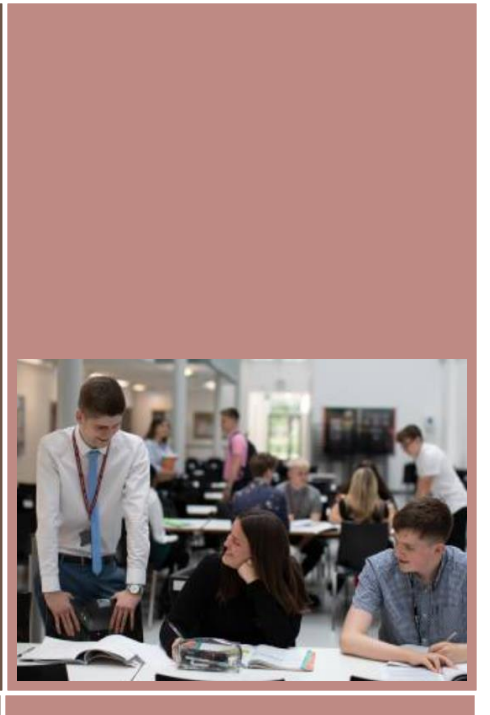
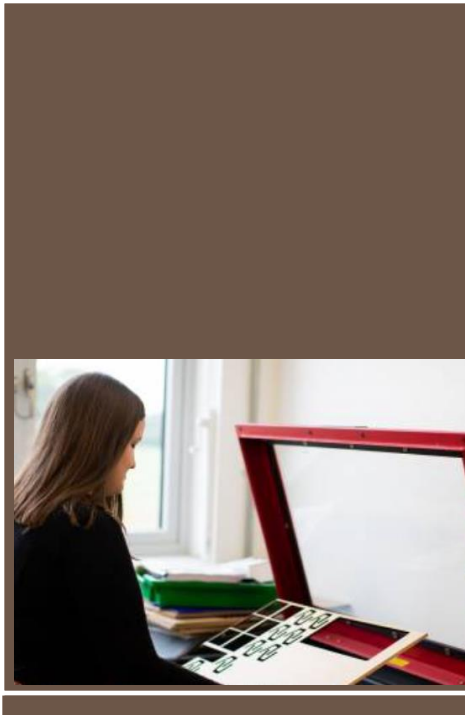
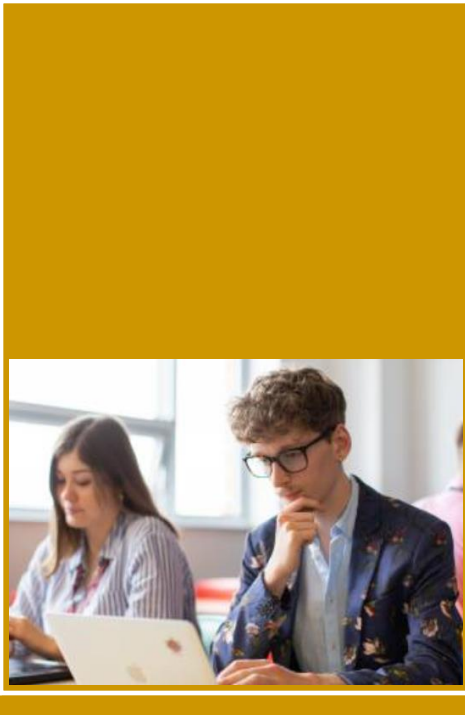


SIXTH FORM REVISION

ADVICE AND GUIDANCE FOR A LEVEL STUDENTS





SIXTH FORM REVISION - INTRODUCTION

There is a huge amount of research that has been carried out into the importance of revision. Essentially, revising reinforces your knowledge and understanding of the key concepts, methodologies and facts that you will be tested on in the exam and can also boost your confidence and reduce anxiety as you move towards the exam period.

“
Successful revision is about getting yourself organised, starting as early as possible, building some momentum and ensuring that the time you put in is as effective and efficient as possible.

”

THE STAGES OF EFFECTIVE REVISION

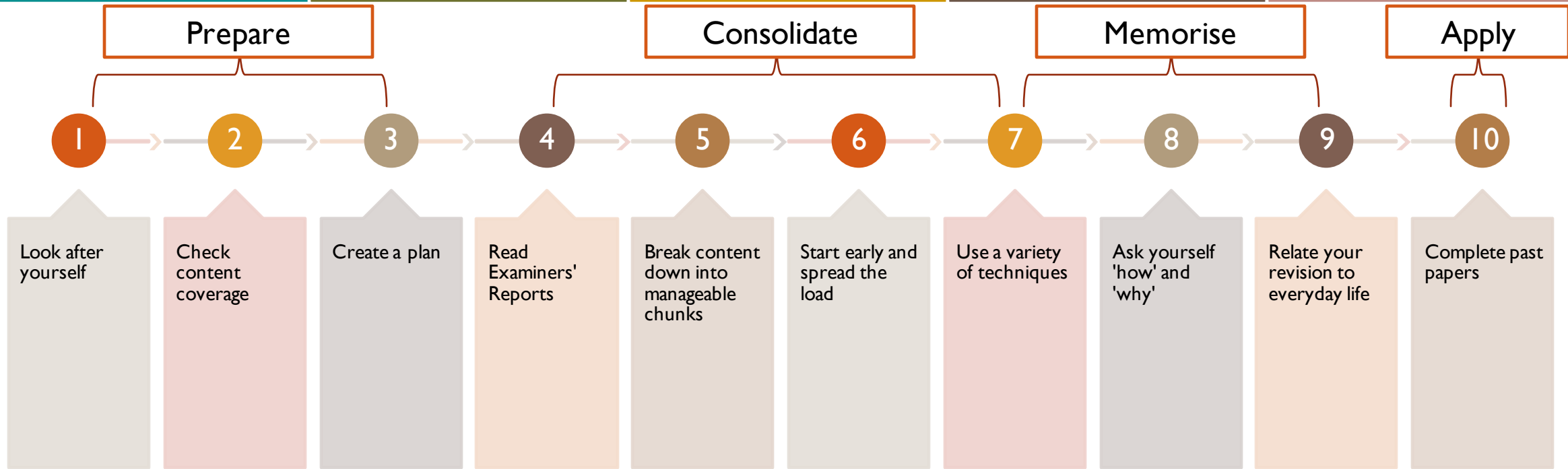
Effective revision can be broken down into 4 key elements:

1. Prepare – page 7
2. Consolidate – page 23
3. Memorise – page 43
4. Apply – page 47

This booklet contains information about each of these



TOP TEN TIPS – BASED ON SCIENTIFIC RESEARCH



- These are the Top Ten Tips for effective revision based on extensive scientific research
- In-line with whole school policy, the sixth form focus on the concepts of 'prepare, consolidate, memorise and apply'



TOP TEN TIPS

- Using the 'Reflections' sheet and thinking about the Top Ten Tips and revision you have undertaken in the past:
 - Reflect on revision techniques that have worked well for you in the past
 - Reflect on things that you could have done better
 - Set yourself some targets for improvement



Reflections:

Use the spaces below to reflect on how well you have used revision in the past and set some targets for improvement.

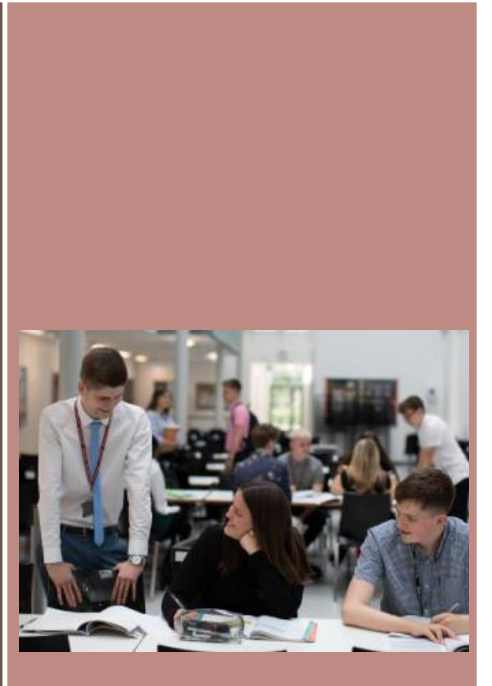
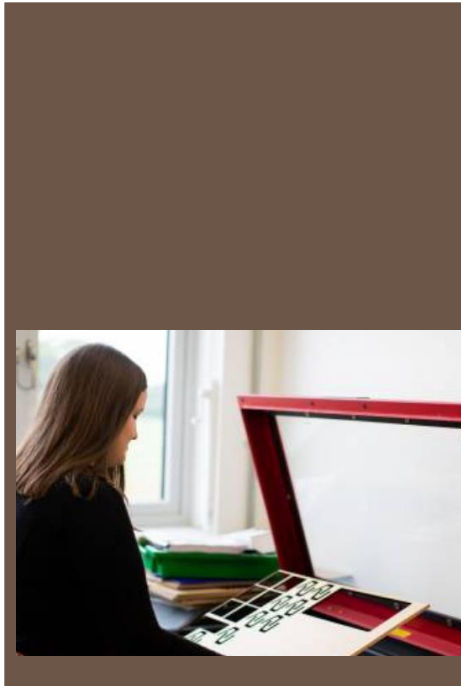
Things that have worked well

