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OCTOBER 31, 2022

ACCREDITOR

FEATURED

BENEFITS OF MUSIC EDUCATION FOR STUDENTS

- ➔ Language skills
- ➔ Improved test scores
- ➔ Self-esteem
- ➔ Listening skills
- ➔ Math skills
- ➔ Making the brain work harder
- ➔ Relieving Stress
- ➔ Builds Creativity

EXCLUSIVE

FEATURED ACCREDITATION

10 TIPS ON HOW TO STUDY SMARTER, NOT LONGER

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24 TOP 10 TIPS ON HOW TO STUDY SMARTER, NOT LONGER

Be kind to yourself - Doing schoolwork during a pandemic is a tough situation at best. But remember your teachers and classmates also face challenges. Like you, they have fears, concerns and questions. Be willing to cut them some slack. And be kind to yourself as well. After all, "we're all in this together."

08 FEATURED ACCREDITATION

IAO received an enormous number of applications from institutes wanting to be recognized internationally through our mark and accreditation



EDITOR'S NOTE

Whilst being fun and social, extracurricular activities are also important in helping develop a child's talents, interests, and passions. One particularly enriching activity is learning to play a musical instrument. There has long been a correlation between musical training and academic success, but there are other benefits too.

Different studies have proven that the comprehension of musical language can benefit a child's overall mental development. Figures show that students who study music are more successful on standardized tests and are also likely to achieve better grades in high school.

Further research revealed that musical training physically develops the left side of the brain known to be involved with processing language and reasoning.



MUSIC, FUN AND MORE

10

**BENEFITS
OF
MUSIC
EDUCATION
FOR
STUDENTS**

MUSIC, PARENTIN

BY LAUREN MARTIN





BENEFITS OF MUSIC EDUCATION FOR STUDENTS

In an effort to trim budgets and improve academic performance, music education is disappearing as a result of state officials cutting the arts from schools.

Some believe that music isn't as important as the core academic subjects. However, research has shown that benefits of music education include students' academic success.

Here are 10 benefits of music education that highlight why it should be an integral part of students' lives—whether inside or outside of school.

01 LANGUAGE SKILLS

According to PBS, "Recent studies have clearly indicated that musical training physically develops the part of the left side of the brain known to be involved with processing language, and can actually wire the brain's circuits in specific ways." Learning a musical instrument also improves how the brain understands human language, which can help students learn a second language.



02 IMPROVED TEST SCORES

Studies have shown that students who are involved with a high-quality music education program in school perform better on tests than students who don't engage in music. PBS reports, "A study published in 2007 by Christopher Johnson, professor of music education and music therapy at the University of Kansas, revealed that students in elementary schools with superior music education programs scored around 22 percent higher in English and 20 percent higher in math scores on standardized tests, compared to schools with low-quality music programs."



03 SELF-ESTEEM

Music allows students to try something new and develop confidence as they master singing or playing an instrument. "When students are working towards a common goal, they appreciate that their 'voice' and interests are heard and understood by others. This joint effort creates a sense of secure acceptance that is critical to their self-esteem," states PBS.



04 LISTENING SKILLS

Music involves listening to yourself and to the rest of the ensemble. Musicians need to hear tempos, dynamics, tuning, and harmonies. This helps auditory development in the brain.

05 MATH SKILLS



Reading music includes learning quarter, half, and whole notes, which are essentially fractions. As Getting Smart explains, "When a music pupil has spent time learning about rhythm, he has learned to count. He is not counting numbers, per se, but he is most certainly using logic to count out the rhythms and bars, and working his way methodically through the piece. Many musical concepts have mathematical counterparts."

06 MAKING THE BRAIN WORK HARDER

Research shows that the brain of a musician works differently than a non-musician, according to PBS. "There's some good neuroscience research that children involved in music have larger growth of neural activity than people not in music training," says Dr. Eric Rasmussen, chair of the Early Childhood Music Department at the Peabody Preparatory of The Johns Hopkins University. "When you're a musician and you're playing an instrument, you have to be using more of your brain."



07 RELIEVING STRESS

We all know that listening to a favorite artist or song can lift a mood and relax us. The same goes for creating music. It gives kids a great release, allowing them to immerse themselves in something that's fulfilling and calming. I know that no matter how stressed I was in school, I would always come out happy and relaxed after choir practice.



08 BUILDS CREATIVITY

Music certainly nurtures kids' creative side. This can have an impact on their futures. The Arts Education Partnership states, "Employers identify creativity as one of the top five skills important for success in the workforce (Lichtenberg, Woock, & Wright, 2008)." The partnership also suggests originality and flexibility are benefits of music education because they are key components of the creativity and innovation music requires. Finally, graduates from music programs report that creativity, teamwork, communication, and critical thinking are skills and competencies necessary in their work, regardless of whether they are working in music or in other fields.





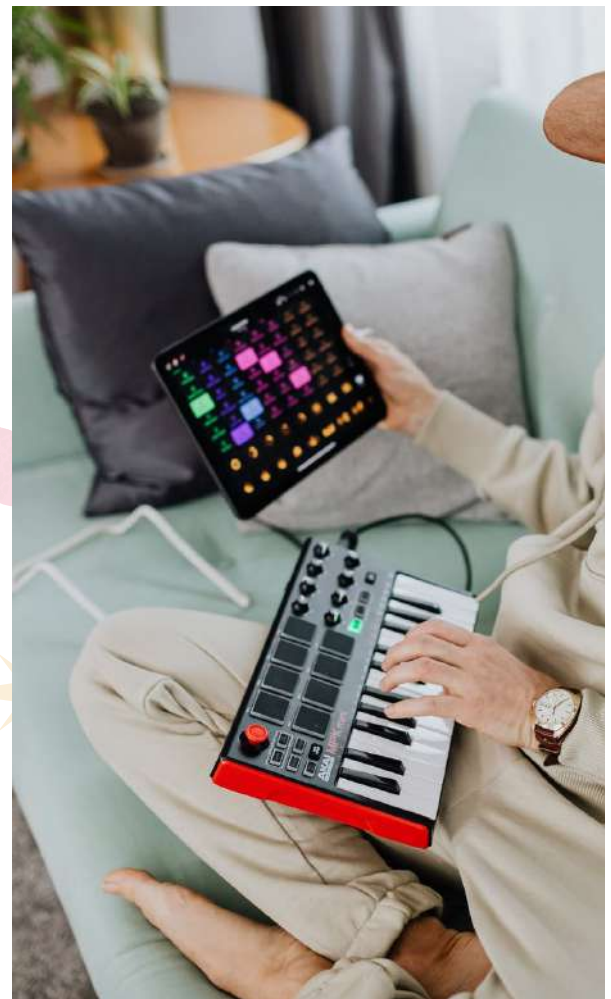
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HELPING SPECIAL NEEDS CHILDREN

Music can have a powerful impact on kids with special needs. It helps them find a way to communicate and open up, which they may struggle with otherwise. For this reason, and despite cuts to music programs, schools are increasingly implementing music therapy after-school programs to benefit students with disabilities.

10 HIGHER GRADUATION RATES

Schools with music programs have higher graduation rates. DoSomething.org reports, "Schools with music programs have an estimated 90.2 percent graduation rate and 93.9 percent attendance rate compared to schools without music education who average 72.9 percent graduation and 84.9 percent attendance."





Many families can instill the benefits of music education in children despite cuts to school programs. Some pursue music on their own or find supplemental learning programs that incorporate music in the midst of dwindling school programs. Private music teachers or music ensembles within communities and churches offer good options for kids to reap the academic benefits of music education. Some might find artistic success as well: K12 student Stephanie Grace, who at age 16 has already released twelve country music songs, and K12 student Kalona Pence, who is a rising Christian music artist. Parents of younger students might consider supplemental learning programs, such as EmbarK12, that incorporate music and other arts that offer important benefits for kids.

EXCLUSIVE

Featured Accreditation

IAO received an enormous number of applications from institutes wanting to be recognized internationally through our mark and accreditation. We include the most devoted institutes seeking to provide high-quality education in the IAO highlighted accreditations, which are accredited internationally by IAO.



FIA was started with the vision of providing quality cosmetic training courses and therefore improve the standards of the cosmetic industry and better serve both doctors & non doctors.

FIA focuses on more than just training people. It is about adding value to the society. We strive to empower and encourage women to take up the mantle for themselves and ensure that there is a rise in employment levels among women who aim to be independent in their field of work.



Innovation Experts Real Estate Institute is a private venture that is envisioned to constitute the gateway of real estate professionals of all horizons to the most relevant, accurate and up-to-date real estate knowledge. Whether it is about world's best practices, or latest market insights, or innovative techniques and tools, our team of experts is fully dedicated to help you upskill your capabilities and deepen your knowledge of the market.



