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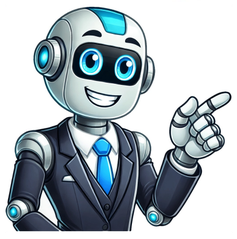

This can help you digest the information faster. For example, if youre learning a new language, you could break it down into nouns, verbs, adjectives, and tenses. It helps the information feel less overwhelming, and it gives you a path forward on how to study it.[1]If youre learning from a textbook, it may be organized like this already. Advertisement Make your goals specific and time-based to cover the most ground. It will help break up the subject so you arent overwhelmed by an entire field of knowledge. You could also set smaller goals throughout the weeks to work up toward learning an entire subject.[2]For example, if youre studying math, try making it a goal to nail down basic algebra by next week. Then, you can move on to tougher concepts, like calculus.You can also split things up by chapters in a textbook. Great notes make studying much easier. Listen to the information being presented and write it down in your own words. Write down key information in short phrases rather than using complete sentences. Leave spaces in your notes to jot down comments or questions later on.[3]For example, instead of writing down, The food chain is a hierarchical series of organisms each dependent on the next as a source of food, you could write, Food chain: series of organisms eating each other.Try developing a shorthand thats easy to write down and understand. For example, if youre learning about chemistry concepts, you could shorten catalyst to cat, chromatography to chrom, or stoichiometry to stoich.If you're taking notes on how to do something sequential, like how to solve a math problem, write your notes down in steps. That way, it will be easier to remember how to apply those same steps to different problems.[4] Advertisement Studies show that writing notes by hand solidifies information in your head. Try going a little old school and whip out a sheet of paper and a pencil. If you want to keep your notes organized, type them up later and save them on your computer.[5]Writing your notes out by hand can take a little longer than typing them up, so its important to write in phrases and use shorthand. Getting someone else to explain it can help you learn faster. If theres a key concept that you just dont quite get, dont be afraid to ask. If youre in a classroom setting, approach the teacher or a fellow classmate.[6] If youre working on your own, try Googling it or finding an online forum for help.[7]If youre in higher education, go to your teachers office hours to get help throughout the school year.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. His site is set apart by its focus on fostering genuine comprehension through step-by-step understanding (instead of just getting the correct final answer), enabling learners to identify and overcome misunderstandings and confidently take on any test they face. He received his MA in Physics from Case Western Reserve University and his BA in Physics from Baldwin Wallace University. Review basic concepts before diving into advanced topics. Identifying the gaps in your knowledge helps you avoid difficulties later on. Take an assessment or get your teacher's advice on where you can improve. Practice targeted exercises to build a strong foundation so you can confidently tackle new lessons. Advertisement Lengthy cram sessions don't help you retain information in the long-term. Instead, try to space out your study time so youre doing a little bit every day. Try studying for 10 to 15 minutes every evening or whenever you have time.[8]Studies show that trying to cram a bunch of knowledge into your mind right before a test will only help you retain it in the short term.If youre limited on time, you might not be able to spread your studying over multiple days. If thats the case, just make sure you take lots of breaks to give your brain a rest. Grab a friend or a classmate and pretend youre a teacher. Go over the basic concepts of what youre learning, and answer any questions they might have. If you get stuck or struggle at any point, go back and revisit the stuff youre having trouble with.[9]If you can teach a subject to someone else, youre probably pretty close to mastering it. Advertisement Read a portion of the material, then say what you just learned. You dont need to be talking to anyoneyou can do this alone in your home if you want. Speaking the information out loud helps you memorize it faster and keep it in your mind for longer.[10]After youre done, go over the information one more time to make sure you got it right. If you missed anything or struggled in one area, go over it a few more times. What will this knowledge help you do in the future? What is it helping you do right now? Connecting a subject to something youre doing outside of a classroom setting is a great way to keep your interest peaked.Oftentimes, people connect subjects to what theyre doing career-wise. If youre learning chemistry, maybe youll use it when you work in a lab later on. If youre studying math, maybe youll crunch numbers at an accounting firm in the future. Advertisement Use this trick to learn chunks of information quickly. For example, if you want to remember the colors of the rainbow (red, orange, yellow, green, blue, indigo, violet), you could use the mnemonic device Roy G. Biv. Its much easier to remember, so you can memorize it faster and use it to retain information.[11]If youre learning the order of operations in math (parentheses, exponents, multiplication, division, addition, subtraction), you could use the mnemonic device PEMDAS. Practice tests can show you where you're struggling. You can find tons of practice tests online for almost any subject. If youre in a classroom setting, you can also ask your teacher to see if they have ones you could practice with. Make sure you check your answers, and go over anything that you struggled with.[12]You can also ask a fellow classmate to check your answers for you.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. 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If your school has multiple math classes, try asking them if there is a possibility of moving down to one which has more time to work on math improvement. Also, you can ask your teacher for study tips and extra help, and maybe they can even get you situated with a tutor if you need it. Question How to reciting English words quckly? Try using flashcards, they help a lot. Even when making them, it helps you learn. Ask a Question Advertisement This article was co-authored by Daron Cam and by wikiHow staff writer, Hannah Madden. Daron Cam is an Academic Tutor and the Founder of Bay Area Tutors, Inc., a San Francisco Bay Area-based tutoring service that provides tutoring in mathematics, science, and overall academic confidence building. Daron has over eight years of teaching math in classrooms and over nine years of one-on-one tutoring experience. He teaches all levels of math including calculus, pre-algebra, algebra I, geometry, and SAT/ACT math prep. Daron holds a BA from the University of California, Berkeley and a math teaching credential from St. Mary's College. This article has been viewed 89,030 times. Co-authors: 9 Updated: June 24, 2024 Views:89,030 Categories: Study Skills PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 89,030 times. "I thought of giving up on putting effort into reading, but as I read through the article, it motivated me more." Share your story To improve your grades, you can either spend more time studying, or you can learn to study smart.168.Thats how many hours there are in a week.If youre a student, you probably feel like this isnt enough.After all, you have so many assignments to do, projects to work on, and tests to study for.Plus, you have other activities and commitments.And you want to have a social life too.Wouldnt it be nice if you could study smarter (not harder), get good grades, and lead a balanced life?Of course it would. Thats why I wrote this article.The main aim of education isnt to get straight As. But learning how to learn is a crucial life skill.So I spent hours scouring scientific articles and research journals to find the best ways to learn more effectively.Im a lifelong top student myself, and Ive since completed my formal education. Over the course of my academic career, Ive used almost all the smart studying tips outlined in this article, so I can verify that they work.Lets get started. Here are 20 scientific ways to learn faster. How to study smarter and more efficientlyStudying smart essentially means learning how to learn.This includes how to learn faster and more efficiently, while retaining information for longer.1. Learn the same information in a variety of ways.The research (Willis, J. 2008) shows that different media stimulate different parts of the brain. The more areas of the brain that are activated, the more likely it is that youll understand and retain the information.[1]So to learn a specific topic, you could do the following:Read the class notesRead the textbookWatch a Khan Academy videoLook up other online resourcesCreate a mind mapTeach someone what youve learnedDo practice problems from a variety of sourcesOf course, you wont be able to do all of these things in one sitting. But each time you review the topic, use a different resource or method youll learn faster this way.2. Study multiple subjects each day, rather than focusing on just one or two subjects.Its more effective to study multiple subjects each day to help you stay focused, than to deep-dive into one or two subjects (Rohrer, D. 2012).[2]For example, if youre preparing for exams in math, history, physics, and chemistry, its better to study a bit of each subject every day. This approach will help you to learn faster than by focusing on just math on Monday, history on Tuesday, physics on Wednesday, chemistry on Thursday, and so on.Why?Because youre likely to confuse similar information if you study a lot of the same subject in one day.So as a tip to learn faster, spread out your study time for each subject. In so doing, your brain will have more time to consolidate your learning.3. Review the information periodically, instead of cramming.Periodic review is essential if you want to move information from your short-term memory to your long-term memory. This will help you get better exam grades.As the research (Cepeda, N. 2008) shows, periodic review beats cramming hands-down.[3]The optimal review interval varies, depending on how long you want to retain the information. But experience both my own and through working with students tells me that the following review intervals work well (I explain the entire periodic review system in this article):1st review: 1 day after learning the new information2nd review: 3 days after the 1st review3rd review: 7 days after the 2nd review4th review: 21 days after the 3rd review5th review: 30 days after the 4th review6th review: 45 days after the 5th review7th review: 60 days after the 6th review4. Sit at the front of the class.If you get to choose where you sit during class, grab a seat at the front. Studies show that students who sit at the front tend to get higher exam scores (Rennels & Chaudhari, 1988). The average scores of students, depending on where they sat in class, are as follows (Giles, 1982):Front rows: 80%Middle rows: 71.6%Back rows: 68.1%These findings were obtained under conditions where the seating positions were teacher-assigned.[4] This means its not just a case of the more motivated students choosing to sit at the front, and the less motivated students choosing to sit at the back.By sitting at the front, youll be able to see the board and hear the teacher more clearly, and your concentration will improve too.Now you know where the best seats in class are!5. Dont multitask.The data is conclusive: Multitasking makes you less productive, more distracted, and dumber.[5][6][7] The studies even show that people who claim to be good at multitasking arent actually better at it than the average person.Effective studentsfocus on just one thing at a time. So dont try to study while also intermittently replying to text messages, watching TV, and checking your Twitter feed.Here are some suggestions for how to study smart by improving your concentration:Turn off notifications on your phonePut your phone away, or turn it to airplane modeLog out of all instant messaging programsTurn off the Internet access on your computerUse an app like FreedomClose all of your Internet browser windows that arent related to the assignment youre working onClear the clutter from your study area6. Simplify, summarize, and compress the information.Use mnemonic devices like acronyms, as these are proven to increase learning efficiency.[8]Example #1If you want to memorize the electromagnetic spectrum in order of increasing frequency, you could use this acronym/sentence:Raging Martians Invaded Venus Using X-ray Guns(In order of increasing frequency, the electromagnetic spectrum is: Radio, Microwave, Infrared, Visible, Ultraviolet, X-rays, Gamma rays.)Example #2 Question: Stalactites and stalagmites which ones grow from the top of the cave and which ones grow from the ground?Answer: Stalactites grow from the top, while stalagmites grow from the ground.Study smart by using mnemonic devices whenever possible. In addition, you could summarize the information into a comparison table, diagram, or mind map.[9] These tools will help you learn the information much faster.7. Take notes by hand, instead of using your laptop.If you want to learn how to study efficiently, write your notes by hand.Scientists recommend this, and not just because youre more likely to give in to online distractions when using your laptop. Even when laptops are used only for note-taking, learning is less effective (Mueller, P. 2013).