Things I could have done better

Targets for improvement

PREPARE

LOOK AFTER YOURSELF, CHECK CONTENT AND CREATE A PLAN






TOP A LEVEL REVISION WEBSITES

- Get Revising <https://getrevising.co.uk/>
- Seneca <https://senecalearning.com/en-GB/>
- Quizlet <https://quizlet.com/gb>
- Physics and Maths Tutor (also does Chemistry, Biology, Psychology, Geography, Economics, Computer Science and English) <https://www.physicsandmathstutor.com/>
- OpenLearn <https://www.open.edu/openlearn/>

MASLOW'S HIERARCHY OF NEEDS

- According to Abraham Maslow's Hierarchy of Needs (1943), we cannot achieve our best ('self-actualization') without fulfilling the earlier stages of physiological and psychological needs.





“
The implications of this theory are that we should pay attention to
looking after ourselves, including our most basic needs, if we can hope to
do the best in our revision and examinations.
”

MASLOW'S THEORY: IMPLICATIONS



SLEEP

- Sleep studies have suggested that getting a good night's sleep has huge benefits to the mental processes of learning, memory retention and recall.
- You are recommended to maintain a regular sleep pattern (the time you go to bed and the time you wake up), to try and get between 8 and 10 hours sleep per night and to avoid alcohol, caffeine, fatty or sugary foods and electronic devices before going to bed



DIET AND HYDRATION

- Research suggests that students learn better when they are well-nourished. Like sleep, a healthy and balanced diet can improve memory, energy and performance.
- Optimal brain function relies on keeping the brain hydrated. This means drinking lots of water.
- You are recommended to have three meals a day (don't skip breakfast) and to eat fresh fruit and vegetables, protein (eggs, fish, nuts).
- 18 year-olds are recommended to drink up to 2.5 litres of water per day.



WORK COMMITMENTS

- We understand how important it is to maintain paid employment, but you also need to make sure you are giving yourself enough time to study (and rest).
- Consider reducing shifts or ending jobs as you build up to the final examination period.

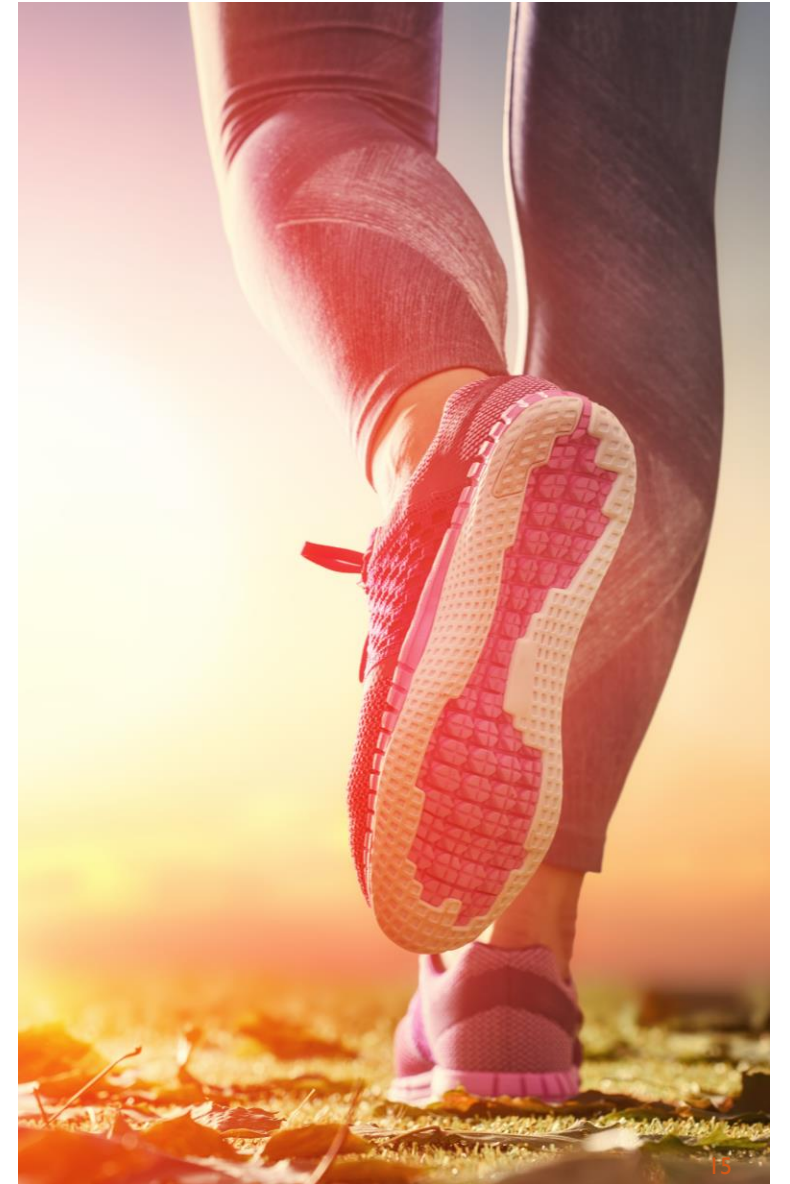


FRIENDS AND FAMILY

- While you are likely to be busy and anxious at times over the coming months, it is crucially important to maintain the sense of love and belonging that comes from the relationships you have with friends and family.
- Talk about your studies, how you're getting on and how you are feeling to those that you trust and try and give time to listen to others who are going through the same experience.

EXERCISE AND BREAKS

- Give yourself lots of breaks while you are studying – even a 5 minute break for every 30 minutes of study can help maintain focus and well-being.
- Take yourself for a walk to get some fresh air but try and avoid short breaks that can become an unhelpful distraction (social media and video games will both swallow your time).
- Physical activity is linked to the release of protein that can boost memory and cognitive skills.
- Try and build exercise into your study plans.



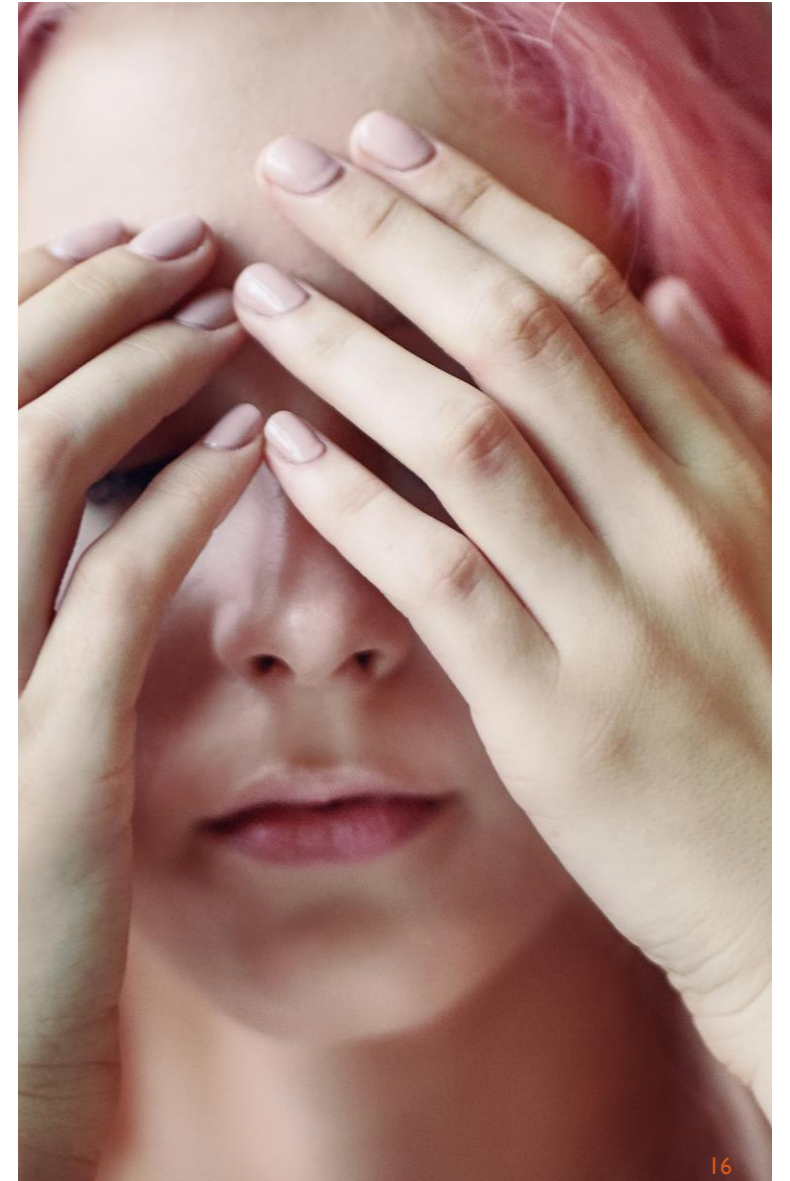
PREPARE

ASK FOR HELP

Wellbeing Request



- If you are feeling overwhelmed, please make sure you talk to someone in the sixth form team. We are here to help.