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EMPOWERING AND INSPIRING

IICA is an initiative of our young, dynamic and vigorous founders, Ms. Chandini Dey, a budding entrepreneur successfully running a business of cosmetology and aesthetic clinic under the name of BBHAC Clinic Private Limited, and Ms. Natasha Pimple, a MBA (Finance) alumna and the designer behind CISS Academy for Skill Human Development Private Limited, a company incorporated to reduce talent inequalities and create a career progression based on skill gradation.

THE SCIENCE OF GHOSTS



HEALTH & MEDICINE

Here's what may explain why some people see, hear or feel a spooky presence.

THE SCIENCE OF GHOSTS

A shadowy figure rushed through the door. “It had a skeletal body, surrounded by a white, blurry aura,” recalls Dom. The figure hovered and didn’t seem to have a face. Dom, who prefers to use only his first name, had been fast asleep. Just 15 at the time, he panicked and closed his eyes. “I only saw it for a second,” he recalls. Now, he’s a young adult who lives in the United Kingdom. But he still remembers the experience vividly.

Was the figure a ghost? In the mythology of the United States and many other Western cultures, a ghost or spirit is a dead person who interacts with the living world. In stories, a ghost may whisper or groan, cause things to move or fall, mess with electronics — even appear as a shadowy, blurry or see-through figure.

Ghost stories are lots of fun, especially on Halloween. But some people believe that ghosts are real. Chapman University in Orange, Calif., runs a yearly survey that asks people in the United States about their beliefs in the paranormal. In 2018, 58 percent of those polled agreed with the statement, “Places can be haunted by spirits.” And almost one in five people from the United States said in another survey, conducted by the Pew Research Center in Washington, D.C., that they’ve seen or been in the presence of a ghost.





On ghost-hunting TV shows, people use scientific equipment to attempt to record or measure spirit activity. And numerous creepy photos and videos make it seem like ghosts exist. However, none of these offer good evidence of ghosts. Some are hoaxes, created to fool people. The rest only prove that equipment sometimes can capture noise, images or other signals that people don't expect. Ghosts are the least likely of many possible explanations.

Not only are ghosts supposed to be able to do things that science says are impossible, such as turn invisible or pass through walls, but also scientists using reliable research methods have found zero evidence that ghosts exist. What scientists have discovered, though, are lots of reasons why people might feel they have had ghostly encounters.

What their data show is that you can't always trust your eyes, ears or brain.



DREAMING WITH YOUR EYES OPEN

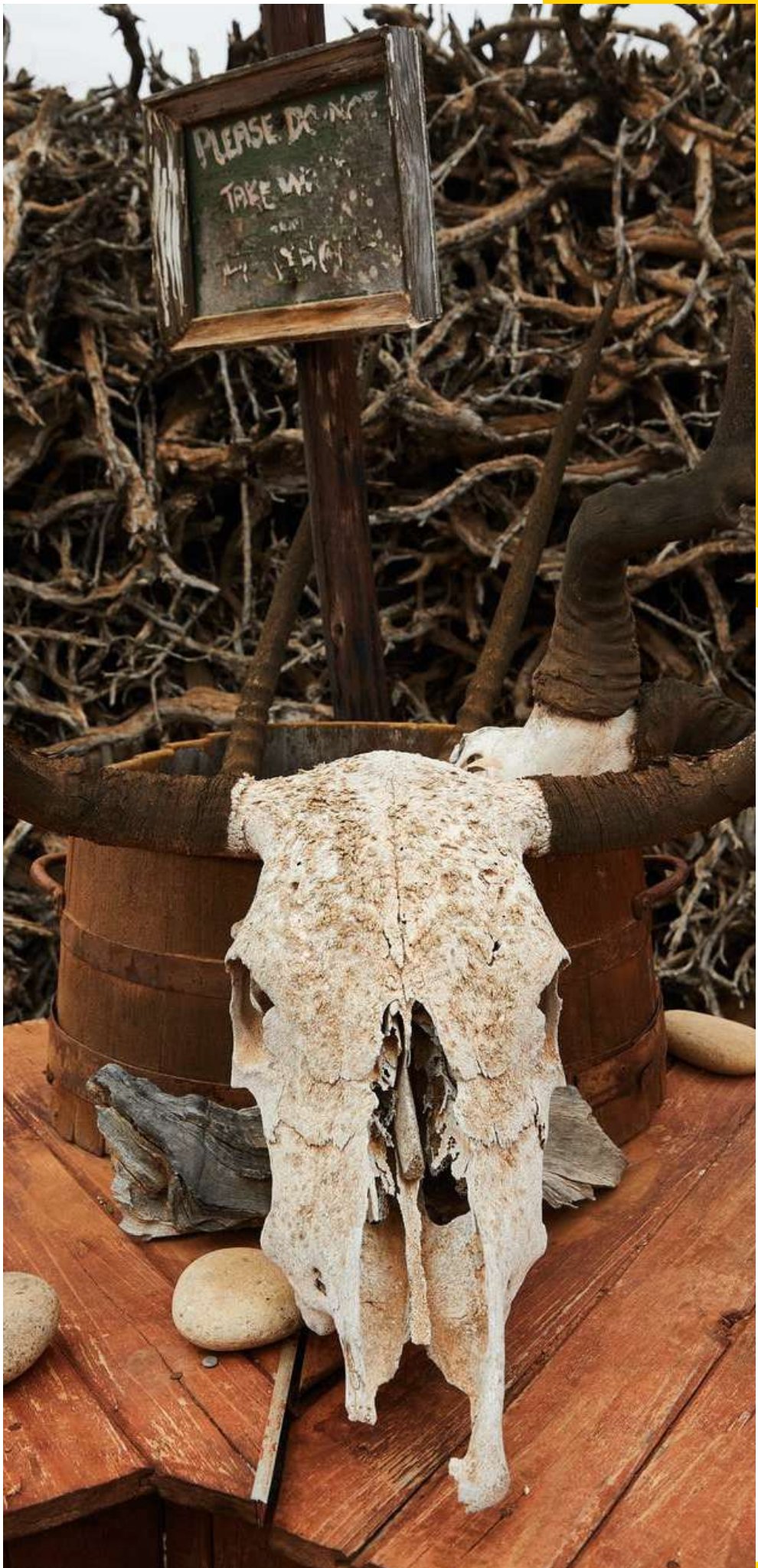
Dom began having unusual experiences when he was eight or nine. He would wake up unable to move. He researched what was happening to him. And he learned that science had a name for it: sleep paralysis. This condition leaves someone feeling awake but paralyzed, or frozen in place. He can't move or speak or breathe deeply. He may also see, hear or feel figures or creatures that aren't really there. This is called a hallucination (Huh-LU-sih-NA-shun).

Sometimes, Dom hallucinated that creatures were walking or sitting on him. Other times, he heard screaming. He only saw something that one time, as a teenager.

Sleep paralysis happens when the brain messes up the process of falling asleep or waking. Usually, you only start dreaming after you're fully asleep. And you stop dreaming before you waken.

Sleep paralysis “is like dreaming with your eyes open,” explains Baland Jalal. A neuroscientist, he studies sleep paralysis at the University of Cambridge in England. He says this is why it happens: Our most vivid, lifelike dreams happen during a certain stage of sleep. It’s called rapid eye movement, or REM, sleep. In this stage, your eyes dart around under their closed lids. Though your eyes move, the rest of your body can’t. It’s paralyzed. Most likely, that’s to prevent people from acting out their dreams. (That could get dangerous! Imagine flailing your arms and legs as you play dream basketball, only to whack your knuckles on the wall and tumble to the floor.)

Your brain usually turns this paralysis off before you wake up. But in sleep paralysis, you wake up while it’s still happening.





FACES IN THE CLOUDS

You don't have to experience sleep paralysis to sense things that aren't there. Have you ever felt your phone buzz, then checked to find there was no message? Have you heard someone calling your name when no one was there? Have you ever seen a face or figure in a dark shadow?

These misperceptions also count as hallucinations, says David Smailes. He's a psychologist in England at Northumbria University in Newcastle-upon-Tyne. He thinks that just about everyone has such experiences. Most of us just ignore them. But some may turn to ghosts as the explanation.

We're used to our senses giving us accurate information about the world. So when experiencing a hallucination, our first instinct is usually to believe it. If you see or feel the presence of a loved one who died — and trust your perceptions — then "it has to be a ghost," says Smailes. That's easier to believe than the idea that your brain is lying to you.



The brain has a tough job. Information from the world bombards you as a mixed-up jumble of signals. The eyes take in color. The ears take in sounds. The skin senses pressure. The brain works to make sense of this mess. This is called bottom-up processing. And the brain is very good at it. It's so good that it sometimes finds meaning in meaningless things. This is known as pareidolia (Pear-eye-DOH-lee-ah). You experience it whenever you stare at clouds and see rabbits, ships or faces. Or gaze at the moon and see a face.

