

Minimise Study Time
Maximise Scores

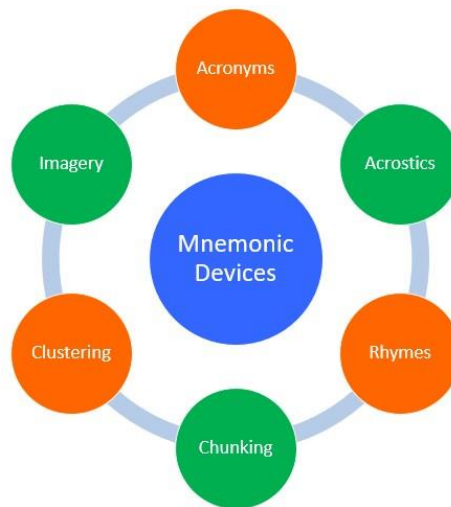


Mnemonic Devices

Mnemonic devices are techniques that help us remember something, usually by causing us to associate the information we want to remember with a visual image, a sentence, or a word. We then use that image or word to provide the retrieval cue for the item we want to remember.

Mnemonic devices can be useful when we need to remember a list of items, specific facts in a particular order, steps in a procedure or sets of points for an essay or speech.

Common types of mnemonic devices include:



Acronyms

Acronyms are words that have been formed out of the first letters of a list of words. Examples include:

- **ROYGBIV**, which is used to remember the colours of the rainbow.
- **CAST**, which summarises the signs of the trigonometric ratios.
- **IPMAT**, which describes the stages of cell division: Interphase, **P**rophase, **M**etaphase, **A**naphase, **T**elephase

$$\begin{array}{c|c} S & A \\ \hline T & C \end{array}$$

To create an acronym, take the list of words or facts that you want to remember and put them in an order so that the first letter of each word spells a real word or an easy to remember made-up word.

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Acrostics

Acrostics are poems or phrases in which the first letter of each word acts as a cue to help recall words that you are trying to remember. Examples include:

- The order for solving algebraic equations:

"Please Excuse My Dear Aunt Sally"

Parenthesis, Exponents, Multiplication, Division, Addition, Subtraction

- The order of names for orbital electrons: s, p, d, f, g, i and k

"Sober Physicists Don't Find Giraffes in Kitchens".

- The classification of living things: **"Kings Play Cards On Fairly Good Soft Velvet."**

Kingdom, Phylum, Class, Order, Family, Genus, Species, Variety.



Rhymes and Alliteration

A rhyme is a saying that has similar sounds at the end of each line. Since each line ends in a similar sound, it creates a singsong pattern that is easier to remember.

General Examples: "i before e except after c".
"30 days hath September, April, June, and November"

History Examples: The Spanish Armada met its fate
In fifteen hundred and eighty-eight.

In 1492, Columbus sailed the ocean blue.

Maths Examples: The Rule for Dividing by Fractions: The number you are dividing by
Turn upside down and multiply!

Probability: Hey diddle diddle,
The median's the middle;
You add and divide for the mean.
The mode is the one that appears the most,
And the range is the difference between.

Chunking

Short-term memory can only hold seven plus or minus two items of information.

This means that if we observe the sequence **b-t-k-l-g-f-t-d-s-r-p-l-s**, we would probably not remember more than 9 letters.

"Chunking" is the process where we decrease the number of items we are holding in memory by increasing the size of each item.

For example, by chunking the letters **b-t-k-l-g-f-t-d-s-r-p-l-s** to

b-t
k-l
g-f-t
d-s-r
p-l-s

and representing these chunks with the words "*boat-keel-gift-desire-please*", we would most likely have no difficulty in remembering them all.

Chunking makes it possible to remember long lists without getting confused.

Learning Implications:

Keep the number of points you are trying to commit to memory at the one time to 5 – 9, and use mnemonics to help you chunk.

Clustering

Clustering is grouping ideas or items with other related items, which is how long-term memory naturally organises information.

Therefore, rather than trying to remember an entire list of items in random order, cluster information into smaller groupings of related items. For example, you may cluster your grocery list into vegetables, fruits, dairy, frozen foods, and bakery items.

Imagery or Visualisation

Imagery can help you remember groups of words by creating a visual representation of the words/ideas in our mind. When we then recall that specific imagery in your mind, it can help you recall the information associated with that imagery.

SMASHIN' SCOPE

To enhance your ability to remember items or concepts, you should incorporate the elements of "**SMASHIN' SCOPE**" when constructing mnemonic imagery:

Senses (Vision, hearing, smell, taste, touch)

The more that you involve your senses, the greater your ability to recall the information that you have learned.

Movement

Moving things attract our attention more than still items. Therefore, makes your images alive and moving as if they were scenes from a movie.

Associations

Our brain thrives on associations. Associate what you are trying to remember with something you already know. Information that is linked in this manner is always easier to store in long-term memory and recall.

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Sexuality

We all have a good memory in this area, so use it!

Humour

Have fun with your memory and make your images funny, absurd, exaggerated and ridiculous. These types of images are vivid and pleasant and therefore easier to remember and recall.

Imagination

Make images vivid, colourful, and three-dimensional — they'll be easier to remember.

Numbers

Numbering adds specificity and efficiency to the principle of order and sequence. And they can help you remember things in the correct order.

Symbolism

Replace boring or serious images/concepts with something more meaningful or interesting. Use signs and symbols as shorthand representations for larger ideas/concepts – these tend to be more graphical and memorable.

Colours

The more colourful an image, the easier it is to remember.