[10]Why?Because students who take notes by hand tend to process and reframe the information.In contrast, laptop note-takers tend to write down what the teacher says word-for-word, without first processing the information.As such, students who take notes by hand perform better in tests and exams.Using an efficient note-taking strategy will reduce the amount of time you need to invest to achieve the same (or better) result.8. Write down your worries.Will I do well on this exam?What if I forget the key concepts and equations?What if the exam is harder than expected?These kinds of thoughts probably run through your head before you take an exam. But if these thoughts run wild, the accompanying anxiety can affect your grades.Heres the solution In one experiment,[11] researchers at the University of Chicago discovered that students who wrote about their feelings about an upcoming exam for 10 minutes performed better than students who didnt. The researchers say that this technique is especially effective for habitual worriers.Psychologist Kitty Klein has also shown that expressive writing, in the form of journaling, improves memory and learning.[12] Klein explains that such writing allows students to express their negative feelings, which helps them to be less distracted by these feelings.To be less anxious, take 10 minutes and write down all the things related to the upcoming exam that youre worried about. As a result of this simple exercise, youll get better grades.9. Test yourself frequently.Decades of research has shown that self-testing is crucial if you want to improve your academic performance.[13]In one experiment, University of Louisville psychologist Keith Lyle taught the same statistics course to two groups of undergraduates.For the first group, Lyle asked the students to complete a four- to six-question quiz at the end of each lecture. The quiz was based on material hed just covered.For the second group, Lyle didnt give the students any quizzes.At the end of the course, Lyle discovered that the first group significantly outperformed the second on all four midterm exams.So dont just passively read your textbook or your class notes. Study smart by quizzing yourself on the key concepts and equations.The Feynman technique is particularly effective in understanding concepts and memorizing them long-term. And as you prepare for a test, do as many practice questions as you can from different sources.10. Connect what youre learning with something you already know.Study faster by connecting new concepts with the knowledge you already have.In their book, Make It Stick: The Science of Successful Learning, scientists Henry Roediger III and Mark A. McDaniel explain that the more strongly you relate new concepts to concepts you already understand, the faster youll learn the new information.[14]For example, if youre learning about electricity, you could relate it to the flow of water. Voltage is akin to water pressure, current is akin to the flow rate of water, a battery is akin to a pump, and so on.Another example: You can think of white blood cells as soldiers that defend our body against diseases, which are the enemies.It takes time and effort to think about how to connect new information to what you already know, but the investment is worth it.11. Read key information out loud.Studies have been conducted, which demonstrate that reading information out loud helps students to learn faster than by reading silently (MacLeod CM, 2010 & Ozubko JD, 2010).[15][16]Whats the reason for this?When you read information out loud, you both see and hear it. On the other hand, when you read information silently, you only see it.It isnt practical to read every single word of every single set of notes out loud. That would take way too much time.So heres the process I recommend to study faster by reading aloud:Step 1: As you read your notes, underline the key concepts/equations. Dont stop to memorize these key concepts/equations; underline them and move on.Step 2: After youve completed Step 1 for the entire set of notes, go back to the underlined parts and read each key concept/equation out loud as many times as you deem necessary. Read each concept/equation slowly.Step 3: After youve done this for each of the underlined key concepts/equations, take a three-minute break.Step 4: When your three-minute break is over, go to each underlined concept/equation one at a time, and cover it (either with your hand or a piece of paper). Test yourself to see if youve actually memorized it.Step 5: For the concepts/equations that you havent successfully memorized, repeat Steps 2, 3, and 4.12. Take regular study breaks.Taking regular study breaks enhances overall productivity and improves focus (Ariga & Lleras, 2011).[17]Thats why it isnt a good idea to hole yourself up in your room for six hours straight to study for an exam.You might feel like you get a lot done this way, but the research proves that breaks help you to study faster in the long run. So take a 5- to 10-minute break for every 40 minutes of work.I recommend that you use a timer or stopwatch to remind you when to take a break and when to get back to studying.During your break, refrain from using your phone or computer, because these devices prevent your mind from fully relaxing.13. Reward yourself at the end of each study session.Before starting a study session, set a specific reward for completing the session. By doing this, youll promote memory formation and learning (Adcock RA, 2006).[18]The reward could be something as simple as:Going for a short walkEating a healthy snackListening to your favorite musicStretchingDoing a couple of sets of exercisePlaying a musical instrumentTaking a showerReward yourself at the end of every session youll study smarter and learn faster.14. Focus on the process, not the outcome.Students who succeed in school concentrate on learning the information, not on trying to get a certain grade.Stanford psychologist Carol Dwecks research shows that these students:[19]Focus on effort, not the end resultFocus on the process, not on achievementBelieve they can improve even in their weak subjects as long as they put in the time and hard workEmbrace challengesDefine success as pushing themselves to learn something new, not as getting straight AsNot-so-successful students tend to set performance goals, while successful students tend to set learning goals.[20]Whats the difference between these two types of goals?Performance goals (e.g. getting 90% on the next math test, getting into a top-ranked school) are about looking intelligent and proving yourself to others.In contrast, learning goals (e.g. doing three algebra problems every other day, learning five new French words a day) are about mastery and growth.Most schools emphasize the importance of getting a certain exam score or passing a certain number of subjects. Ironically, if you want to meet and surpass these standards, youd be better off ignoring the desired outcome and concentrating on the learning process instead.15. Drink at least eight glasses of water a day.You probably think you drink enough water, but studies show that up to 75% of people are in a chronic state of dehydration.[21]Dehydration is bad for your brain and your exam grades too.University of East London researchers have found that your brains overall mental processing power decreases when youre dehydrated (Edmonds, C. 2013).[22] Further research has shown that dehydration even causes the grey matter in your brain to shrink.[23]The simple solution?Drink at least eight glasses of water a day. Bring a water bottle wherever you go, and drink water before you start to feel thirsty.And if youre taking an exam, bring a water bottle with you. Every 40 minutes or so, drink some water. This will help you stay hydrated and improve your exam performance. Plus, this also acts as a short break to refresh your mind.16. Exercise at least three times a week.Exercise is good for your body. Its also very good for your brain.Various studies have shown that exercise Improves your memory[24]Improves your brain function[25][26]Reduces the occurrence of depressionHelps to prevent diseases like diabetes, cancer, and osteoporosisEnhances your sleep qualityReduces stressImproves your mood[27]Exercise is quite the miracle drug!So to study smarter, exercise at least three times a week for 30 to 45 minutes each time. Youll be healthier and more energetic, and youll remember information better too.17. Sleep at least eight hours a night, and dont pull all-nighters.When considering how to study efficiently, dont neglect sleep.Ive spoken to and worked with 20,000 students so far. Not asingle one has told me that he or she consistently gets eight hours of sleep a night.Theres just so much to do, I hear students say, again and again. As a student, sleep often seems more like a luxury than a necessity.But what does the research have to say about sleep?The research shows that if you get enough sleep, youll be more focused, youll learn faster,[28] and your memory will improve.[29] Youll also deal with stress more effectively.[30]This is a recipe for excellent grades.So sleep at least eight hours a night. This way, you will have more productive study sessions and you wont need to spend as much time hitting the books.In addition, sleep expert Dan Taylor says that learning the most difficult material immediately before going to bed makes it easier to recall the next day.[31] So whenever possible, arrange your schedule such that you study the hardest topic right before you sleep.Lastly, dont pull all-nighters. As psychologist Pamela Thachers research shows, students who pull all-nighters get lower grades and make more careless mistakes.[32]18. Eat blueberries.Blueberries are rich in flavonoids, which strengthen connections in the brain and stimulate the regeneration of brain cells.Researchers at the University of Reading have found that eating blueberries improves both short-term and long-term memory (Whyte, A. & Williams, C. 2014).[33][34] Blueberries may also help to prevent degenerative diseases like Alzheimers.19. Eat chicken and eggs.A team of researchers from Boston University conducted a long-term study on 1,400 adults over 10 years. They found that participants who had diets high in choline performed better on memory tests.[35]Choline is the precursor to acetylcholine, which is essential for the formation of new memories.What foods are high in choline? Chicken and eggs (the egg yolk contains 90% of the total choline in the egg[36]).Just in case youre worried about the high cholesterol content of egg yolks, you can breathe a sigh of relief. Recent studies show that eggs including the yolk are a healthy food for almost everyone.[37]And if youre a vegetarian, there are alternatives to getting choline in your diet:LentilsSunflower seedsPumpkin seedsAlmondsCabbageCauliflowerBroccoli20. Eat omega-3 fatty acids.Omega-3 fatty acids are critical for brain function.[38]One experiment (Yehuda, S. 2005) also found that taking a combination of omega-3 and omega-6 fatty acids reduced test anxiety in students and improved their mental concentration.[39]Omega-3 fatty acids are linked to the prevention of high blood pressure, heart disease, diabetes, arthritis, osteoporosis, depression, attention deficit/hyperactivity disorder (ADHD), dementia, Alzheimers, asthma, colorectal cancer, and prostate cancer.[40]Thats an incredible list!Here are foods that are rich in omega-3 fatty acids:SalmonSardinesMackerelTroutFlaxseedPumpkin seedsWalnutsThe bottom line on studying smartThis is a long article that contains a lot of information.But dont feel overwhelmed, because theres no need to implement everything at one shot.As the saying goesHow do you eat an elephant? One bite at a time.In the same way, to implement all 20 tips in this article, do it one tip at a time. Focus on just one tip a week, or even one tip a month.Once youve turned that tip into a consistent study habit, move on to the next one.Throughout the process, dont let the goal of getting straight As become an unhealthy obsession. After all, education is about more than getting good grades.Its about the pursuit of excellence. Its about cultivating your strengths. And its about learning and growing, so you can contribute more effectively.Theres hard work involved, but I know youre up to the challenge. Like this article? Please share it with your friends. Learn CPR It's as simple as ABC - Airway, Breathing and Circulation! Learn how to make knots Square Knot, Clove Hitch, Bowline, Figure 8, Sheet Bend, Two Half Hitches, Carrick Bend, and so many more. How many do you know? Learn to differentiate between crows and ravens One of the best ways to tell crows and ravens apart is by their calls, but there are other clues. Ravens are larger and often travel in pairs, while crows are typically seen in larger groups. Learn how to pick locks ALSO ON DAY ZERO...Get inspired with these ideas for interesting and different experiences around the world.Take your goal setting to the next level with a whole set of exclusive features that will empower you to achieve more. Learn basic knitting/crocheting Learn to play the ukulele The ukulele is often considered one of the easiest instruments to learn due to its small size and simple chord shapes. Learn to touch type Learn simple needle and thread sewing Learn to whistle with my fingers Learn how to write with my non-dominant hand Learn to tie a tie The most popular style is the Windsor knot, but there are many other methods you can experiment with, including the Four-in-Hand, The Pratt (Shelby), the Ascot, the Kelvin, and many more! Learn how to cross stitchCross-stitch is a form of sewing and a popular form of counted-thread embroidery in which X-shaped stitches in a tiled, raster-like pattern are used to form a picture. The stitcher counts the threads on a piece of evenweave fabric in each direction so that the stitches are of uniform size and appearance. This form of cross-stitch is also called counted cross-stitch in order to distinguish it from other forms of cross-stitch. Sometimes cross-stitch is done on designs printed on the fabric ; the stitcher simply stitches over the printed pattern. Cross-stitch is often executed on easily countable fabric called aida cloth, whose weave creates a plainly visible grid of squares with holes for the needle at each corner. Learn Morse code Did you know that Morse code is named after its inventor, Samuel Morse, who co-developed the telegraph? Learn meditation Find the right technique for you - some of the more popular practices are Buddhist (Zen, Vipassana, Mindfulness, Metta), Hindu (Mantra, Transcendental, Yoga), and Chinese (Taoist, Qigong). Learn to make cheese Cheese is made from the curdling of milk, which separates the solid curds from the liquid whey. Learn how to parallel park Learn how to change my own oil Learn kitchen knife skills Learn how to make latte art Mastering latte art