The brain also does top-down processing. It adds information to your perception of the world. Most of the time, there is way too much stuff coming in through the senses. Paying attention to all of it would overwhelm you. So your brain picks out the most important parts. And then it fills in the rest. "The vast majority of perception is the brain filling in the gaps," explains Smailes.



What you see right now isn't what's actually out there in the world. It's a picture your brain painted for you based on signals captured by your eyes. The same goes for your other senses. Most of the time, this picture is accurate. But sometimes, the brain adds things that aren't there.



For example, when you mishear the lyrics in a song, your brain filled in a meaning that wasn't there. (And it will most likely continue to mishear those words even after you learn the right ones.)

This is very similar to what happens when so-called ghost hunters capture sounds that they say are ghosts speaking. (They call this electronic voice phenomenon, or EVP.) The recording is probably just random noise. If you listen to it without knowing what was supposedly said, you probably won't hear words. But when you know what the words are supposed to be, you might now find that you can discern them easily.

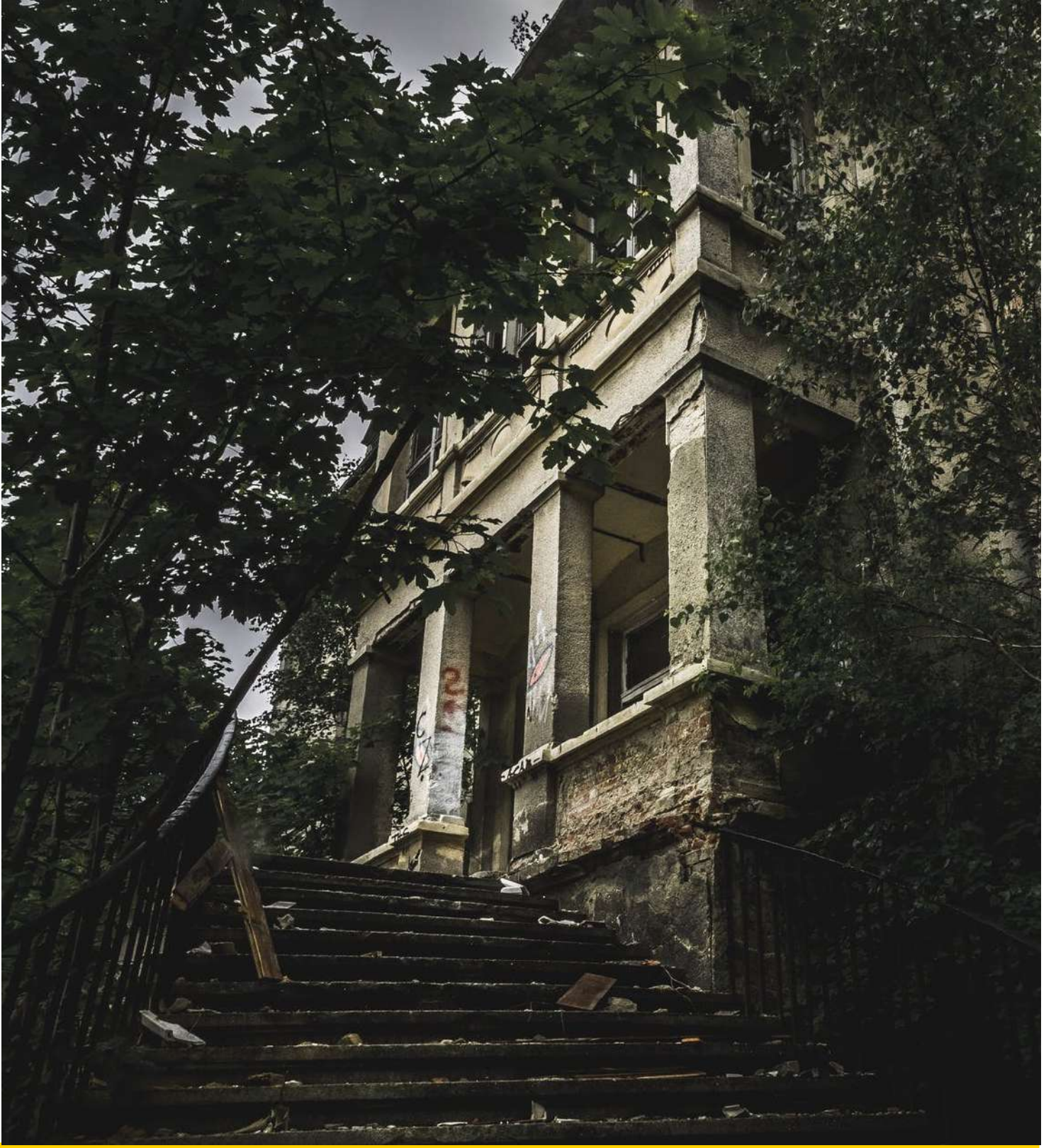
Your brain may also add faces to images of random noise. Research has shown that patients who experience visual hallucinations are more likely than normal to experience pareidolia — see faces in random shapes, for instance.

In one 2018 study, Smailes' team tested whether this might also be true for healthy people. They recruited 82 volunteers. First, the researchers asked a series of questions about how often these volunteers had hallucination-like experiences. For example, "Do you ever see things other people cannot?" and "Do you ever think that everyday things look abnormal to you?"

Next, the participants looked at 60 images of black and white noise. For a very brief moment, another image would flash in the center of the noise. Twelve of these images were faces that were easy to see. Another 24 were hard-to-see faces. And 24 more images showed no faces at all — just more noise. The volunteers had to report whether a face was present or absent in each flash. In a separate test, the researchers showed the same volunteers a series of 36 images. Two-thirds of them contained a face pareidolia. The remaining 12 did not.

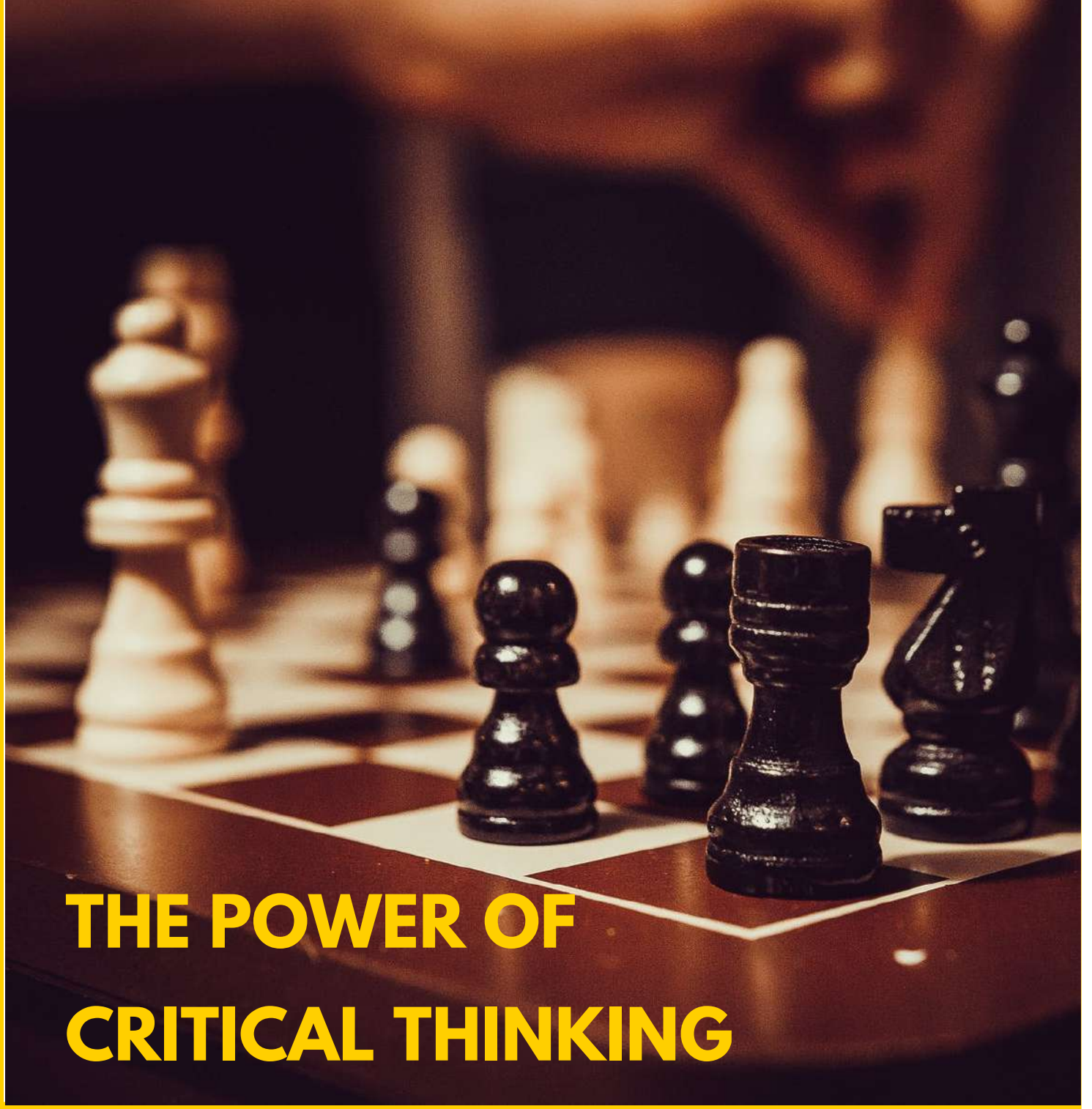
Participants who had initially reported more hallucination-like experiences were also more likely to report faces in the flashes of random noise. They were also better at identifying those images that contained face pareidolia.





