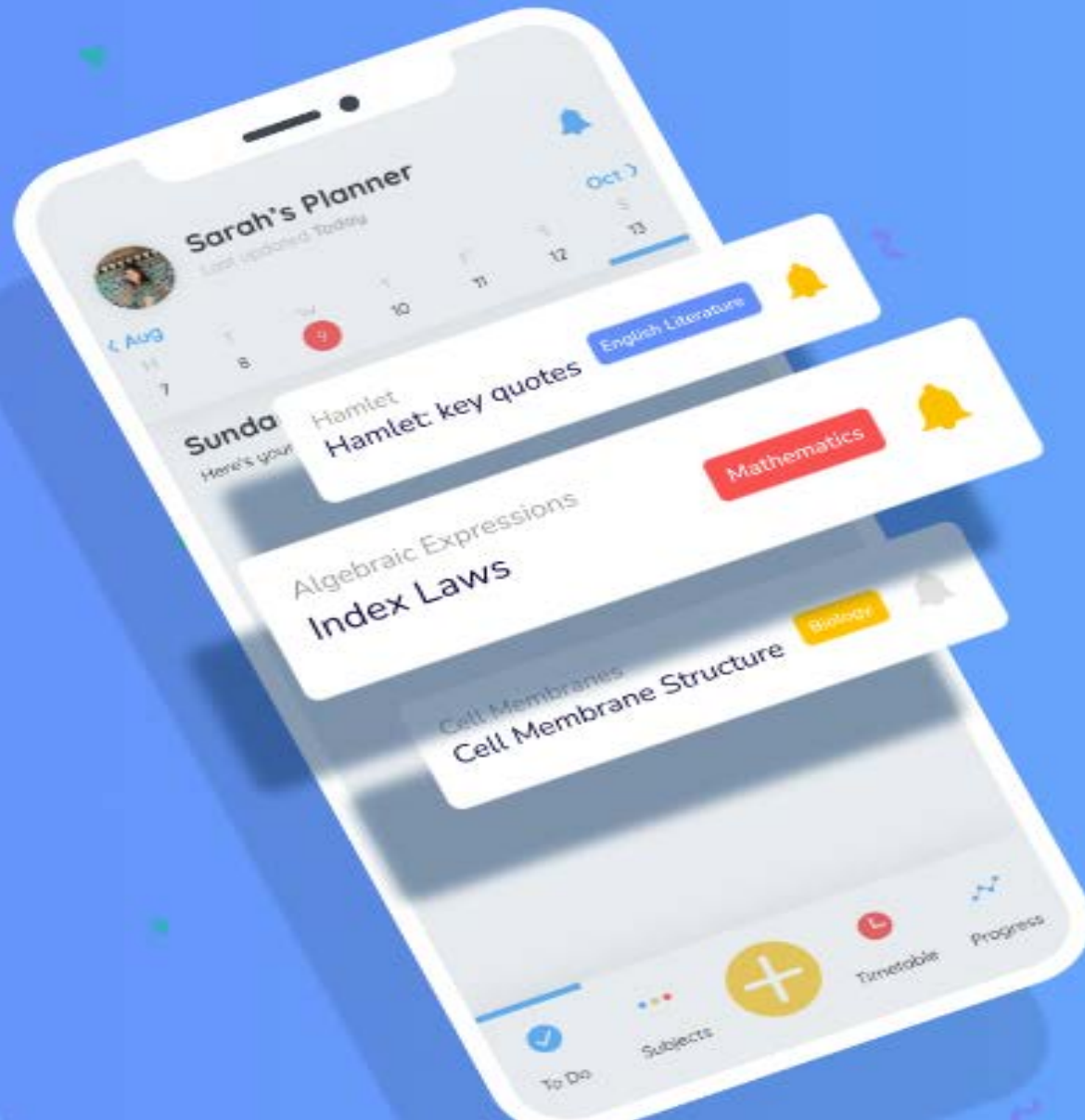


Online (e.g. GCSEpod)



Creating mind maps

# The option of digital planners



The revision  
timetable  
that does it all for  
you.

Everyone's talking  
about it.



Balancing studying with the fun stuff in life can be difficult. Revising can get in the way of everything from meeting friends to relaxing after school.

Building a revision plan helps you manage your time more effectively. It gives you a clear idea of what subjects and topics you'll be revising each day and helps you organise your studies around your life.