involves precise milk frothing and pouring techniques to create intricate designs. Latte art is a method of preparing coffee created by pouring microfoam into a shot of espresso and resulting in a pattern or design on the surface of the latte. It can also be created or embellished by simply "drawing" in the top layer of foam. Latte art is particularly difficult to create consistently, due to the demanding conditions required of both the espresso shot and milk. This, in turn, is limited by the experience of the barista and quality of the espresso machine. The term also applies to other beverages containing milk foam, such as cappuccino and hot chocolate. Learn Sudoku In Sudoku, each number 1-9 must appear exactly once in every row, column, and 3x3 grid. Learn how to say the alphabet backwards Learn the alphabet in sign language Learn how to make a friendship bracelet Learn some yoyo tricks Mastering the "Sleeper" trick is essential, as it forms the foundation for most advanced yoyo tricks. Learn to eat with chopsticks Holding chopsticks closer to the tips gives better control, making it easier to pick up food. Immerse yourself in Asian culture and cuisine by mastering the art of eating with chopsticks. Learn to longboard Learn to read music The spaces on the treble clef spell "FACE," helping you remember the notes F, A, C, and E. Learn how to tie a Windsor knot Learn how to make an omelet Learn to paddle board Balance is key: focus your gaze on the horizon to stabilize and enjoy paddle boarding. ALSO ON DAY ZERO...Get inspired with these ideas for interesting and different experiences around the world.Take your goal setting to the next level with a whole set of exclusive features that will empower you to achieve more. Posted at 11:56h in Blog by Maria 0 Comments Mastering complex subjects doesnt have to be a daunting task reserved for the few with innate talent. With the right strategies and a bit of persistence, anyone can learn difficult topics more efficiently and effectively. This guide explores practical methods that simplify the learning process, making it accessible and less intimidating. Whether youre tackling advanced mathematics, diving into the depths of philosophy, or exploring the intricacies of language learning, these tips are designed to streamline your study sessions and enhance your comprehension. 1. Break Down the MaterialThe key to understanding complex subjects is breaking them down into smaller, more manageable parts. Start by dividing the topic into subtopics, then focus on learning one piece at a time. This approach prevents feeling overwhelmed and helps build a solid foundation of knowledge, piece by piece.2. Use Active Learning TechniquesActive learning involves engaging directly with the material through activities such as summarizing information in your own words, teaching concepts to someone else, or applying what youve learned to practical scenarios. This method strengthens comprehension and retention by forcing you to process the information more deeply.3. Consider Professional AssistanceSometimes, the fastest route to understanding a challenging subject, like science, is to seek guidance from someone who already knows it inside out. A tutor can offer tailored explanations, address specific questions, and provide the structured support you need to overcome obstacles in your learning journey. But how much does a science tutor cost? The answer can vary widely based on factors such as the tutors qualifications, experience, and the complexity of the subject matter.4. Create a Study ScheduleConsistency is crucial when learning complex subjects. Design a study schedule that allocates regular, dedicated time slots for diving into the material. A consistent routine not only aids in retention but also turns studying into a habit, reducing the likelihood of procrastination.5. Employ Multimedia ResourcesDont limit yourself to just textbooks or written notes. In todays digital age, a wealth of multimedia resources is available at your fingertips. Videos, podcasts, interactive tutorials, and online courses can present information in different formats, making it easier to grasp challenging concepts. Diversifying your study materials can cater to various learning styles and preferences, enhancing your overall understanding of the subject.6. Leverage Study GroupsStudy groups offer a dynamic way to learn difficult subjects. By collaborating with peers, you can gain new insights, clarify doubts, and deepen your understanding through discussion. Each member brings unique perspectives and knowledge to the group, making it easier to tackle complex topics. Additionally, explaining concepts to others is a powerful way to reinforce your own learning. This collaborative environment also fosters accountability, encouraging members to prepare and participate actively.7. Practice RegularlyMastery of challenging subjects requires not just understanding but also practice. Regularly solving problems, writing essays, or engaging in practical applications of the theory solidifies your knowledge and enhances skill retention. This consistent practice helps identify areas of weakness that need further study, ensuring a comprehensive grasp of the subject matter. Incorporating a variety of practice methods, such as quizzes or flashcards, can further enhance the learning experience by targeting different cognitive skills.8. Use Visual AidsVisual aids such as charts, graphs, and mind maps can simplify complex information, making it more accessible. They help in organizing thoughts, showing relationships between concepts, and providing a visual summary of the material. For many learners, a single diagram can illuminate a concept more effectively than pages of text. Regularly updating and refining these aids as your understanding grows can also serve as an effective revision tool.9. Set Achievable MilestonesSetting small, achievable milestones throughout your learning process offers a sense of progress and accomplishment. These markers motivate you to continue and provide opportunities to review and consolidate what youve learned. Celebrating these milestones also helps maintain a positive attitude towards the subject, even when the going gets tough. Tailoring these milestones to match personal learning goals and deadlines can optimize the efficiency and effectiveness of your study plan.10. Adapt Learning Strategies to the SubjectDifferent subjects may require different approaches. For instance, learning a language might benefit more from immersion and practice, while a subject like mathematics might require solving numerous problem sets. Identify the most effective strategies for each subject and adapt your study habits accordingly. Being flexible and open to experimenting with new study techniques can also uncover more efficient ways of learning.11. Seek FeedbackFeedback is essential for improvement, especially when learning something complex. Whether its from teachers, tutors, or peers, constructive feedback provides insight into your understanding and performance. It highlights areas for improvement and guides your study efforts more effectively. Actively seeking out feedback, not just on errors but also on successes, can help refine both knowledge and study strategies.12. Stay Curious and MotivatedCuriosity drives learning. Maintain an inquisitive mindset towards the subject, always looking to explore deeper and beyond the basics. Staying motivated, even when faced with difficulties, is crucial. Remind yourself of your goals and the reasons behind your study efforts to keep the flame of motivation burning. Setting aside time to explore related areas of interest can also enrich your understanding and sustain engagement with the subject.ConclusionLearning difficult subjects quickly and easily doesnt mean seeking shortcuts or avoiding hard work. It involves strategically approaching your studies with techniques that enhance understanding, retention, and application. By breaking down the material, engaging with it actively, and leveraging external resources like study groups and tutors, you can transform a daunting task into a manageable and even enjoyable process. Regular practice, the use of visual aids, setting milestones, adapting strategies, seeking feedback, and maintaining curiosity and motivation are all part of a holistic approach to mastering complex topics. The journey of learning is as rewarding as the knowledge gained at the end. Each step taken towards understanding a challenging subject not only builds your intellectual capabilities but also your confidence in tackling any learning obstacle that comes your way.Image Source This can help you digest the information faster. For example, if youre learning a new language, you could break it down into nouns, verbs, adjectives, and tenses. It helps the information feel less overwhelming, and it gives you a path forward on how to study it.[1]If youre learning from a textbook, it may be organized like this already. Advertisement Make your goals specific and time-based to cover the most ground. It will help break up the subject so you arent overwhelmed by an entire field of knowledge. You could also set smaller goals throughout the weeks to work up toward learning an entire subject.[2]For example, if youre studying math, try making it a goal to nail down basic algebra by next week. Then, you can move on to tougher concepts, like calculus.You can also split things up by chapters in a textbook. Great notes make studying much easier. Listen to the information being presented and write it down in your own words. Write down key information in short phrases rather than using complete sentences. Leave spaces in your notes to jot down comments or questions later on.[3]For example, instead of writing down, The food chain is a hierarchical series of organisms each dependent on the next as a source of food, you could write, Food chain: series of organisms eating each other.Try developing a shorthand thats easy to write down and understand. For example, if youre learning about chemistry concepts, you could shorten catalyst to cat, chromatography to chrom, or stoichiometry to stoich.If you're taking notes on how to do something sequential, like how to solve a math problem, write your notes down in steps. That way, it will be easier to remember how to apply those same steps to different problems.[4] Advertisement Studies show that writing notes by hand solidifies information in your head. Try going a little old school and whip out a sheet of paper and a pencil. If you want to keep your notes organized, type them up later and save them on your computer.[5]Writing your notes out by hand can take a little longer than typing them up, so its important to write in phrases and use shorthand. Getting someone else to explain it can help you learn faster. If theres a key concept that you just dont quite get, dont be afraid to ask. If youre in a classroom setting, approach the teacher or a fellow classmate.[6] If youre working on your own, try Googling it or finding an online forum for help.[7]If youre in higher education, go to your teachers office hours to get help throughout the school year.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. His site is set apart by its focus on fostering genuine comprehension through step-by-step understanding (instead of just getting the correct final answer), enabling learners to identify and overcome misunderstandings and confidently take on any test they face. He received his MA in Physics from Case Western Reserve University and his BA in Physics from Baldwin Wallace University. Review basic concepts before diving into advanced topics. Identifying the gaps in your knowledge helps you avoid difficulties later on. Take an assessment or get your teacher's advice on where you can improve. Practice targeted exercises to build a strong foundation so you can confidently tackle new lessons. Advertisement Lengthy cram sessions don't help you retain information in the long-term. Instead, try to space out your study time so youre doing a little bit every day. Try studying for 10 to 15 minutes every evening or whenever you have time.[8]Studies show that trying to cram a bunch of knowledge into your mind right before a test will only help you retain it in the short term.If youre limited on time, you might not be able to spread your studying over multiple days. If thats the case, just make sure you take lots of breaks to give your brain a rest. Grab a friend or a classmate and pretend youre a teacher. Go over the basic concepts of what youre learning, and answer any questions they might have. If you get stuck or struggle at any point, go back and revisit the stuff youre having trouble with.[9]If you can teach a subject to someone else, youre probably pretty close to mastering it. Advertisement Read a portion of the material, then say what you just learned. You dont need to be talking to anyoneyou can do this alone in your home if you want. Speaking the information out loud helps you memorize it faster and keep it in your mind for longer.[10]After youre done, go over the information one more time to make sure you got it right. If you missed anything or struggled in one area, go over it a few more times. What will this knowledge help you do in the future? What is it helping you do right now? Connecting a subject to something youre doing outside of a classroom setting is a great way to keep your interest peaked.Oftentimes, people connect subjects to what theyre doing career-wise. If youre learning chemistry, maybe youll use it when you work in a lab later on. If youre studying math, maybe youll crunch numbers at an accounting firm in the future. Advertisement Use this trick to learn chunks of information quickly. For example, if you want to remember the colors of the rainbow (red, orange, yellow, green, blue, indigo, violet), you could use the mnemonic device Roy G. Biv. Its much easier to remember, so you can memorize it faster and use it to retain information.[11]If youre learning the order of operations in math (parentheses, exponents, multiplication, division, addition, subtraction), you could use the mnemonic device PEMDAS. Practice tests can show you where you're struggling. You can find tons of practice tests online for almost any subject. If youre in a classroom setting, you can also ask your teacher to see if they have ones you could practice with. 