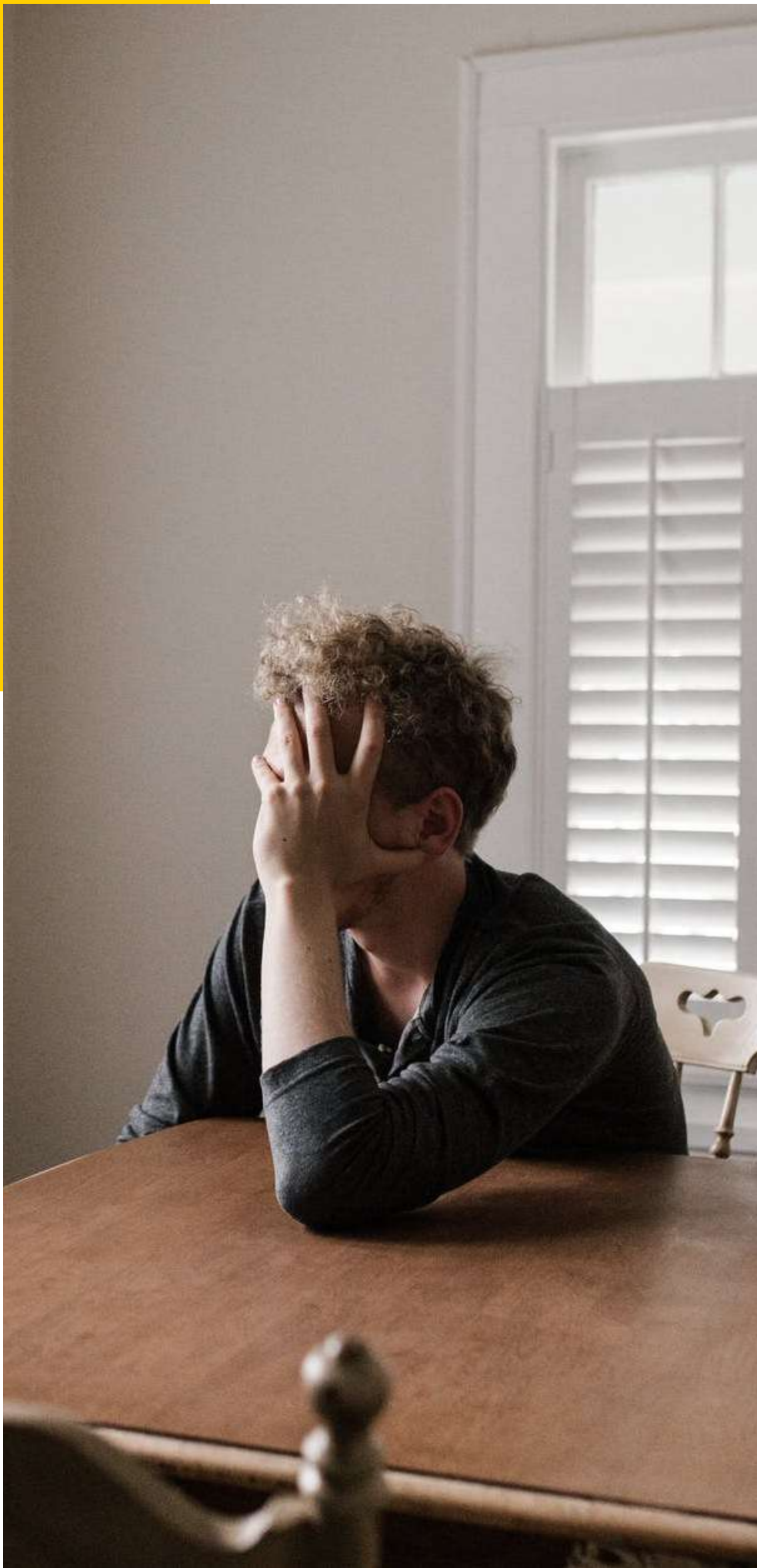
In the next few years, Smailes plans to study situations in which people might be more likely to see faces in randomness.

When people sense ghosts, he points out, "They're often alone, in the dark and scared." If it's dark, your brain can't get much visual information from the world. It has to create more of your reality for you. In this type of situation, Smailes says, the brain may be more likely to impose its own creations onto reality.



THE POWER OF CRITICAL THINKING

Anyone may experience sleep paralysis, hallucinations, pareidolia or inattentive blindness. But not everyone turns to ghosts or other supernatural beings as a way to explain these experiences. Even as a child, Dom never thought he had come face to face with a real ghost. He went online and asked questions about what might have happened. He used critical thinking. And he got the answers he needed. When an episode happens now, he uses a technique that Jalal developed. Dom doesn't try to stop the episode. He just focuses on his breathing, tries to relax as much as possible and waits for it to pass. He says, "I deal with it far better. I just sleep and enjoy sleeping."



Robyn Andrews is a psychology student at the University of South Wales in Treforest. She wondered if people with stronger critical-thinking skills might be less likely to believe in the paranormal. So she and her mentor, psychologist Philip Tyson, recruited 687 students for a study about their paranormal beliefs. The students majored in a wide range of different fields. Each was asked how strongly he or she agreed with statements such as, "It is possible to communicate with the dead." Or "Your mind or soul can leave your body and travel." The research team also looked at the students' grades on a recent assignment.

Students with higher grades tended to have lower levels of paranormal beliefs, this study found. And students in the physical sciences, engineering or math tended not to believe as strongly as those studying the arts. This trend also has been seen in research by others.



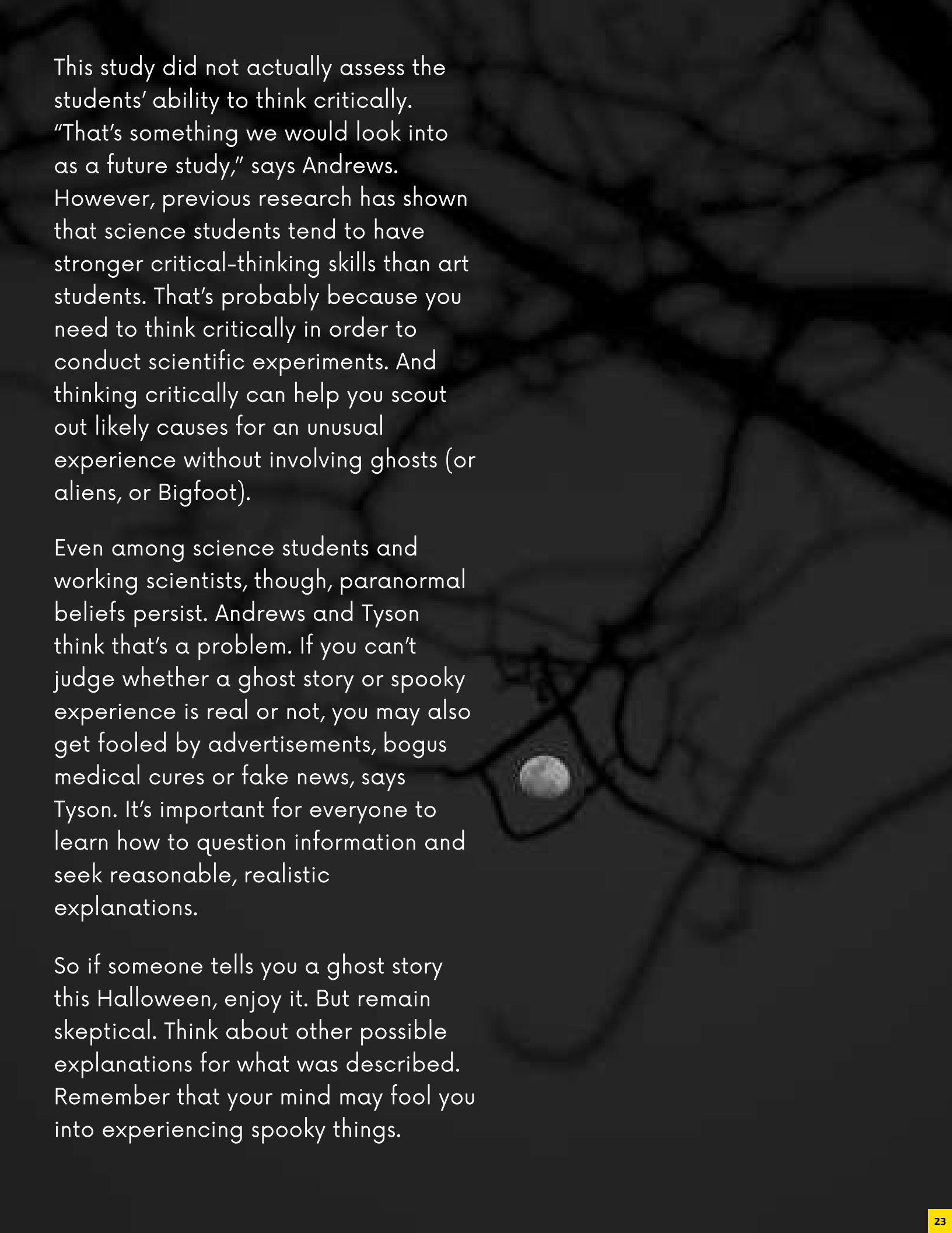
This study did not actually assess the students' ability to think critically. "That's something we would look into as a future study," says Andrews. However, previous research has shown that science students tend to have stronger critical-thinking skills than art students. That's probably because you need to think critically in order to conduct scientific experiments. And thinking critically can help you scout out likely causes for an unusual experience without involving ghosts (or aliens, or Bigfoot).