ACCESS EXAM BOARD INFORMATION

- The starting point for any kind of revision is to know the content that you will be examined on (the specification), an understanding of how you will be assessed (past papers) and advice about how previous students have successfully answered exam questions (Examiners' Reports).



Subject	Exam Board	Website
Art	Edexcel	Pearson Edexcel A Levels
Biology	OCR	OCR A Levels
Business Studies	AQA	AQA A Levels
Chemistry	OCR	OCR A Levels
Drama	AQA	AQA A Levels
Economics	Edexcel A	Pearson Edexcel A Levels
English Literature	AQA	AQA A Levels
French	Edexcel	Pearson Edexcel A Levels
Geography	Edexcel	Pearson Edexcel A Levels
History	Edexcel	Pearson Edexcel A Levels

KNOW YOUR
EXAM BOARD

Subject	Exam Board	Website
Mathematics and Further Mathematics	Edexcel	Pearson Edexcel A Levels
Music	Eduqas	Eduqas A Levels
Photography	Edexcel	Pearson Edexcel A Levels
Physics	OCR	OCR A Levels
Physical Education	OCR	OCR A Levels
Politics	Edexcel	Pearson Edexcel A Levels
Psychology	AQA	AQA A Levels
Religious Studies (Philosophy & Ethics)	OCR	OCR A Levels
Sociology	AQA	AQA A Levels
Spanish	Edexcel	Pearson Edexcel A Levels
Design & Technology (Product Design)	Edexcel	Pearson Edexcel A Levels
Textiles	AQA	AQA A Levels

**KNOW YOUR
EXAM BOARD**

CHECK THE SPECIFICATION

- Make sure you have a breakdown of the units you will be assessed on
- Most websites will have a specification summary document



AS AND A-LEVEL PSYCHOLOGY

AS (7181)
A-level (7182)

Specifications

For teaching from September 2015 onwards
For AS exams in May/June 2016 onwards
For A-level exams in May/June 2017 onwards

Version 1.1 24 June 2019



CREATE A PLAN

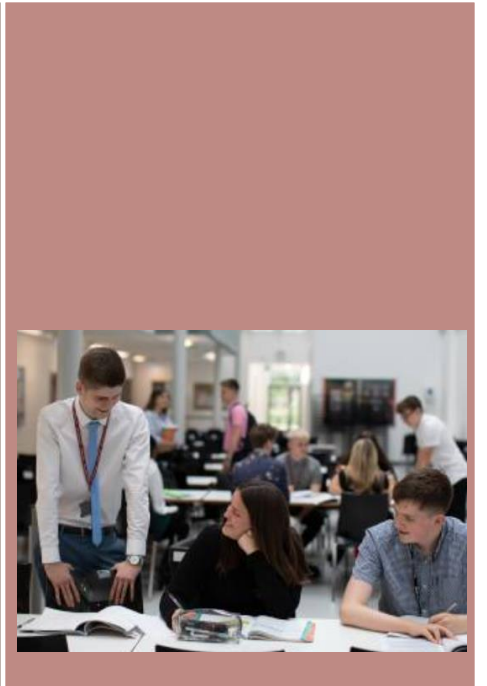
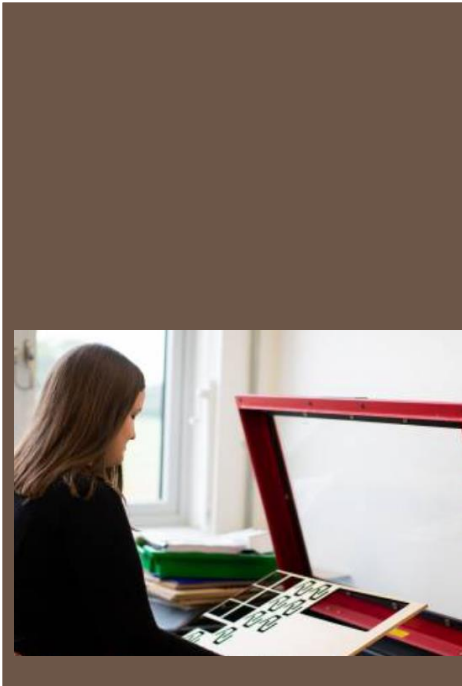


- Creating a revision plan is a crucial stage in your preparations
- You can use an online platform such as Get Revising <https://getrevising.co.uk/planner>
- Or, use the next page as a template

	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Monday													
Tuesday													
Wednesday													
Thursday													
Friday													
Saturday													
Sunday													

CONSOLIDATE

READ EXAMINERS' REPORTS, BREAK CONTENT DOWN, SPREAD THE LOAD AND USE A VARIETY OF TECHNIQUES



EXAMINERS' REPORTS

- For every assessment cycle, examiners will produce a report about the things that students did well and common mistakes and misconceptions that were made. Although these are written mainly for teachers and subject leaders, they will give you a good idea about how your assessments will be marked.

A-LEVEL SOCIOLOGY

7192/1 Education with Theory and Methods
Report on the Examination

7192
June 2018

Version: 1.0



CHUNKING

- Chunking is the process of breaking down larger amounts of information into smaller units (chunks) and organising the information by finding patterns or similarities.



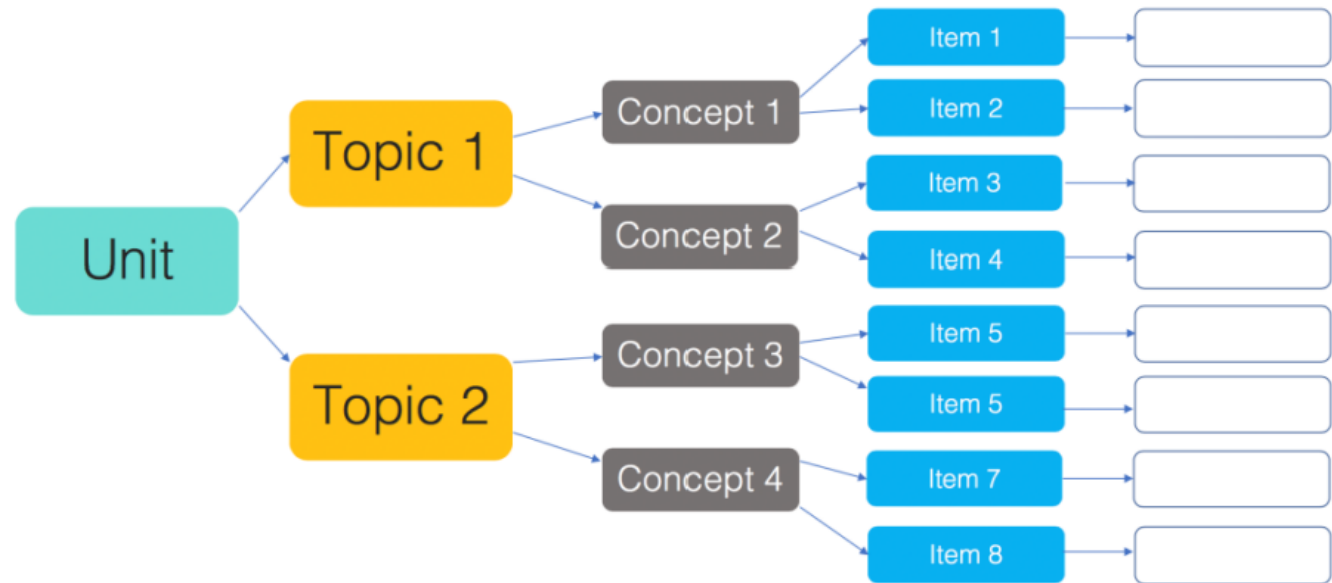
CHUNKING

- Chunking is an effective way of helping your memory as your brain can struggle to remember a lot of information at once and has a better chance of recalling information that has been logically organised and is linked to other knowledge (semantic encoding).
- The strengthening of this knowledge and understanding reflects the strengthening of connections between neurons and synapses in your brain.

