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Freshman biology study guide

College is a time of personal discovery, academic development, and simply fun. But one thing it usually isn't, is a period in life when you get a ton of sleep. Between late-night classes, early morning classes, and irresistible parties, there are a million and one reason college kids often don't prioritize sleep. But if college students are hoping to actually learn something and have the scores to prove it, they may want to rethink their unsconged approach to sleep, according to surprising new research by MIT. The results of the study were surprising, in fact, they even managed to shock the team behind the study. The whole project began when MIT professor Jeffrey Grossman decided to consider a possible link between how many students in his solid-state chemistry class performed and the scores they received. To find out the relationship, he asked 100 students to wear Fitbits for the semester and enroll 25 of them in an intensive fitness program. Did hitting the gym lead to better scores in the chem? The answer turned out to be no (though you should probably hit the gym anyway for about a million mental and physical health reasons). But that doesn't mean the study is a semi-statue. When Grossman and his partner crunched the data, a correlation clearly popped out. When the team conspired how many students slept against their scores, a frank relationship emerged. The more students sleep, the better they do in Grossman's classroom. That's not surprising. It's hard to find out when you're half asleep from last night's rager. But according to Grossman, the strength of the relationship was a shock. Sleep really, really matters, he remarked. And, sorry owl night owls, kids clubs, and video game addicts, so don't go to your bedtime. The numbers also show that even if you sleep a lot, if you go to bed after 2am.m. your academic achievements will still be affected. Along the same line, keeping a relatively consistent bedtime routine rather than having your bedtime swing around erratic also correlations with better scores. The strength of the connection between good quality sleep and the student's final grade wasn't the only shock the team caught from the Fitbit data. They also discovered good news for last minute crammers everywhere. While sleeping more throughout the semester had a huge impact on performance, sleeping more the night before a major test didn't. We heard the phrase 'Get a good night's sleep, you've got a big day tomorrow.' It points out this doesn't correlation at all with test performance. Instead, it's the sleep you get during the learning days occurs most importantly. That means if your nerves have you up the night before your big exam, don't freak out. You are not doomed to fail. But I don't think simply cramming all your learning into a late-night marathon session is going to work either. Pre-test insomnia doesn't matter because most of the learning for a test happened way earlier last night. You won't be able to shove everything you need to know into your head for one night, but you also won't blow your test if you don't sleep like an angel the night before. That's good news for sleep-deprived college students. But that's the only good news in this study. Otherwise, the message is crystal clear: if you want to do well at university, put all those stereotypes of college students stumbling home at 4am.m out of your head (most days) and actually getting some rest. Poor sleep leads straight to bad points. Last updated on December 17, 2020 While learning is a simple concept on the surface, there are many things that ordinary people do not know about this topic, including a lot about distance repetition. For one, did you know that everything that we learned at school taught us ineffectively? While it's a rather unusual disclosure of information, that question will start to make sense when you adopt a special learning technique. It's not something that's taught in schools, but if it were, we'd have brighter students and people who could retain better information. This technique is called repetition apart. Similar to the memory palace, this technique is something that has been lost for ages but is an incredibly powerful technique. This is one of the many keys to retaining information, but also to help with learning as we get older. Today, I will look at this technique, showing how it works, and how you can also benefit from this technique. What is distance repeating? Before learning about distance repeating systems, it's key to understanding how our brains work. In order for us to retain any information in the brain, we must refresh it periodically with specific intervals. For example, let's say you hear that Ottawa is the capital of Canada. If you don't use that information at all, you'll probably forget about it after you've finished reading this article or sometimes later. However, if you continue to learn that Ottawa is the capital of Canada through writing or you explain this, you will retain this information better. The problem is: The more often you encounter certain bits of information, the less frequently you'll refresh your memory. What makes our brains so interesting, though, is that even long-term pieces of information can be forgotten. Even the most familiar pieces of information can be forgotten if we don't run into it enough. For example, people who move to another country may forget or have difficulty speaking their native language if they do not continue with enough of it in the new country. With that understanding, repetition is based entirely on Principles. It's an idea to look at information at in ascending intervals. Does repeat distance really work? Of course, this technique is effective and well worth your time. To argue about this, let's go back to what I mentioned earlier about school. It is a fact that learning at school is ineffective compared to this technique. Aside from the fact most of us probably don't remember much about anything we've learned in high school at the moment, even the younger generation will have a harder time retaining that knowledge. There are two main factors to learning and retaining information: How much information we retain The amount of effort spent to retain that level of information Back to school, we have to retain a lot of information around the different topics that we have been teaching for a short time , so the amount of information is significant. But it starts to fall short when you consider the second factor. After all, we only have to retain that information for both the tests and the exams we take at the end. Because of this, it's fair to say that the school teaches us to learn to pass a