

SUPPORTING YOUR CHILD THROUGH THE REVISION ROLLERCOASTER

Insights into success and “quick wins” during KS4



REVISING FOR GCSE EXAMS – MYTH BUSTING

- REVISION RESOURCES ARE ONLY EFFECTIVE IF MADE COMPLETELY FROM SCRATCH
- REVISION IS BEST TO BE COMPLETED ONLY BEFORE ASSESSMENTS – SO INFORMATION IS FRESH IN YOUR MIND
- PAST PAPERS ARE THE BEST WAY TO REVISE FOR EXAMS

WHAT DOES EFFECTIVE REVISION LOOK LIKE?

- Effective revision involves some form of “active engagement” with knowledge and course content
- Students should be actively doing something to recall the knowledge, simply reading flash cards or knowledge banks is not enough

A “Quick Win” to check how effective revision is ...

- Ask your child “*how are you using this resource?*” – they should be able to describe what they are doing with the content, are they writing it down somewhere? Are they answering examination questions written on the resource? If so, how are they verifying their answers?

WHAT IS ALREADY AVAILABLE FOR YOUR CHILD TO ACCESS ... KNOWLEDGE BANKS

- One slide summary of the key information needed on any given topic
- Your child should have access to these for every topic on each of their courses

Use a blank piece of paper to recall as much information as they can from the whole knowledge bank

Perception

Sensation and Perception
Sensation – Information we receive through our senses from the environment. It is the objective feeling of stimuli.
Perception – Subjective interpretation & organisation of the sensory information by the brain – perception is personal to you & based off past experiences, such as recognising familiar tastes & smells.
Example: Face Blindness
People have the same sensations when looking at a face, but some people's brains can't put the facial features together, making recognition difficult.

Visual Cues and Constancies
Visual Cues - Aspects of our environment, such as movement, that give us clues as to where objects are in relation to each other.
Visual Constancies - Our ability to understand that an object is still the same, even if our visual sensation of it is slightly different.

Monocular Depth Cues (can be perceived with only 1 eye)

- Height in Plane**
Objects higher in the visual field are perceived as being further away.
- Relative Size**
When objects you know are the same size appear to be different sizes, the smaller one is perceived as being further away.
- Linear Perspective**
Parallel lines appear to come together (converge) the further you look out.
- Occlusion**
Objects that are behind or blocked by other objects are perceived as being further away.

Binocular Depth Cues (needs both eyes)

- Retinal Disparity**
Our eyes see 2 different images when looking at an object – the closer an object, the bigger the difference between the images.
- Convergence**
When an object is far away, our eyes relax, when it is near, our eyes come together. The brain interprets the electrical signals from the eye muscles to perceive depth.

Gregory's Constructivist Theory of Perception
Top-down theory – perception is influenced by past experiences & is an active process.
Perception is a Construction – We build our perception of the world based on educated guesses.
Inference – What we sense is incomplete, so we fill in the gaps.
Visual Cues – We base out perceptions on visual cues, which can be manipulated to trick our brain – visual illusions.
The Role of Experience – Perception becomes more sophisticated as we get older.
✓ Supported by research into other cultures – Müller-Lyer
✗ Research support for the theory relies on artificial materials
✗ Fails to explain how perception begins in the first place.

Visual Illusions & Explanations

- Ponzo Illusion**
The line above appears longer than the line below.
- Müller-Lyer Illusion**
The line on the left appears smaller than the line on the right.
- Rubin's Vase**
Depending on what you focus on, you can see either a vase or 2 faces looking at each other.
- Necker Cube**
Depending on where you focus, you can make the cube face down & left or up & right.
- Kanizsa Triangle**
The gaps in the lines and circles suggest that a triangle is in front of them, blocking your view, but nothing is there.
- Ames' Room**
The back wall is angled & the pattern on the floor distorted to make the room look square when it is actually a trapezium. People standing in each corner look different sizes, but one person is just stood further away. They can swap places and appear to shrink/grow.