### The Study Planner:

- ✔ Builds revision sessions around your life
- ✔ Automatically adds revision sessions for you
- ✔ Reminders of revision sessions

## Get started. It's free

<https://getrevising.co.uk/planner>

[illegible]



# **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, yellow, and red, and blue hydrangeas. The garden is set against a backdrop of tall, green trees and a clear sky. The overall scene is a beautiful, well-maintained garden.

# 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.**

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	Compare electron and light microscopes in terms of their magnification and resolution			
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## 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

	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	Macbeth character REVISIT

## TASK 1:

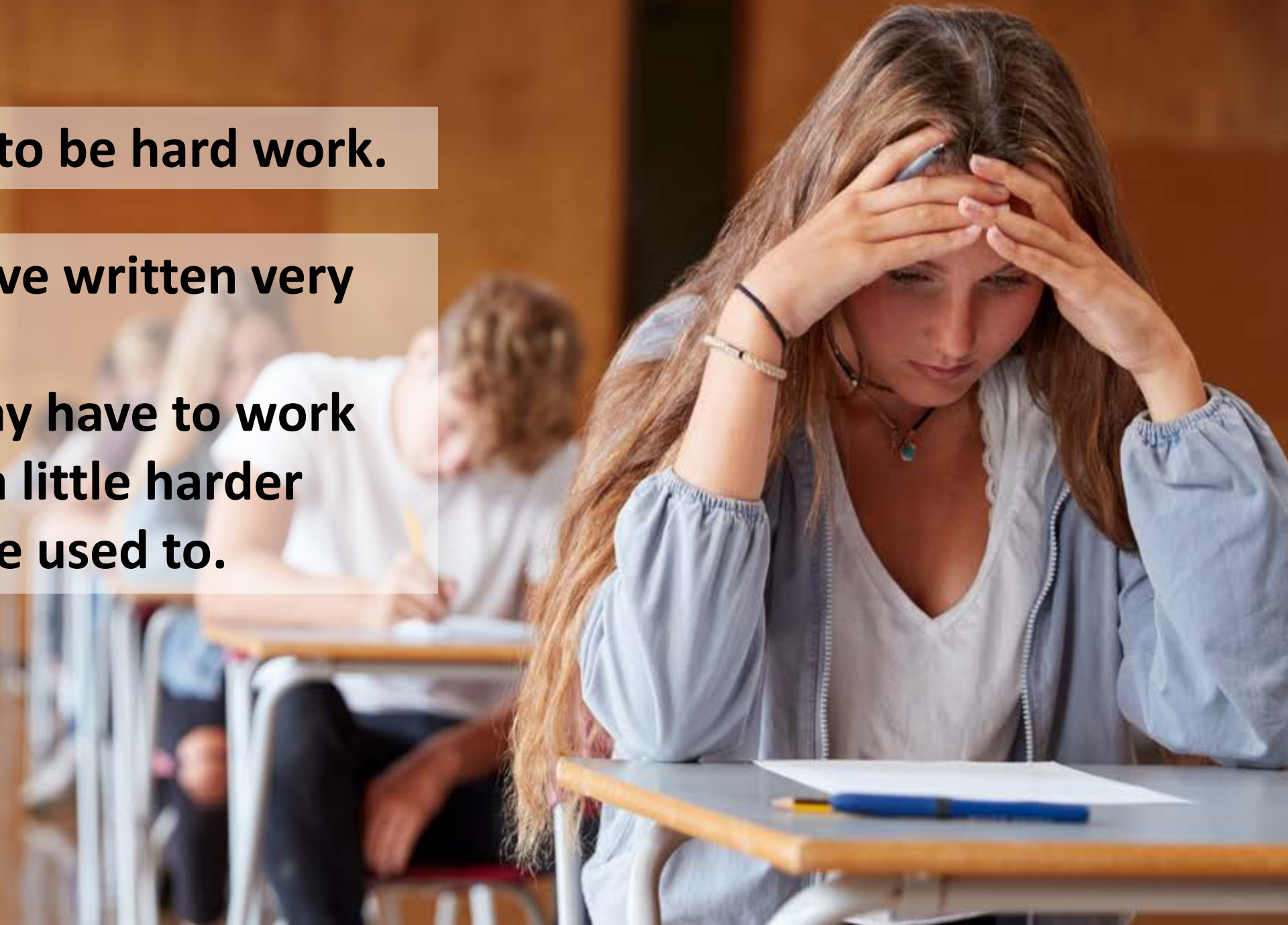
Take **two** minutes to write down everything you can remember about cell structure



**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.**





How do we  
now get this to  
go in?