test. We do not learn for the sake of retaining that information and developing as individuals.Compared with the repetition of each other, we find this method working wonders for us. While the information may be small or extensive, the effects can be transformed. In Gabriel Wyner's book Fluent Forever: How to Learn Any Language and Never Forget It, repeating distance is the approach to: Repeat distance ... [is] extremely effective. Over a four-month period, practiced for 30 minutes a day, you can expect to learn and retain 3600 flashcards with 90-95 percent accuracy. These flashcards can teach you an alphabet, vocabulary, grammar, and even pronunciation. And they can do it without becoming tedious because they are always challenging enough to maintain fun and fun. Mindhacker, a book written by Ron and Marty Hale-Evans, expands on this point: Our memory is simultaneously wonderful and pathetic. It has incredible miraculous abilities, but it never works quite as much as we wish it would. Ideally, we will be able to remember everything immediately, but we are not computers. We hack our memory with tools like the memory palace, but such techniques require effort and dedication. Most of us give up, and out-of-our memory to smartphones, the cloud allows computers, or the old bronze pens and paper. There's a compromise... a learning technique called repeat distance that effectively organizes information or memorizes and maintains can be used to achieve near-perfect recall. How often should you use distance repetition? At this point, we know full well that frequency matters a lot, but it's worth looking at the level and frequency we're involved with with information. For one, you might think cramming might be a good idea, but that's not a this method. According to the German psychologist Hermann Ebbinghaus, the crammed truth disappeared. Instead, Ebbinghaus encourages us to focus on a number of other factors before going into frequency. Those factors are the intensity of our emotions and the intensity of our attention. He writes: It is huge that the dependence of retention and reproduction when the intensity of attention and interest has been attached to the mental state the first time they are present. The burned child stayed away from the flames, and was beaten running from the whip, after a single vivid experience. People that interest us, we can see daily and yet can't recall the color of their hair or of their eyes... Our information comes almost only from observing extreme cases and is particularly striking. Why is he focused on that rather than a specific time? Well, because Ebbinghaus discovered more than that fact. After all, he was the pioneer of this work. How he discovered all this was through self-testing. His experiments not only uncovered the factors I mentioned above, but also something called the forgotten curve From Ebbinghaus's research, he concluded that a certain amount of information is stored in our subconscious. He called those memories savings. These are memories we cannot recall consciously; however, when exposed, these memories speed up our re-learning process. Think of a song you've not heard in a decade or a few years. You may not be able to recall the words right now, but if you hear the melody, the lyrics will pour in. Back to our question, how long should we use this technique? According to Ebbinghaus, it relies more on the quality of our recall rather than frequency. Schedule repeats the best distance Despite what Ebbinghaus claims, his work has been expanded. His theory still stands, but his work has inspired different distance repetitive schedules. Unlike Ebbinghaus, they give specific times for when we should repeat these processes, against the forgotten curve Ebbinghaus creates. Among many schedules, the most common schedules are SuperMemo SM-2 (SM-2) and Mnemosyne.SM-2 which are schedules that repeat the original distance and default on it and for good reason. It was published by P.A. Wozniak in 1990 as a the disstheses. It's an algorithm that was born through testing and the error took several years to get it to where it is today. According to the publishing house, the author memorizes 10,255 entries and then, based on the algorithm, repeats those items every day. The author spends 41 minutes a day memorizing and rereading those items. After the experiment ended, the overall retention rate was 92%. Since then, many other programs appeared, but no one was able to meet those expectations, making the SM-2 a rival. Mnemosyne is a one because it is extremely similar to the SM-2. Of all, it is the closest schedule to achieving the same result. How to use repeat distance for learning effectively There is a schedule is one thing, but then it is a matter of using it and retaining information. Also, if a schedule is too complicated for you, this 4-step method is easy to get and will bring the same results. 1. Review your notes within 20-24 hours of receiving the original information, make sure the information is recorded in the notes and you have reviewed them. During the review session, you want to read them, but then look away and try to recall the most important points. Remember, there is a difference between reading back and recalling, so make sure you look away and pull from your memories. 2. Revoke the information for the first time in a day, try to recall the information without using any of your notes much. Try remembering when you are going for a walk or sitting down and relaxing. You can also increase your efficiency by creating flashcards of key ideas and quizzing yourself on concepts. 3. Recall the document again Then recall the document every 24-36 hours over the course of several days. They do not need to be recalled long. Try a call back session when you are standing in the elevator or waiting in line. You're still free to see your notes or flashcards, but try recalling them while working with them. The idea with this step is to ask yourself questions and ask yourself to retain and recall this information. 4. Study It All Over Again After a few days have passed, give your material and research it all over again. If this information is for testing, make sure this is done within a week before the test. This allows your brain to re-process the concept. Even without schedule, repeat distance feels natural and is a better way to learn than traditional methods. It expands on memory retention strategies such as memory palaces, too. Not only that, but this technique can apply to all ways of things in life. Thanks to using flashcards and other methods, you can learn new languages, properly prepare for tests, and more. Learn more about effective LearningFeatured photo credit: Joel Muniz via unsplash.com unsplash.com