

Cell Structures

Specialised Cells & Functions

Red blood cell	The role of it is to carry oxygen
Sperm cell	The role of it is to carry genetic information
Egg cell	The role of it is to carry genetic information
Palisade cell	The role of it is to carry out photosynthesis

Specialised cells and their functions		Draw a cell	Label and describe	Key (colour)
<p>Red blood cell</p> <p>Red blood cells are specialised to carry oxygen. They are biconcave discs, which increases their surface area to volume ratio. This allows them to absorb oxygen efficiently from the lungs and transport it to the rest of the body.</p>		Diagram		
		Diagram		
		Diagram		
		Diagram		
<p>Sperm cell</p> <p>Sperm cells are specialised to carry genetic information. They are small, oval-shaped cells with a long tail (flagellum) that allows them to swim towards the egg cell.</p>		Diagram		
		Diagram		
		Diagram		
		Diagram		
<p>Egg cell</p> <p>Egg cells are specialised to carry genetic information. They are large, spherical cells with a nucleus and various organelles.</p>		Diagram		
		Diagram		
		Diagram		
		Diagram		
<p>Palisade cell</p> <p>Palisade cells are specialised to carry out photosynthesis. They are elongated cells with many chloroplasts, which contain the green pigment chlorophyll that absorbs light energy.</p>		Diagram		
		Diagram		
		Diagram		
		Diagram		

Try and complete the blank knowledge organiser from memory.
Check against the original and write in anything you missed (using a different colour).
Repeat! You will need lots of copies of the blank one!

Microscopy Techniques

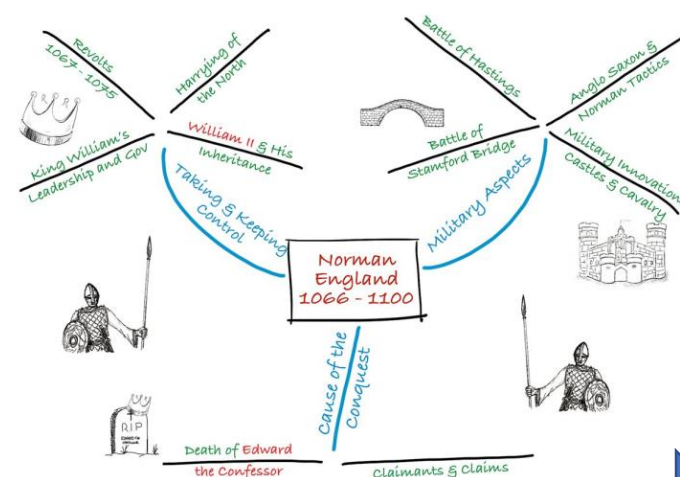
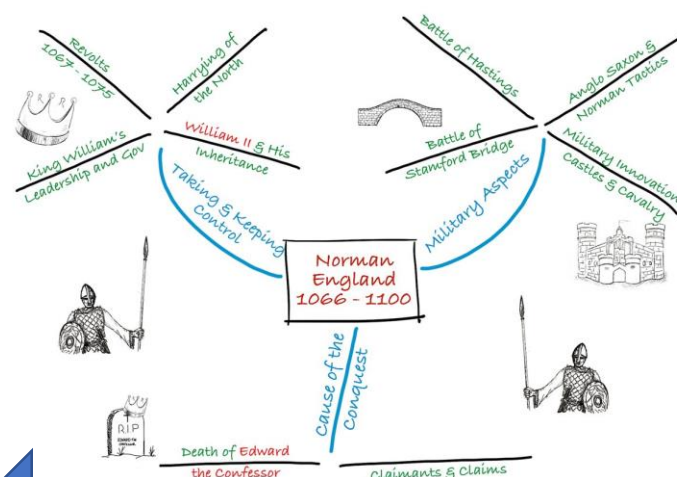
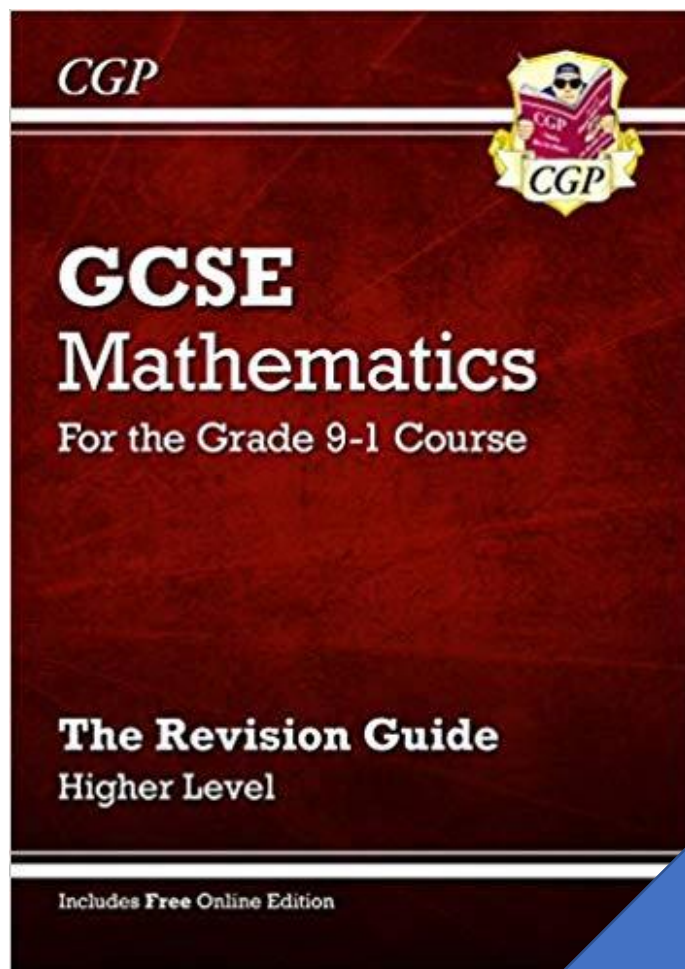
Light Microscope	Used to observe small structures that are visible to the naked eye.	Resolution	Low resolution (approx. 200nm)
Electron Microscope	Used to observe very small structures that are not visible to the naked eye.	Resolution	High resolution (approx. 0.05nm)