Factors Affecting Perceptual Set & Named Studies
Perceptual Set - A tendency to notice or prefer certain aspects of the sensory environment whilst ignoring others.
Culture – Perception is affected by the social world around us as our brains become more specialised in processing information that we experience the most & our upbringing within our culture, as we learn perceptual skills from the adults within our culture.
Emotion – More likely to perceive something ambiguous as aligning with our current mood, e.g. when we are angry, we tend to perceive things in a more negative manner. We also take longer to perceive things that we find unpleasant, as our brains try to block it out.
Motivation and Gilchrist & Nesberg
When deprived of something, we are more likely to perceive it when things are ambiguous.
One group went 20 hours without food, the other group ate as normal. Participants then had to adjust the brightness of a slide that had an image of food on there. Those starved of food for 20 hours readjusted the slide brighter than those who ate normally, suggesting they perceived it to be more appealing.
✓ Independent Groups – only in 1 condition
✗ Ethical issues – physiological/psychological harm
✗ Artificial task – pictures of food

Expectation and Bruner & Minturn
People are predisposed to jump to conclusions – past experiences, readiness, & priming.
The ambiguous figure **13** was used in either the **HEBA** sequence or **AIBC** sequence. Participants were asked to say & write what they had seen. People were more likely to report seeing the ambiguous figure in a way that made sense with their number/letter sequence – what they expected.
✓ Controlled lab experiment
✓ Independent groups – only in 1 condition
✗ so don't see the figure being used twice
✗ Artificial task – artificial figure

Gibson's Direct Theory of Perception
Bottom-up theory – Perception abilities are innate.
Sufficient Information for Direct Perception – sensation is perception. Everything in the optic array gives us enough information to perceive.
Optic Flow Patterns – When moving, our target stays stationary & the rest of our view seems to flow away.
Motion Parallax – When moving, objects closer to us appear to move faster than objects in the distance.
Texture & Colour Gradients – Objects closer to us are more detailed and the colour are brighter.
Affordances – objects within our environment 'afford' certain physical properties.
✓ Research support – visual cliff
✗ Struggles to explain visual illusions as our brains are tricked
✗ Fails to explain how culture affects perception.

Visual Illusions & Explanations (continued)

- Size Constancy**
When an object moves closer to us, we know that they are not getting bigger, they are just moving towards us.
Link to Illusions: Ames' Room
- Misinterpreted Depth Cues**
Perceiving distance when it is not actually there, causing us to scale up/down an object that shouldn't be.
Link to Illusions: Ponzo Illusion, Müller-Lyer Illusion
- Ambiguity**
When there are two or more interpretations of a figure, we can only focus on one at a time.
Link to Illusions: Necker Cube, Rubin's Vase
- Fiction**
When an image suggests something is there when it really isn't, our past experiences fill in the gaps.
Link to Illusions: Kanizsa Triangle

Named Studies

Cover up sections that they find tricky – recall these sections only then add in extra detail with their notes

Have only these accessible when answering past paper questions – always mark on the paper when notes have been used

WHAT IS ALREADY AVAILABLE FOR YOUR CHILD TO ACCESS ... PAST PAPERS

- On the exam board websites – your child may be sitting exams from a number of exam boards such as AQA, Edexcel and OCR



Complete these with no notes then mark them – ALWAYS respond to progress (see The Revision Clock)

Use revision resources only to make exemplar answers, if the resources are not enough to answer a question, this may show that they need to be adapted

Become the examiner – when your child has exhausted the available papers, get them to write their own questions, what might an examiner ask them about different topics on the course? This shows a depth of understanding.

WHAT CAN YOUR CHILD MAKE IF THEY WANT TO CREATE THEIR OWN RESOURCE ... FLASH CARDS

- Information should be short and concise – not copied from other notes
- ALWAYS have a test yourself element to ensure that these are a useable resource!