CHUNKING

- By breaking down each unit into topics, concepts and items you are creating layers of learning that can inform your revision

An example of Chunking



In this example for A Level Psychology, you could create revision notes on the whole unit for **paper I** for the big picture, then generate more detail as you move through the topics, concepts and items that make up the syllabus. This example shows how the topic of **social influence** is broken down into concepts and then how the concept of **types of conformity** is broken down into items

Unit

Paper I

Topics

Social Influence

Memory

Attachment

Psychopathology

Concepts

Types of conformity

Asch and Zimbardo

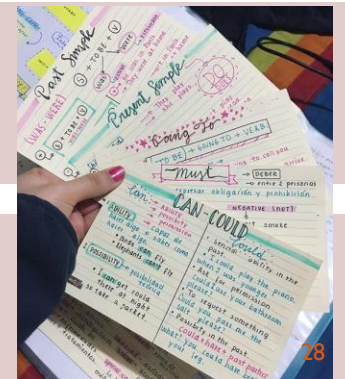
Milgram and obedience

Items

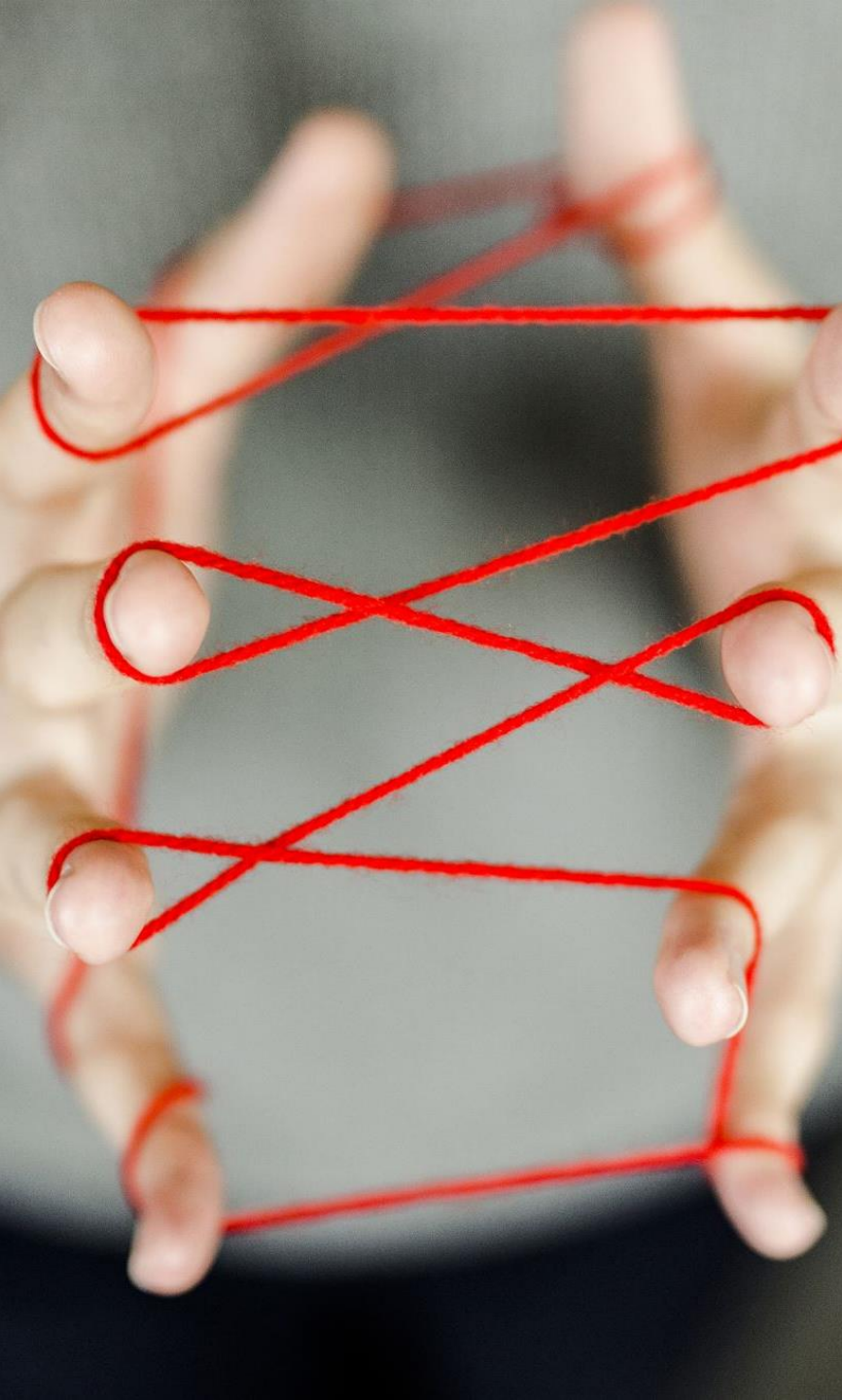
Internalisation

Identification

Compliance



CONSOLIDATE



DISTRIBUTED PRACTICE

- These connections are strengthened even further through regular practice over an extended period of time.
- This is known as **distributed practice** and encourages you to start revision as early as possible and spread the load over several months rather than trying to cram at the last minute.



DELIBERATE PRACTICE

- Once you've identified the chunks of information and dedicated the time to revising, you need to focus on the deliberate practice of effective revision. We will look at revision techniques in a future session, but this could include:
 - Creating mindmaps on a specific unit, topic and concept to reflect the different layers of learning
 - Answering past paper questions on specific topics and concepts
 - Creating flashcards on specific topics and concepts



REVISION TECHNIQUES

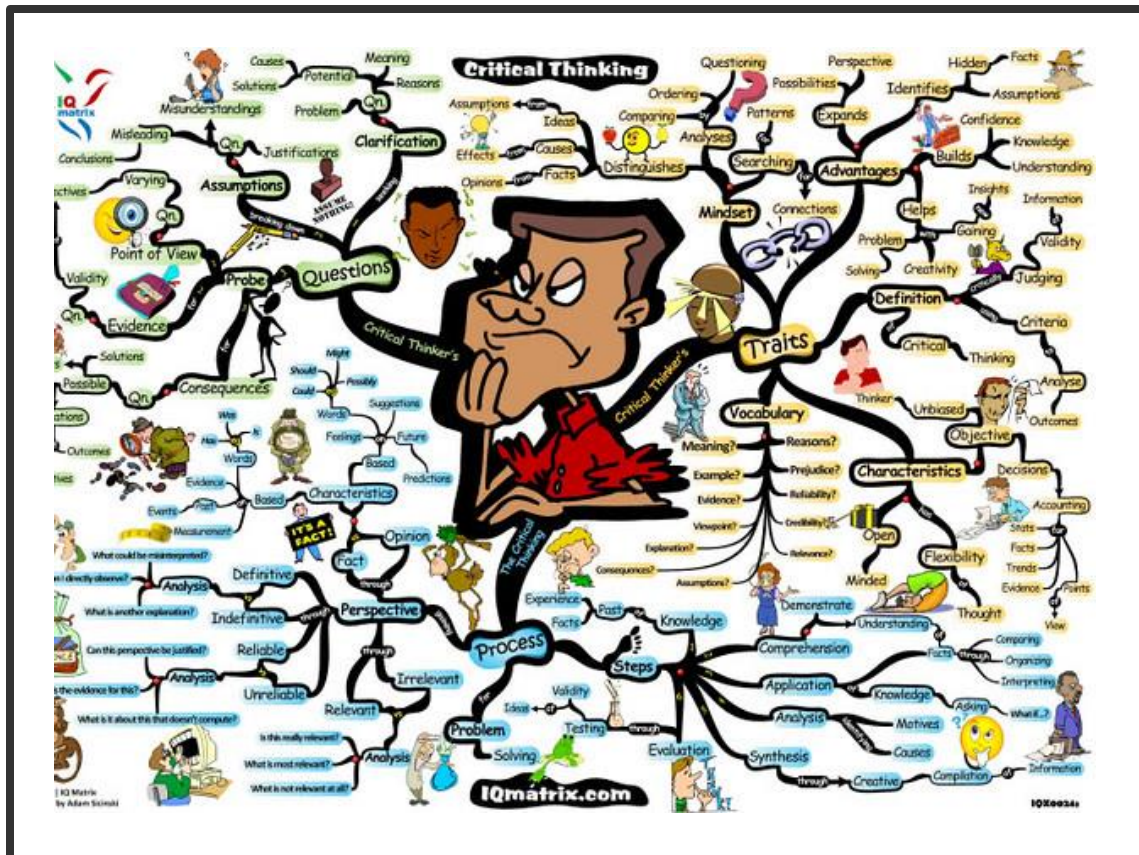
- Lots of research has been carried out into which revision techniques work the best
- Some techniques will work better for different people
- Try them out...