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Use worksheets that provide answer keys for instant feedback. Discuss answers with a classmate or find explanations online. Immediate feedback will help you correct your mistakes, avoid bad habits, and advance your learning more quickly. Advertisement Add New Question Question What should I do if I am getting low grades in math but am trying my best? The first thing you can do is talk to your teacher to make sure they know you are trying. If your school has multiple math classes, try asking them if there is a possibility of moving down to one which has more time to work on math improvement. Also, you can ask your teacher for study tips and extra help, and maybe they can even get you situated with a tutor if you need it. Question How to reciting English words quckly? Try using flashcards, they help a lot. Even when making them, it helps you learn. Ask a Question Advertisement This article was co-authored by Daron Cam and by wikiHow staff writer, Hannah Madden. Daron Cam is an Academic Tutor and the Founder of Bay Area Tutors, Inc., a San Francisco Bay Area-based tutoring service that provides tutoring in mathematics, science, and overall academic confidence building. Daron has over eight years of teaching math in classrooms and over nine years of one-on-one tutoring experience. He teaches all levels of math including calculus, pre-algebra, algebra I, geometry, and SAT/ACT math prep. Daron holds a BA from the University of California, Berkeley and a math teaching credential from St. Mary's College. This article has been viewed 89,030 times. Co-authors: 9 Updated: June 24, 2024 Views:89,030 Categories: Study Skills PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 89,030 times. "I thought of giving up on putting effort into reading, but as I read through the article, it motivated me more." Share your story Deepto BanerjeeYou may also likeDont have a law degree? You can still g...Study Abroad with SAT: 8 Things You Need...Read NextPage 2Discover legal careers, from paralegals and court reporters to compliance officers and private investigators. Explore their responsibilities in the legal industry.Paralegals work in law firms and corporate legal departments and specialize in areas like family or criminal law. Legal secretaries handle administrative tasks like answering calls, greeting visitors, processing mail, and organizing documents. This role requires either a high school diploma or a bachelor's degree.Court reporters use steno machines to create real-time transcripts of legal proceedings, typing at speeds of about 225 words/minute. They can work in courts, legislatures, or as freelancers, providing essential services.Legal transcriptionists create text files from audio recordings made by attorneys, typing at about 75 words per minute accurately. Legal recruiters match job candidates with positions at law firms, handling attorney, paralegal, and support staff placements. While some have legal backgrounds, formal training isn't required.You may also likeStudy Abroad with SAT: 8 Things You Need...9 tips to become an SQL developer and ma...Compliance officers ensure adherence to industry regulations and standards across various sectors such as healthcare and finance. They oversee employee training, policy enforcement, and regulatory analysis. Process servers deliver legal documents like subpoenas and complaints, abiding by state regulations. They must have strong research skills and often work long hours to locate individuals. Private investigators conduct covert surveillance, research legal matters, and interview witnesses for individuals, businesses, or attorneys. Entry typically requires a high school diploma, though degrees in fields like criminal justice may be preferred. Find out MoreThis can help you digest the information faster. For example, if youre learning a new language, you could break it down into nouns, verbs, adjectives, and tenses. It helps the information feel less overwhelming, and it gives you a path forward on how to study it.[1]If youre learning from a textbook, it may be organized like this already. Advertisement Make your goals specific and time-based to cover the most ground. It will help break up the subject so you arent overwhelmed by an entire field of knowledge. You could also set smaller goals throughout the weeks to work up toward learning an entire subject.[2]For example, if youre studying math, try making it a goal to nail down basic algebra by next week. Then, you can move on to tougher concepts, like calculus.You can also split things up by chapters in a textbook. Great notes make studying much easier. Listen to the information being presented and write it down in your own words. 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Its much easier to remember, so you can memorize it faster and use it to retain information.[11]If youre learning the order of operations in math (parentheses, exponents, multiplication, division, addition, subtraction), you could use the mnemonic device PEMDAS. Practice tests can show you where you're struggling. You can find tons of practice tests online for almost any subject. If youre in a classroom setting, you can also ask your teacher to see if they have ones you could practice with. Make sure you check your answers, and go over anything that you struggled with.[12]You can also ask a fellow classmate to check your answers for you.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. 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If your school has multiple math classes, try asking them if there is a possibility of moving down to one which has more time to work on math improvement. Also, you can ask your teacher for study tips and extra help, and maybe they can even get you situated with a tutor if you need it. Question How to reciting English words quckly? Try using flashcards, they help a lot. Even when making them, it helps you learn. Ask a Question Advertisement This article was co-authored by Daron Cam and by wikiHow staff writer, Hannah Madden. Daron Cam is an Academic Tutor and the Founder of Bay Area Tutors, Inc., a San Francisco Bay Area-based tutoring service that provides tutoring in mathematics, science, and overall academic confidence building. Daron has over eight years of teaching math in classrooms and over nine years of one-on-one tutoring experience. He teaches all levels of math including calculus, pre-algebra, algebra I, geometry, and SAT/ACT math prep. Daron holds a BA from the University of California, Berkeley and a math teaching credential from St. Mary's College. This article has been viewed 89,030 times. Co-authors: 9 Updated: June 24, 2024 Views:89,030 Categories: Study Skills PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 89,030 times. "I thought of giving up on putting effort into reading, but as I read through the article, it motivated me more." Share your story Remember when you had to learn integrals in math class and had no idea what the F*&# was going on? Why do I have to understand whats inside of this S? What I wish I had known earlier was that there is a better way to learn complex topics.As a now doctor, Ive been learning hard stuff for a long time; Ive been studying university-level material for over 12 years, and not just integrals. Things are even more random, like Eosinophilic Esophagitis, Allergic Bronchopulmonary Aspergillosis, or endoscopic retrograde cholangiopancreatography; who comes up with these names anyway? With some help from academic journals, I discovered the most efficient and effective way to learn complex things quickly, which has changed my life.We are going to cheat, then read a magazine, then build the house and break the house, and finally meet our friends Jimmy Neutron and Brain Blast before coming back to another dearer (and more real) friend, Richard Feynman.Heres how to learn hard stuff, easily.How did others learn it? Is there a cheat sheet? You shouldnt be discovering the theory of relativity on your own here. The best scientists and researchers all develop their theories and discoveries based on others research.For example, in medical school, many students made their Flashcards in an application called Anki. I know, however, that there was a premade set of cards with all the best information that was collectively exhaustive and mutually exclusive (for the most part), allowing me to cover all the information and not waste time.Another example is video resources and guides, study guides, etc. Dont be the first person to try and study integrals; theres a great Khan Academy video on it. Dont be the first person to try to understand heart failure based on one lecture; there are fantastic Boards and Beyond videos, Osmosis videos, and Amboss resources.Cheat by taking advantage of the previous students hard work to streamline the basics into your head, what resources to top performers use? In what order? For how long? Look at the title, pretty pictures, exciting bolded words. This is what you do in magazines anyway, right? We want to build our interest in the topic while creating a general layout of what we will learn. If you know a new textbook chapter or lecture slides, briefly glance through the whole thing without trying to understand the content.What is the title of the lecture? The chapter titles? The section titles?What pictures and graphs are there?What are some questions that I am going to be asked based off of this material?For any day of learning, magazining the material should never take longer than 20 minutes. Remember, its a magazine, read it for fun.Dont lie about your knowledge; take a severe analysis of what you understand and dont understand. As you build your knowledge on this topic, things will only get more difficult as you move on, and a shaky foundation is, well, destructive house of cards, Kevin Spacey, you know the deal.How are we going to do this? Well, we just magazine it remember, so now we will understand the Titles, the bolded words, and the section headers in a fundamental way.Lets take trying to understand the heart as an example. Before we even begin to think about things like cardiac output or myocytes, we need to understand the building blocks of the heart.What is a ventricle? an atrium? What the valves that connect these two? What is the basic function of the heart?Without understanding the above, there is no basis to learn about different diseases of the heart or difficult cell biology, because we dont know the point.Step 1: understand all the bolded words and terms simply by looking them up.Step 2: create a one-liner for the content you are about to learn.The best way to guide your learning is to develop a one-liner of what is going on for the chapter or the basic idea. We do this in medicine multiple times a day, this is a 60 yo male with a PMH of HTN, smoking, and HLD who presents to the ED with chest pain, that gives you a pretty fair understanding of what might be going on with this guy right?So, for a chapter on the heart for example I might say something like this:The hearts function is to circulate oxygenated blood throughout the body; it does that by using energy and special muscle cells, cardiac myocytes, to squeeze the deoxygenated blood received in the right atrium to the right ventricle, to the lungs to be oxygenated before returning to the left atrium and then left ventricle where oxygenated blood leaves from and circulates to the rest of the body.Split the very difficult thing into its core components, and aim to understand each piece over a period of time.This is where the hard work, hours of studying, and library time come in. However, it still shouldnt take the majority of time spent studying (thats the next section), but it should come close. Everything we just did above should take 30 minutes 1-hour MAX. The above will be part A if you want to be a pro. You do the night before a lecture, then you have your day of lecture (because our brains do well at consolidating and snipping out unnecessary memories while we sleep1,2) and go through steps 4/5/6 after the lecture.So, for the physiology of the heart (when its healthy), for example, this is what I would do:Break down the anatomy of the heart, and everything I need to learn about that (right ventricle, valves, blood flow pattern, etc.)Understand the Math of the heart and physics (starling curve, cardiac output, etc.)Understand the cell biology of the heart (why are cardiac myocytes different? how do they work? How do they all contract in a coordinated fashion?)So, instead of breaking it into Left Ventricle, Right Ventricle, EKGs, and oxygenated blood, I try to make 3-5 major categories of things I should learn and slowly tick my way through each category by reading the textbook, watching third-party videos, or having an intelligent friend teach me (undervalued).Next is the top performer from multiple well-

