

The importance of effective study and revision

Learning is the process of understanding information and being able to remember it over a long period of time.

Revising is the process of revisiting information which you have already been taught to ensure that you have learned it and to ensure that you can easily use it in exams.

To remember a lot of knowledge quickly, that knowledge needs to be securely stored in long-term memory.

To make sure knowledge goes into long-term memory, stays there, and to make sure it can be recalled quickly, pupils need to spend time thinking hard about that knowledge in their working memory.

Key pieces of advice to learn and revise effectively:

1. **Avoid distractions;** to focus on the information that is being learnt or revised.
2. **Think hard;** without thinking hard about the information being learnt or revised, it is unlikely to go into long-term memory.
3. **Start early;** thinking hard about information takes time and information needs to be revisited regularly to strengthen those memories. Leaving revision until the last minute is likely to be overwhelming and will limit how effective revision is.

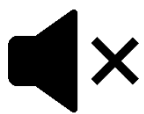
Where should your child work and revise?

When revision is done effectively, information is pulled from their long-term memory and strengthened in working memory. It may also allow gaps in long-term memory to be identified and these can be closed by thinking hard about new information in their working memory.

Working memory can only hold a small amount of information at once. In order to revise and learn effectively, techniques should be used which stop working memory from becoming overwhelmed.

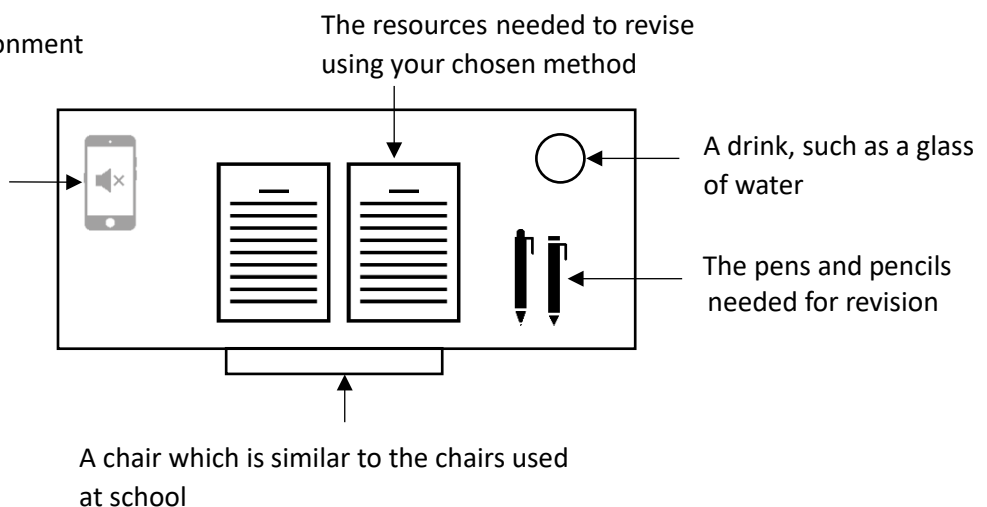
Anything that is being currently experienced or paid attention to takes up space in working memory. One way to free up space in working memory is by working in an environment which is free from distractions.

An example of an effective revision space :



A quiet environment

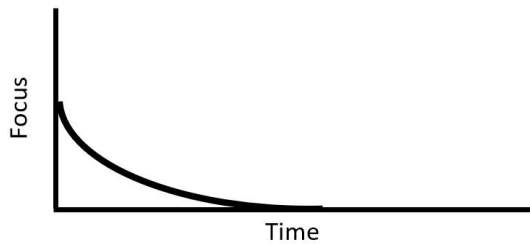
Put phones on silent if you will need to use it or put it in another room.



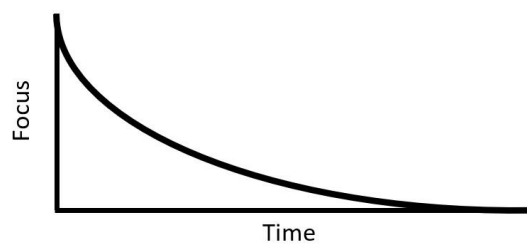
When should I revise?

In order to revise effectively, pupils have to think hard. Thinking hard is tiring. Therefore, revising, pupils should choose a time when they find it easiest to focus. This should be a time when pupils are well-rested and when pupils are used to working.

Revising when tired:

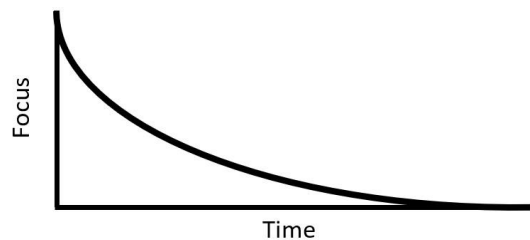


Revising when well-rested:

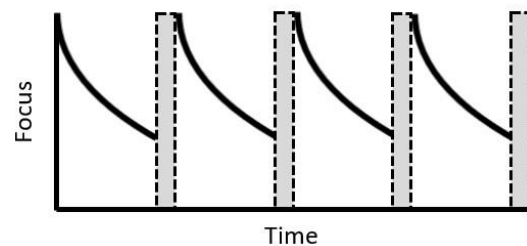


Pupils should also take regular breaks when revising. These breaks can be structured using a method called the Pomodoro technique.