Have one side for facts and content and one side for questions and/or prompts

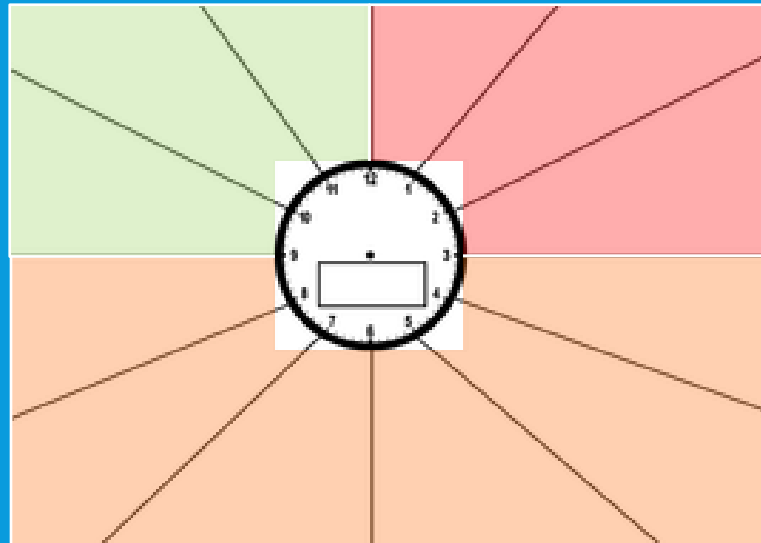
Add images (these can be from Google) to aid dual encoding

Making these electronically can also then mean they double up as a retrieval resource later



THE REVISION CLOCK

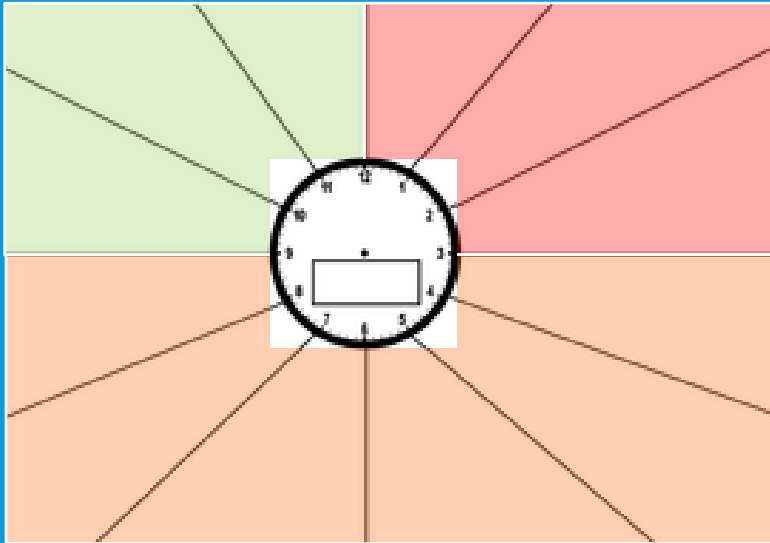
Step 3: Respond to your progress – did you get everything right, excellent, how can you stretch yourself with this? If not, how can you develop your notes to ensure that you do next time? Spend the last quarter of your time slot on this – it will help make your time more meaningful when you next review this content!



Step 1: Recap the content for the first quarter of your time – what are the “must haves” that you need to remember or areas that you find more difficult?

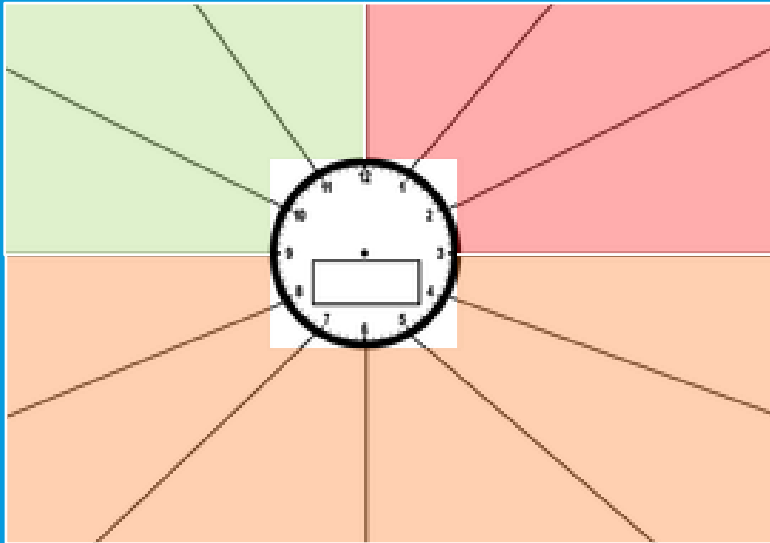
Step 2: Apply your knowledge – what better way to be certain that you truly understand the content than by testing yourself! Spend half of your allocated time slot on this.