Order

Adding order and/or organising ideas/concepts into a sequence gives a structure to our memories, acting like a scaffold that holds information together. This makes it easier for the brain to randomly access any piece of the information learned.

Positivity

Use positive, pleasant images, because the brain often blocks out unpleasant ones. The more positive and pleasant your mnemonic images are, the more likely your brain will want to return to them.

Exaggeration

Exaggeration of size, shape and sound will enhance the image, making it easier to remember.

i.e. SMASHIN SCOPE

1. Simple Visual Associations

Visual mnemonics are a type of **mnemonic** that work by associating an image with characters or objects whose name sounds like the item that has to be memorised.

For example, a microphone to remember the name "Mike," a rose to remember the name "Rosie."

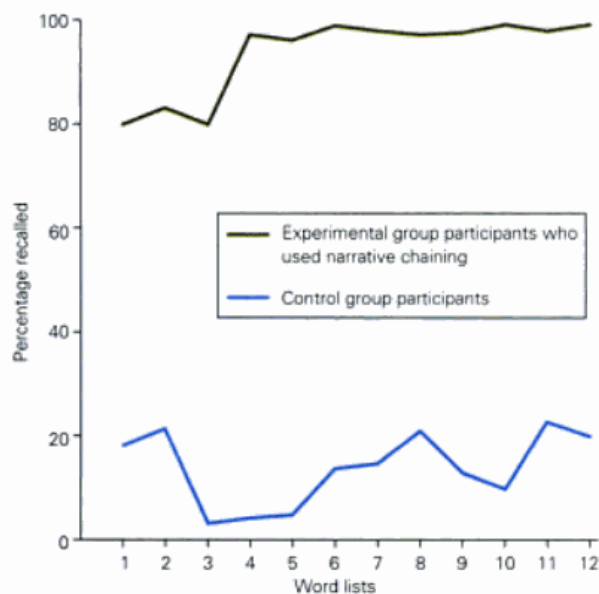
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2. Narrative Chaining

Narrative chaining involves connecting unrelated items into a meaningful story, which presents the items in order as the story unfolds.

For example: To remember the list – aeroplane, tree, envelope, paperclips, visualise an aeroplane being flown by a tree, with envelopes stuffed with paper clips instead of leaves.

How effective is this technique?



The graph shows the results of the Bower and Clark (1969) experiment. The experimental group participants who used narrative chaining recalled many more of the words from the lists when compared with the control group participants who chose their own strategy to learn the words.

3. The Method of Loci

The “Method of Loci” is an ancient and effective way of remembering large volumes of structured materials such as a speech or essay plan. Also referred to as the memory palace technique or the journey method, the method of loci involves visualising yourself moving through some familiar place or route and placing each item to be remembered at a landmark in a specific location.

Once the landmarks along the route have been memorised, we link/associate the items/information to be learned to each landmark using **visual imagery**.

To retrieve the learned information, you mentally revisit each landmark, which acts as a sequence of retrieval cues in your mind.

This method works because it organises the material to be remembered and it encourages elaborative processing and memorable imagery.

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Step 1: Choose the Route or Palace

Choose a place or route that you're very familiar with. The effectiveness of the technique relies on your ability to mentally see and walk around in your palace or along that route with ease. Examples include the route to school or the journey between your front door and your bedroom.

Step 2: Identify Landmarks

Once you have determined your palace or path, imagine yourself walking along it, and identify specific landmarks that you will pass. For example, the first landmark on your walk to your bedroom could be the front door, followed by some steps and then a fish tank.

The number of landmarks you choose will depend on the number of things you want to remember. For example, if you are required to remember a list of 10 items, identify 10 landmarks in your palace or along your route. Each one of these landmarks will act as a "memory slot" or "memory peg" that you'll later use to store a single piece of information.

Step 3: Imprint the Palace on Your Mind

Commit your route/palace to memory, always looking at the landmarks from the same point of view. Suggestions include:

- Physically walk through the route repeating out loud the landmarks as you see them.
- Write down the landmarks on a piece of paper and mentally walk through them, repeating them out loud.

Once you're confident that the route/palace is stamped on your mind, you can use the landmarks to memorise just about anything you want.

Step 4: Associate

Take a landmark (memory peg) and combine it with the information/word you want to memorise using visual associations.

Make visual associations unusual, extraordinary, animated, crazy, ridiculous, nonsensical as these are the things that are most easily remembered. i.e. Apply as many elements from **SMASHIN SCOPE** as possible.

For example: To memorise a groceries list

Landmark (Peg)	Item to Remember
1. Front door	Bacon
2. Stairs	Water
3. Fish Pond	Grapes
4. Carpet	Dog food



Mentally transport yourself to your memory palace or route. The first landmark you see in your mind is the front door. Visually combine 'bacon' with the sight of your front door.

Imagine giant fried bacon strips flowing out from underneath the door reaching for your legs. Feel the touch of the "bacon fat" on your legs (kinesthetic linking) and smell the crackling bacon.

Now open the door and keep walking, following the exact same route you defined before.

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Look at the next landmark and associate it with the second item to be memorised. Continue this process until there are no items left to memorise.

Step 5: Visit Your Palace or Route

If you're new to the technique, you'll probably need to do a little rehearsal, repeating the journey at least once in your mind. If you start from the same point and follow the same route, the memorised items will come to mind instantly as you look at the journey's selected landmarks. Go from the beginning to the end of your route, paying attention to the landmarks and replaying the scenes in your mind. When you get to the end of your route, turn around and walk in the opposite direction until you get to the starting point.

Regards,
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