respected internet sources. Just like Jimmy Neutron, lets brain blast!I will never perfectly understand a topic; I guarantee it. Einstein had many working models of physics that he used to come to the theory of relativity. Mozart had uninteresting and flawed pieces, but he also created moving music; Thomas Edison supposably failed at least over 1,000 times before he made a functional lightbulb.The point is these notable inventors and scientists didnt know everything about electricity or gravity before coming to their conclusions and discovering. They tried multiple experiments or problem solutions before coming to an answer.Here are some facts:Students who do problems without seeing the answers perform better on exams and tests than students who simply study the problem-answer combination.5Through academic journals and experiments, practice testing is consistently reported as one of the most efficient and effective study techniques for higher grades (compared to highlighting, summarizing, rereading, or underlining).3,4Simply put, practice testing (a form of active recall) is the highest yield study technique there is.Now, because of the wide variety of material you could be learning, Im not going to give specific resources or places to find practice questions or problems, but you know they are there. Generally, you can:Look at the back of your textbookAsk your teacher for some practice questionsCREATE some practice questionsSearch online for practice questionsHeres my guide on properly using practice questions.In medicine, we have a phrase: see one, do one, teach one. Now, should we necessarily be teaching something we just learned? Maybe not, but a supervising doctor is always there, watching and correcting mistakes. However, We teach one because this is a fantastic way to learn and solidify the information in our brains.Evidence shows simply teaching a topic back can dramatically improve retention and memory of a subject as well as exam performance.6,7The Feynman technique explains a topic to someone in a simple manor as if you were explaining it to a 12-year-old in your own words. In your own words is the most essential part of that definition because its how you start to work with the material in your brain. Remember that hierarchy of learning? This gets us to step 4, where we begin to analyze and work with the material, significantly increasing our retention of the material.The mistake I see most people make: they wait way too long before they start teaching it to someone. I would start trying to teach topics to my friends the next day, or, in medical school, we were forced to introduce a topic to the class the next day. My learning and test scores skyrocketed, likely due to this one intervention.Heres my guide on the Feynman Technique. Overall, though, information can be challenging. However, with a well-thought-out strategy, you really can learn anything in the entire world, and this is life-changing. Nothing can stop you; no topic is too complex, and no task is too hard. You are just going to break it down step by step, slowly, and become the powerhouse superstar I know you are. In summary:30 minutes to 1 hour on steps 1-3Divide your remaining study time between steps 4 (1/3 of the time) and 5-6 (2/3 of the time) preferably one day after steps 1-3Good luck, and remember, never get between Carl and a croissant.Stickgold, R. Sleep-dependent memory consolidation.Nature437,12721278 (2005). KJ, Cote KA. Contributions of post-learning REM and NREM sleep to memory retrieval. Sleep Med Rev. 2021 Oct;59:101453. doi: 10.1016/j.smrv.2021.101453. Epub 2021 Jan 23. PMID: 33588273.Hartwig MK, Dunlosky J. Study strategies of college students: are self-testing and scheduling related to achievement?.Psychon Bull Rev. 2012;19(1):126134. doi:10.3758/s13423-011-0181-yDunlosky J, Rawson KA, Marsh EJ, Nathan MJ, Willingham DT. Improving Students Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology.Psychol Sci Public Interest. 2013;14(1):458. doi:10.1177/1529100612453266Roediger, H. L., & Karpicke, J. D. (2006). 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If youre in a class, listen carefully to the lecture and write down the keywords and phrases you hear, and if youre learning something online or from a book, rewrite what you read in your own words. Taking handwritten notes helps you retain information better the first time you learn it, so you dont have to review it over and over again in the future.[1]Not only will the process of writing your notes help you learn things faster, but it will also leave you with a cheat sheet of important concepts to review if you need to quickly refresh your memory later.You can even go through and highlight or underline important keywords and phrases so that they immediately stand out when you reread your notes. Advertisement Hearing yourself repeat things out loud helps you remember them better. Oral repetition cuts down on learning and review time because the information is more ingrained in your brain the first time you learn it. If youre studying from a book, an online source, or your notes, read important keywords and concepts aloud to lock them into your memory.[2]For example, if youre trying to learn a new language, practice saying vocab words and sentences as you learn them.Since youre actively speaking, the information stands out better in your long-term memory.[3] Quiz yourself so you know what topics you still need to review. After youve read through or practiced something, test your memory by reciting everything you just learned. If you need to remember keywords or phrases, try writing down their definitions without looking them up. If you have flashcards, use them to test your knowledge. Make a note of what you have trouble remembering so you can go back and practice it some more. That way, you arent wasting time focusing on things you already know well.[4]For example, if youre testing yourself on a textbook chapter, summarize everything that happened in your own words. Then, check for any keywords at the end of the chapter and try to define them.You can also find many practice tests online for the subject youre studying.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. His site is set apart by its focus on fostering genuine comprehension through step-by-step understanding (instead of just getting the correct final answer), enabling learners to identify and overcome misunderstandings and confidently take on any test they face. He received his MA in Physics from Case Western Reserve University and his BA in Physics from Baldwin Wallace University. When doing practice problems, promptly check to see if your answers are correct. Use worksheets that provide answer keys for instant feedback. Discuss answers with a classmate or find explanations online. Immediate feedback will help you correct your mistakes, avoid bad habits, and advance your learning more quickly. Advertisement Explaining information to someone else helps you retain it better. As you study the information yourself, try to think about how you would teach it to a friend. What main points would you emphasize? What key facts, definitions, and concepts would you include? Research shows that studying information with the intent to teach it to someone else helps you remember it better and recall it more easily.[5]After you study, ask a friend or family member if you can teach them the information, then tell them what you know in a clear and direct way.If you dont have a friend to do this with, thats okay! Just pretend that you do.Research suggests that its still beneficial to study with the expectation of teaching the information to someone else, even if you dont actually end up doing it.[6] Mnemonic devices can help you recall information more quickly. Dorsey explains that mnemonic devices help you keep new facts in your mind. If you're trying to learn coordinating conjunctions, for example, Dorsey says that the FANBOYS acronym (for, and, or, but, or, yet, so) would be helpful. The more you practice with [mnemonic devices], the more second nature they become. You can learn them on a Thursday or Friday and know them by Saturday morning.[7]Mnemonic devices can be sentences, too. For example, if you want to learn the notes on a treble clef, you could use the sentence Every Good Boy Deserves Fudge to remember the notes E, G, B, D, and F.If a mnemonic device doesnt already exist for the subject youre studying, you can make up your own unique acronym or sentence to help you remember the information. Advertisement Find a personal connection to the things youre studying. Find a way to make it apply to you, suggests Dorsey. For example, if youre reading a book for English class, try relating some of the plot points to things that have happened in your life. Assess whether any of the characters remind you of friends or family members, and then connect them in your mind. The more you personalize the information youre learning, the more likely its going to stick, says Dorsey.[8] Varying your study techniques helps you pick up information more quickly. Doing the exact same thing during every study session can get a bit dull, and if youre not focused and engaged, you wont learn the information quickly. Instead, try out new study methods on a regular basis to keep things fresh. Your brain has to adapt to the new situation, which ingrains the information in your memory faster.[9]For example, instead of just reviewing your notes, try playing a learning game, inviting classmates over for a group study session, or taking a new creative approach to remember the information (like making an artistic poster or writing a study song). Advertisement Even a short pause gives your brain some time to refocus. Your brain gets tired when you overload it with information, so breaks are essential to keep your study sessions productive. Try to give yourself a few minutes every hour to rest and step away from what youre learning. After giving your brain some time to recharge, itll be easier for you to focus and pick up on the information quickly.[10]Try the Pomodoro technique. Stay focused and work hard for a 25-minute chunk of time, then take a 5-minute break. Repeat the process until youre done studying.During your breaks, avoid scrolling through social media or surfing the internetthese things can disrupt your focus and make your study break less effective.Good activities to do during your break include hydrating and grabbing a snack, doing something creative, stretching or moving around, having a quick conversation with a friend or family member, or doing a 5-minute meditation.[11] Multitasking makes it harder to remember information. If youre watching TV, checking your phone, or trying to study two subjects at once, youre more likely to get confused and have to go back to review the topics later on.[12] When its time for you to study, get in the zone, eliminate distractions, and focus on only one subject at a time. This will help you cut down on learning time and retain the information better on your first go.If you have a hard time resisting the temptation to check your phone while studying, consider turning it off and putting it somewhere out of reach from your desk or even keeping it in a different room. Advertisement If you think you can learn something, youre more likely to succeed. It can be a little daunting to learn something complex, but it gets a lot easier if you trust in yourself.[13] Whenever you have a negative thought about learning, try to replace it with something positive instead.[14] With a positive mindset, youll be more eager to learn and more confident in your abilities, so youre more likely to get the hang of new skills quickly.[15]For example, if you find yourself thinking, This is way too much to learn. Ill never be able to remember all of it, try to reframe the situation in a more positive way.Tell yourself something like, This may take a while to learn, but with a little patience and determination, I can do it.[16] Exercise boosts your memory, which helps you learn faster. Studies have shown that you have improved memory after doing aerobic exercises. It also helps increase your bodys production of a protein that supports how your brain cells grow and function. Try to get in about 20 minutes of exercise during the day to keep your body healthy and your brain stimulated.[17] Advertisement Sleeping helps lock in the memories youve formed during the day. While youre asleep, your brain also links the new memories youve made to earlier ones, which can help you recall new concepts more easily and quickly.[18] Because of this, getting some sleep after learning something new will likely be more effective than staying up all night to keep studying.Aim to get around 79 hours of quality sleep every night.[19]To improve sleep quality, try to follow the same sleep schedule every day, keep your room cool and dark, and avoid devices that emit blue light (like your phone) right before bed.[20] Add New Question Question What if I'm having trouble learning a difficult subject? Ronitte Libedinsky, MS Academic TutorRonitte Libedinsky is an Academic Tutor and the Founder of Brighter Minds SF, a San Francisco, California based company that provides one-on-one and small group tutoring. Specializing in tutoring mathematics (pre-algebra, algebra I/II, geometry, pre-calculus, calculus) and science (chemistry, biology), Ronitte has over 12 years of experience tutoring to middle school, high school, and college students. She also tutors in SSAT, Terra Nova, HSPT, SAT, and ACT test prep. Ronitte holds a BS in Chemistry from the University of California, Berkeley, and an MS in Chemistry from Tel Aviv University. Try to remember that learning is a process, and no one is born understanding difficult subjects, like math. It's okay if you're not fast at it. You can take the time to learn at your own pace. Try to focus on small goals and the progress you've made so far instead of getting overwhelmed because you don't know everything yet. Question How can I study without being distracted? Put your phone away, study in a quiet place away from other people and challenge yourself to stay focused on your studies for just a half hour at a time. Take a five minute break after a half hour to recharge, then get back to studying. Question I understand everything in class, but then I forget everything when I get home. How can I stop this? Take good notes in class. Then go over your notes when you get home to refresh your memory. See more answers Ask a Question Advertisement Thanks Thanks The advice in this section is based on the lived experiences of wikiHow readers like you. If you have a helpful tip youd like to share on wikiHow, please submit it in the field below. Decide what you struggle with the most and spend more time on that. If you know you excel in one subject, allocate less time on that to maximize your energy for others. Don't forget to reward yourself when you meet your goals, no matter how big or small they are! Advertisement This article was co-authored by Ronitte Libedinsky, MS and by wikiHow staff writer, Annabelle Reyes. Ronitte Libedinsky is an Academic Tutor and the Founder of Brighter Minds SF, a San Francisco, California based company that provides one-on-one and small group tutoring. Specializing in tutoring mathematics (pre-algebra, algebra I/II, geometry, pre-calculus, calculus) and science (chemistry, biology), Ronitte has over 12 years of experience tutoring to middle school, high school, and college students. She also tutors in SSAT, Terra Nova, HSPT, SAT, and ACT test prep. Ronitte holds a BS in Chemistry from the University of California, Berkeley, and an MS in Chemistry from Tel Aviv University. This article has been viewed 853,932 times. Co-authors: 56 Updated: August 15, 2024 Views:853,932 Categories: Featured Articles | Studying PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 853,932 times. "I want to be able to make a difference in the world, and being able to learn quickly is a must for being able to succeed. Applying what I've learned in this article, I've noticed substantial differences in how quickly I can assimilate what I learn, and that's incredible.Thank you!"