POMODORO TECHNIQUE

- Named after the tomato timer used by Francesco Cirillo who devised the technique in the 1980s
- Choose a task
- Revise for 25 minutes – set a timer <https://pomofocus.io/>
- Have a short 5 minute break
- Repeat 3 more times before having a longer break



MINDMAPS



- Mindmaps are diagrams which consist of one central starting point which you then add several different branches to
- Each branch relates to a different idea, and you keep expanding until you've added all the information you need to
- Mindmaps allow you to engage with content using colour and imagery and can reflect the different layers of content that you identified by chunking the specification down into units, topics, concepts etc.

FLASHCARDS

- On one side of a flashcard you write a key term/concept and then on the other side the definition or explanation
- Use the Pomodoro Technique to give yourself 25 minutes to study the card, pause for 5 minutes, then (using Blurting) recall the information.

Enzymes - Biological Catalysts

CATALYSTS: speed up metabolic reactions in organisms - remain unchanged

STRUCTURE: genes contain coded instructions to make enzymes. a gene mutation changing amino acid sequence will change tertiary structure of the enzyme. stop function. enzymes also catalyse formation of structural components in an organism e.g collagen

ACTIVE SITE: complementary to substrate (can only catalyse reaction involving specific molecule) - Bonds of tertiary structure altered by pH, Temp

INTRACELLULAR: Metabolic pathway: consecutive reactions. 1 step catalysed by an enzyme. Plants + animals: no access to substrates, therefore products are known as metabolites. Metabolic pathway: by small amounts of energy. Mitochondria: produces energy for cells. Photosynthesis: produces oxygen for plants. Chloroplasts: produce oxygen for plants. Photosynthesis: produces oxygen for plants. Chloroplasts: produce oxygen for plants.

EXTRACELLULAR: Enzymes secreted from cells e.g hydrolytic enzymes, released from large animal, live separate. A temporary canal: digestive system. Release enzymes into gut lumen to digest food. Proteins: hydrolysed. Amylase: released from salivary glands to digest starch into maltose. pH 7.5-8.5. Synthesis: made in pancreas, digested in small intestine.

Factors

Enzymes only work with cofactors - small non-protein molecules associated. Metal ions by covalent bond, are called prosthetic groups. Non permanent ions are also cofactors. METAL IONS: e.g calcium, magnesium. It contains a permanent zinc ion bound to active site - found in red cells and catalyses $SO_2 + H_2O \rightarrow$ catalase, broken to protons. Protonate ions. It's a reversible reaction. It enables CO_2 to be carried by blood to lungs.

Enzyme + Substrate: temporarily bind from enzyme in a catalysed reaction. Some ions partially bind to enzyme or substrate increasing rate of the catalysed reaction.

Substrate: binds to substrate to form correct shape for active site. Some change substrate's activities, charge distribution on surface, making bonds to form.

Enzyme only works with chloride ions present.

Enzymes: bind to active site at same time substrate binds. Chemically changing a reaction so are recycled into original state. e.g. H₂O₂ if deficient + vitamin B12 from; (B12, cobalamin) cofactors, pemis (vitamin B12), (vitamin B12, cobalamin) cofactors, pemis (vitamin B12), (vitamin B12, cobalamin) cofactors, pemis (vitamin B12).

Mechanism of Enzyme Action

KEY: tertiary shape complementary to substrate.

1. Enzyme + substrate form enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

2. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

3. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

4. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

5. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

6. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

7. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

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9. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

10. Enzyme-substrate complex. Enzyme holds substrate by temporary bonds. Enzyme-substrate complex. Product released. Enzyme + product. Enzyme ready to catalyse another reaction.

Effect of Temperature on Enzyme Activity

KINETIC ENERGY: extra energy in the form of heat, causes molecules to move faster, increasing the force of the collisions and rate of collisions. Both molecules (enzyme and substrate) gain kinetic energy increasing the rate per second of collisions, formation of enzyme-substrate complex.

VIBRATING MOLECULES: vibrating breaks weak tertiary structure bonds e.g H-bonds. Changes the enzyme active site shape. More heat, more (reversible) changes shape. No longer complementary. Enzyme is denatured - the reaction can no longer proceed at all.

OPTIMUM TEMPERATURE: Maximum rate of reaction.

Psychrotrophic bacteria: cold conditions enzymes work at low temp e.g red algae.

Thermophilic bacteria: hot conditions enzymes work at high temp e.g hot polymerase.

Graph: Rate of reaction vs Temperature. Shows optimum temperature (fastest rate of reaction) and denatured (no reaction) at high temperatures.

Effect of pH on Enzyme Activity

Buffers: resist pH change e.g those in blood, those in stomach, those in urine.

EFFECT ON BONDS: excess H⁺ ions interfere with hydrogen bonds, changing the shape of the tertiary structure. Amino acid groups in the active site are also affected. Amino acid groups in the active site are also affected. Amino acid groups in the active site are also affected.

DIFFERENT OPTIMUM pH: intracellular may not be pH 7. K⁺ ions maintain low pH in stomach. Enzymes, pepsin, work at low pH. Salivary amylase, trypsin, work at high pH.

Effect of Substrate Concentration

Substrate conc increases → rate increases. More enzyme can form. More product molecules form. Maximum rate is when all active sites are occupied with substrate. No more added can't successfully collide into active site.

Graph: Rate of reaction vs Substrate concentration. Shows a saturation point where the rate levels off.

Experiment: Effect of substrate conc on urease catalysing breaking urea into ammonia. 1) 10ml urea solution + 10ml phosphate buffer (pH 7.5) + 10ml urease solution. 2) 10ml in 30-40°C water bath. 3) 10ml urease solution shake every 5 mins for 10 mins. 4) Use colorimeter to read absorbance of each tube. 5) Record data in a table. 6) Plot graph of absorbance vs time. 7) Range of 10cm³ of 0.1M urea solution + 0.1M phosphate buffer conc urea (0.1M) + 0.1M phosphate buffer conc urea (0.1M).

Enzyme Inhibitors

Competitive Inhibitors: take up the active site temporarily, as their shape is complementary to the active site and they block the substrate from getting in, and slow down for taking longer to reach maximum rate but will reach the same maximum rate.

Non-Competitive Inhibitors: Bind to a different site and change active site shape, denaturing many enzymes so can't reach same maximum rate (can't make enzyme-substrate complex).

Control of Metabolic Sequences

When cells do not need to accumulate too much of the end product of the pathway, the last enzyme in the reaction may attach to a different site in the protein to change the running of the pathway. This is reversible non-competitive inhibition.

Enzyme Inhibition - Poisons & Medical Drugs

POISONS: block inactive enzymes.

Poisonous Cyanide: inhibits aerobic respiration catalase. It's hydrolysed to produce toxic hydrogen cyanide which dissociates into ions which bind to the final enzyme in aerobic respiration stopping earlier steps from running.

Verapamil: contracts acetylcholinesterase (AChE) inhibitor chemical. AChE is important in to break down ACh (acetylcholine) (a neurotransmitter) so it's inhibited. ACh keeps muscle contracted as it's attached to receptors on muscle membrane. Causes paralysis.

MEDICAL DRUGS:

Aspirin: directly acted binds to enzymes in the formation of prostaglandins so the acid binds to it (instead of prostaglandins forming which cause painful nerve sensations).

ATPase Inhibition: cardiac glycosides inhibit sodium potassium pump in membrane of heart muscle cells. Without calcium ions in heart muscle contraction strengthening heart beat.

ACE Inhibitors: inhibit ACE (an enzyme) which increases blood pressure. Lower bp, it's heart failure.