Revising without a break:



Revising with small regular breaks:



Planning revision sessions using the Pomodoro Technique:

1. Choose a time when well-rested and used to working.
2. Decide the specific task that is going to be completed (e.g. I will complete a Science revision module about electrolysis of aqueous substances).
3. Set up your study area.
4. Decide on how many 25-minute slots are needed to complete the task.
5. Remove phones and any other distractions from the working space.
6. Set a timer for 25 minutes. Ideally using a digital timer which is *not* on a phone.
7. Spend the *entire* 25 minutes working. If there is spare time at the end, another task can be started.
8. When the timer goes off, leave the working area and take a 5-minute break.
9. Repeat. Longer breaks can be taken after every three 25-minute sessions.

Technique 1: Self-quizzing

Self-quizzing is when a series of questions about a topic are answered from memory. It is a useful tool for finding specific gaps in knowledge within a topic and it allows a quick check about whether something has been remembered correctly.

Self-quizzing can be completed in lots of different ways. For example, specific questions can be answered, gap fill-activities can be completed, or a diagram can be filled in from memory.

Below is an example of a specific question quiz, which shows that a pupil would have to revisit the information required for question 6:

Public Health in the Industrial Revolution

Questions:

1. Give two reasons why people migrated to urban areas during the Industrial Revolution.
2. Why did increased population density increase the risk of epidemics in urban areas?
3. Give an example which shows that many public health systems in urban areas were overwhelmed during the Industrial Revolution.
4. Why did many people living in damp and overcrowded housing increase the risk of epidemics during the Industrial Revolution?
5. Why didn't the government in the early Industrial Revolution take steps to improve public health services and living conditions?
6. Give an example of a disease, caused by poor public health, of which there were epidemics during the Industrial Revolution.

Answers:

1. Improvements in agricultural technology and the invention of the factory ✓
2. Diseases could easily spread from person to person.
3. Multiple families would share one overflowing cesspit. ✓
4. People had weak immune systems which made them less able to fight off diseases. ✓
5. The government had a laissez-faire attitude to public health, meaning that they did not think that improving public health should be their responsibility. ✓
6. The plague **X Cholera or typhus (the plague was in the Middle Ages and the Renaissance)**

5/6 (83%)

Technique 2: Flashcards

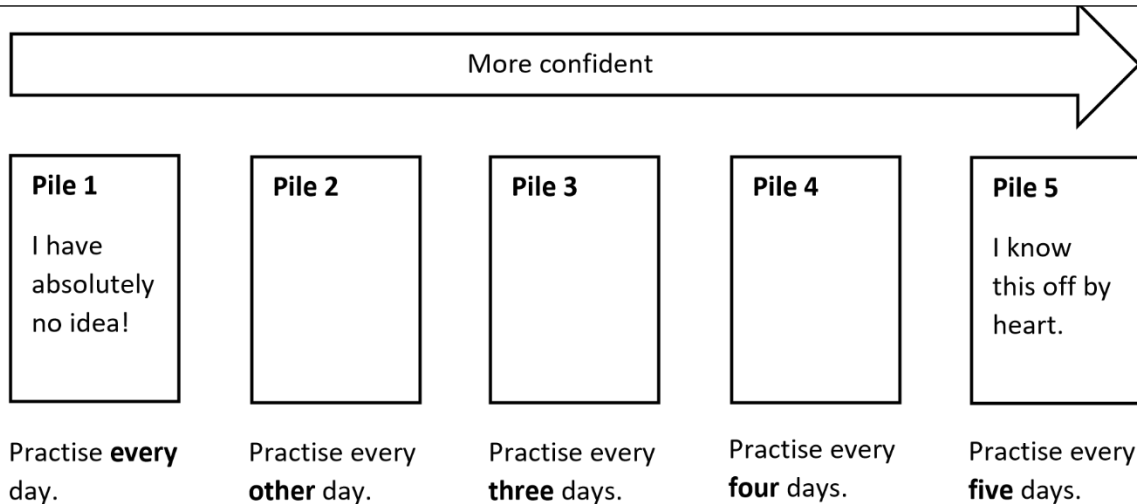
Flashcards are small sheets of paper or card with matching pieces of information on either side. They are a useful tool for learning facts and allow pupils to quickly check whether they have remembered something correctly.