Microscopy Techniques		Draw a cell	Label and describe	Key (colour)
<p>Light Microscope</p> <p>Used to observe small structures that are visible to the naked eye. It consists of an objective lens and an eyepiece lens. The specimen is placed on a slide and covered with a cover slip. Light is shone through the specimen and the resulting image is viewed through the eyepiece.</p>		Diagram		
		Diagram		
		Diagram		
		Diagram		
<p>Electron Microscope</p> <p>Used to observe very small structures that are not visible to the naked eye. It consists of an electron gun, a condenser lens, and a series of objective lenses. The specimen is placed on a slide and covered with a cover slip. A beam of electrons is shone through the specimen and the resulting image is viewed through the eyepiece.</p>		Diagram		
		Diagram		
		Diagram		
		Diagram		


Name all the parts of an animal cell	Why are electron microscopes useful?
Name the part that a plant has that an animal does not	Describe the structure of a plant cell
cytoplasm, nucleus, mitochondria, cell wall, vacuole, chloroplasts.	vacuole, nucleus, chromosomal DNA, plasmid DNA.
Why are light microscopes useful?	What is a gene?

They allow us to see even smaller things such as bacteria in more detail than a light microscope can as they have a much higher magnification.	Cell membrane, cytoplasm, nucleus, mitochondria.
It is surrounded by a cell wall with a cell membrane inside it; they have no nucleus, just a circular chromosome containing their main DNA and	Cell wall, chloroplasts.
the cell, plasmid DNA. Contains extra genetic material, e.g. genes for antibiotic resistance.	where respiration takes place. Cell wall: supports the cell and keeps the cell rigid. Vacuole: filled with cell sap. Chloroplast: contains chlorophyll and is the site of photosynthesis.
A section of DNA that codes for a specific protein.	They allow us to see things such as cells that are too small to see with the eye.

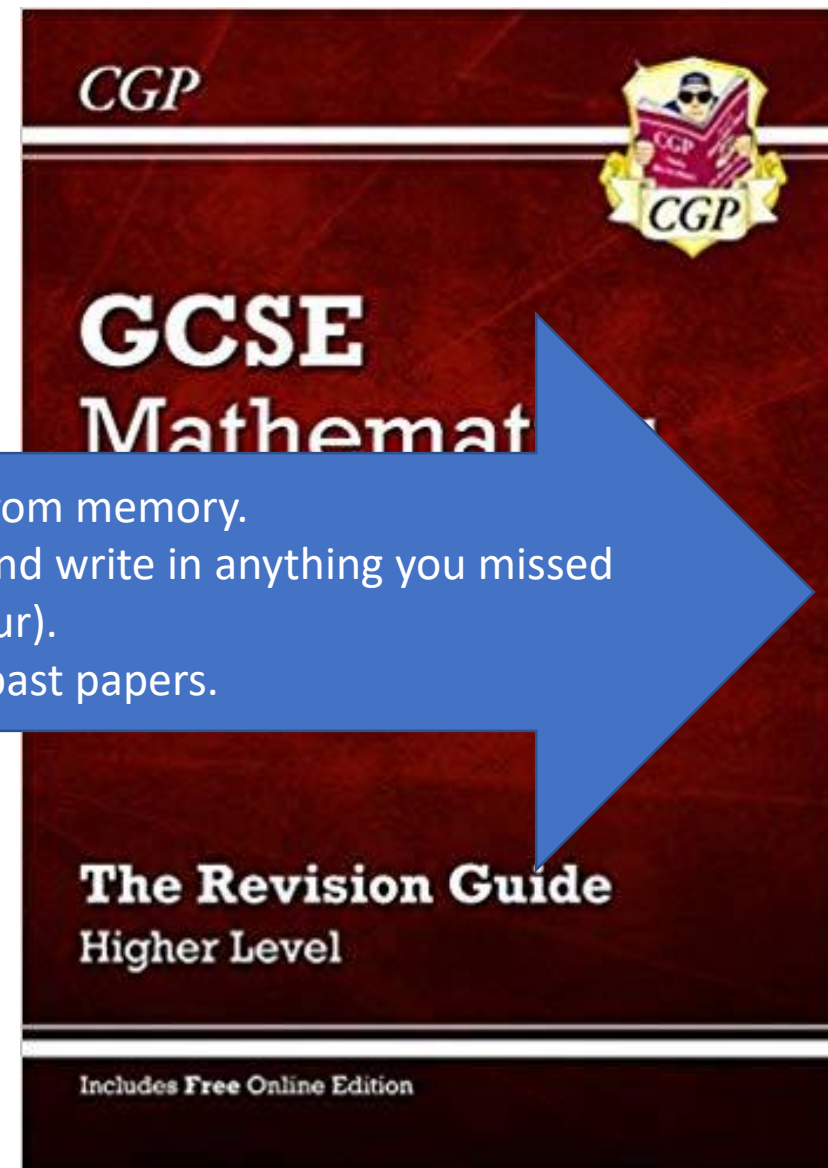
Try and complete the answers from memory.
Check against the back and write in anything you missed (using a different colour).
Repeat! You will need lots of scrap paper, a notebook or a mini-whiteboard.



