Revision

What is revision and how can we revise effectively?

Kings Langley School
Unlocking Potential for Life

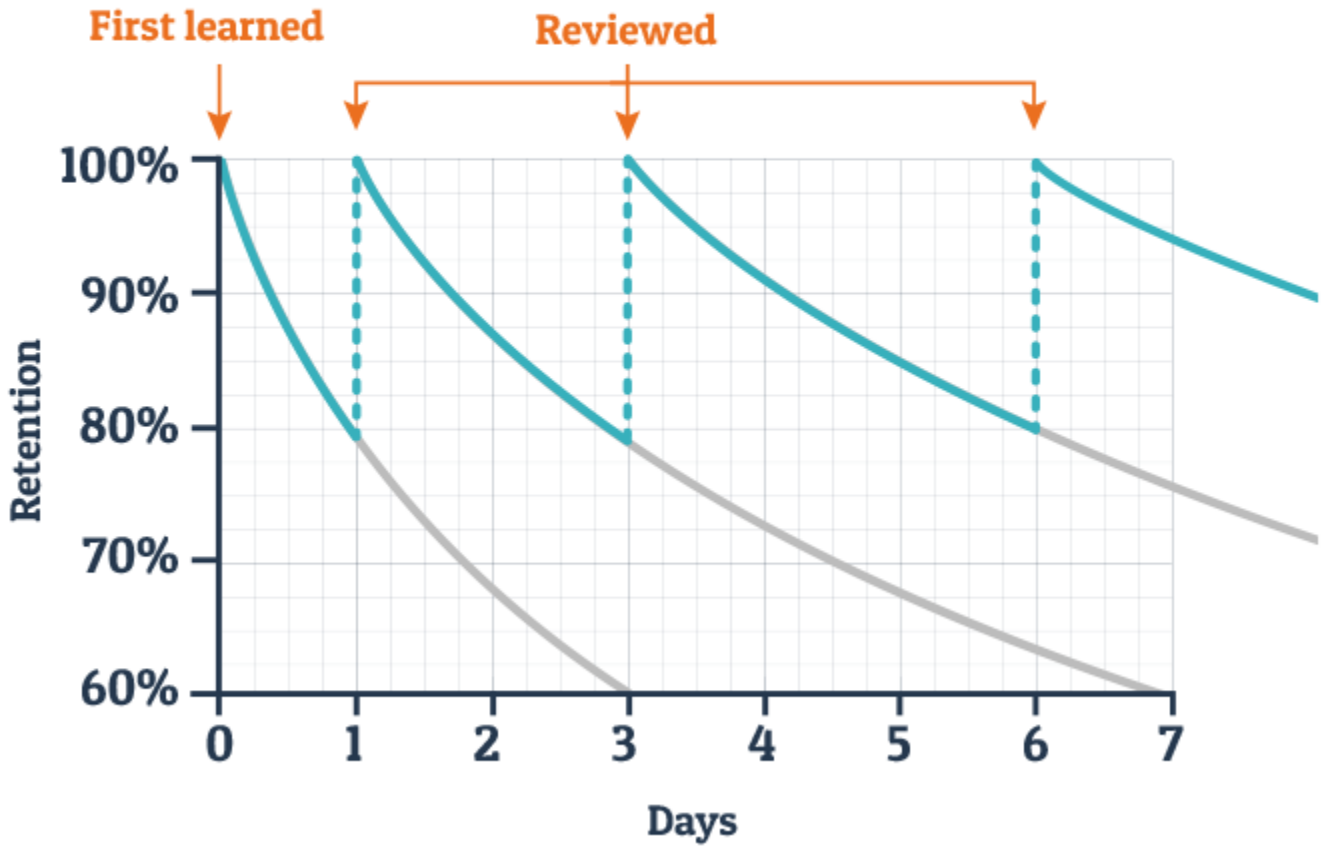
Revision (n): the study of information that has been studied before

The prefix 're' means 'again' and 'vision' is 'to see' so literally 'seeing again' as in looking back at learning to help remember and understand it.

