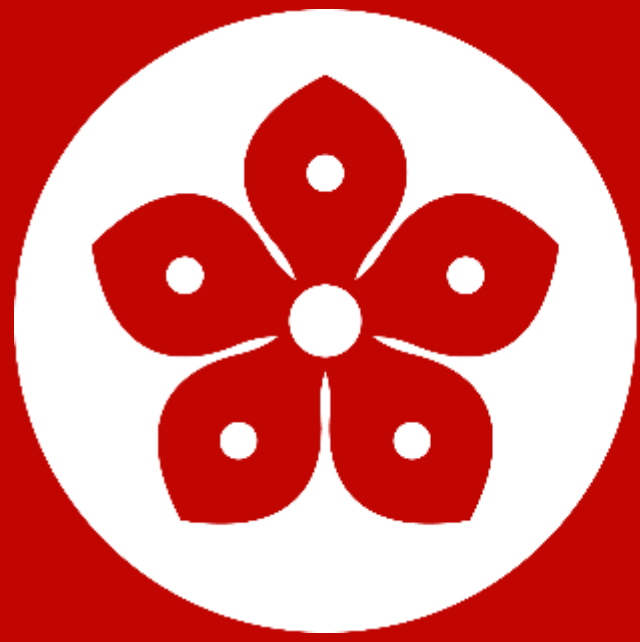




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METACOGNITIVE SKILLS

BREAKING DOWN THE WORD



- Meta means above
- Cognition means the process of thinking and knowing
- Metacognition literally means 'above cognition'
- So metacognition means above thinking and knowing
- cognition about cognition,
- or more informally, thinking about thinking.



Allow you to:

- Recognise your own cognitive abilities (skills your brain uses)
- Direct your own learning
- Evaluate your performance
- Understand what caused your successes or failures
- Learn new strategies.



Research says that students who use metacognitive skills to evaluate and adapt their learning can make +8 months additional progress than those that don't. Our students could be 8 months ahead of students at schools that don't work on this!



- Flashcards
- Mind maps
- Summarising
- Using images
- Reviewing your work

TEACHERS CAN HELP DEVELOP THESE SKILLS BY:

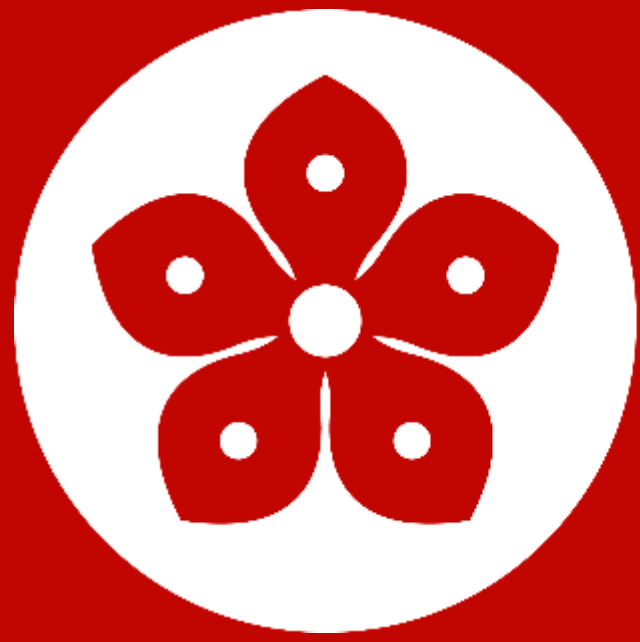


- Modelling
- Feeding back on assessments
- Questioning
- Review activities
- Homework



We teach about metacognition through:

- Lessons
- Assemblies
- Tutor time programme
- PDC



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SOME STRATEGIES WE COVER:



- Flash/cue cards are easy to make
 1. Include the key facts in short phrases
 2. Add colour and any quick pictures that might help you recall the information (dual coding)
 3. Keep your flash cards simple and not too busy.