..." more Share your story LizzieJul 17, 20221 min readAs a medical student, I have often been frustrated by learning. Mostly with myself: for procrastinating, getting distracted from studying, not wanting to put in the time to learn difficult things; or with my teachers: for what we've considered lazy, poorly-delivered and uninspiring lectures. And when you have a temperamental attention span like me, it becomes necessary to find ways to make yourself want to put in the time it takes to learn difficult things. This is where I break down exactly how I teach myself to learn difficult things (step by step, using an example). I hope it helps anyone else out there who, like me, often feels they're the problem and they're the stupid one. Spoiler alert: we're not To make your life easier: We are lucky that our brains are readily capable of learning new things by design. Even when we are not motivated? We grow about 700 new neurons every day. Thats automatic. Those are for learning. But thats just a tiny portion of it. The remaining 100,000,000,000 neurons in the brain are ready to change how they connect with each other. Thats all for learning too. So how do we go about bringing in those changes in the brains behavior? How do we improve and optimize learning? The most fundamental ways to learn anything you want to 1. Find a reason & purpose to learn 2. Be ready to pay attention 3. Pay attention to the big picture and the finer details simultaneously 4. Have fun while learning 5. Learn in small bits, consistently 6. Exercise well, sleep well, eat well, socialize well 7. Always use variety in your approaches along with trial and error 8. Ground your learning in people, books/videos/toys, and the environment 9. Use metaphors and analogies to grasp new concepts in terms you understand 10. Learn to recognize what is wrong 11. Use feedback to confirm or evaluate how much you are learning 12. Challenge yourself enough not to always succeed 13. Talk about your learning and, if possible, teach 14. Ask questions and dont accept superficial answers easily 15. Always think about what you have learned 16. Learn important words, technical details, and processes Sources There is a convoluted answer to the question How can I learn anything efficiently?. From a neuroscientific perspective, learning is defined as a stable change in the brain. These changes are at the level of single neurons, brain regions, or spread-out neural circuits. The convoluted answer to that question is the best way to learn anything is to ensure that the brain undergoes a meaningful change. A more useful answer is actively do a few things which allow the brain to do its job well. And a practical answer is The quickest way to learn new concepts/skills easily is to let your brain process information deeply[1] and let new knowledge build on old knowledge to form a dense network[2] of learning/memory. On top of this, you can boost your learning capacity by keeping a explore with curiosity, and actively apply in real-life mindset. Well see how in a bit. Passive living doesnt exactly encourage a change in the brains structure. At least not a desirable change. We cant just put our hands inside the brain and re-wire it. We cant clearly upload information yet. What we can do is be strategic and deliberate so the brain just does its job more efficiently. For that, we need to step out of our neurons, figuratively, and approach learning from all those things that connect our neurons to the inside world and outside world (mind & environment). Fortunately, there are a few fundamental factors that affect learning. They are a little deeper than most learning how to learn approaches that discuss study methods, visualizations, practice routines, or task-specific suggestions. These are the most fundamental, easily usable tips on effective learning. It wouldnt matter what you are learning, or at which skill level you are. The following learning tips will improve your chances of quality learning in any domain be it coding, small-talk, acting, chess, business, cooking, parkour, facts, philosophy, or statistics. The stronger the reason, the better your learning will be. In psychology, the word conation refers to a basic aspect of being alive motivation & intent. Conation[3] is the body and minds readiness to approach, perform, or avoid doing a task. It describes the baseline energy the body and mind have to acquire new information and the willingness to supply additional energy to keep acquiring new information. Conation is a fancy term for a deliberate, specific kind of motivation the motivation needed to convert thoughts and emotions into actions. To begin learning anything, the needed conation can come from reason/purpose[4] because it can fulfill psychological needs. These needs could be anything: creating a new self-image, need for pleasure, satisfy curiosity, avoid boredom, understand a deeply personal topic, help a valued family member, gain social recognition, show dominance in the business world, save the world, etc. There can be a million needs to fulfill and those needs can give a reason, purpose, and conation to learn. Conation gives you the commitment to achieve goals and dreams. One of the biggest problems is not paying attention. If you really want to learn, give it all the attention you got. Our ability to select relevant information to focus on is called attention and our ability to sustain that attention for a long time is called concentration. Attention & concentration are the 2 most fundamental processes needed to do any deliberate activity. Attention is our ability to prioritize information and that tells the brain what to process. For any kind of learning, paying attention is important. But, many factors can hamper it distraction, lack of motivation, lack of commitment to your task, negative emotions, etc. Lifestyle aspects like the quality of sleep, diet, and physical activity affect your ability to concentrate too. So for learning anything, its vital to be ready to pay attention. Always stay in touch with the big picture and the finer details. Our attention can focus on details or look at the big picture and both of these tell our brain a different story. Focusing on the details activates a map of information that is closely tied to the details. Focusing on the big picture activates a map of information (represented by neural circuits) that is broad and global. When you approach any learning activity, focusing on both allows the brain to activate both maps. When both are activated, the new learning is grounded in those maps. It is also processed at multiple levels (from shallow to deep encoding[5]) which makes learning intuitive, stable, and flexible. If you simultaneously attach the details and global aspects of new learning to past learning, your new skills or knowledge gets a robust foundation. This groundedness improves memory and the stability of learning. Positive emotions like curiosity, satisfaction, and liveliness have a massive impact on how your brain processes your learning. One of the key benefits of having fun while learning is that it creates a sense of reward in learning. That inherently motivates people. Fun and liveliness also help the brain toggle between narrow-detailed processing and global-abstract processing which further improves the richness of learning. Fun boosts many aspects of cognition that are necessary for learning. Along with enjoyment, attempt to fully engage all your senses as they would provide rich, mutually supporting information to your brain. Dont expect mastery in 1 day. Take it slowly, do it consistently. Taking small steps at a time doesnt tax the brain and helps us build knowledge & skills little by little. If you need help (or scaffolds), begin learning with additional help[6] and then let go of that help slowly. Small chunks of learning are more manageable than large chunks because large chunks may not have the necessary foundation set in the brain. Taking time off learning also improves memory for previously learned information. Gaps between learning sessions, as opposed to long marathons of learning, promote new neural changes[7]. The benefits of taking time off and spacing-out learning sessions are called the spacing effect. It is one of the best ways to study efficiently, especially if you have to memorize facts. Overall well-being keeps your brain healthy and that ensures you have the capacity to learn. Social health[8], sleep hygiene, eating & drinking hygiene, and physical activity[9] affects overall well-being, cognition, and biological health. Compromising any of these is a certain way to put your brain at a disadvantage while learning. Your learning is more generalized than mindless repetition if you learn using a variety of techniques and learn a variety of things. Variety creates a better foundation[10] to expand learning and skill, especially if you build the foundation slowly. Trial and error show you how to expand your learning and skill. Variations in what you learn allow the brain to aggregate all minor changes and create a flexible generalized neural pattern (and mental approach) to execute a skill or apply knowledge. Trial and error methods encourage the brain to engage in error monitoring[11] to explore errors and arrive at a correct (or functional) approach. So variations in learning optimize the brains knowledge/skill-representation mechanisms. Caution: While planning your learning, dont spend too much time finding all (or the best) resources before you even start. That usually is a sign of procrastination. Talk with other people who are learning or are experts. Read books, blogs, watch videos, play with relevant toys. And use your learning in the real/digital world. Make sure you can do something with your skill in your environment, not just within your mind. Explore all sorts of resources you can find to learn. All resources can be good enough unless they are not even wrong[12]. Even factually wrong or contextually incorrect resources can show you whats a good approach. Taking help is a part of any skill training or expertise, so seek help from a resource when you need it. Metaphors and analogies are powerful tools to understand something new. When we use metaphors and analogies, we can connect new knowledge to old knowledge. If you are trying to learn new concepts in biology, connect them to things you already understand well maybe how a computer works or how society functions. Then learn the technical terms and try to separate the analogy from your new learning. This will leave you with a model of how things work in biology. When analogies are familiar and we get them, they stick around because they are simplified versions of new information and they compress new information in digestible chunks. Itll help you course-correct your learning. For this, you need to figure out good resources to learn from. A fundamental way in which people learn concepts is differentiating one concept from the other[13]. For example while talking about things that fly, knowing an airplane is a flying vehicle is not enough. Understanding that a bird is not an airplane and a drone isnt a vehicle is important in distinguishing between birds, drones, airplanes while discussing things that fly. Understand what aspects of your understanding or performance are wrong and explore why and how they are wrong by comparing correct and wrong aspects. Help me run this site with a donation :) Feeling like you have learned something is very different from knowing you have learned something. Knowing it means confirming it. Retrieval practice[14] (deliberate attempts to recall what youve learned) along with feedback on whether your test of memory was right or wrong can improve learning as well as the motivation to spend more time learning. Dedicated online tools[15] to provide feedback (Grammarly, for example) can help students learn better and engage them in an active learning environment too. Look for evidence that confirms or contradicts how well you have demonstrated learning. Look for evidence that highlights the details in how you approached it. Seek concrete/detailed as well as judgment-based (good/bad, pass/fail) feedback from apps or people. Keep room for failure. Keep room for trying things beyond your capacity. Use failure to explore and improve. Taking on challenges has 2 benefits a) It can induce a state of Flow where you feel fully immersed in a task, and b) It can push you[16] to use a little extra effort and accelerate learning toward a higher standard. It can help you envision a slightly improved version of yourself (or skill, depth of knowledge, or awareness). This is sometimes called adaptive learning and is effective in both cognitive[17] and motor[18] learning. If task difficulty cant be increased, you could consume coffee to feel more aroused[19] to optimize learning. High arousal usually makes learning more efficient. Challenges & arousal optimize learning but extremely easy or extremely difficult tasks dont, typically. Thats the Yerkes-Dodson law. Teaching is a fun way to verify learning and expose gaps in that learning. Just telling someone what you learned can also encode your learning with explicitly chosen words and a memory of that act of talking can further improve the memory of your original learning. Over time, the memory of your original learning and what you describe it as could merge into a more consolidated type of knowledge. Talking or teaching can expose certain limitations in your own understanding and those could be areas you work on to improve the quality of learning. Dive in deep and feel the satisfaction of exploring. Just knowing words for something you dont understand may not always help. We can be under the illusion of knowing something just because we can identify or label it with a word. For example, why does the heart race? Knowing that a fast heart is called Tachycardia does explain the cause or mechanism, it just gives us a word that may help us explore the reasons. The answer because the heartbeat is fast is a poor answer to the question why do people have