Even among science students and working scientists, though, paranormal beliefs persist. Andrews and Tyson think that's a problem. If you can't judge whether a ghost story or spooky experience is real or not, you may also get fooled by advertisements, bogus medical cures or fake news, says Tyson. It's important for everyone to learn how to question information and seek reasonable, realistic explanations.



So if someone tells you a ghost story this Halloween, enjoy it. But remain skeptical. Think about other possible explanations for what was described. Remember that your mind may fool you into experiencing spooky things.





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TOP 10 TIPS ON HOW TO STUDY SMARTER, NOT LONGER

GOOD STUDY SKILLS MATTER NOW MORE THAN EVER, AND SCIENCE POINTS TO ONES THAT REALLY WORK



TOP 10 TIPS ON HOW TO STUDY SMARTER, NOT LONGER

As a teen, Faria Sana often highlighted books with markers. “The colors were supposed to tell me different things.” Later, she recalls, “I had no idea what those highlighted texts were supposed to mean.”

She also took lots of notes as she read. But often she was “just copying words or changing the words around.” That work didn’t help much either, she says now. In effect, “it was just to practice my handwriting skills.”

“No one ever taught me how to study,” Sana says. College got harder, so she worked to find better study skills. She’s now a psychologist at Athabasca University in Alberta, Canada. There she studies how students can learn better.





Having good study skills is always helpful. But it's even more important now during the COVID-19 pandemic. Many students worry about family or friends who may get sick, Sana notes. Others feel more general stress. Beyond that, students in many countries are facing different formats for learning. Some schools are holding in-person classes again, with rules for spacing and masks. Others schools have staggered classes, with students at school part-time. Still others have all online classes, at least for a while.

These conditions can distract from your lessons. Plus, students are likely to have to do more without a teacher or parent looking over their shoulders. They will have to manage their time and study more on their own. Yet many students never learned those skills. To them, Sana says, it may be like telling students to learn to swim by "just swimming."

For more than 100 years, psychologists have done research on which study habits work best. Some tips help for almost every subject. For example, don't just cram! And test yourself, instead of just rereading the material. Other tactics work best for certain types of classes. This includes things like using graphs or mixing up what you study. Here are 10 tips to tweak your study habits.

01 SPACE OUT YOUR STUDYING

Nate Kornell “definitely did cram” before big tests when he was a student. He’s a psychologist at Williams College in Williamstown, Mass. He still thinks it’s a good idea to study the day before a big test. But research shows it’s a bad idea to cram all your studying into that day. Instead, space out those study sessions.

In one 2009 experiment, college students studied vocabulary words with flash cards. Some students studied all the words in spaced-apart sessions throughout four days. Others studied smaller batches of the words in crammed, or massed, sessions, each over a single day. Both groups spent the same amount of time overall. But testing showed that the first group learned the words better.

Kornell compares our memory to water in a bucket that has a small leak. Try to refill the bucket while it’s still full, and you can’t add much more water. Allow time between study sessions, and some of the material may drip out of your memory. But then you’ll be able to relearn it and learn more in your next study session. And you’ll remember it better, next time, he notes.



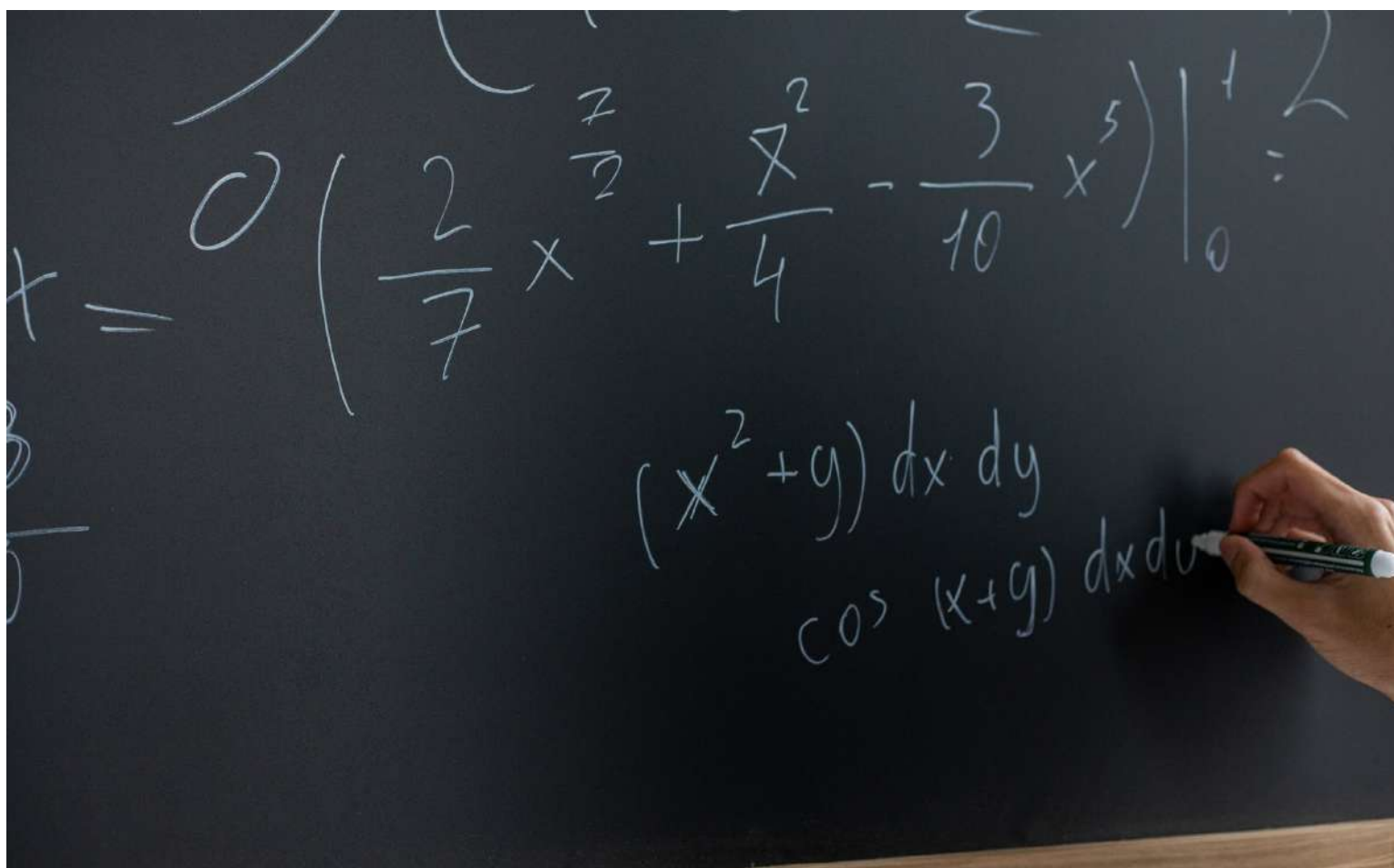
02

PRACTICE, PRACTICE, PRACTICE!