EXAMPLE

Title

Key
knowledge

Dual coding

Red blood cells

- Transport oxygen for Aerobic respiration
- contain haemoglobin
- have no nucleus
- small and flexible - can fit through narrow gaps
- Biconcave shape - flattened disc

biconcave disc:
No nucleus
carries oxygen

cytoplasm containing
haemoglobin

Title

Key
knowledge

Underline
key words

White blood cells

Phagocytes - engulf and destroy unwanted microorganisms. This is called phagocytosis

- Part of the immune system

Lymphocytes - produce antibodies when a foreign body enters the body

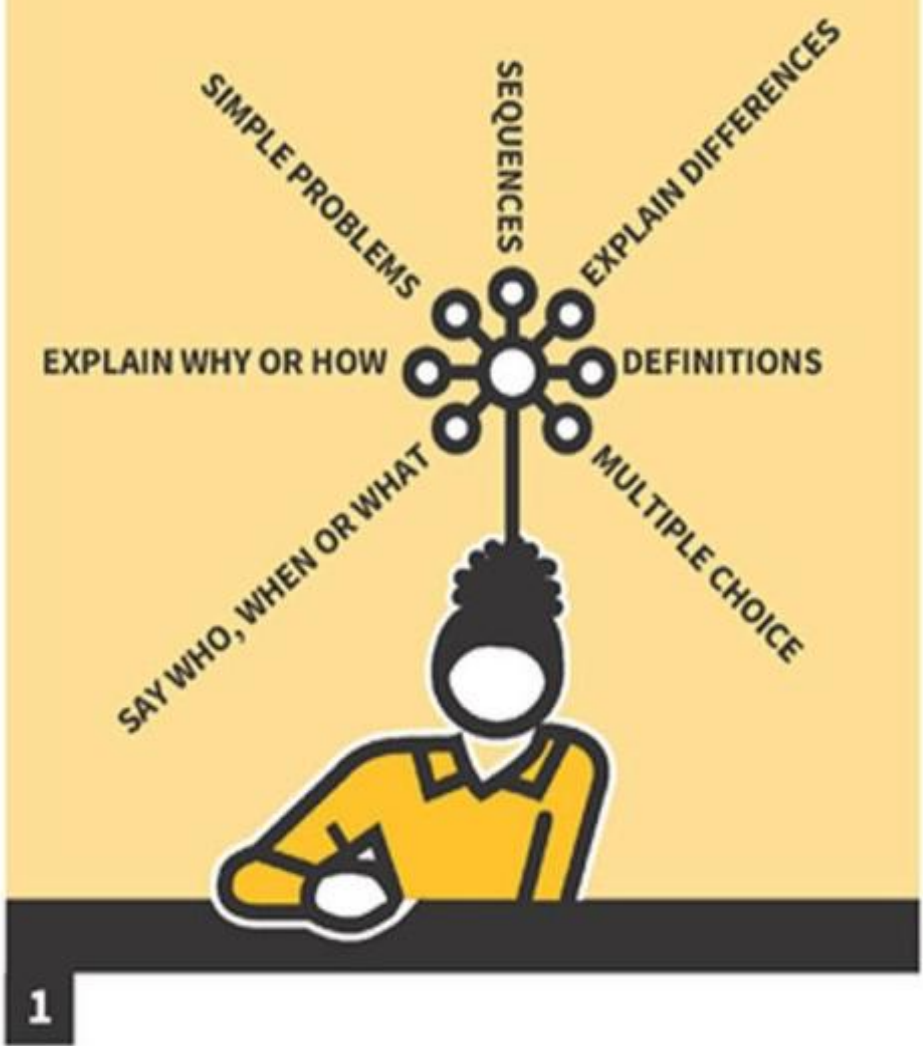


SELF QUIZZING

- Self quizzing is an effective way of using retrieval.
1. The questions should be short.
 2. Test on key information and knowledge.
 3. Use your knowledge organisers, notes and the exam specification (at GCSE) to help write your questions.
 4. Focus on specific terminology you need to know.
 5. Quiz yourself regularly.
 6. Adapt your quizzing to focus on areas of weakness.