How do you feel about revision? Is it stressful, frightening, impossible? Is it something you feel confident you know how to do?
How has this definition changed what you thought revision was?

Ebbinghaus Forgetting Curve

Typical Forgetting Curve for Newly Learned Information



We either 'use it or lose it': unless learning is regularly reviewed (retrieval), we are very likely to forget it.

Desirable Difficulties

Desirable difficulties are learning tasks that require more effort; the reason this effort is 'desirable' is because it is much more effective for long-term learning.

Desirable difficulties include:

- Spacing learning so it is more difficult to remember;
- Interleaving different topics;
- Varying the conditions;
- Retrieving learning from memory with no cues.

What does an effective study session look like?

- Effective study sessions require discipline which can be hard when we all have mobile phones - adults find this difficult too!
- The best way to avoid the temptation of electrical devices is to switch them off for the duration of the study session.
- Before starting your study session, decide what strategies you are going to use. Perhaps a 5 minute flashcard quiz, followed by a Brain Dump on something you are finding difficult to remember?
- At the end of your session, make a brief note of what went well and any sticking points.

Example Revision Plan for PE

Timing	Activity
5 minutes	Flashcard revision on key vocabulary words in the CV System.
15 minutes	Brain Dump on CV System - Q, SV, HR ...
15 minutes	Write a paragraph on the CV System using the vocabulary from the Brain Dump
5 minutes	Write up strengths from today's session - what could I remember easily? Note down some targets: what did I struggle to remember? Was there a part of my paragraph I wasn't sure how to complete?

Debunking Revision

What revision is	What revision isn't
✓ Going over material you have already studied	✓ Revising for GCSE exams from Year 7
✓ Using strategies to help remember prior learning	✓ Completing practice exam papers
✓ Making links between new topics and previously studied ones	✓ Re-reading class notes
✓ Building confidence with independent study	✓ Highlighting
✓ Knowing your strengths and targets and how to address them	✓ Cramming before an important exam or assessment

Demystifying Revision

Teachers constantly tell students to revise but don't always tell or show them how! We are going to reveal to you the most effective study strategy and then we will look at some different ways to use it.

Teachers spend a lot of time trying to get information into students' heads; retrieval (the most effective study strategy for remembering information) is practising getting information out! There are lots of simple ways to use retrieval as a revision tool. Let's look at few today:

1. Self-quizzing
2. Brain Dumps/Knowledge Splats
3. Flashcards
4. Retrieve taking
5. Elaborative interrogation
6. Dual coding
7. Examples and non-examples

Kings Langley School
Unlocking Potential for Life

1. Self-Quizzing

- This is a little bit like spelling where you look-cover-write-check.
- Let's read the information below: (this is stage one: look)

Revision is the process of 'looking again': studying information that has been studied before. The most effective way to do this is through retrieval which means getting all the information you can remember out of your head and there are a variety of ways you can do this. It can be written or verbal but the most effective way is when you have no cues to help you!

- Now say/write everything you can remember: it doesn't need to be word-for-word but must include what revision is and what retrieval is! We are now completing stages two & three: cover and write.
- Finally (and this is the most important stage), take a different colour pen and look back at the information. If you have missed anything out or written anything down incorrectly, change it with your different colour pen and make a note of the parts you struggled to remember - this is being aware of your targets!

2. Brain Dumps/Knowledge Splats

This one is really simple: take a blank piece of paper (no cheating by looking at the notes in your book!) and write down everything you can remember about a section of the course. You could do this as a mind map of spider diagram.