Protease Inhibition: e.g. protease inhibitors. Prevent virus particles replicating by stopping protease. Protease release nucleic acid. Inhibitors prevent HIV by inhibiting DNA making enzymes.

Effect of Enzyme Concentration

INCREASING ENZYME CONCENTRATION: more active sites available. More successful collisions. More enzyme per substrate. More successful collisions.

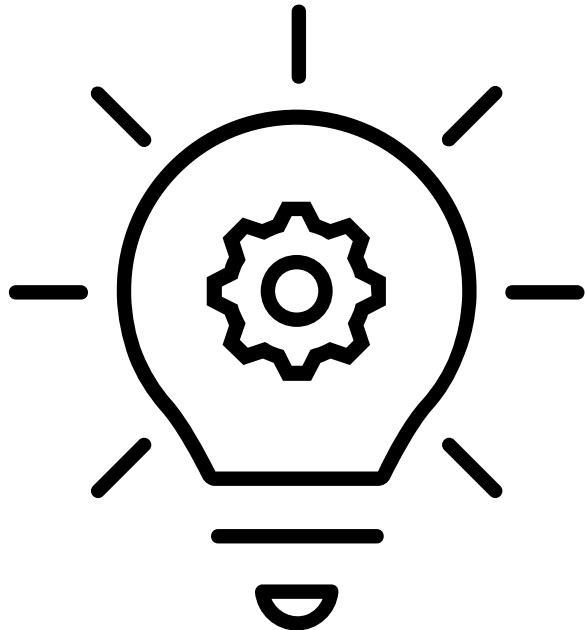
When enzyme conc surpasses substrate conc, no more increased active sites are available. Enzyme and substrate conc become the limiting factor.

Graph: Rate of reaction vs Enzyme concentration. Shows a linear increase in rate until substrate becomes the limiting factor.

Experiment:

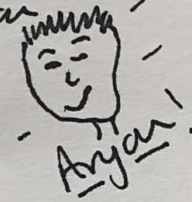
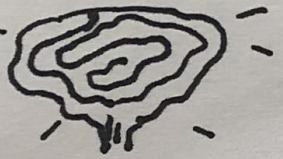
- Use a set conc of urea + make up different conc solutions of urease.
- Add the 2 together and use phenol red as well as the cuvette to identify colour change to show when reactions are done.
- Repeat record data in a table.

DUAL CODING



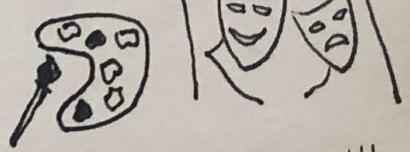
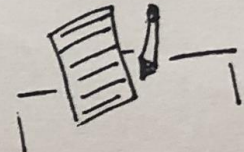
- Combine written and visual information when revising
- We all benefit from seeing information represented in different ways
- Short term memory relies on both visual and acoustic coding
- Use icons, cartoons, symbols and diagrams to help understand key words

indoctrination of the German population.



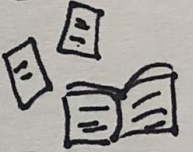
The Gestapo had the power to search bookshops and libraries and sieze any books.

Goebbels.

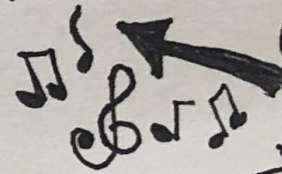
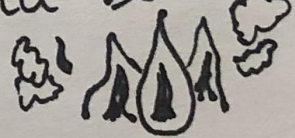


It wasn't just Jewish culture as jazz music was also banned

It was important the Nazi message was spread and shared. To do this everything needed to be censored and controlled.

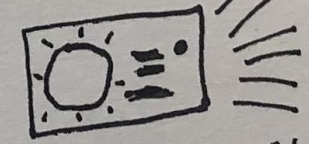
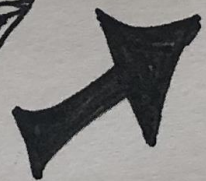
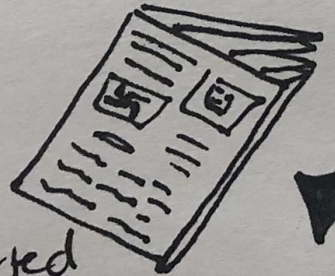


Books or materials deemed inappropriate could be destroyed



Jewish or Communist authors were not allowed to be published or listed.

Newspapers were strictly controlled & only Nazi newspapers (or papers that supported the Nazi regime) were allowed to be published and distributed. Editors were responsible for checking & censoring all content.



Programmes on the radio were also strictly controlled. Radios were made cheap as they were an easy way to spread Nazi messages to homes.



Radios made in Germany could not pick up foreign broadcasts.



EXAMPLE - HISTORY NOTES



BLURTING

- Once you have notes, mindmaps, flashcards etc then you can test yourself on how much information you can recall
- Read notes/mindmaps etc for 25 minutes, have a 5-minute rest, then spend 25 minutes 'blurting' everything you can remember either by writing it down or talking about it.



ChatGPT

TECHNOLOGY

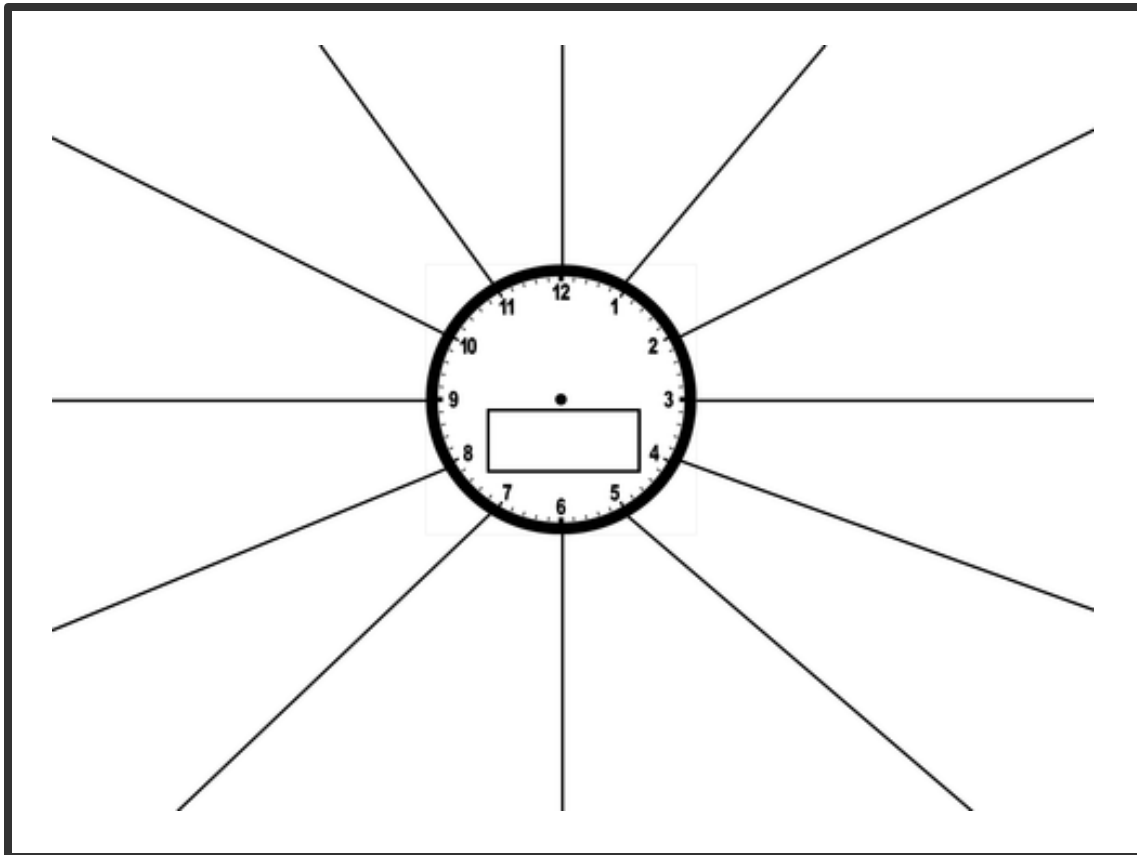
- Many subjects now have a wide range of revision videos on YouTube which many students find useful to over content and pick up on exam techniques
- AI platforms such as ChatGTP can be very useful if, for example, you need a quick summary of a concept to make flashcards with or if you want some questions on content to help frame your revision.

