



Metacognition



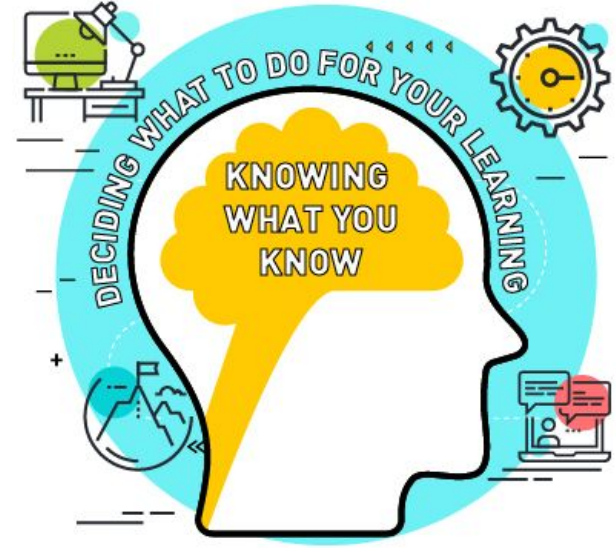
Metacognition

What is metacognitive knowledge?

- **Knowing** how to approach a learning task
- **Planning** an approach to learning
- Knowledge of the task, strategy and **self**

What is metacognitive regulation?

- Applying your **prior knowledge** and making a plan
- Thinking deeply about the **learning**
- Your ability to *plan, monitor and evaluate* your learning based on your existing knowledge



Rationale for Train My Brain

Improve my understanding of how my brain works through explicit teaching

Ensure I am actively learning within my lessons

For me to feel the motivation and confidence that accompany being an independent learner

To improve the outcomes I get at GCSE

EEF Metacognition findings

Metacognition and self-regulation

Very high impact for very low cost based on extensive evidence.





Be
honest!

Your team is working
hard...
Are you?

To achieve our goals, we need to put in the effort each and every day.

Even on days that we feel good and on days when we don't feel like doing the work.
Many people will put in effort for a short time and when their effort does not
immediately pay off or they become distracted by life, they stop putting in the daily
effort needed to finish and succeed.



Discussion



1. What did you do last week to meet the goal you want to accomplish by 1st December?



If you haven't set a specific goal to meet by 1st December 2023, what could your goal be?

2. What do you need to do this week?

Step one- make yourself accountable by completing the google form. Decide when you can complete this.



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Start early - instead of spending 2 hours per day revising for 1 week, it's better to spend 1 hour per day over 2 week

WHAT IS Metacognition?

DEVELOPING HELPFUL THINKING STRATEGIES
Using reflective thinking before, during and after a task helps you plan effectively, stay on track and consider how you can improve for future tasks.

KNOWING YOURSELF - AWARENESS
Being aware of your skills to evaluate what you can and can't do, to help identify the areas that you can develop in.

CRITICALLY ANALYSING HOW YOU THINK
Stepping back and questioning your own thoughts, even when it's tough to admit that you might be wrong.



Effective strategies
to
make learning stick!



- Revision timetables
- Space
- Remove temptations
- Discuss what they are revising
- Discuss what they've learned

A final test is 2-7 days away:

Students who had **one study period followed by a session of retrieval practice** did _____ at least better than those who had done **two study periods of just reading**.

A. 10%

B. 20%

C. 30%



What is Retrieval Practice?

A learning technique revolving around **repeatedly recalling learned material without seeing it in front of you.**



Working with past papers

First, **try it in exam conditions** with a time limit.

Then, carry on until you've **done everything you can without help**.

Use your **class material to complete the paper** to the best of your ability.

Fill in any gaps and make corrections using the mark scheme.

Finally, **add anything you looked up on your list of topics** to revise as part of your study schedule.



Effective strategies
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What is Metacognition?