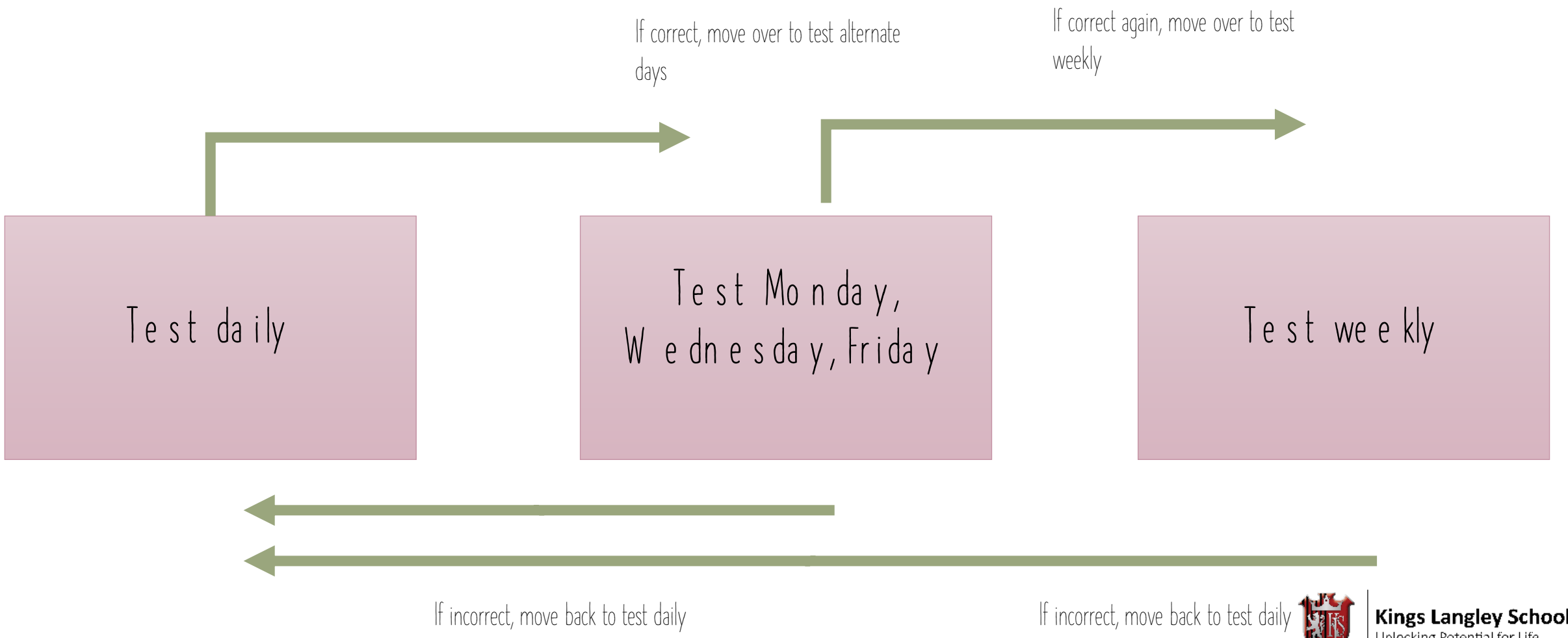
You might want to use the following headings:

- What are the main components of the CV System
- What are their roles
- How do they help performance

Again, the feedback stage is important but let's add another layer this time. Compare your notes with a partner: Have you got the same? If it's different, what do you need to change or add? Finally, take a look at your notes and see if there is anything else you have missed or written down incorrectly.

3. Flashcards

Flashcards are very simple as they are just cards with a question on one side and answer on the other that you can use to self-quiz or quiz with a partner. However, we are going to show you a very specific method for using these. This one is called The Leitner Method:



Kings Langley School
Unlocking Potential for Life

Kings Langley School
Unlocking Potential for Life

The Leitner Method

- A flashcard is a card containing a small amount of information used as an aid for learning. For revision, students can write questions on one side and answers on the other, testing themselves and re-ordering them according to which answers they were able to correctly recall. For flashcards to be effective, they should contain just a small amount of information (for example, a key word and definition or an image and a sentence related to that image in the target language for foreign language learning).