Read?  
Highlight?

Mind map?  
Flashcards?

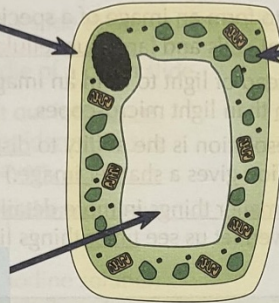
## Cells

### Plant Cells

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

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

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



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

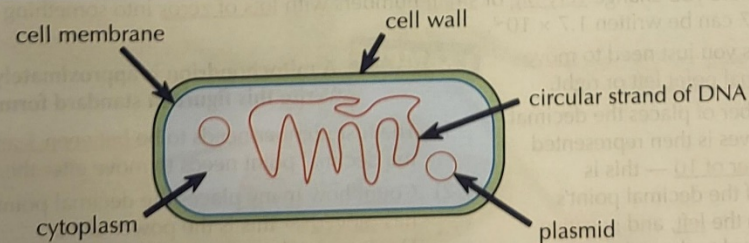
- 3) Chloroplasts — these are where photosynthesis occurs, which makes food for the plant (see page 101). They contain a green substance called chlorophyll, which absorbs the light needed for photosynthesis.

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).

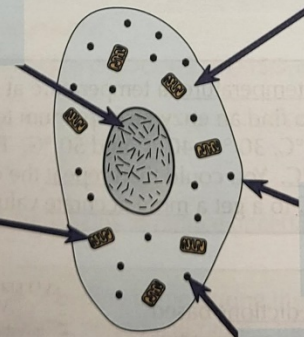
### Plant and Animal Cells have Similarities and Differences

#### 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.

- 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.



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

- 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.