tachycardia?. Some answers are just rephrased questions. Identify those and ask Why like a child. Ask all sorts of questions. Wonder IF something can be explored. For any new learning, explore causes & effects, mechanisms, processes, labels, additional related information, etc. Descriptions are great for learning but dont treat descriptions as explanations. Explore explanations. Relate it to your life, your future, or your experiences. Try to make sense of it for a deeper understanding. Sense-making helps people learn, and even fosters curiosity. Thinking about thinking is called metacognition[20]. Our ability to reflect on our own thoughts creates the opportunity to give higher importance to certain thoughts (and associated neurons). That is likely to make associated neural structures more efficient[21]. Freely thinking about an experience or connecting it to your lifes goals can also promote a chain reaction of thoughts that give us creative insights, highlight gaps in knowledge, and create a deeper understanding (or confusion). All 3 of these creativity, gaps, & understanding (confusion) can create a new chain reaction of learning using curiosity, new ideas, and new goals/directions as fuel. Dont stay ignorant and unaware of what you are learning with the belief that technical words are just meaningless words. Labels are important in learning. Not having the right words (labels) or mental images to describe something is called hypocognition[22] and it suppresses cognitive ability. Words & labels help you understand concepts and relate them to each other and improve memory. They help you differentiate between related ideas. You can form a network of concepts and facts to create a big picture once you learn relevant words and concepts. Be sure you can mentally represent what you are learning by visualizing, describing, or moving your body. These are called mental models. Acquire a mental model for what you are learning and gift-wrap it in words. If you implement even a few of these, you probably wont need additional help. Many of these learning tips are subsumed under the brain-based learning approach, which you can read about here and here. SourcesHey! Thank you for reading; hope you enjoyed the article. I run Cognition Today to capture some of the most fascinating mechanisms that guide our lives. My content here is referenced and featured in NY Times, Forbes, CNET, and Entrepreneur, and many other books & research papers.Im am a psychology SME consultant in EdTech with a focus on AI cognition and Behavioral Engineering. Im affiliated to myelin, an EdTech company in India as well.Ive studied at NIMHANS Bangalore (positive psychology), Savitribai Phule Pune University (clinical psychology), Fergusson College (BA psych), and affiliated with IIM Ahmedabad (marketing psychology). Im currently studying Korean at Seoul National University.Im based in Pune, India but living in Seoul, S. Korea. Love Sci-fi, horror media; Love rock, metal, synthwave, and K-pop music; cant whistle; can play 2 guitars at a time. Help me run this site with a donation :) Check out these quick visual stories I've spent most of my life being a self-taught learner. As a medical student, a doctor and an entrepreneur I've had to teach myself to learn lots of topics that initially seemed hard or a bit boring like the hundreds of eponymous syndromes in neurology that all seem quite similar.When you encounter something that you feel is hard or uninteresting, the temptation is to think it's difficult because your ability is lacking and you're not smart enough when actually it's because you don't have a method for teaching yourself hard topics.I want to show you the step-by-step process that I use to easily learn difficult topics that makes them interesting, relevant and most importantly easy to remember. Being able to teach myself how to learn hard things is the single most life-changing skill I have taught myself. I'm going to keep this practical and combine my own personal experiences with evidence-based studies on learning and some neuroscience on how our brains form memories.So for the purposes of showing you in detail today we're going to be learning about Bell's Palsy which is one of those eponymous neurology topics that can seem confusing and hard when you first encounter it. If you're not a medic don't worry as the principles can be applied to lots of other topics too and if you stick around till the end I also have a second example looking at how you can apply this to Maths.Make It Relevant and PersonalThe first step in the process that I use to easily learn difficult topics is to make the topic we're learning relevant and personal.The problem with being told to learn things is that it's kind of thrust upon us. We don't necessarily naturally want to learn certain topics as, at face value, they just don't seem interesting, they are just chapters in a textbook that we've been told we need to learn. While you can force yourself by thinking "I need to learn this for an exam to get a job" that only goes so far to boosting your motivation and your interest.The reason we find learning these new topics difficult is because we lack context, we're not deeply, emotionally invested enough to push through and figure them out and we often just don't know how to teach ourselves full stop. If you keep coming up against difficult topics or you find things hard to recall you can start to think you're not smart enough. But this isn't the case. If we look at cognitive load theory we can see that if something is uninteresting to us we won't focus our attention on it to move it to our working memory. If the information is too complex or not related to any existing knowledge we have our working memory will get overloaded as it only has a limited capacity, our cognitive load.So the first step is to hack the attention and encoding portion of memory formation and make whatever you are learning deeply interesting and relevant to you to reduce your cognitive load.In order to learn, when our brains encounter new information the information needs to grab our attention since our brains naturally filter out the tons of irrelevant information which we encounter every day. And we want to try and link that information to things we already know. This is what memory masters do and it's the reason why you can more easily remember things that have strong emotional connections. So let's take this example of Bell's Palsy which maybe isn't that interesting and make it interesting and anchor it to something we connect with. A great way to do this is to head to Google. In order to encode effectively our brains need to focus our attention and then process small chunks of information which are linked to our existing memories. So I will usually go to google images first to look for any easy to understand diagrams, then I'll head to videos or youtube to see if there are any quick explainers or preferably worked examples and then I'll head to the front page or news tab to look for any interesting stories that grab my attention.For example, for Bell's Palsy a quick google search shows some quick images of human faces so I can immediately see the signs. As this is an image it visually obvious. Scrolling down I can also see that Angelina Jolie suffered from it and this immediately links a new concept to something you already know, in this case, a famous actress. Now this has grabbed my attention and I'm genuinely intrigued because I didn't realise Angelina Jolie had this condition. If I click through I can see that this article gives a full breakdown of her struggles. And more than that, as this is a personal account it adds emotion and as the article is written as a story it provides context and anchoring way beyond if you just read a paragraph from a textbook or wikipedia.What we're doing here is we're moving this very fact-based concept of a medical condition that we might encounter in a lecture or a textbook and giving it meaning by connecting it to something we already know. In learning science storytelling helps with learning because stories are easy to remember. Organizational psychologist Peg Neuhauser found that learning which stems from a well-told story is remembered more accurately, and for far longer, than learning derived from facts and figures. Similarly, psychologist Jerome Bruners research suggest that facts are 20 times more likely to be remembered if theyre part of a story.Now I know what you're thinking. Googling things is pretty basic right? Well that's kind of the point. Textbooks and lecture slides are often written by academics and they can be overly complicated. Consumer-facing articles on the other hand are written by people who are experts at writing copy that is understandable and easy to follow. Remember Nobel prize winning physicist Richard Feynman was known as the great explainer for his ability to explain complex topics in simple terms that his students could understand. By reducing the complexity of new information we are optimising the intrinsic load on the brain which is the burden imposed on our short-term memory by the difficulty of the material. And by linking new information to existing, in this case via a story about Angelina Jolie, we are optimizing our germane load by better organizing the new information prior to encoding.If it's simple, obvious and makes a hard topic easy it's exactly what you want to give you a good overview before you head to the second step in the process for learning difficult topics which is to dive deeper and get curious.Get CuriousNow that we've anchored the topic of Bell's Palsy and it's got our attention with some images and a relatable story about Angelina it's time to get curious to stimulate learning. Being curious is an underrated skill. If making things relevant grabs our attention getting curious is what really drives learning and if you can get curious about uninteresting topics you'll be able to learn anything. So sticking with our example;If the article you found piques your interest start to read around certain areas and ask questions. Why has Angelina Jolie developed a Bell's Palsy? What is the underlying cause? By being curious you begin to peel away the layers around a topic and build understanding.If we were to just read a textbook or try to rote learn the information from the article that would be pretty superficial learning. We'd just be memorizing facts for the sake of it without much deeper understanding. Memorization of facts is at the bottom of Bloom's Taxonomy. Bloom's Taxonomy is a schema guiding your depth of mastery of a topic from simply remembering something to applying knowledge and teaching others at the top.This is where getting curious comes in. When reading this article or reviewing images or this short video on YouTube about Bell's palsy I'm actively thinking about how it relates to my existing knowledge. I might even google something like what are the causes of Bell's Palsy or what is the history of Bell's palsy. In learning science this is something called elaborative rehearsal where you are not just looking superficially but are meaningfully engaging with the content as it interests you.If you're not curious enough about the topic you need to go back to step one to really drive that interest but if you are really curious you can then head to step three in my process for easily learning difficult topics.Chunk and FocusOnce you have built some context and linked the hard topic to your existing knowledge step three is to chunk up the content and focus on one or two things to learn at a time. You can do this by making a study plan or mind-map out what you need to learn. Sticking with Bell's Palsy you might want to plan to study the pathophysiology, signs, symptoms, tests and management. You can then chunk this up into a timetable and focus on one area at a time. Chunking reduces your cognitive load and allows you to stay focused on one section at a time.One of the problems with becoming curious and interested in a topic is that it's a bit of a double edged sword. You can continue asking questions and unpeeling layers of a topic for a longer period of time which isn't that efficient when studying.Instead if you focus your curiosity around chunks of information it is a much more efficient way to learn. For example I might focus my curiosity first on the causes of Bell's Palsy and try and understand why it happens and the disease process behind it. To stay efficient I'll set myself a false deadline since, according to Parkinson's law a task will fill the time allocated to it. At the end of this deadline, regardless of how far I've got I'll then challenge myself to summarize the causes in simple terms following the Feynman method.But what happens if, when you're being curious and focused and chunking you come across something you just don't understand. Well we'll look at this more in the final step of the process shortly but in essence if you come up against a wall don't worry too much at this stage. It's not that you're not smart it might be that you either need a break or you need to mix up how you are learning and start embracing getting things wrong and this is what step four is about.Active Recall and SpacingStep four in the process moves from encoding to ensuring that we can remember the new content and moves up Bloom's Taxonomy to begin applying our knowledge. To do this we need to use active recall and spacing. In simple terms once you have grounded the content in your reality, become curious and chunked it up you can now start to self-test. A great way to do this is to close your books and simply ask yourself to write out as much about each of the chunks as possible. For example "can i write out all the signs and symptoms of Bell's Palsy?". You should be able to visualise the Angelina Jolie article to help with this as a mental cue. Once you have self-tested you can go back over your notes or original material and see what you got correct or incorrect. Now, as we know from the forgetting curve, we forget things. So you need to re-test yourself at the start of your next study session and at set intervals to ensure the new content sticks.If there were some elements which you still found difficult to understand worked examples and practise questions can help to provide frameworks. This is especially helpful when learning new concepts in subjects like maths and physics with lots