- Let's say it's Monday. Students take their flashcards and test themselves. If the information is recalled correctly, they place the card in Box Two. If they cannot remember the answer or answer incorrectly, it is placed in Box One: tested daily. On Tuesday, students test themselves on all the cards in Box One and Box Two. If a card from Box One is answered correctly, it moves to Box Two. If it is answered incorrectly, it stays in Box One. If a card from Box Two is answered correctly, it moves to Box Three (tested weekly). If it is answered incorrectly, it moves back to Box One. On Wednesday, students test on Box One cards, on Thursday Boxes One and Two and on Friday Boxes One and Three. If a card from Box Three is answered correctly, it stays there but if it is answered incorrectly, it moves back to Box One to be tested daily. This means students are getting the most practice on the flashcards they are weakest on.

- Basically, increasing the spacing slightly each time the information is correctly recalled is the most effective way to ensure the information enters long-term memory. Students are testing themselves on information just before they have forgotten it.

- The idea is that by making key knowledge so secure in students' memories, they are better able to use this as a foundation on which to build excellent exam answers, add more knowledge, reducing cognitive load in their writing and enabling them to become 'experts'. As explored in Step One, it's about building the factual recall to a point of automaticity so that students can easier access the higher-order thinking and ideas.

- It makes sense to start small so students might start by testing themselves on one part of one topic (e.g. key vocabulary about The Tudors) but the nearer they get to exams (from KS4 perhaps), they can interleave flashcards from different topics and even different subject areas.

4. Retrieve Taking

Retrieve taking is a form of note taking where students listen to a lesson, read a text or watch a video without taking notes.

The lesson, text or video is then paused and students write down what they can remember.

The lesson, text or video then resumes with students thinking about what they were able to accurately remember.

5. What is elaborative interrogation?

- Elaborative interrogation involves asking 'how' and 'why' questions about a topic in order to develop depth of knowledge and understanding. This could also be done in pairs.
- How does X work?
- Why does X happen?
- Why does it make sense that _____?
- Why is this true?
- Why is X true and not Y?
- When did X happen?
- What caused X?
- What is the result of X?