Musicians practice their instruments. Athletes practice sports skills. The same should go for learning.

"If you want to be able to remember information, the best thing you can do is practice," says Katherine Rawson. She's a psychologist at Kent State University in Ohio. In one 2013 study, students took practice tests over several weeks. On the final test, they scored more than a full letter grade better, on average, than did students who studied the way they normally had.

In a study done a few years earlier, college students read material and then took recall tests. Some took just one test. Others took several tests with short breaks of several minutes in between. The second group recalled the material better a week later.



03 DON'T JUST REREAD BOOKS AND NOTES

As a teen, Cynthia Nebel studied by reading her textbooks, worksheets and notebooks. "Over and over and over again," recalls this psychologist at Vanderbilt University in Nashville, Tenn. Now, she adds, "we know that's one of the most common bad study skills that students have."

In one 2009 study, some college students read a text twice. Others read a text just once. Both groups took a test right after the reading. Test results differed little between these groups, Aimee Callender and Mark McDaniel found. She is now at Wheaton College in Illinois. He works at Washington University in St. Louis, Mo.

Too often, when students reread material, it's superficial, says McDaniel, who also co-wrote the 2014 book, *Make It Stick: The Science of Successful Learning*. Rereading is like looking at the answer to a puzzle, rather than doing it yourself, he says. It looks like it makes sense. But until you try it yourself, you don't really know if you understand it.

One of McDaniel's coauthors of *Make it Stick* is Henry Roediger. He, too, works at Washington University. In one 2010 study, Roediger and two other colleagues compared test results of students who reread material to two other groups. One group wrote questions about the material. The other group answered questions from someone else. Those who answered the questions did best. Those who just reread the material did worst.

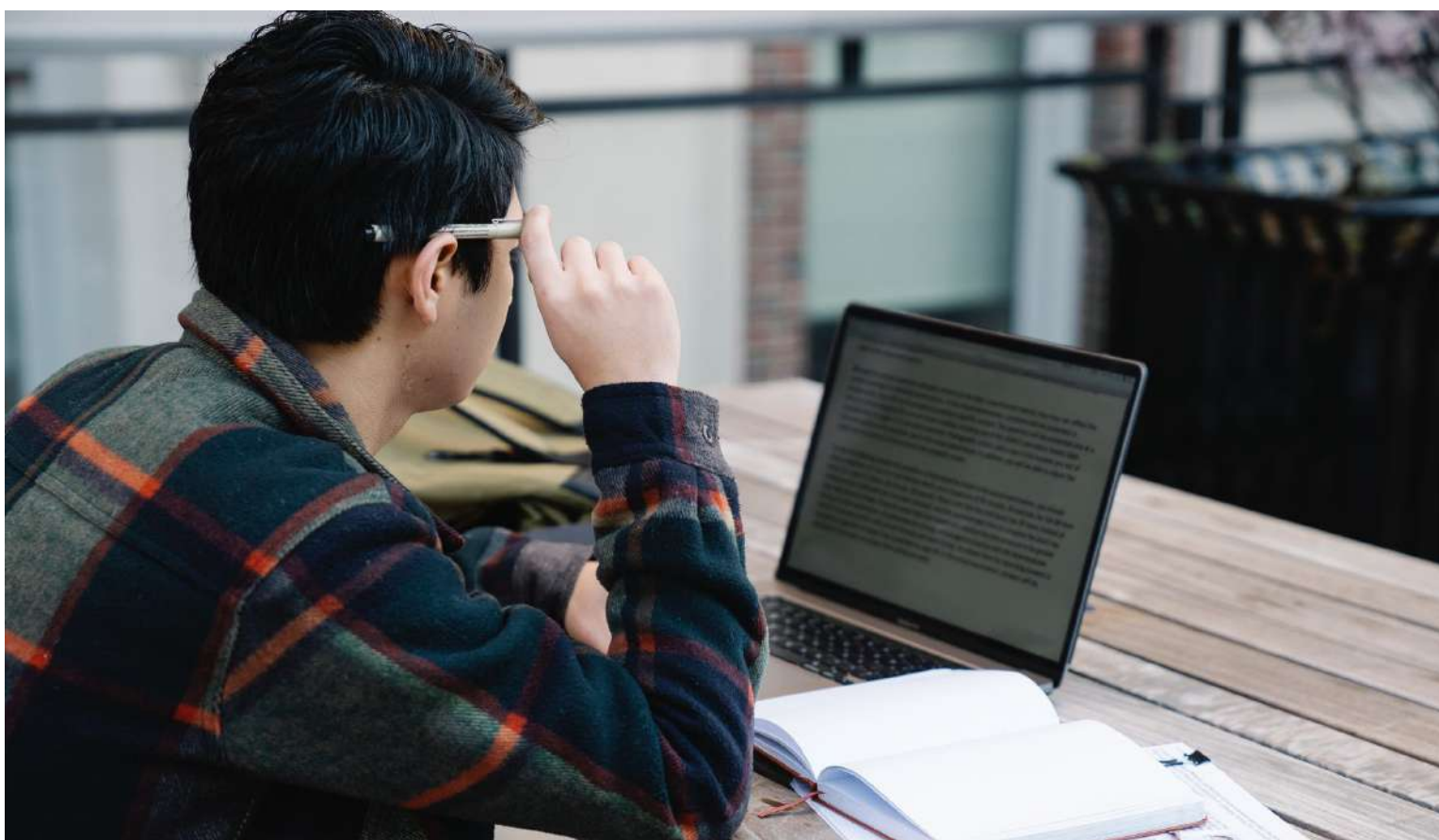


04 TEST YOURSELF

That 2010 study backs up one of Nebel's preferred study habits. Before big tests, her mom quizzed her on the material. "Now I know that was retrieval practice," she says. "It's one of the best ways you can study." As Nebel got older, she quizzed herself. For example, she might cover up the definitions in her notebook. Then she tried to recall what each term meant.

Such retrieval practice can help nearly everyone, Rawson and others showed in an August 2020 study in *Learning and Instruction*. This research included college students with an attention problem known as ADHD. It stands for Attention Deficit Hyperactivity Disorder. Overall, retrieval helped students with ADHD and those without the disorder equally well.

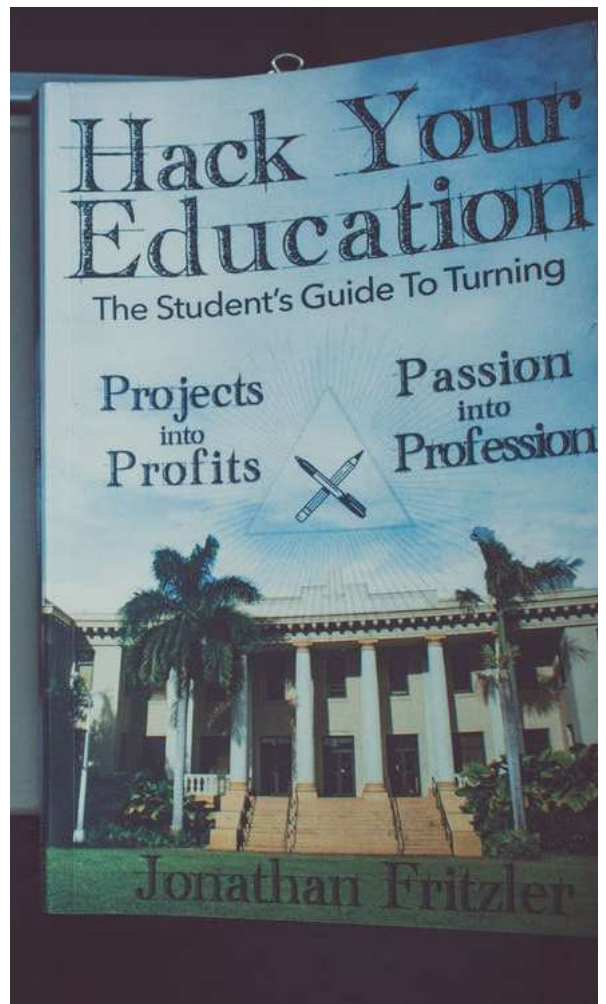
"Create a deck of flash cards every time you learn new information," Sana suggests. "Put questions on one side and the answers on the other side." Friends can even quiz each other on the phone, she says.



“Try to quiz yourself the way the teacher asks questions,” Nebel adds.

