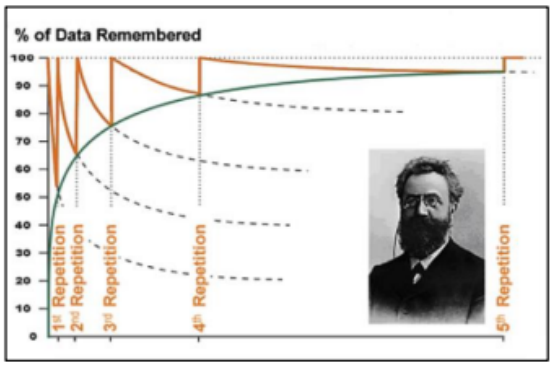
Effective Study Skills at Key Stage 4

Retrieval is trying to remember information you have previously learned, so you can access it easily at a later date. When we are asked a question, our brain makes connections to other things we know. By repeating the question regularly, those connections are strengthened, and eventually the information transfers to our long term memory making sure that we are successful in the GCSE exams and in study post 16.

What does the research say?

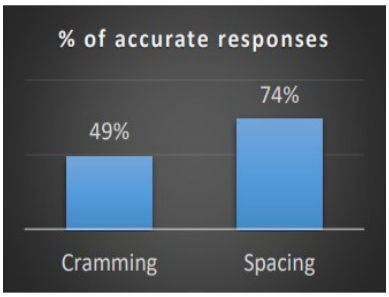
This is one of the most extensively researched areas of learning . **If we only learn something once, we are more than likely to forget it**; we need to force ourselves to remember and re-learn the information if we want to cement it in our long term memory. Look at this diagram – those students who self-tested 3 times before the exam were far more successful than those who just re-read the text.



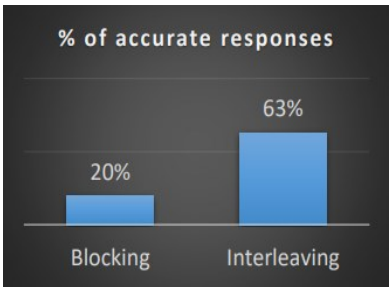
How can you make it even more effective?

Spacing

Cutting up your revision into smaller chunks and spacing them out over a period of time is much more beneficial than cramming an entire subject in a day. An hour of History each day for 5 days is much more effective than 5 hours in one day.



Interleaving

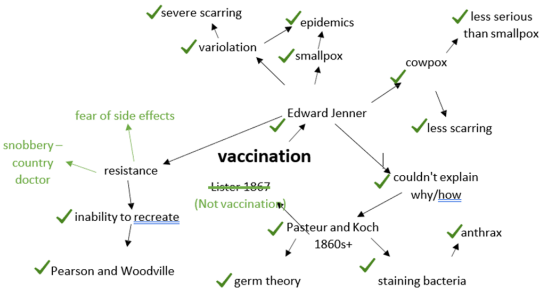


To improve your results further, also consider interleaving. This is where you **mix up the subjects and topics you revise**: 30 minutes of Shakespeare, 30 minutes of algebra, 30 minutes of Poetry, 30 minutes of Ratio - rather than an hour of English and an hour of Maths.

Effective Retrieval Strategies

1. Brain Dump

Choose a topic and write down as much as you can remember, without referring to your notes. Check your notes and see what you missed then try to fill the gaps without the notes. Check your notes a third time and add the missing information.



Summary: Brain dumps

1.	2.	3.	4.	5.
Identify knowledge	**Write it down**	**Organise information**	**Check understanding**	**Store and compare**
Identify the knowledge/topic area you want to cover.	Take a blank piece of paper/white board and write down everything you can remember about that topic. (with no prompts) Give yourself a timed limit (e.g. 10 minutes)	Once complete and you cannot remember any more use different colours to highlight/underline words in groups. This categories/links information.	Compare your brain dump to your K/O or book and check understanding. Add any key information you have missed (key words) in a different colour.	Keep your brain dump safe and revisit it. Next time you attempt the same topic try and complete the same amount of information in a shorter period of time or add more information.

Brain dumps are a way of getting information out of your brain.

2. Flash Cards

Write flashcards for each topic, in all subjects, then mix them up for the most effective revision. Keep your flashcards simple – one question, one answer per card.