THE REVISION CLOCK



1. Write a list of “must haves” for your topic(s)
2. Try to recap more than one topic at a time – your actual GCSEs test **cumulative** knowledge
3. Use your flash cards for the topics in your “everyday” box
4. Try to recreate a condensed version of your revision resource from memory – add in anything you missed in a new colour
5. RAG rate the specification – try to remember at least 3 key facts from each aspect
6. Write your own examination questions based on the example ones you have seen
7. Cut up exam questions into topics and sub topics and look for themes in question structures ****do not predict future exams**** but consider how they can assess the different aspects of the content in each area

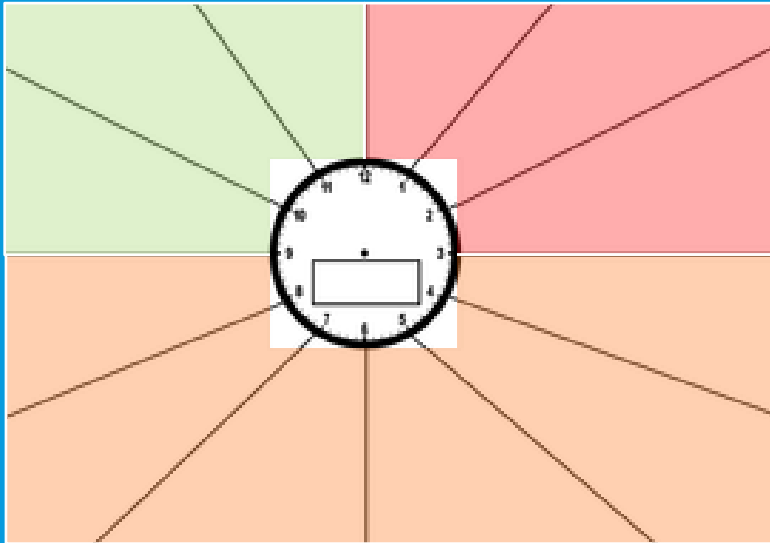
THE REVISION CLOCK



1. Complete examination questions in timed conditions and assess using a mark scheme
2. Use your notes, mark schemes and examiners comments to write exemplar answers
3. Use the "test yourself" questions on your flash cards – actually write the answers down or keep a tally of your progress within the topic

Replicate exam conditions

THE REVISION CLOCK



1. Use post-it notes to identify key facts or concepts that you have forgotten – or even signpost who sections you are struggling with – this is a great visual aid for your next time looking at this content.
2. Create a mini version of the resource based on your understanding of the exam questions highlighting the “must haves” in each topic
3. Use different colours to identify links between areas of content either in exam skills or topic crossover
4. Write yourself a “I must remember to ...” list for each sub topic based on the examiners comments and mark scheme
5. Write a set of exemplar answers for the questions that you have just done based on the feedback that you have given yourself. Use your existing notes to identify any gaps that you need to fill in!

RETRIEVAL PRACTICE

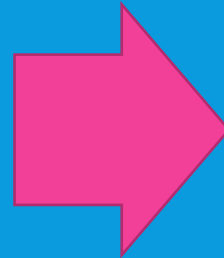


- Retrieval practice is “the process of calling information to mind that you have previously been exposed to” (Durrington Research School)

Retrieval

Engage in a task which is designed to see how much information you are able to recall

Consider how much you can recall with and without assistance



Response

Consider HOW you can target the vulnerable knowledge

What can you do to keep the information that you are confident on in the “secure” bank?