But really grill yourself and your friends, she says. And here’s why. She was part of a team that asked students to write one quiz question for each class period. Students would then answer a question from another classmate. Preliminary data show that students did worse on tests afterward than when the daily quiz questions came from the teacher. Nebel’s team is still analyzing the data. She suspects the students’ questions may have been too simple.

Teachers often dig deeper, she notes. They don’t just ask for definitions. Often, teachers ask students to compare and contrast ideas. That takes some critical thinking.

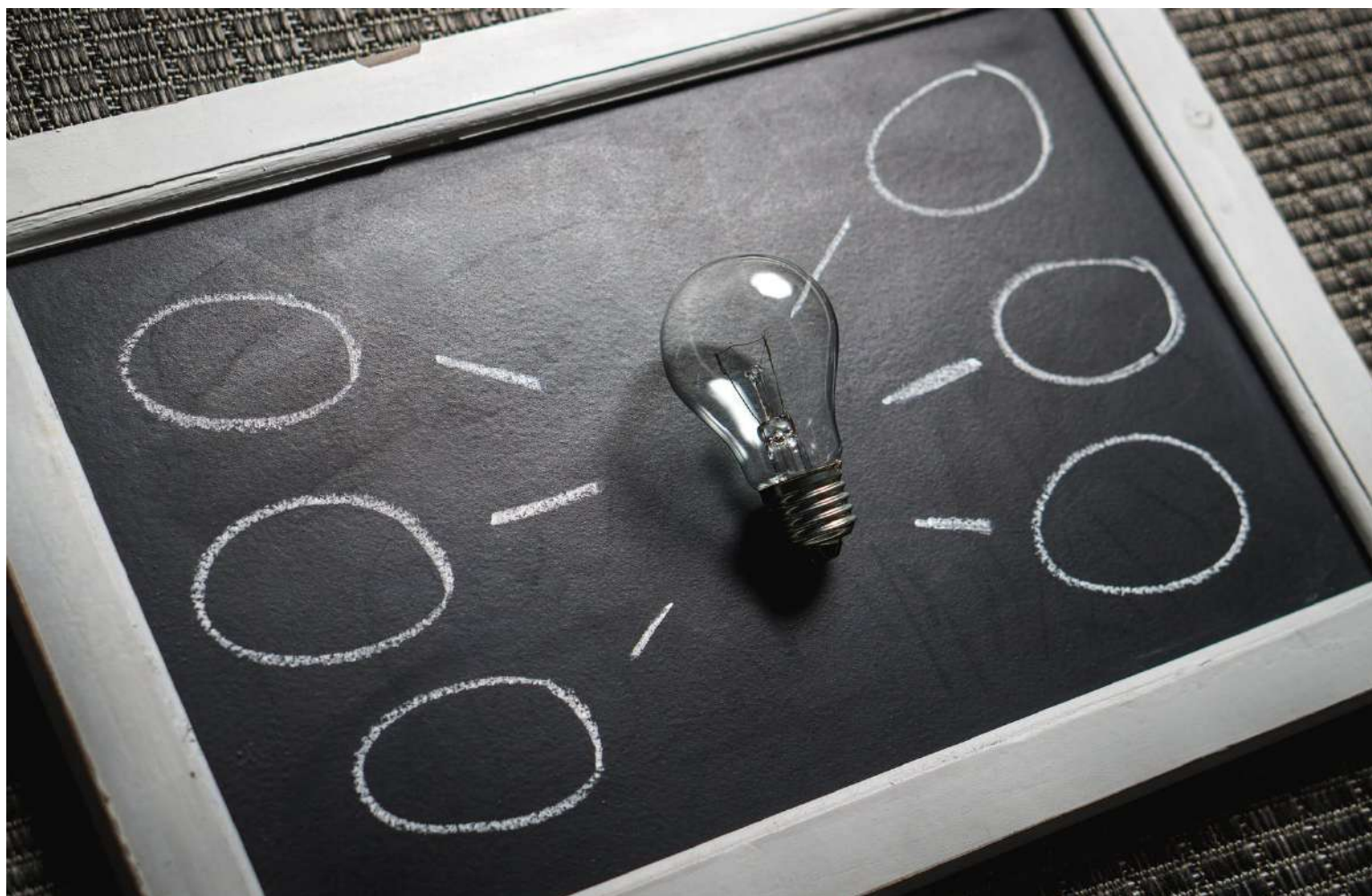


05 MISTAKES ARE OKAY — AS LONG AS YOU LEARN FROM THEM

It's crucial to test your memory. But it doesn't really matter how many seconds you spend on each try. That finding comes from a 2016 study by Kornell and others. But it's important to go the next step, Kornell adds: Check to see if you were right. Then focus on what you got wrong.

"If you don't find out what the answer is, you're kind of wasting your time," he says. On the flip side, checking the answers can make your study time more efficient. You can then focus on where you need the most help.

In fact, making mistakes can be a good thing, argues Stuart Firestein. A Columbia University biologist in New York City, he actually wrote the book on it. It's called *Failure: Why Science is So Successful*. Mistakes, he argues, are actually a primary key to learning.



06 MIX IT UP

In many cases, it helps to mix up your self-testing. Don't just focus on one thing. Drill yourself on different concepts. Psychologists call this interleaving.

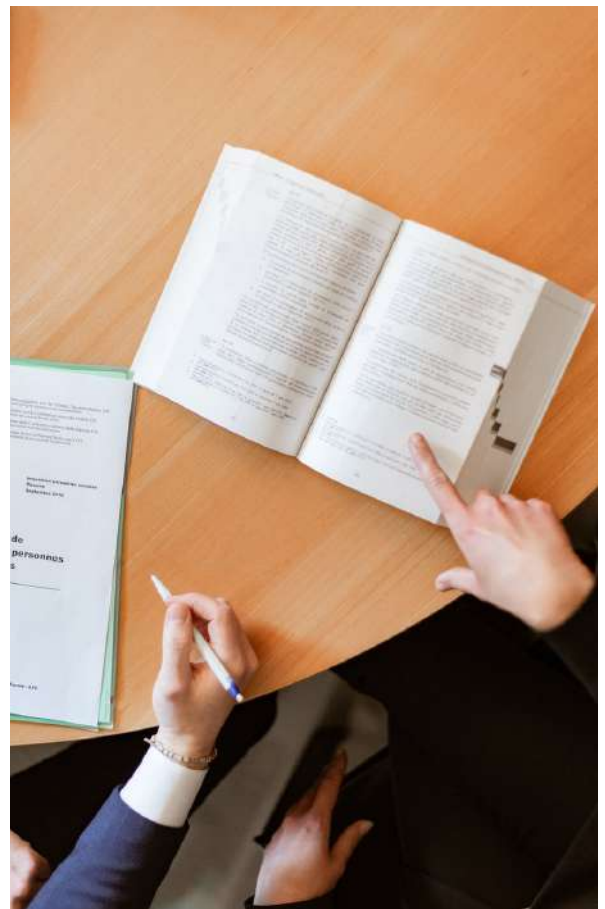
Actually, your tests usually will have questions mixed up, too. More importantly, interleaving can help you learn better. If you practice one concept over and over "your attention decreases because you know what's coming up next," Sana explains. Mix up your practice, and you now space the concepts apart. You can also see how concepts differ, form trends or fit together in some other way.



Suppose, for instance, you're learning about the volume of different shapes in math. You could do lots of problems on the volume of a wedge. Then you could answer more batches of questions, with each set dealing with just one shape. Or, you could figure out the volume of a cone, followed by a wedge. Next you might find the volume for a half-cone or a spheroid. Then you can mix them up some more. You might even mix in some practice on addition or division.

Rawson and others had groups of college students try each of those approaches. Those who interleaved their practice questions did better than the group that did single-batch practice, the researchers reported last year in *Memory & Cognition*.

A year earlier, Sana and others showed that interleaving can help students with both strong and weak working memory. Working memory lets you remember where you are in an activity, such as following a recipe.



07 USE PICTURES

Pay attention to diagrams and graphs in your class materials, says Nebel. "Those pictures can really boost your memory of this material. And if there aren't pictures, creating them can be really, really useful."

"I think these visual representations help you create more complete mental models," McDaniel says. He and Dung Bui, then also at Washington University, had students listen to a lecture on car brakes and pumps. One group got diagrams and was told to add notes as needed to the diagrams. Another group got an outline for writing notes. The third group just took notes. The outlines helped students if they were otherwise good at building mental models of what they were reading. But in these tests, they found, visual aids helped students across the board.

Even goofy pictures might help. Nikol Rummel is a psychologist at Ruhr University Bochum in Germany. In one study back in 2003, she and others gave cartoon drawings to college students along with information about five scientists who studied intelligence. For example, the text about Alfred Binet came with a drawing of a race car driver. The driver wore a bonnet to protect his brain. Students who saw the drawings did better on a test than did those who got only the text information.