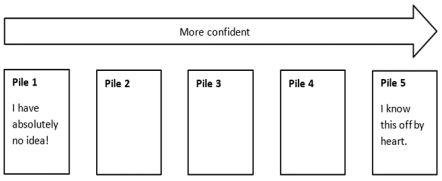
osmosis
Net movement of water from a high concentration to low concentration across a partially permeable membrane

1861
Pasteur published his paper about germ theory.

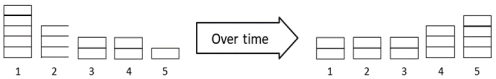
Summary: How to use flash cards

1.	2.	3.	4.	5.
Identify knowledge	**Colour coding**	**Designing**	**Using**	**Feedback**
What are you creating flash cards on? Do you have your knowledge organizer? Use your book to look at previous misconceptions from whole class feedback.	Use different coloured flash cards for different topics. This helps with organization NOT recall	1 Question per flashcard. Making them concise and clear. Use a one word prompt, so that you can recall as much as you can. No extended answer questions.	Write your answers down, then check. Or say your answers out loud. This really clearly shows the gaps in your knowledge. Do not just copy & re-read. Shuffle the cards each time you use them. Use the Leitner system to use flash cards everyday.	How have you performed when you look back at your answers? Is there anything you need to revisit in more detail? Is your knowledge secure? If so, move onto applying knowledge in that area in specific extended exam questions.

Avoid answering the questions in your head: research shows that when you read a question and answer it in your head, you aren't actually testing your knowledge effectively. Say the answer out loud or write it down before checking it against the card, so you are truly testing if you can explain the answer properly



As you test yourself on the different piles, move the cards into different piles as you become more confident.



3. Quizzes

Write a set of questions and answers and ask someone else to test you. It's important to either write or say your answers aloud.

Public Health in the Industrial Revolution

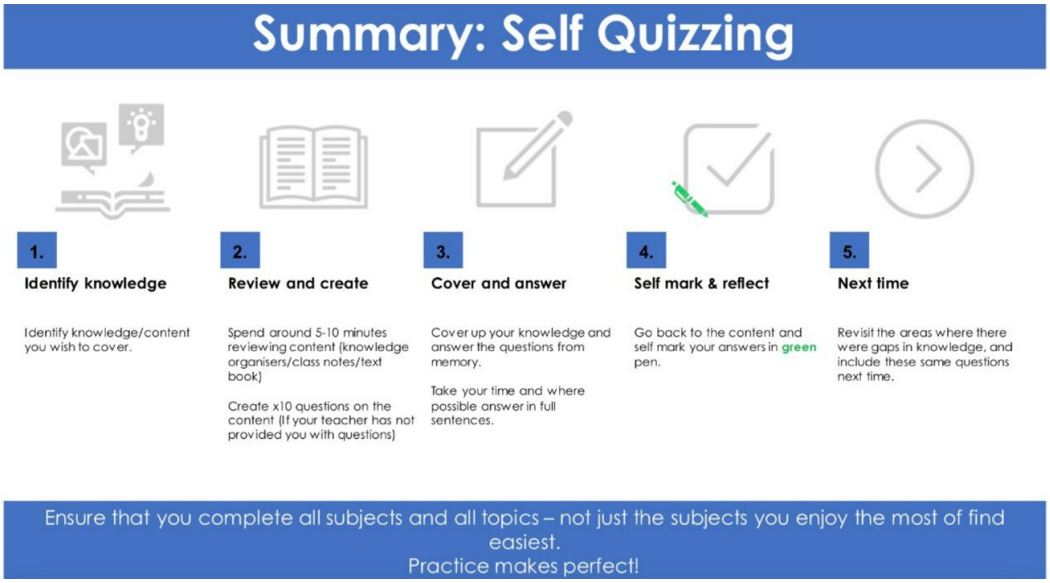
Questions:

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:

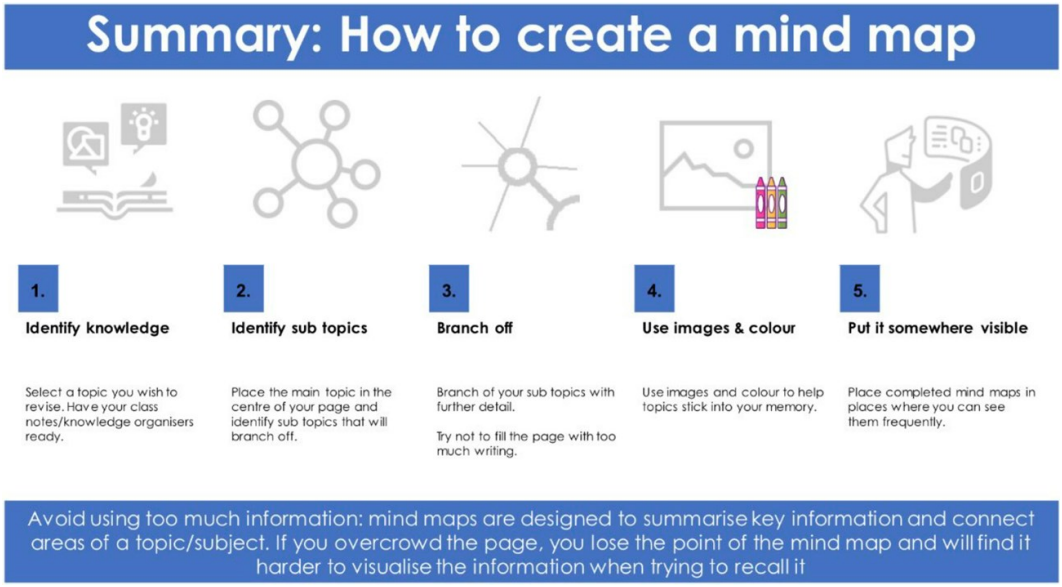
1. Improvements in agricultural technology ar the invention of the factory ✓
2. Diseases could easily spread from person tc person. ✓
3. Multiple families would share one overflowing cesspit. ✓
4. People had weak immune systems which made them less able to fight off diseases. ✓
5. The government had 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%)



4. Mind Maps

Mind maps provide a structured way to capture and organise ideas and information. They help users to understand concepts by breaking them down into their component parts. The technique is used to develop new ideas, or to break down and better understand existing information.



5. Map it out!

Take an essay question or writing question and map out your answer, without writing a full response. Look at the mark scheme and decide if your plan meets the criteria. Do this for a number of questions, then choose one and write the full response

6. Past Papers

Ask your teacher for practice questions or exam papers. Complete them without notes in exam conditions, then check your answers and identify the gaps in your knowledge, so you can target your revision.

7. Thinking Hard: Reduce

Read a section of your notes then put them aside and reduce what you read to 3 bullet points, each one no more than 10 words. Look back at the notes and decide if you missed anything important. Hide the notes and write a fourth bullet point.

8. Thinking Hard: Transform

Read a paragraph from your notes or a text book and transform it into a diagram, chart or sketch – no words allowed. Look at a diagram in Science, for example, and transform it into a paragraph of explanation.

9. Thinking Hard: Connect

For each subject, consider the exam papers and group together questions that require the same technique to answer. Write down the requirements of each type. Find a previous example you've completed and identify where you've met the criteria.

10. Key Vocabulary

For a particular topic, make a list of key vocabulary, then do the following: define each word; use each term in a sentence; create a question where the key word is the answer; identify other words which connect to each of the words in your list.

Important!

Whichever purpose your revision has, it is important that you focus on the weaknesses within your knowledge. It is tempting to revise topics you're already good at. However, if you do this, you waste valuable revision time and you could get a nasty shock when you don't do well in exams or assessments.

Before you start revising for a subject, you should decide what you need to focus on. Assessments, exams and Question Level Analysis data helps you to do this.

How to decide what to revise:

1. Use information from a range of sources to find out where your weaknesses are.

What topics **don't** I enjoy or feel success in?	What does my teacher think I need to revise?	What are my weakest areas on online platforms?	In which topics or questions did I struggle in my last assessment?

2. Create a table of topics and subjects on which you need to focus.

Topic:	Scores:					
Reasons why people migrated West in the 1840s	20%	15%	37%	45%	50%	
The Catholic Church and medicine in the Middle Ages	40%					
Religion in Nazi Germany	30%	33%				

3. Fill in your scores. This will allow you to see your progress over time.
4. As you become more successful in the areas you have identified, go back to step one. This will allow you identify any gaps in new knowledge or any information which has faded since you made your first list.

5 Step Study Plan

1. Make a list

What do you need to know? Break it down into topics and units. When you can retrieve it without effort, cross it off the list. It might help with motivation and organisation to have a 'to do' and 'have done' list.

2. Timetable a spaced schedule

Look back at the notes about spacing and interleaving. Study each topic little and often and mix up subjects and topics so you are revising a mixture each day. Be sure to leave yourself enough time to cover everything.

3. Use Effective Study Strategies

Test yourself, using retrieval strategies.

4. Identify the gaps in your knowledge

Having used the retrieval strategies, where are the gaps? What are you confident with? What do you need to go back to? What do you need to study more? Be honest with yourself – don't just focus on what you do know.

5. Close the gaps

Repeat the third and fourth steps of the plan until you are confident with everything. Some parts will be difficult, but don't give up. The harder you have to think, the more likely you are to remember in the end. 'Memory is the residue of thought.' (Dan Willingham)

What else helps?

Get some sleep

How many hours of sleep do you get each night? On average, teenagers claim to get 6-7 hours a night, when they should really be aiming for 9-10 hours. If you are only getting 6-7, you are depriving yourself of over 1000 hours of sleep each year.

Limit your screen time

Mobile phones can be great tools for learning but are they having a negative impact on your learning? Catching up with friends, social media, movies and box sets is great – but when is the best time to do these things?

Look after yourself

Being kind to yourself each day can have a big impact on your performance during revision and exams. Take a break and get some exercise. Aim to start the day with cereal or toast – but be sure to treat yourself later on in the day. Find time to do the things you love. Reward yourself for your hard work