USE A WHITEBOARD

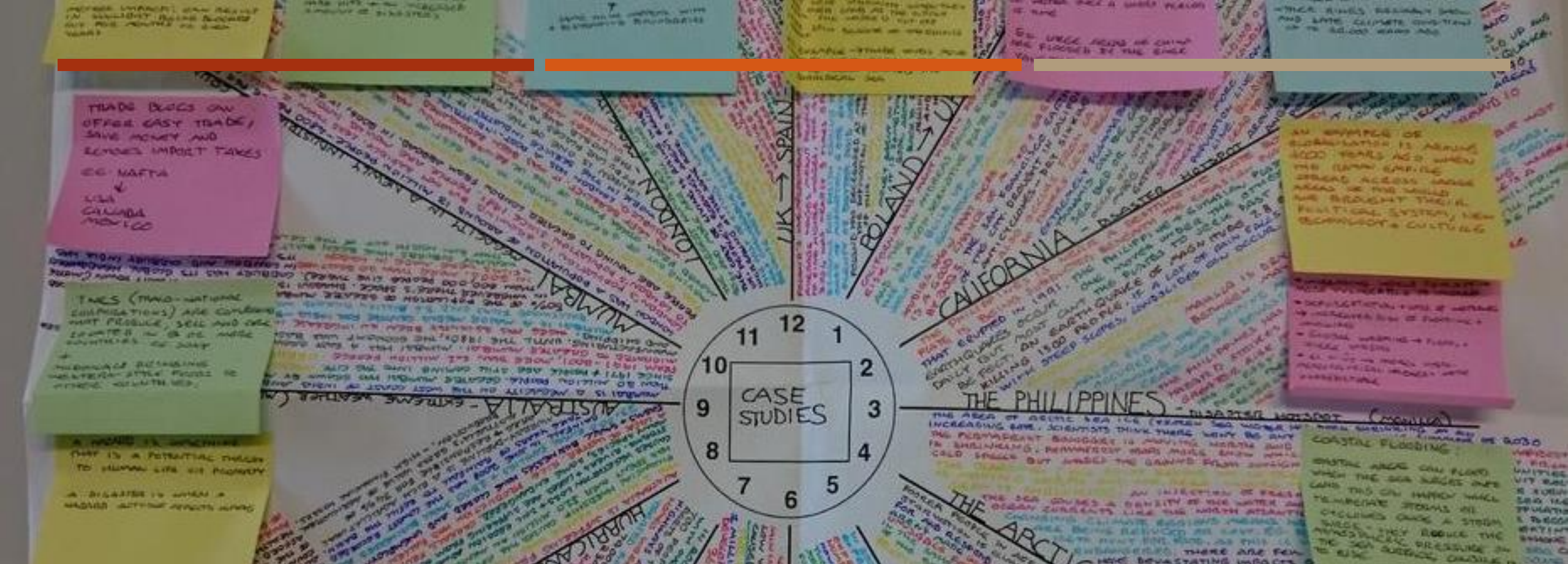
- One of the best ways to learn is to teach
- Buy yourself a whiteboard (lots of different sizes/costs available)
- Choose a topic/practice question and teach it to someone else or nobody in particular



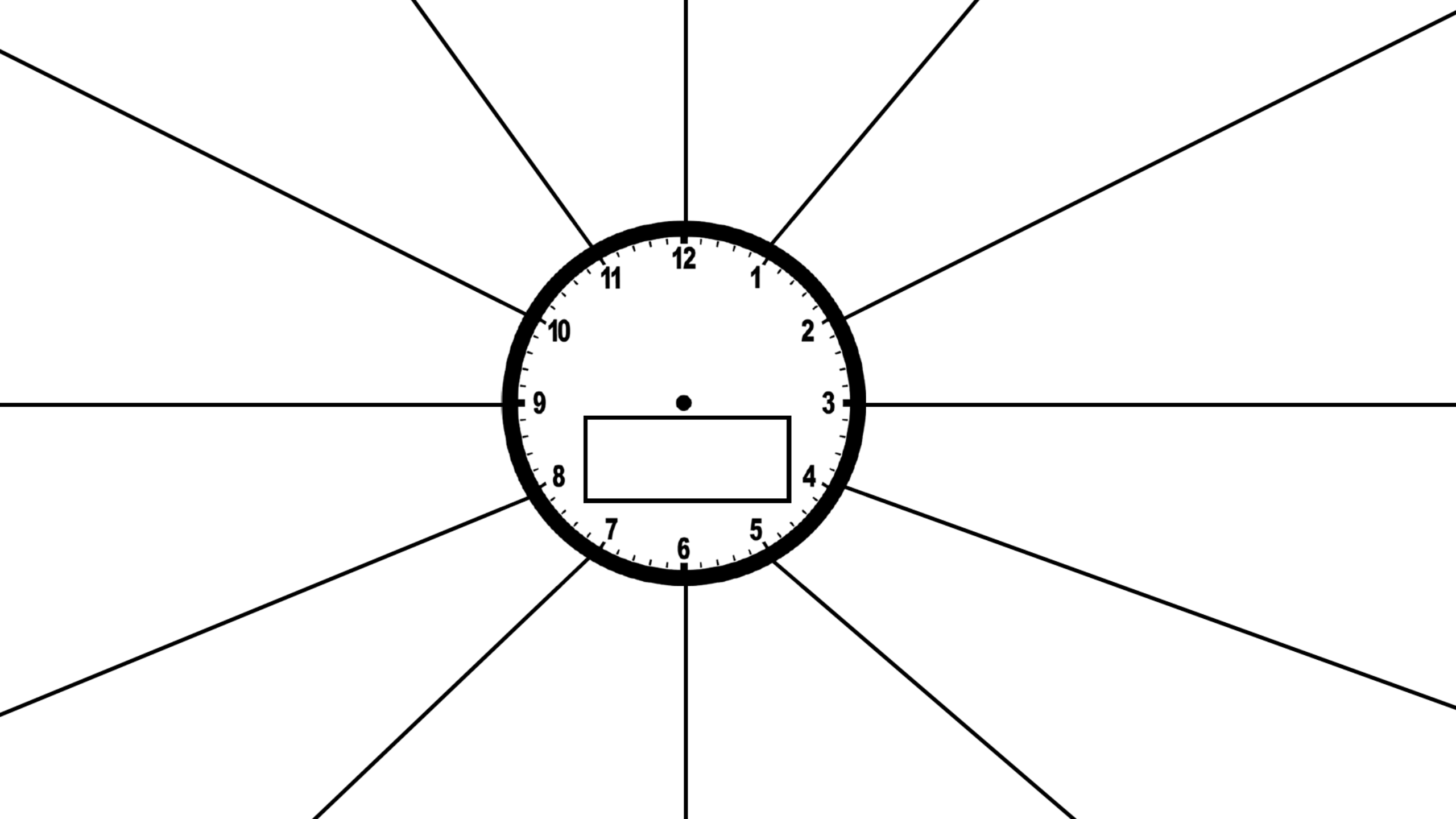
REVISION CLOCK



- Choose a topic area
- Use the Revision Clock template on a sheet of A3 paper
- Break the topic down into 12 sub-categories
- Write brief notes on each sub-category
- Revise each chunk for 5 minutes
- Turn the clock over and recite knowledge
- Move on to the next chunk

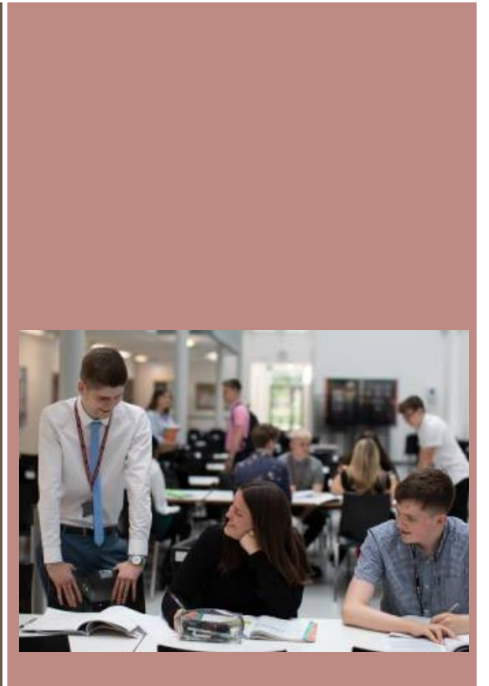
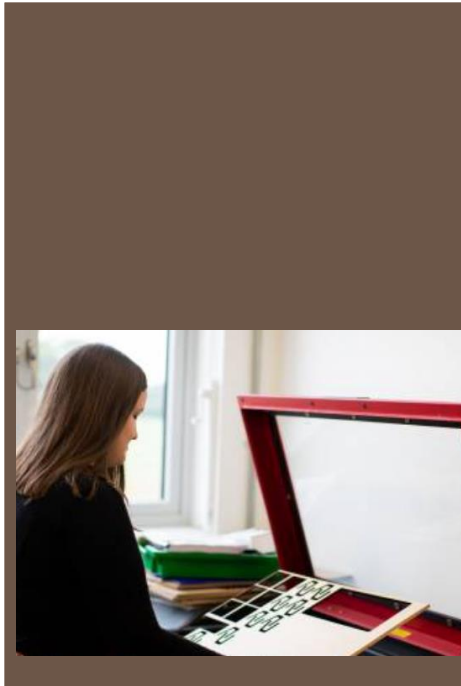