6. What is dual-coding?

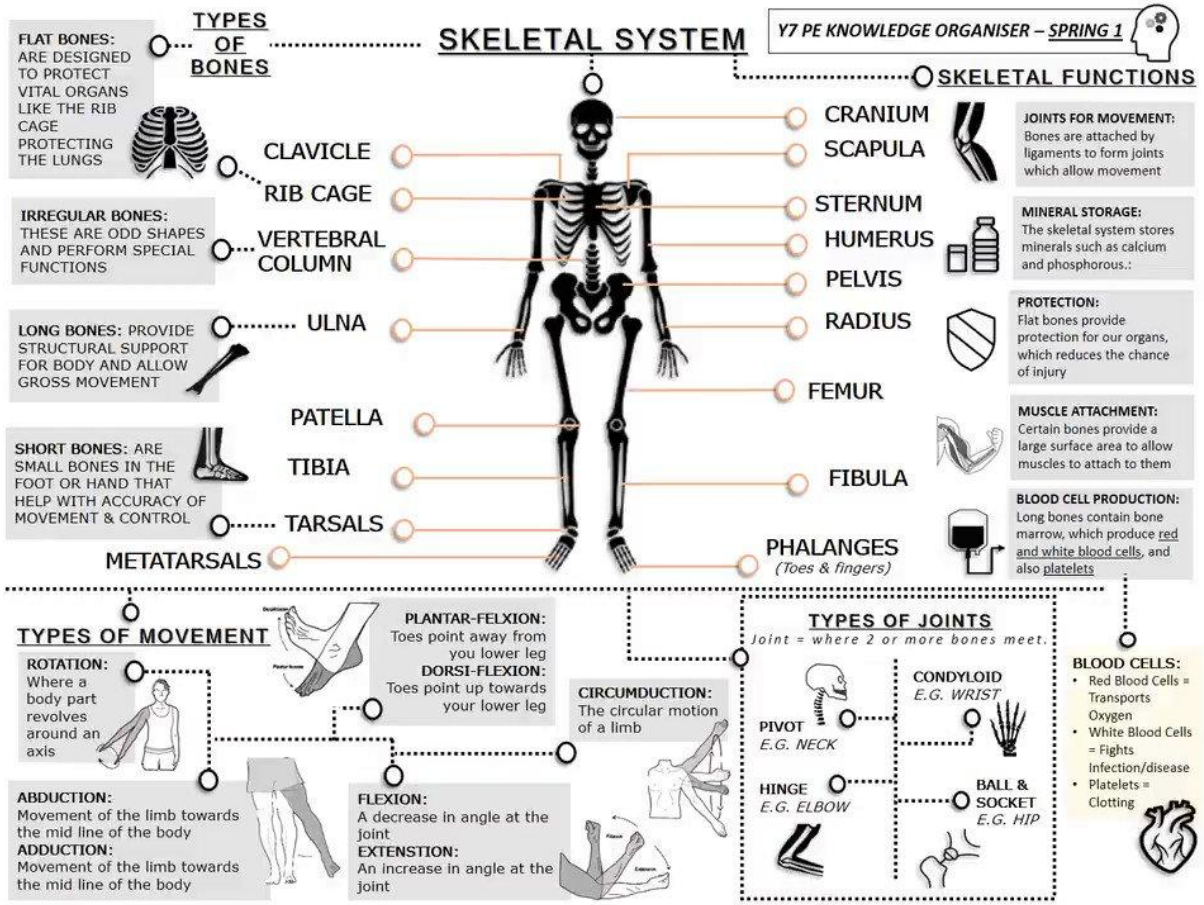
Very simply, dual coding is combining visuals and words. Our brain receives information through two channels: an auditory and a visual therefore the brain remembers the information better when they have two prompts: a visual and a verbal one.

Research shows that creating your own images for vocabulary words helps with remembering their definition so an effective dual-coding revision activity might be coming up with simple images to represent key words.

Dual-coding works well in conjunction with elaborative interrogation as we can use questions to be clear about the links between the image and the key word or concept. For example, How are the words describing what is in the visuals? How do the visuals describe what is in the text?

Graphic Organisers

- As well as simple images, graphic organisers can be a useful revision tool. Studies show that using multiple images to represent an idea makes it clearer. The example opposite covers the skeletal system.



Kings Langley School
Unlocking Potential for Life

7. Examples and non-examples

Another useful way to make the abstract concrete is through noting down examples and non-examples and looking at they key differences to help understand common misconceptions. The Frayer Model is one way to organise your examples and non-examples:

Kings Langley School
Unlocking Potential for Life

Frayer Model

Abduction

DEFINITION	CHARACTERISTICS
Movement away from the midline of the body.	Sideways movement away from the body. Remember the word 'abduct'. It means to take away.
EXAMPLES/MODELS	**NON-EXAMPLES**
A gymnast with their leg lifted to the side of their body. A swimmer who lifts their arms out to the side during the butterfly stroke. A student who lifts their arms and legs out to the side when completing a star jump.	A sprinter lifting their knee when completing a 100m race. A weight lifter raising a bar above their head.

Cardiac Output

DEFINITION	CHARACTERISTICS
The volume of blood pumped per minute by each ventricle of the heart.	Increases as exercise intensity increases. Related to the amount of times the heart beats per minute.
EXAMPLES/MODELS	**NON-EXAMPLES**
An athlete's cardiac output will increase as soon as they start to exercise. Cardiac output = stroke volume x heart rate.	The amount of air breathed in and out in one minute. Related to the respiratory system.

Kings Langley School
Unlocking Potential for Life

Revision Timetable Template

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Break day		Break day			Break day
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday