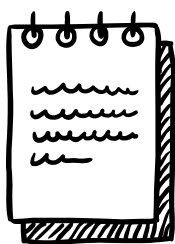


Brownhills Ormiston Academy

**Revision and the science
of learning**

**Handbook for students
and their families**



What is revision?

Revision is the process of reviewing, practising and strengthening knowledge and skills that have already been taught. It is not simply re-reading notes or looking through exercise books. Effective revision involves actively recalling information, identifying gaps in understanding and practising applying knowledge to different questions and situations. Good revision helps students move learning from their short-term memory into their long-term memory, making it easier to remember information in lessons, assessments and examinations.

Why is revision important?

Revision is important because it:

- ☐ Improves memory and recall of key knowledge.
- ☐ Builds confidence before assessments and examinations.
- ☐ Helps students identify strengths and areas for improvement.
- ☐ Reduces stress by ensuring students are well prepared.
- ☐ Develops independent study skills that are valuable in further education and employment.
- ☐ Improves performance by helping students apply knowledge accurately and efficiently.

Revision should not begin only a few days before an examination. The most successful students revise regularly throughout the year, revisiting topics little and often.

What does effective revision look like?

Effective revision is:

Planned

Students should create a realistic revision timetable, balancing subjects across the week and including breaks.

Regular

Short, focused revision sessions completed consistently are more effective than occasional long sessions.

Active

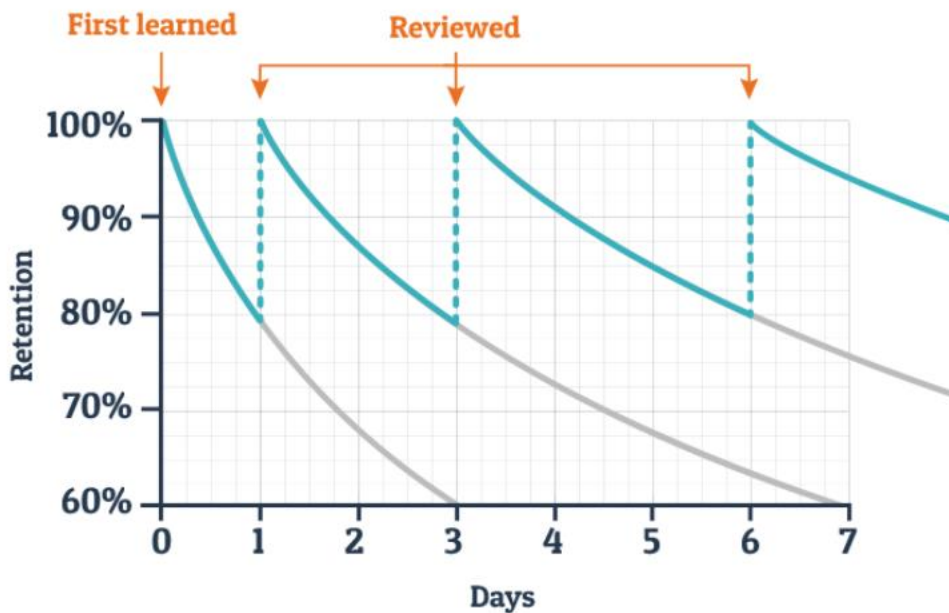
Students should be doing something with the information, not just reading it.

Focused

Revision sessions should have a clear objective, such as learning quotations, practising equations or answering exam questions.

Why do we do this?

Typical Forgetting Curve for Newly Learned Information



‘Forgetting’ happens to everyone...

The following diagram outlines this process and is called the **Ebbinghaus Forgetting Curve** (1885).

Humans start losing ‘memory of knowledge’ over time **unless the knowledge is consciously reviewed time and time again.**

Ebbinghaus concluded through his studies:

- ❑ **Memory retention is 100% at the time of learning any particular piece of information (in the moment). However, this drops to 60% after three days.**
- ❑ A range of factors affect the rate of forgetting including motivation, the meaningful nature of the information, the strategies for revision and also psychological factors (sleep for example).
- ❑ **If each day, repetition of learning occurs and students take time to repeat information then the effects of forgetting are decreased.**

In summary, what do we know about memory?

- ❑ **Consistent practice and revisiting previous material strengthens memory and boosts learning.**
- ❑ **Information, if not revisited, is ‘lost’ from our memory.**
- ❑ **Our working memory is finite and limited and so overloading this or cramming for revision doesn’t work.**

What strategies can I use to revise?

1. Retrieval Practice

Retrieval practice involves recalling information from memory without looking at notes.

Examples:

- ☐ Answering questions from memory.
- ☐ Completing a blank knowledge organiser.
- ☐ Writing down everything remembered about a topic.
- ☐ Using flashcards with questions on one side and answers on the other.

Why it works: Every time information is retrieved from memory, it becomes easier to recall in the future.

2. Self-Quizzing

Testing yourself is one of the most powerful revision techniques.

Examples:

- ☐ Flashcards.
- ☐ Online quizzes.
- ☐ Knowledge checks created by teachers.
- ☐ Asking family members to test key facts.

Why it works:
Students quickly identify what they know and what needs further study.

USING FLASHCARDS TO REVISE

by @inner_drive | www.innerdrive.co.uk

1 Split a box into 5 different compartments and label them 1 to 5.



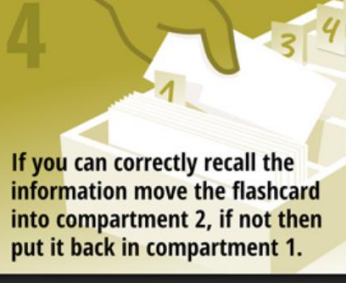
2 Place all your flashcards in compartment 1.



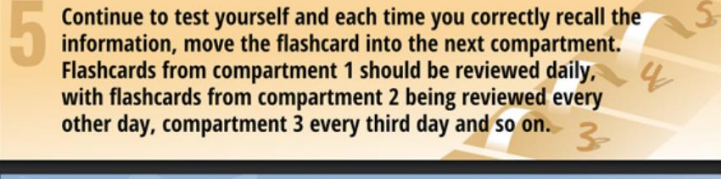
3 Test yourself on a flashcard



4 If you can correctly recall the information move the flashcard into compartment 2, if not then put it back in compartment 1.



5 Continue to test yourself and each time you correctly recall the information, move the flashcard into the next compartment. Flashcards from compartment 1 should be reviewed daily, with flashcards from compartment 2 being reviewed every other day, compartment 3 every third day and so on.



6 Eventually, all your flashcards will have been transferred to compartment 5 and the information they contain stored in your long-term memory.



3. Spaced Practice

Spaced practice means revisiting topics over time rather than cramming everything into one session.

For example:

- ☐ Review a topic one day after learning it.
- ☐ Review it again a week later.
- ☐ Review it again a month later.

Why it works: Regular review helps move information into long-term memory.