of calculations. Worked examples or partially-solved questions help to reduce your cognitive load while explaining things in practical terms which you can try yourself. With spacing we often focus on the re-testing element of spaced repetition. The more you test yourself over intervals of time the better it will stick. But when learning difficult topics the space when you are not learning is equally important. In learning science this is known as Diffuse Thinking and it's what happens when your mind relaxes, providing space for daydreaming and wandering thoughts. It's something that many people miss or undervalue it's the fact that even when your conscious mind stops concentrating on something, your brain will continue to process, ponder and think about something. For me personally if I'm struggling with any kind of decision or can't quite figure out something I'm learning I'll take a break, go for a walk, hit the gym or do something else and let my brain work on things in the background. Researchers even found that our brain consolidates memories and solves problems while we sleep. So taking a break and coming back to the hard topic at a later date may stop you getting frustrated, giving up or thinking you can't quite get it. Be Kind and Go AgainStep five in the process is to remember that learning isn't linear and you need to be kind to yourself. You won't remember everything first time round and you'll need to come back to the topic, look at it from different angles and self-test again to really master it. Rather than worrying about reading the original article over and over again, instead focus on teaching others and linking what you have learned to new topics. Bloom's Taxonomy reminds us that teaching and analysing are at the top of the pyramid and are indicators that you know a topic well. Sticking with our Bell's Palsy topic you might become curious about the difference between Bell's Palsy and similar conditions such as Ramsay-Hunt syndrome. You can go back to step one and google Ramsay-Hunt and guess what? Justin Bieber was recently diagnosed with Ramsay-Hunt and put out a video on instagram showing his symptoms. You can then compare Angelina Jolie to Justin Bieber and these anchored, visual cues aid both encoding and recall of information we once considered difficult. In both cases we can really empathise with the people affected which creates more of an emotional cue when recalling the information.To hit this home further when I revised for surgical exams around my day job as a doctor I didn't just go over practise questions once. I went over them 2-3 times focusing on the ones I got wrong in the last attempt. If I got a question wrong I didn't think "damn I'm stupid", I thought "awesome, I get to read the explanation and learn something new then get it right next time".If you apply these five simple steps when you encounter something you perceive to be a hard topic you'll have a framework but also a new mindset where hard topics don't put you off.Using This For Non-Medical TopicsOkay so for medicine where diseases effect real people these human example are pretty memorable. But what about things like maths. Well let's go again real quick. Let's say I have no clue about something like Pythagorean theorem.Back to google I can see some quick images and even an 18 second video to help me reduce my cognitive load and explain things in simple terms. There is also a worked example where a quiz questions is being answered and then there is a whole host of background information about how the theorem was discovered which is pretty interesting. Following my steps I'd then dive deeper getting curious, chunk up the information put the theorem into practise by doing some test questions and then I'd go again until I knew I'd mastered it.Instead of having to learn it I'm now actually interested in the topic.There Are No Hard TopicsSchool grades and exams lead us to believe that we might not be as smart as others who seem to easily master "hard" topics. At work too, it can seem like some people can pick things up faster than others. This leads to some people feeling like they just aren't clever enough and they give up altogether.Here are a few examples:When studying medicine, you think that neurology is too complicated and so you put it off and worry about it the most when it comes to examsWhen growing a business you have no idea where to begin with sales so you just don't do itWhen practising guitar you just can't get some chords so you stop practisingWe consider things to be hard when they are new and we struggle to find context, interest or even a place to start to understand them so we either don't try or we feel we're not good enough. This is totally wrong. Learning is all about breaking things down into simple, relatable, and easy-to-understand chunks.Think back to the best teacher you had. Or think about Richard Feynman who was known as the Great Explainer for his ability to make complex topics in physics understandable.The best teachers engage us, make us curious, provide worked examples and structure to give us a clear path to learn and then they quiz us. When teaching yourself you need to be the best teacher possible.If you're able to do this you'll be able to learn anything at school, college or in work faster and more effectively to get ahead in life while also having more time away from work and study to enjoy yourself.The single most life-changing skill I have taught myself is how to teach myself and specifically how to learn hard things. This helped me rank first at exams while studying less than my friends and to quickly pick up difficult concepts when teaching myself how to grow businesses. This can help you digest the information faster. For example, if youre learning a new language, you could break it down into nouns, verbs, adjectives, and tenses. It helps the information feel less overwhelming, and it gives you a path forward on how to study it.[1]If youre learning from a textbook, it may be organized like this already. Advertisement Make your goals specific and time-based to cover the most ground. It will help break up the subject so you arent overwhelmed by an entire field of knowledge. You could also set smaller goals throughout the weeks to work up toward learning an entire subject.[2]For example, if youre studying math, try making it a goal to nail down basic algebra by next week. Then, you can move on to tougher concepts, like calculus.You can also split things up by chapters in a textbook. Great notes make studying much easier. Listen to the information being presented and write it down in your own words. Write down key information in short phrases rather than using complete sentences. Leave spaces in your notes to jot down comments or questions later on.[3]For example, instead of writing down, The food chain is a hierarchical series of organisms each dependent on the next as a source of food, you could write, Food chain: series of organisms eating each other.Try developing a shorthand thats easy to write down and understand. For example, if youre learning about chemistry concepts, you could shorten catalyst to cat, chromatography to chrom, or stoichiometry to stoich.If you're taking notes on how to do something sequential, like how to solve a math problem, write your notes down in steps. That way, it will be easier to remember how to apply those same steps to different problems.[4] Advertisement Studies show that writing notes by hand solidifies information in your head. Try going a little old school and whip out a sheet of paper and a pencil. If you want to keep your notes organized, type them up later and save them on your computer.[5]Writing your notes out by hand can take a little longer than typing them up, so its important to write in phrases and use shorthand. Getting someone else to explain it can help you learn faster. If theres a key concept that you just dont quite get, dont be afraid to ask. If youre in a classroom setting, approach the teacher or a fellow classmate.[6] If youre working on your own, try Googling it or finding an online forum for help.[7]If youre in higher education, go to your teachers office hours to get help throughout the school year.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. His site is set apart by its focus on fostering genuine comprehension through step-by-step understanding (instead of just getting the correct final answer), enabling learners to identify and overcome misunderstandings and confidently take on any test they face. He received his MA in Physics from Case Western Reserve University and his BA in Physics from Baldwin Wallace University. Review basic concepts before diving into advanced topics. Identifying the gaps in your knowledge helps you avoid difficulties later on. Take an assessment or get your teacher's advice on where you can improve. Practice targeted exercises to build a strong foundation so you can confidently tackle new lessons. Advertisement Lengthy cram sessions don't help you retain information in the long-term. Instead, try to space out your study time so youre doing a little bit every day. Try studying for 10 to 15 minutes every evening or whenever you have time.[8]Studies show that trying to cram a bunch of knowledge into your mind right before a test will only help you retain it in the short term.If youre limited on time, you might not be able to spread your studying over multiple days. If thats the case, just make sure you take lots of breaks to give your brain a rest. Grab a friend or a classmate and pretend youre a teacher. Go over the basic concepts of what youre learning, and answer any questions they might have. If you get stuck or struggle at any point, go back and revisit the stuff youre having trouble with.[9]If you can teach a subject to someone else, youre probably pretty close to mastering it. Advertisement Read a portion of the material, then say what you just learned. You dont need to be talking to anyoneyou can do this alone in your home if you want. Speaking the information out loud helps you memorize it faster and keep it in your mind for longer.[10]After youre done, go over the information one more time to make sure you got it right. If you missed anything or struggled in one area, go over it a few more times. What will this knowledge help you do in the future? What is it helping you do right now? Connecting a subject to something youre doing outside of a classroom setting is a great way to keep your interest peaked.Oftentimes, people connect subjects to what theyre doing career-wise. If youre learning chemistry, maybe youll use it when you work in a lab later on. If youre studying math, maybe youll crunch numbers at an accounting firm in the future. Advertisement Use this trick to learn chunks of information quickly. For example, if you want to remember the colors of the rainbow (red, orange, yellow, green, blue, indigo, violet), you could use the mnemonic device Roy G. Biv. Its much easier to remember, so you can memorize it faster and use it to retain information.[11]If youre learning the order of operations in math (parentheses, exponents, multiplication, division, addition, subtraction), you could use the mnemonic device PEMDAS. Practice tests can show you where you're struggling. You can find tons of practice tests online for almost any subject. If youre in a classroom setting, you can also ask your teacher to see if they have ones you could practice with. Make sure you check your answers, and go over anything that you struggled with.[12]You can also ask a fellow classmate to check your answers for you.EXPERT TIP Joseph Meyer Math Teacher Joseph Meyer is a High School Math Teacher based in Pittsburgh, Pennsylvania. He is an educator at City Charter High School, where he has been teaching for over 7 years. Joseph is also the founder of Sandbox Math, an online learning community dedicated to helping students succeed in Algebra. His site is set apart by its focus on fostering genuine comprehension through step-by-step understanding (instead of just getting the correct final answer), enabling learners to identify and overcome misunderstandings and confidently take on any test they face. He received his MA in Physics from Case Western Reserve University and his BA in Physics from Baldwin Wallace University. When doing practice problems, promptly check to see if your answers are correct. Use worksheets that provide answer keys for instant feedback. Discuss answers with a classmate or find explanations online. Immediate feedback will help you correct your mistakes, avoid bad habits, and advance your learning more quickly. Advertisement Add New Question Question What should I do if I am getting low grades in math but am trying my best? The first thing you can do is talk to your teacher to make sure they know you are trying. If your school has multiple math classes, try asking them if there is a possibility of moving down to one which has more time to work on math improvement. Also, you can ask your teacher for study tips and extra help, and maybe they can even get you situated with a tutor if you need it. Question How to reciting English words quckly? Try using flashcards, they help a lot. Even when making them, it helps you learn. Ask a Question Advertisement This article was co-authored by Daron Cam and by wikiHow staff writer, Hannah Madden. Daron Cam is an Academic Tutor and the Founder of Bay Area Tutors, Inc., a San Francisco Bay Area-based tutoring service that provides tutoring in mathematics, science, and overall academic confidence building. Daron has over eight years of teaching math in classrooms and over nine years of one-on-one tutoring experience. He teaches all levels of math including calculus, pre-algebra, algebra I, geometry, and SAT/ACT math prep. Daron holds a BA from the University of California, Berkeley and a math teaching credential from St. Mary's College. This article has been viewed 89,030 times. Co-authors: 9 Updated: June 24, 2024 Views:89,030 Categories: Study Skills PrintSend fan mail to authors Thanks to all authors for creating a page that has been read 89,030 times. "I thought of giving up on putting effort into reading, but as I read through the article, it motivated me more." Share your story

How to learn things easily. How to easily learn hard things. How to learn something difficult. Learn difficult things. How to learn difficult concepts.