EXAMPLE – GEOGRAPHY CASE STUDIES



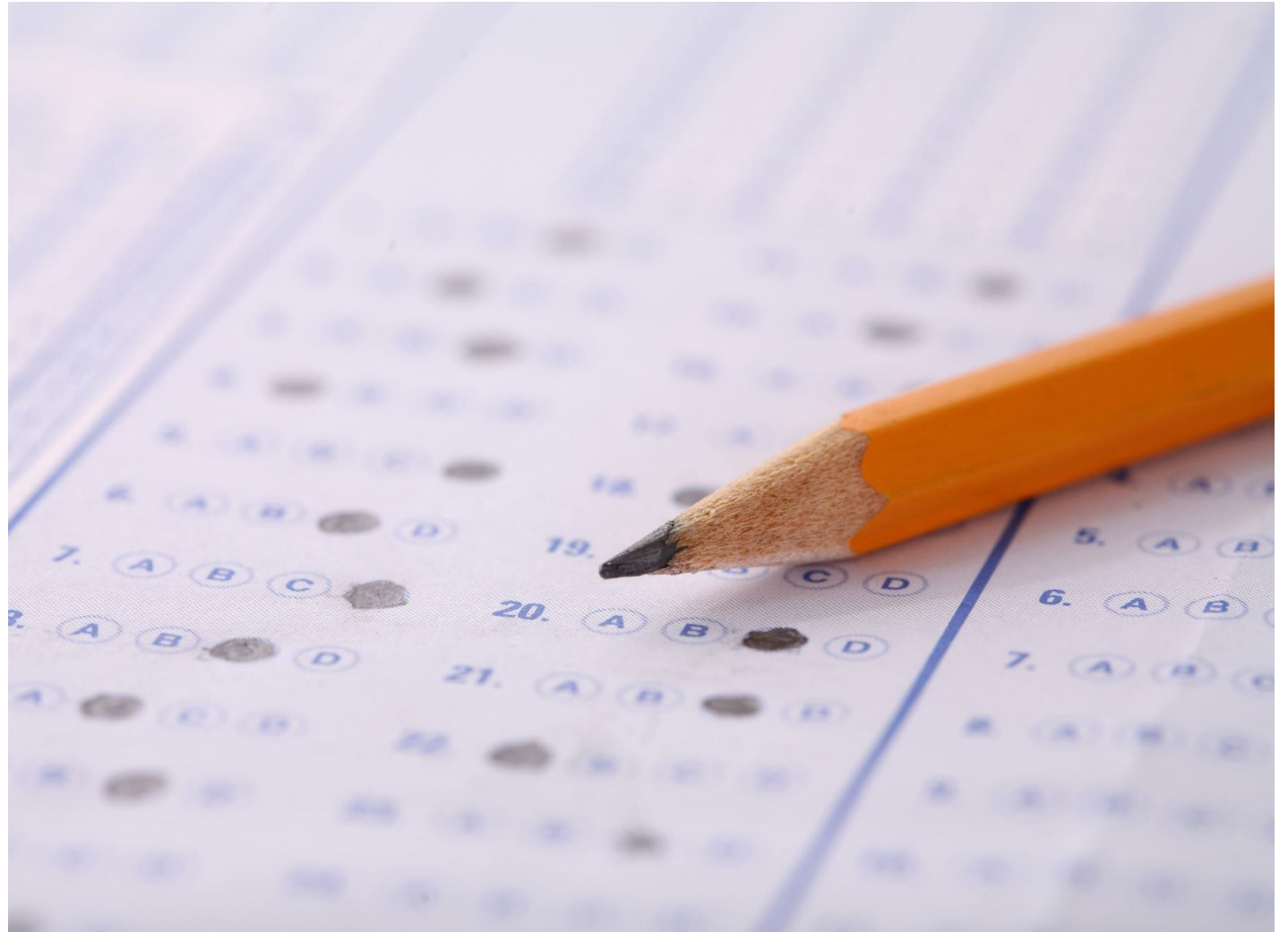
MEMORISE

USE A RANGE OF TECHNIQUES, ASK YOURSELF 'HOW' AND 'WHY' AND RELATE REVISION TO EVERYDAY LIFE



CREATE YOUR OWN QUIZZES

- Choose a topic area
- Open Microsoft Forms, Kahoot!, or any other quiz generating platform
- Write questions with multiple choice answers to help **consolidate** learning
- Use the quiz to help you **memorise** content
- Share quizzes with others in your class



ASK YOURSELF 'HOW' AND 'WHY'

- One of the simplest but best revision techniques you can do is to ask yourself “How?” and “Why?” Both will help you build deeper understanding.
- If you’re not sure how or why something works, look for the answers in your class materials or discuss them with your classmates. Find similarities and differences between related ideas. Describe what’s going on out loud. Write down accurate explanations that you can refer back to.

MEMORISE

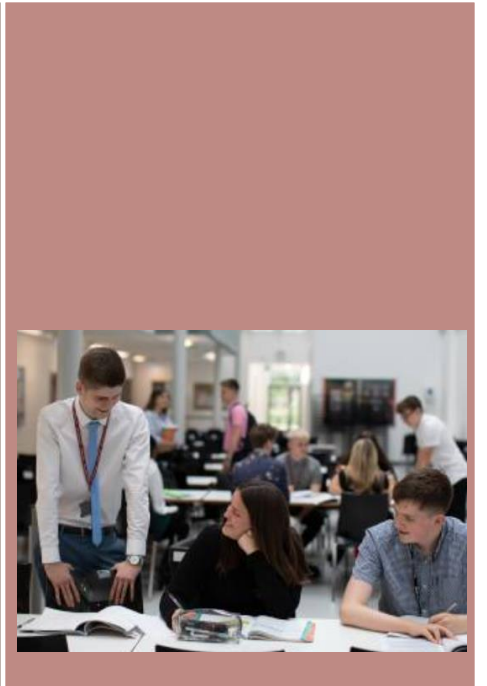
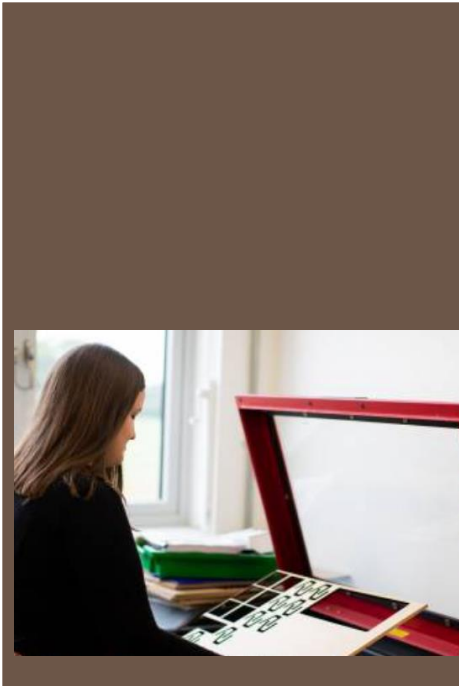


RELATE REVISION TO EVERYDAY LIFE

- To move your knowledge from theory to practice, using real examples in your studies can be one of the best revision techniques to help you memorise information in a way that makes sense to you, for the long-term.
- Abstract ideas are harder to put onto paper and it can be tricky to know whether you truly understand them without a concrete example. There are two main ways to do this:
 - Find concrete case studies - (your teacher may have already provided you with some) and focus on understanding how the theory has been applied - case studies with diagrams are even better
 - Reverse engineer model answers - (you can often find these in mark schemes) to work out how they've been put together, what makes them good and how you would go constructing it yourself.

APPLY

COMPLETE PAST PAPERS



PAST PAPERS

- If you have prepared, consolidated and memorised, you are ready to apply your learning
- Spend some time looking at previous examinations
- Practice as many questions as you can