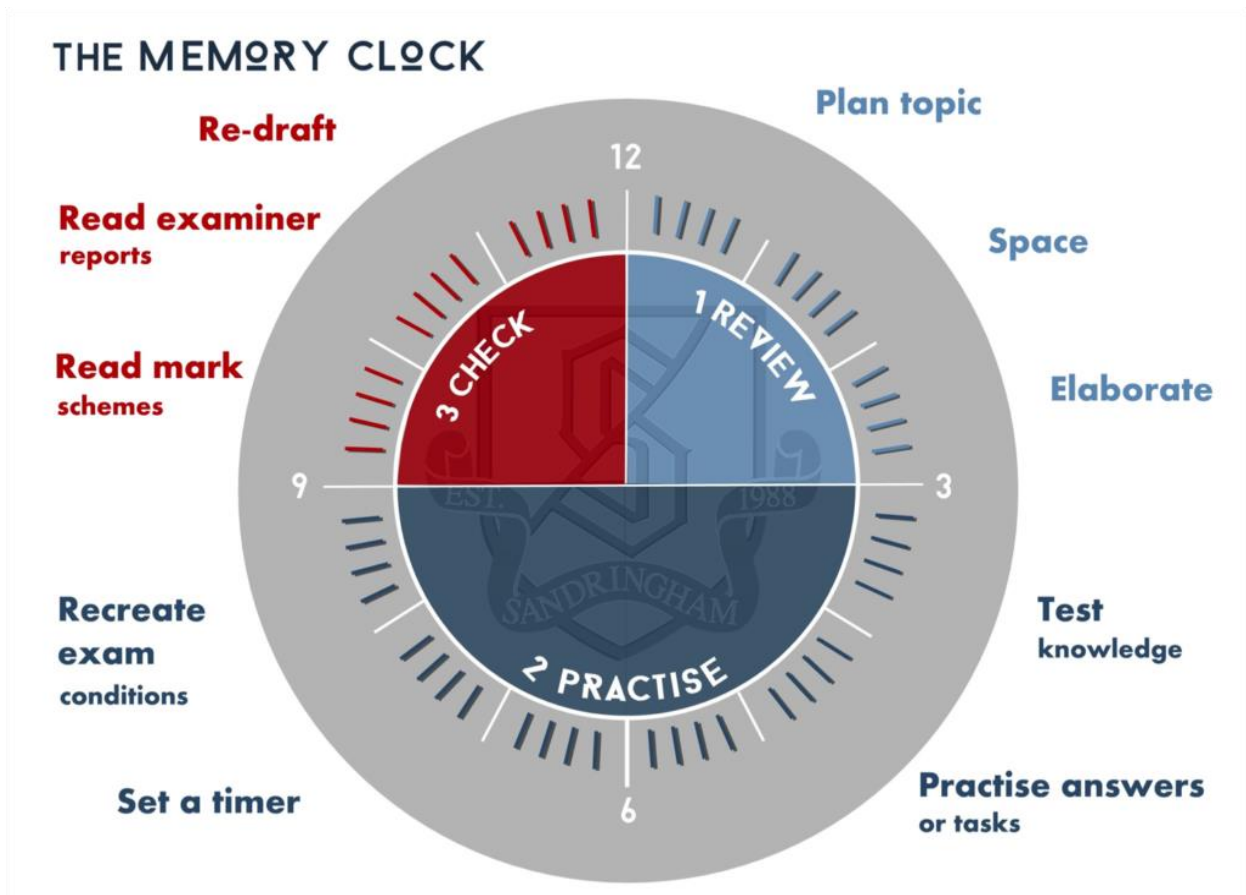
4. Practice Questions and Past Papers

Completing examination-style questions is essential preparation for assessments.

Students should:

- ☐ Attempt questions independently.
- ☐ Mark answers using mark schemes where available.
- ☐ Improve responses based on feedback.

Why it works: Students develop exam technique while applying their knowledge in realistic situations.



5. Explaining Learning to Others

A student who can explain a topic clearly often understands it well.

Examples:

- ☐ Teaching a concept to a friend.
- ☐ Explaining a topic to a parent or sibling.
- ☐ Recording themselves explaining a process.

Why it works: Explaining learning highlights gaps in understanding and strengthens knowledge.

Revision Strategies That Are Less Effective

Students often spend time on activities that feel productive but have limited impact on learning.

Examples include:

- ☐ Re-reading notes repeatedly.
- ☐ Highlighting large sections of text.
- ☐ Copying notes word for word.
- ☐ Reading textbooks without testing understanding.

These activities may be useful as a starting point but should not replace active revision techniques.

Tips for Successful Revision

- ☒ Revise little and often.
- ☒ Remove distractions such as mobile phones where possible.
- ☒ Use active strategies such as retrieval practice and self-quizzing.
- ☒ Take regular short breaks.
- ☒ Maintain a healthy balance with sleep, exercise and relaxation.
- ☒ Ask teachers for support when topics are difficult.
- ☒ Stay positive and focus on consistent effort.

Five-step study plan

by @KateJones_teach & @Inner_Drive | innerdrive.co.uk

- 1. Make a list** - What do you need to know?



- 2. Timetable a spaced schedule** - Study each topic little but often, and leave yourself enough time.



- 3. Use effective study strategies** - Test yourself and keep the re-reading and highlighting to a minimum.



- 4. Identify the gaps in your knowledge**
What do you need to study more?
What can you move on from?



- 5. Close the gaps** - Repeat steps 3 & 4 as many times as you need until you are comfortable with everything.

