



# 13 Study Tips: The Science of Better Learning

## **SCENE 1**

Our brain can potentially memorize 2.5 petabytes of information, which is roughly the equivalent of 3 million hours of YouTube videos. In order to use some of that staggering capacity a little more effectively when you learn, here are some tips that are based on widely-accepted research by neuroscientists and learning experts.

## **SCENE 2**

### **Spaced Repetition**

To maximize your learning, study short but often. Neuroscientists proved that synapses, the million billion connectors in your brain that make you remember and understand stuff, grow mainly at night when you are asleep. This means that it is more productive to study regularly with sleeping breaks in between. Try it! Practice something for 15 minutes every day and you'll be surprised by your progress within just weeks.

## **SCENE 3**

### **Find Your Own Style**

While listening to the history teacher, Tom scribbles images and Jane finishes 1 kilo of nuts. Some enjoy watching videos over reading books, others study with friends and some like sitting in silence among a million books. Everybody is different.

## **SCENE 4**

### **Good Night's Sleep**

Sleep and dreams are vital to processing and storing new information. A Harvard study showed that students who had a good night's sleep remembered their study materials 35% better than those who studied in the morning to take a test in the evening.

## **SCENE 5**

### **Focus!**

If you tend to procrastinate, which means that you tend to switch from doing something hard like studying maths to something easy like browsing the web, protect yourself from distraction. One way of doing this is to shut down your mobile phone or go to a quiet place like a library.

## **SCENE 6**

### **Pomodoro Technique**

Set a timer to 25 minutes when you focus entirely on your studies. When the timer rings, relax for 5 minutes. If you want to continue just set the timer again. The small breaks in between are relaxing and motivating to keep going.



## **SCENE 7**

### **Hard Stuff First**

Do the things that are difficult first. Because if you are like most people, you have the strongest willpower in the morning. Once you are done with the hard stuff you will feel better for the rest of the day and probably more motivated to get other things done.

## **SCENE 8**

### **Exercise, Meditate and Converse**

There are few activities proven to grow your brain however physical exercise, regular meditation, and good conversations apparently do exactly that. They lead to the creation of new neurons inside your brain and therefore grow its potential.

## **SCENE 9**

### **Go Places!**

You can create deeper memories of a subject by learning in a richer environment that offers more visual clues. In an experiment, two groups of students had to remember random words. One group changed the classroom while studying, the other didn't. The group that studied in two different rooms (one was small and windowless, the other big and bright) was 40% more likely to recall the words later.

## **SCENE 10**

### **Take Fun Seriously**

Whatever it is, find a fun way to practice. Modern learning science believes that positive emotions are very important for increasing your learning potential. So do yourself a favor and have a good time!

## **SCENE 11**

### **Space Your Studies**

In order to remember things for a longer time, repeat the material in spaced intervals. Facts or vocabularies, for example, are best learned if you review them the first time 1-2 days after the initial study and then again after 1 week and after 1 month.

## **SCENE 12**

### **30% Read 70% Recite**

If you have one hour to learn to recite a poem or prepare for a speech, spend 20 minutes of the time on studying the text and 40 minutes on practicing to recite. This ratio usually leads to the best results. In the case of an emergency, put a glass of water next to you. Take a sip whenever you lose it ;)

## **SCENE 13**

### **Instant Self-Test**

After you study, finish up with a quick quiz. Immediate recall in the form of a test or a short summary on what you've just learned can increase retention by as much as 30%.



Because it's much harder for your brain to reflect than to read, that extra effort creates to see the glass of water next to you deeper traces in your memory.

## **SCENE 14**

### **Don't Force it**

Motivation is like hunger. You cannot force yourself to be motivated just like you can't tell someone else to be hungry. So if you are not hungry right now, don't worry. Take a break and do something else.

### **Description**

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SOURCES and teaching resources :

<https://sproutsschools.com/scientific-study-tips-learning-how-to-learn/>

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<https://sprouts.featureupvote.com/>

## **SOURCES**

Brain Capacity

<https://www.scientificamerican.com/article/what-is-the-memory-capacity/>

Spaced Repetition

<http://science.sciencemag.org/content/344/6188/1173.full>

<http://www.alzforum.org/news/research-news/while-you-were-sleeping-synapses-forged-amyloid-purged>



[https://en.wikipedia.org/wiki/Spaced\\_repetition#Research\\_and\\_applications](https://en.wikipedia.org/wiki/Spaced_repetition#Research_and_applications)

Find your own Style

[http://www.br-online.de/jugend/izi/english/publication/televizion/25\\_2012\\_E/huether\\_learning.pdf](http://www.br-online.de/jugend/izi/english/publication/televizion/25_2012_E/huether_learning.pdf)

Good Night Sleep

<http://www.mcgill.ca/channels/news/give-it-time-and-sleep-25022>

Spaced Repetition

[https://en.wikipedia.org/wiki/Spaced\\_repetition#Research\\_and\\_applications](https://en.wikipedia.org/wiki/Spaced_repetition#Research_and_applications)

Pomodoro

[https://en.wikipedia.org/wiki/Pomodoro\\_Technique](https://en.wikipedia.org/wiki/Pomodoro_Technique)

Hard Stuff first

<https://staciechoice1010.wordpress.com/category/learning-solutions-in-action/>

Expertise, Meditate, Converse

[https://www.ted.com/talks/sandrine\\_thuret\\_you\\_can\\_grow\\_new\\_brain\\_cells\\_here\\_s\\_how](https://www.ted.com/talks/sandrine_thuret_you_can_grow_new_brain_cells_here_s_how)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3004979/>

Go Places

<https://www.tamu.edu/faculty/stevesmith/SmithMemory/SmithSageChapter.pdf>

Take Fun Seriously

<https://www.edutopia.org/blog/neuroscience-behind-stress-and-learning-judy-willis>

Space Your Studies

[http://www.psych.utoronto.ca/users/shkim/Barrick%20et%20al.%20\(1993\)%20spacing%20effect.pdf](http://www.psych.utoronto.ca/users/shkim/Barrick%20et%20al.%20(1993)%20spacing%20effect.pdf)

70% Recite vs 30% Memorize

<https://archive.org/details/recitationasfact00gaterich>

Instant Self-Test

[http://learninglab.psych.purdue.edu/downloads/2006\\_Roediger\\_Karpicke\\_PsychSci.pdf](http://learninglab.psych.purdue.edu/downloads/2006_Roediger_Karpicke_PsychSci.pdf)

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If you enjoyed reading about how to study better you may also like these articles from Sprouts on learning:



- Active Learning
- Brainstorming Process
- Passion and Learning

#### CLASSROOM EXERCISE

Try one tip a week with your class. At the start of the week introduce the tip and have a brief discussion with your students about why they and you think this tip might be useful for them. At the end of each week ask the students to reflect on how they were able to incorporate the tip into their daily routine and whether they think it was useful or not. By the end of half-term, your students should have accumulated useful study tips that fit their style of learning. Let us know how it goes 😊

For more background and some ideas check out our sources section!

TAGS: #Focused, #Fun, #learning, #practice, #sleep, #studytips