DEVELOPING HELPFUL THINKING STRATEGIES
Using effective thinking before, during and after a task helps you plan effectively, stay on track and consider how you can improve for future tasks.

BEING AWARE OF YOUR ABILITY TO EVALUATE WHAT YOU CAN DO AND CAN'T DO, TO HELP IDENTIFY THE AREAS THAT YOU CAN DEVELOP IN.

CRITICALLY ANALYSING HOW YOU THINK
Stepping back and questioning your own thoughts, even when it's tough to admit that you might be wrong.



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THE FEYNMAN TECHNIQUE

1. Choose
a concept
to learn

2. Teach it
to yourself or
someone else

3. Return to the
source material
if you get stuck

4. Simplify your
explanations
and create
analogies

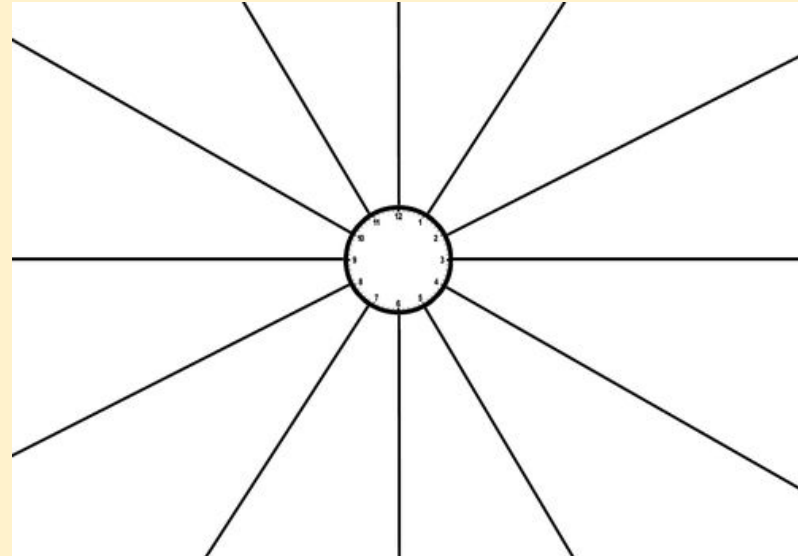
How it works

The Revision Clock is a helpful way to condense down your notes, interleave your topics, and break your revision into manageable chunks.

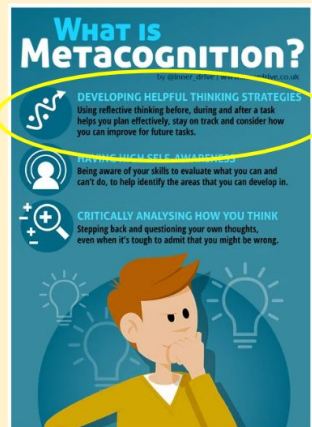
1. Divide a page (A4 or A3, no bigger) into 12 segments like numbers on a clock face.
2. Organise your revision notes into 11 topics and condense the notes from each topic into one of the segments on the page.
3. Label the final section "break".
4. Next time you revise, set a recurring timer for 5 minutes. Spend only 5 minutes on the information in each segment before moving to the next when the timer goes off.
5. When you have completed all segments, take a 5 minute break!



Effective strategies
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Flashcards



Effective strategies
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1. Limit information on the cards

To make the most effective flashcards, *you want short 'flashes' of information*

Spread out the content of large topics onto many flashcards

2. Phrase flashcards as questions

So for example, instead of writing 'The stages of mitosis' on your flashcard, you'd write '**What are the stages of mitosis?**'.

Phrasing your flashcards as questions means that your mind works harder to get the answer. *It eliminates the chance that your brain is just associating recognition with actual knowledge*

Year 11 students could begin by making flashcards based on their knowledge organisers.

Leitner System

Basic principles

- Group your flashcards into different categories (i.e. boxes) based on the difficulty level
- Revisit the flashcards in the more difficult boxes more often than the easier ones



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