Below are some examples of flashcards, which can be used for simple quizzing:

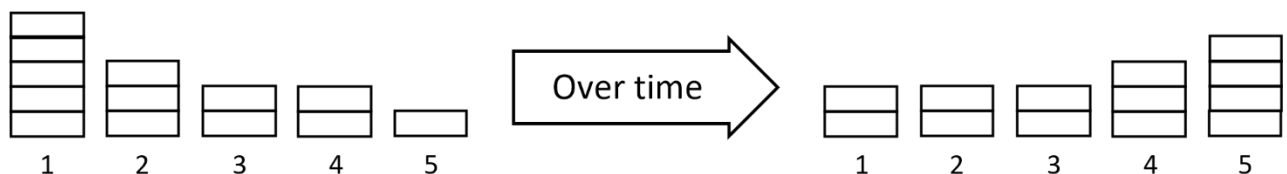
Front of the Flashcard	Back of the Flashcard
Henry VIII	King of England from 1509-1547
What are the parts of the 'Trinity'?	Father, Son and the Holy Spirit
Where is the pharmacy?	Où est la pharmacie?

How to use flashcards:

1. The flashcard is used to test knowledge
2. As the flashcards are used, the flashcards are sorted into up to five piles according to how confident you are with the content.
3. The flashcards are then put into numbered envelopes (1-5).
4. The piles are then used to test knowledge on different days:

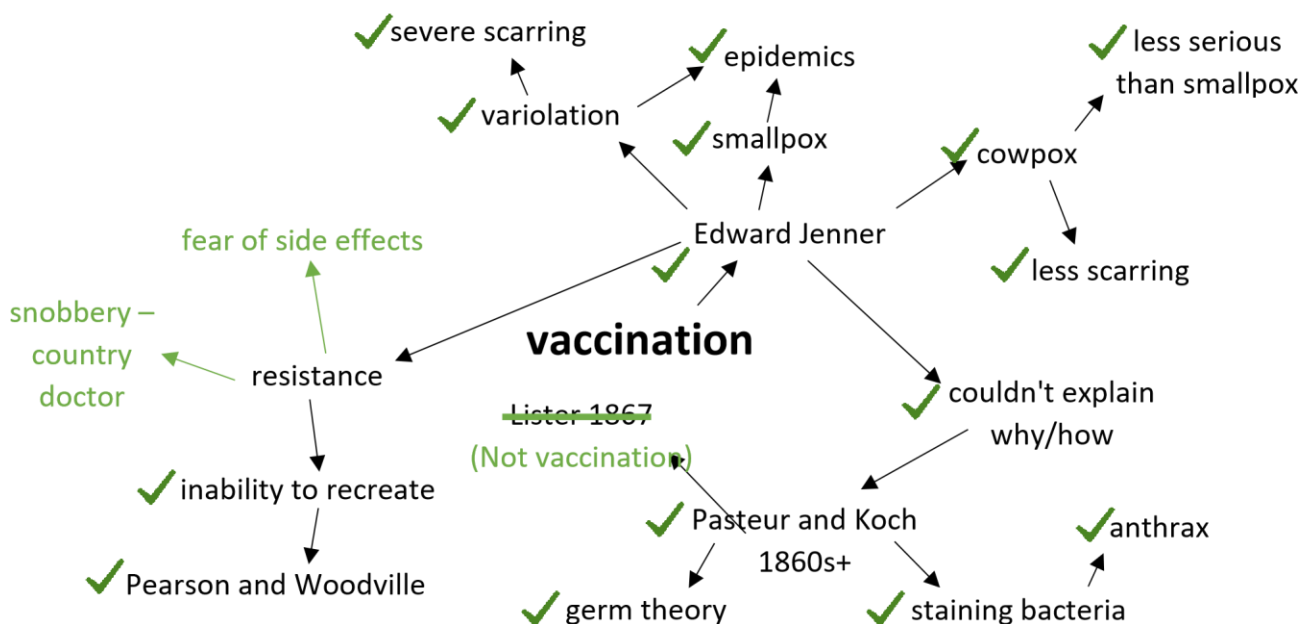


5. As the different piles are used to test knowledge, the cards are moved into different piles as confidence increases.



Technique 3: Knowledge dumps

A knowledge dump is when everything that can be remembered about a topic is written down. They are a useful tool for finding out what is known and where the gaps are in knowledge. Below is an example about vaccinations:



How to write a knowledge dump:

1. Use an empty piece of paper and write the date at the top of the page.
2. Without any support, write down the first thing you can remember about the topic you have chosen. Use single words or phrases.
3. As this fact triggers more information, write those facts down. Connect the facts together with lines or arrows.
4. Once you can't remember anything else about the area you started writing about, try to remember another fact to start another 'web' of knowledge. Stop once you can't remember anything else.
5. Using a knowledge organiser or textbook, check and correct your knowledge using a different coloured pen.
6. Keep your knowledge dump. This will allow you to compare knowledge dumps over time so you can see your success.
7. Note down what you corrected or added. Practise these gaps using flashcards or quizzing.

Technique 4: Exam questions

One of the best ways to think hard about knowledge that has been learnt and preparing for exams is by completing exam questions; practising exam questions and techniques, such as writing in timed conditions or by annotating questions.

Exam questions can be collected from teachers and it is best if they are completed in conditions as close to a real exam as possible. So, it is important that exam questions are completed in a set amount of time as they would be in an exam, as this will help revise the skill as well as the knowledge.

Adapted from 'Launchpad into Year 11' from @MissSayers1

Adapted from 'The Revision Revolution' by Helen Howell and Ross Morrison McGill