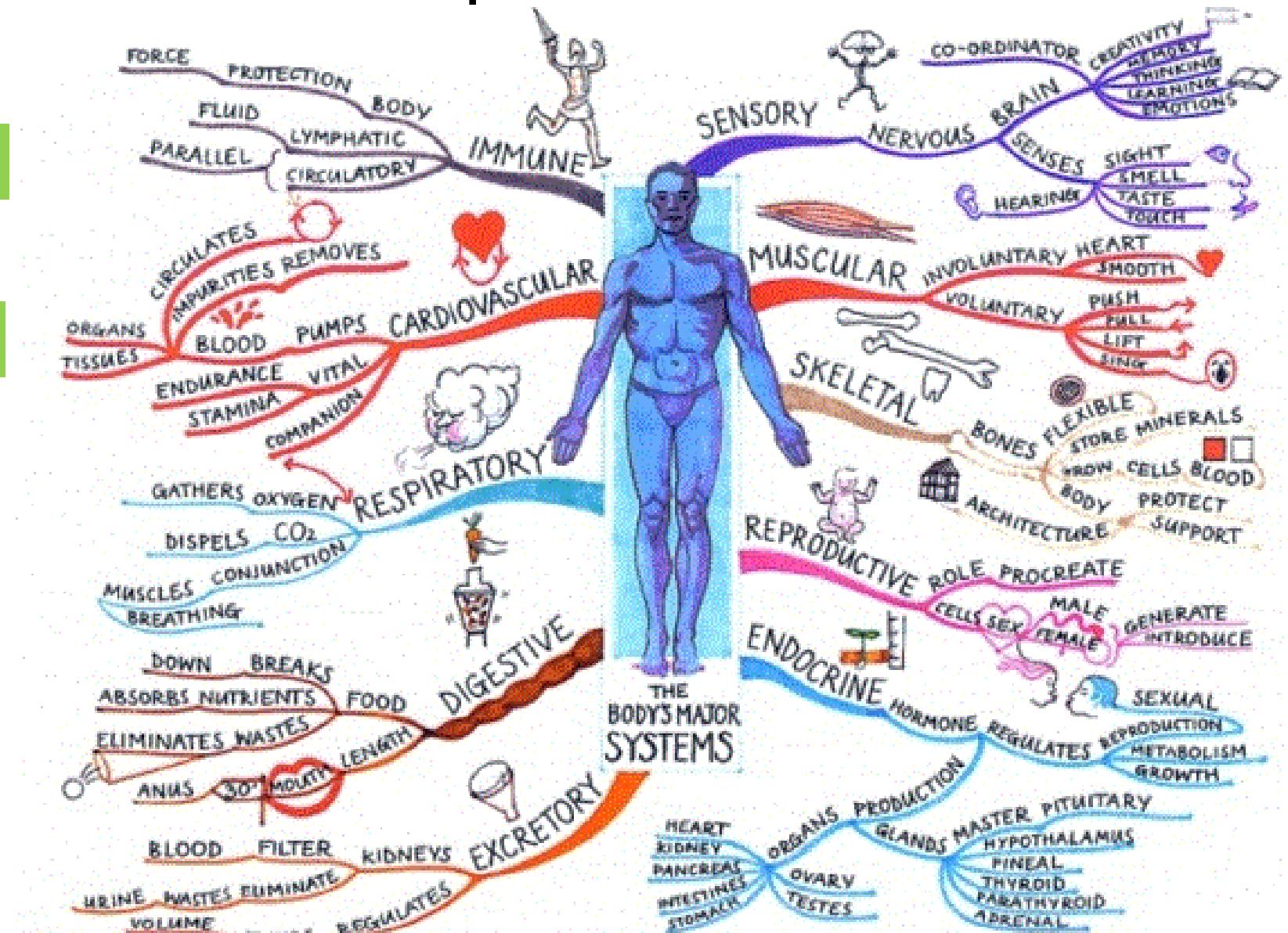
# You have a choice

## Mind Maps

Large parts of a topic

Brief text with pictures

Stick it up  
somewhere to  
trigger strong  
memories

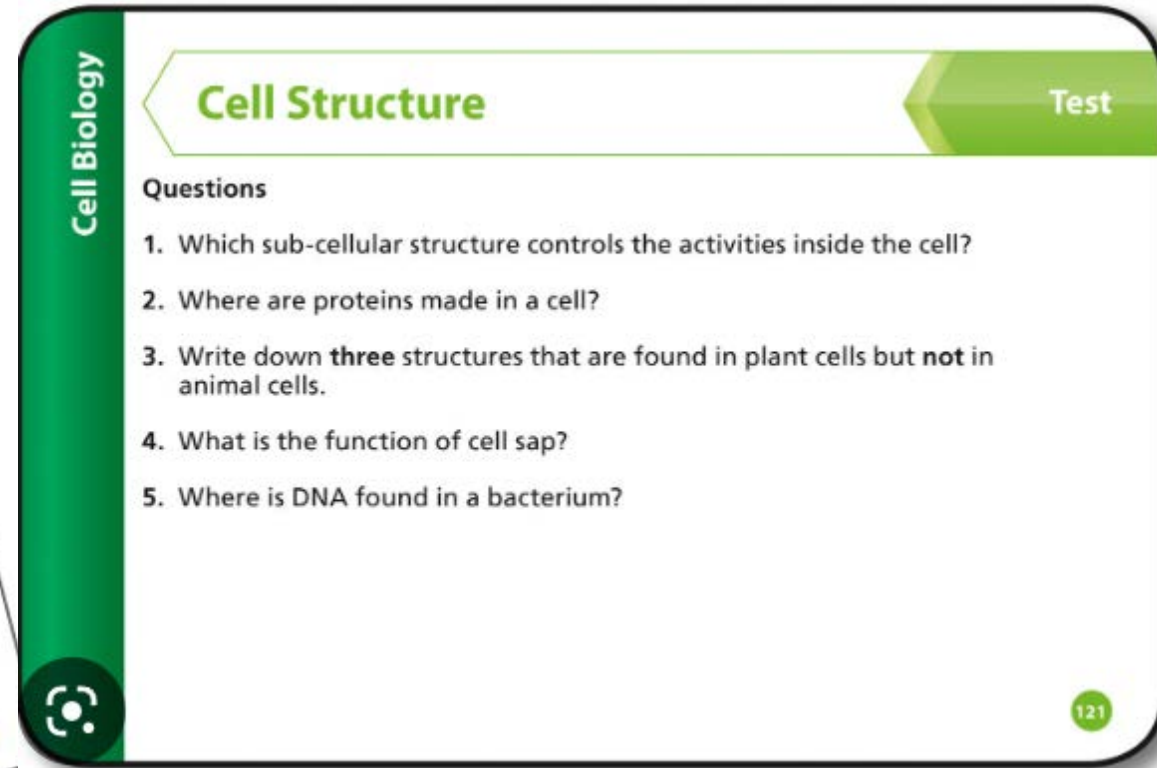
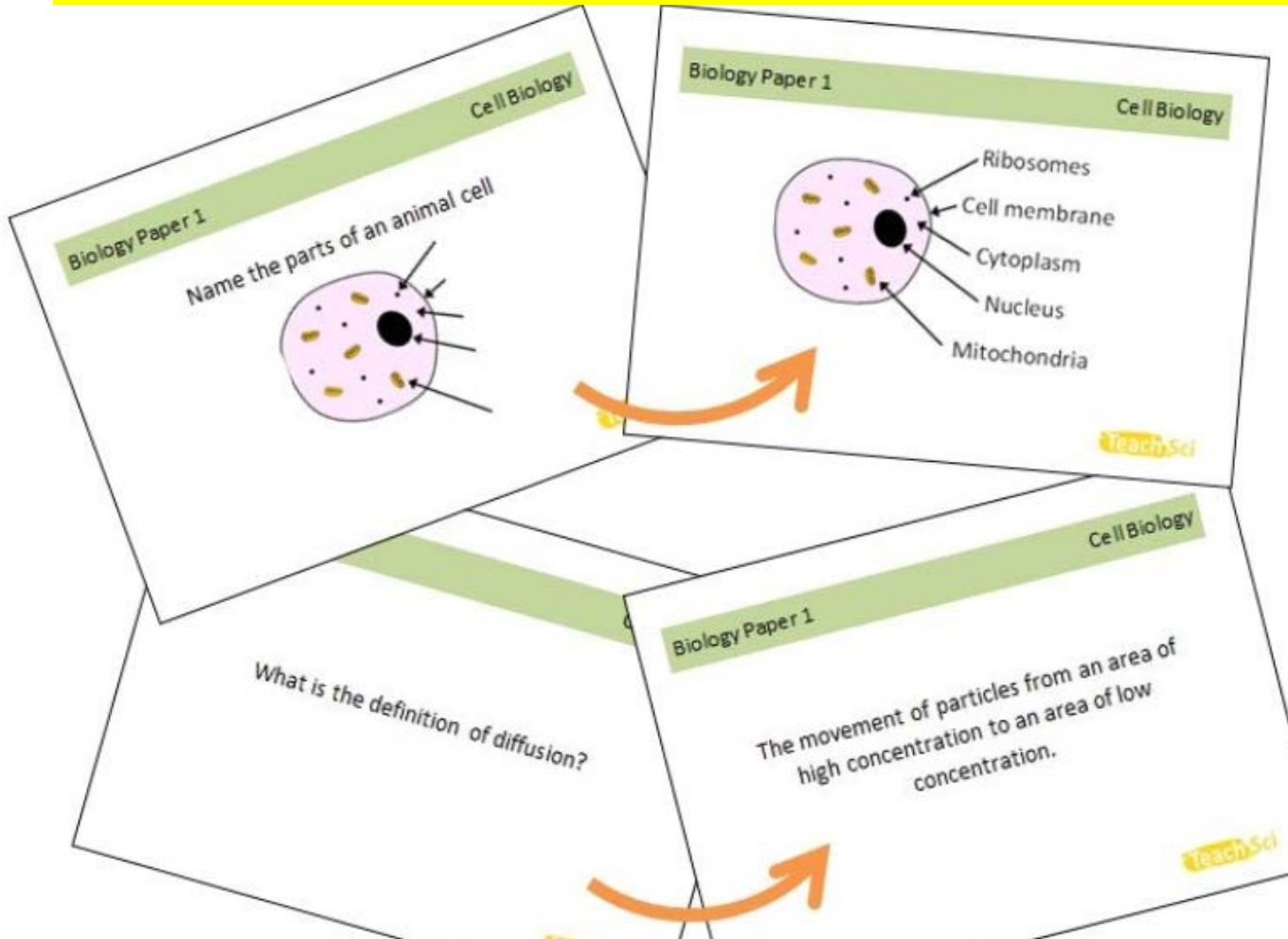


Cells



# 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

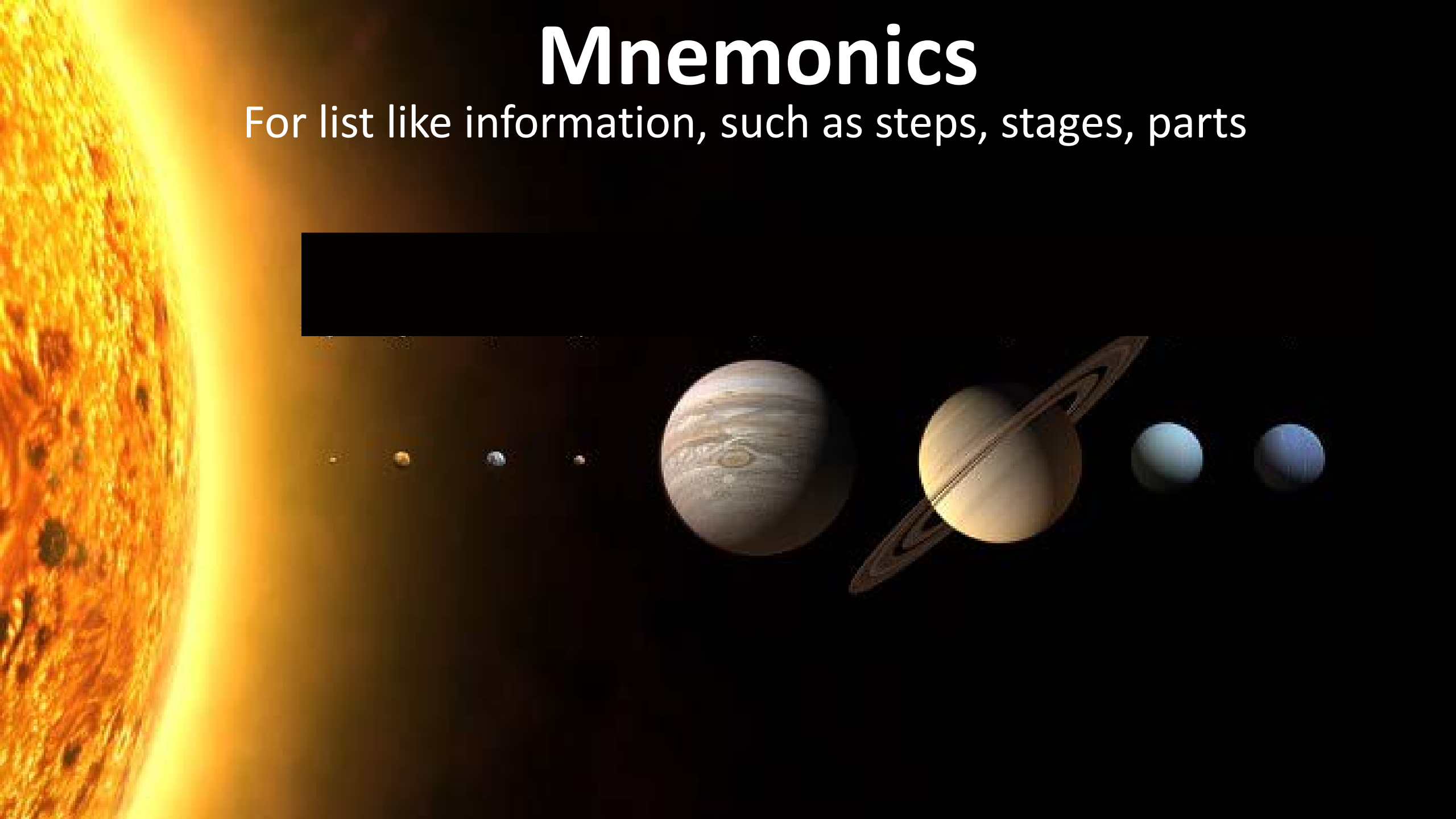
<https://revisionworld.com/gcse-revision/gcse-exam-past-papers>

# Flashcards

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

# Mnemonics

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





Biology

◀ Exam Board

AQA

◀ Back

Subjects / Exam Boards / Topics

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Something missing?

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All Content ▾

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

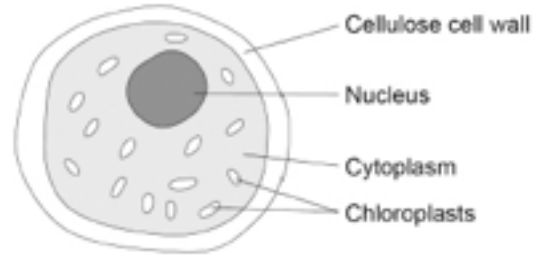
☒

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 proteins are made
	Where glucose is made
	Where photosynthesis takes place

(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