SELF QUIZZING

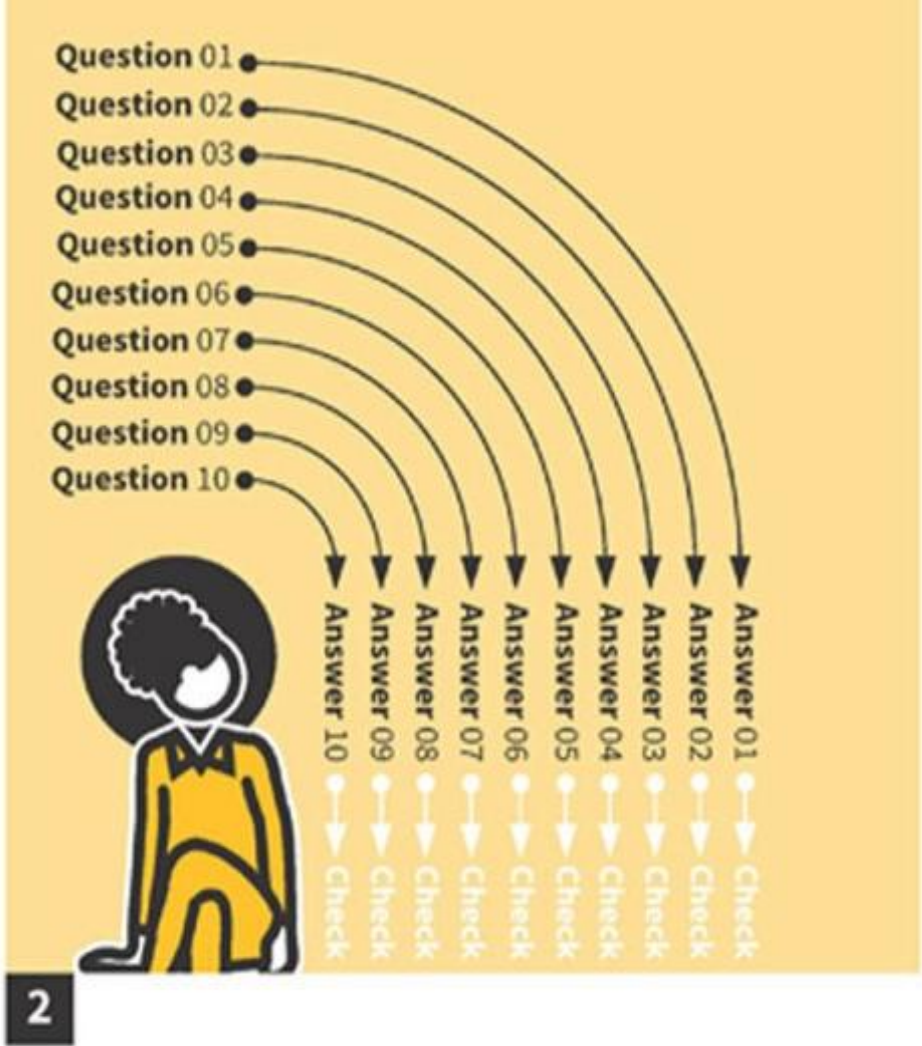


1 GATHER OR GENERATE QUIZ QUESTIONS

Your study material will probably include quiz questions as a starting point with a range of styles:

- Say who, when or what.
- Explain why or how.
- Simple problems, as in maths.
- Multiple choice, true/false.
- Explain the difference between.
- Definitions: what does X mean?
- Sequences: put these in the right order.

You can also generate similar questions for simple recall: definitions of terms, sequences, labelling diagrams, explaining concepts, remembering quotes, retelling events.