HOW DOES IT WORK?

https://www.youtube.com/watch?time_continue=13&v=22DkzIS7TmY&embeds_referring_euri=https%3A%2F%2Fhubblecontent.osi.office.net%2F&source_ve_path=Mjg2NjMsMjM4NTE&feature=emb_title

RETRIEVAL PRACTICE – FREE VS CUED RETRIEVAL



Free Recall - This is where you have a blank page and recall content in any structure, in whatever order you wish to recall it

When is it useful?

- When you need to make an assessment on what you do and do not know
- When you are confident with content and want to test a large chunk in one go
- When you are revising cumulatively i.e. more than one topic at a time

Cued Retrieval - This is where you use images, key words or phrases to prompt recall of content on a given topic

When is it useful?

- When you are feeling less confident on a topic
- In the early stages of revision when the content is not fully embedded into memory
- At the end of a revision session when you may feel more fatigued

PLANNING AND FLEXIBILITY



Why should we plan revision?

Planning is essential to ensure that time spent is focussed and purposeful

Revision can feel daunting and an overwhelming task – planning helps to make this feel accessible

Why should we be flexible with revision?

- Revision does not always go to plan – sometimes we realise we do not understand something which we previously thought was okay, or equally, we are more confident than we gave ourselves credit for
- Life changes and adapts with us – sometimes it is not possible to do as much as planned – it is important to stop if some head space is needed



CONSIDER ALL THE FACTORS



What different factors do you need to consider when planning your revision?

Different types of subject

Different lengths of exam papers

A range of time blocks to avoid boredom

A range of tasks to avoid boredom

Balancing in free time/other activities

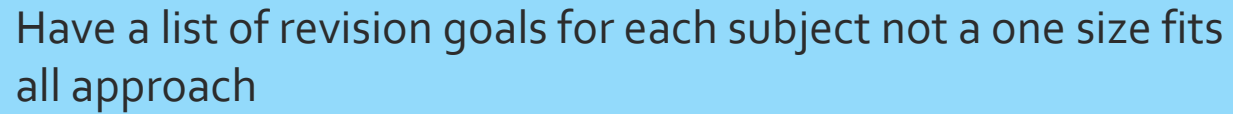
A FLEXIBLE REVISION TIMETABLE

Trying out a wide range of different activities

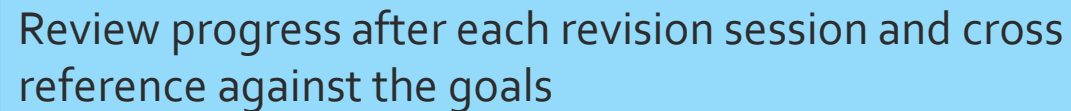
Trying out a range of different time frames

Balancing school work and looking
after yourself

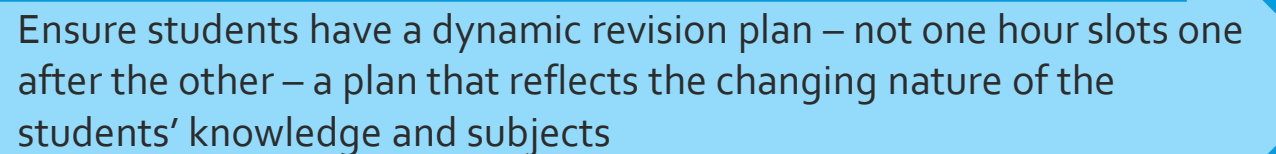
PLANNING AND FLEXIBILITY – THE QUICK WINS



Have a list of revision goals for each subject not a one size fits all approach



Review progress after each revision session and cross reference against the goals



Ensure students have a dynamic revision plan – not one hour slots one after the other – a plan that reflects the changing nature of the students' knowledge and subjects

WHO TO TALK TO IN KS4