Create the mind-maps / diagrams using revision guides / class notes, etc.
Try and complete the mind map again from memory.
Check against the original and write in anything you missed (using a different colour).
Repeat! You will need lots of scrap paper, a notebook or a mini-whiteboard.

Surname		Other Names	
Edexcel GCSE		Centre Number	Candidate Number
Mathematics A			
Paper 1 (Non-Calculator)			
Higher Tier			
Practice		Paper Reference	
Time	minutes	MissB/Edex/H1	
			
Teacher		Class	

www.missbsresources.com



Try and complete the answers from memory.
Check against the revision guide or mark scheme and write in anything you missed (using a different colour).
Repeat! You will need lots of past papers.

4 Methods of Retrieval Practice

@impactnotes

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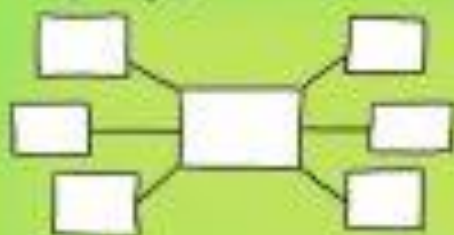
Before you start put away all your books & classroom materials.

Retrieval Practice Examples

- * Exit Tickets
- * Starter quizzes
- * Multiple choice quizzes
- * Short answer tests
- * Free write
- * Think, pair, share
- * Ranking & sorting
- * Challenge grids

BRAIN DUMP

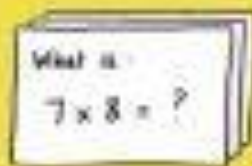
Write, draw a picture, create a mind-map on everything you know about a topic.



Give yourself a time limit say 3 minutes then have a look at your books & add a few things you forgot.

FLASHCARDS

Create your own flashcards, question on one side answer on the other. Can you make links between the cards?



You need to repeat the Q&A process for flashcards you fail on more frequently & less frequently for those you answer correctly.

QUIZZING

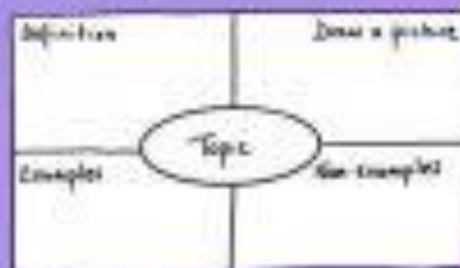
Create practice questions on a topic. Swap your questions with a partner & answer.

Question - What is a metaphor?

- ☐ A comparison using 'like, as, than'.
- ☐ A comparison where one thing is another.
- ☐ A comparison with a human attribute.

KNOWLEDGE ORGANISERS

Complete a knowledge organiser template for key information about a topic.



You can use knowledge organisers to learn new words & make links between subjects or ideas.

After you have retrieved as much as you can go back to your books & check what you've missed. Next time focus on that missing information.



LEARNINGSOCIETIES.ORG

LEARN TO STUDY USING ... Retrieval Practice

PRACTICE BRINGING INFORMATION TO MIND



HOW TO DO IT

Put away your class materials, and write or sketch everything you know. Be as thorough as possible. Then, check your class materials for accuracy and important points you missed.



Take as many practice tests as you can get your hands on. If you don't have ready-made tests, try making your own and trading with a friend who has done the same.



You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.



HOLD ON!



Retrieval practice works best when you go back to check your class materials for accuracy afterward.



Retrieval is hard! If you're struggling, identify the things you've missed from your class materials, and work your way up to recalling it on your own with the class materials closed.



Don't only recall words and definitions. Make sure to recall main ideas, how things are related or different from one another, and new examples.

RESEARCH

Read more about
retrieval practice
as a study strategy

Roodiger, H. L., Putnam, A. L., & Smith, M. A. (2011). Ten benefits of testing and their applications to educational practice. In J. Mestre & B. Ross (Eds.), *Psychology of learning and motivation: Cognition in education*, (pp. 1-36). Oxford: Elsevier.