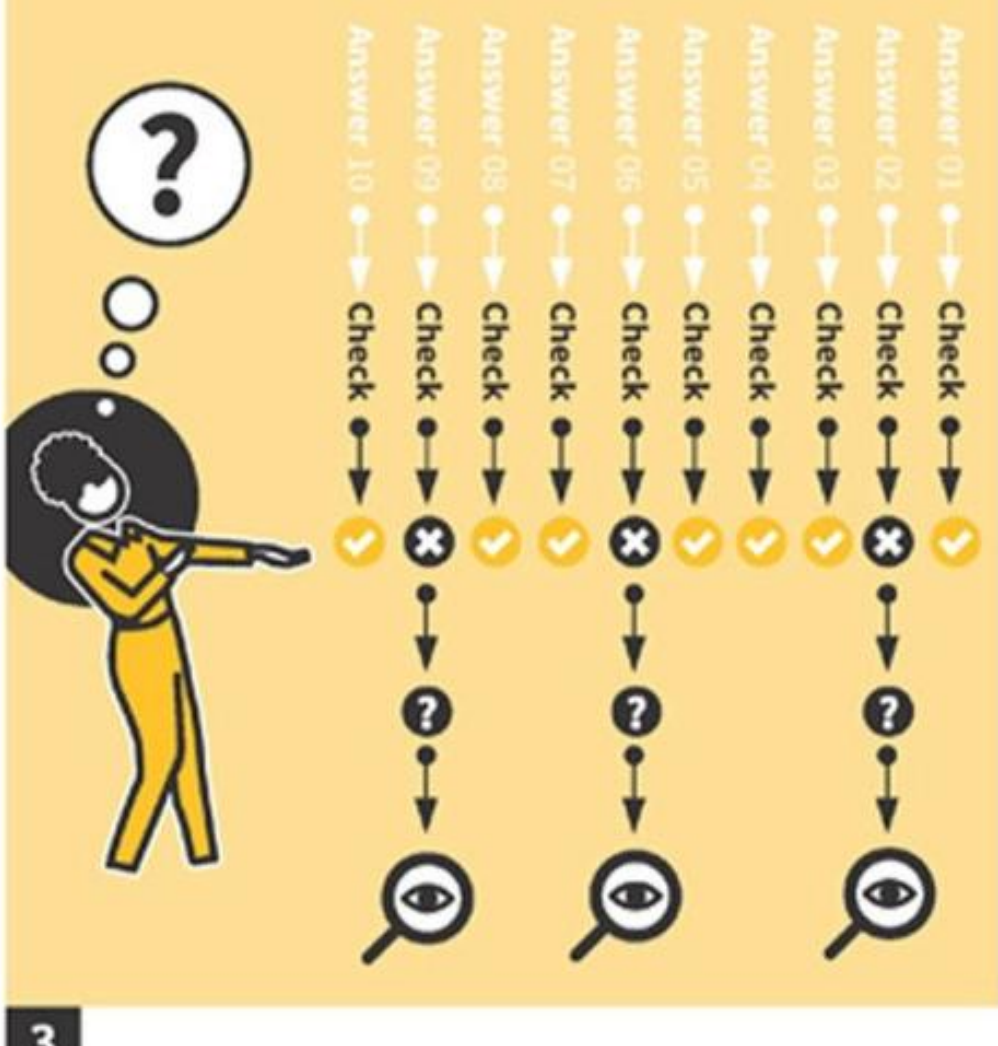


2 ANSWER THE QUESTIONS UNAIDED

With your questions ready, run through a set of 5-10 of them, producing the answers. You might write them down to check later or do this mentally (provided you can remember what your answers are!).

For a true test of what you really know, it's so important to self-quiz without any help at first. Don't look things up or ask for help; take your time, think hard and try your best to produce an answer.

You want the most accurate picture of your own knowledge and, since nobody but you will know, you can be very honest with yourself.



3 CHECK YOUR ANSWERS

After you've run your self-quiz, go back to your notes, your books or a set of pre-prepared answers to check how well you did. If they are simply right or wrong, make a note with a tick or cross — or the mental equivalent — and for those you got wrong note what the correct answers were.

It's important to note what you got right — to consolidate your knowledge and give you confidence.

For those you got wrong, you need to establish why.



4 IDENTIFY AREAS YOU NEED TO RESTUDY

For your wrong answers:

- Did you just forget, i.e. you knew it and understood it before but forgot? If so then you might need to restudy the material, rehearsing the answers and making sure you're connecting them to your more secure knowledge.
- Do you not fully understand the question or the material in general? This is more significant. You might need to reread more of your notes, refer back to other worked examples or seek help from your teacher to re-explain it to you.



5 TEST YOURSELF AGAIN. REPEAT

If you TEST yourself again straight away you'll probably remember all the answers because you've only just gone through them. This doesn't really tell you how secure your knowledge is, but it can be a reassuring check and acts as a kind of rehearsal.

For a more accurate view of what you now know, test yourself repeatedly on similar material or using the exact same questions, at a later point — a day or a week later perhaps. You should find you remember more each time. If you're still struggling, you might need to go back to some basic concepts and restudy or ask for more help.

HOW TO DO A KNOWLEDGE DUMP



- Use an empty piece of paper and write the date at the top
- Without any support, write down the first thing you can remember about the topic. Use single words or phrases
- As this fact triggers more information, write these facts down and connect with arrows
- Once you can't remember any more about that fact, start again with a new one from the same topic.
- Check your knowledge with the text book or knowledge organiser using a green pen and add to it where you need to.
- Keep your knowledge dump to reflect back on the progress you've made when you do your next one on the same topic.

HOW TO DUAL CODE



- Take a chunk of information and read through it
- Highlight the key facts
- Plan out your diagram, how will you fit the information into the final result.
- Think about the use of colour and words to keep it as minimal as possible.
- It doesn't have to be a work of art! It is about using key words and images to remember information