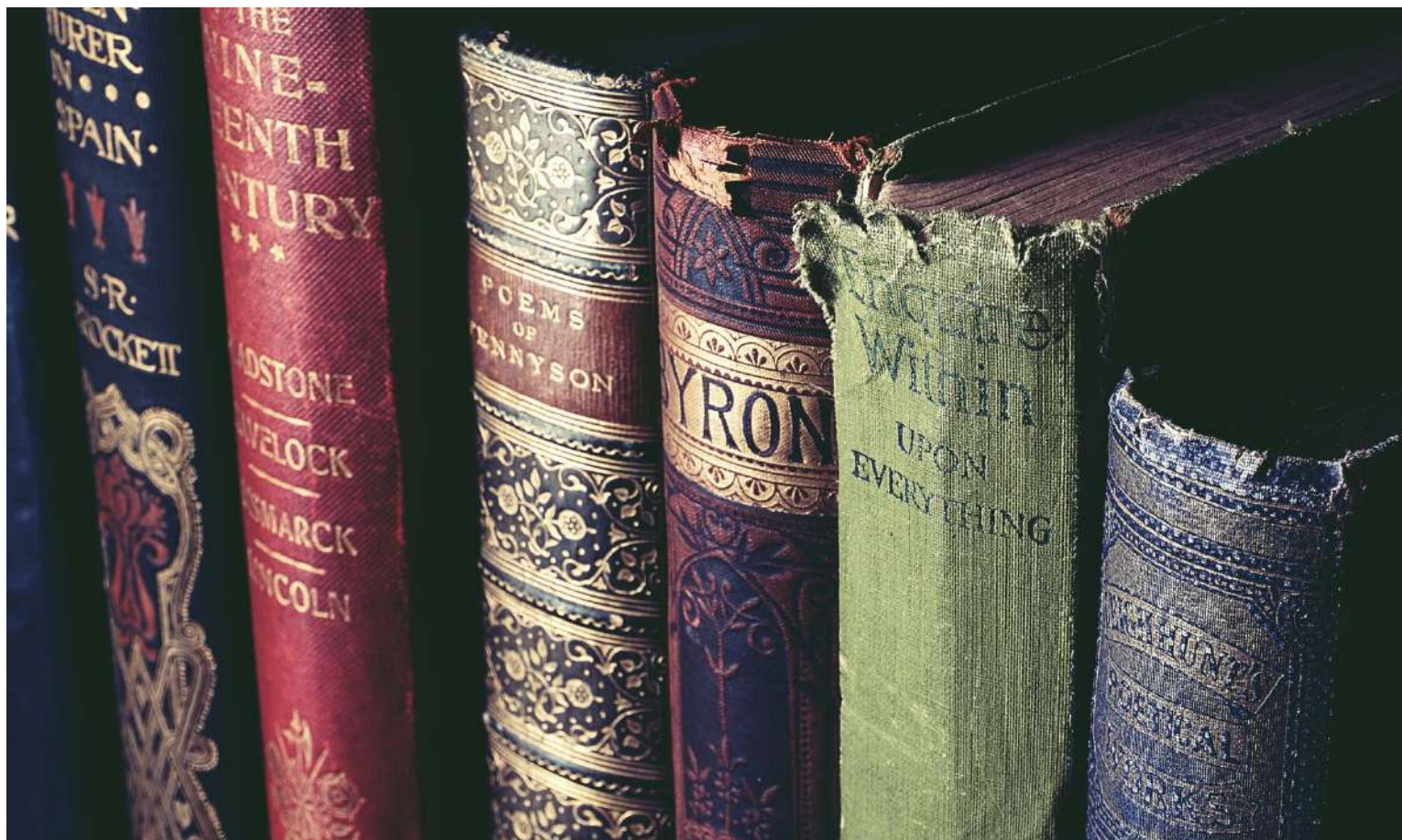


08 FIND EXAMPLES

Abstract concepts can be hard to understand. It tends to be far easier to form a mental image if you have a concrete example of something, Nebel says.

For instance, sour foods usually taste that way because they contain an acid. On its own, that concept might be hard to remember. But if you think about a lemon or vinegar, it's easier to understand and remember that acids and sour go together. And the examples might help you to identify other foods' taste as being due to acids.

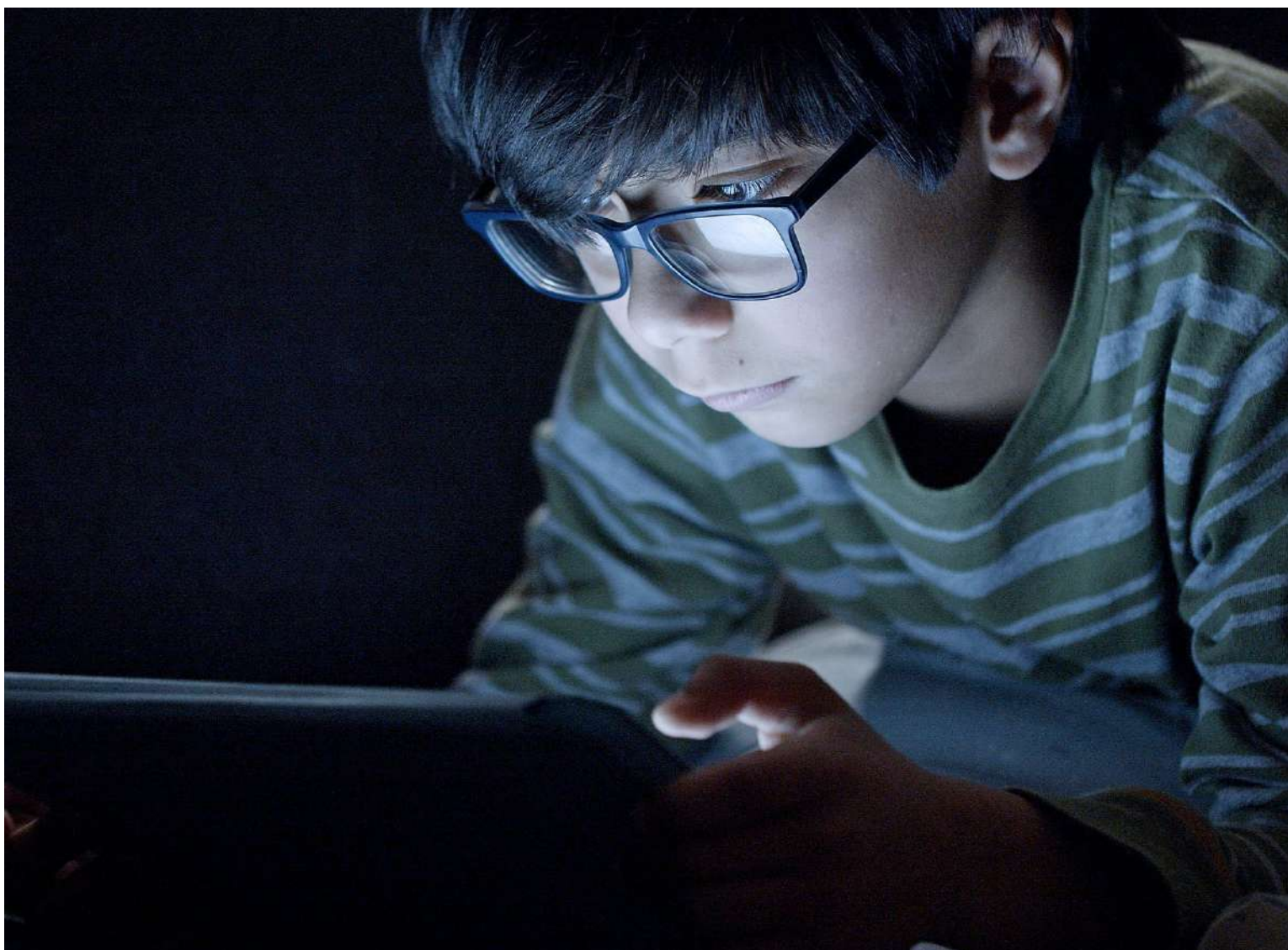
Indeed, it helps to have at least two examples if you want to apply information to new situations. Nebel and others reviewed studies on this in July 2019. Their *Journal of Food Science Education* report describes how students can improve their study skills.



09 DIG DEEPER

It's hard to remember a string of facts and figures if you don't push further. Ask why things are a certain way. How did they come about? Why do they matter? Psychologists call this elaboration. It's taking class material and "asking a lot of how and why questions about it," Nebel says. In other words, don't just accept facts at face value.

Elaboration helps you combine new information with other things you know. And it creates a bigger network in your brain of things that relate to one another, she says. That larger network makes it easier to learn and remember things.



Suppose you're asked to remember a string of facts about different men, says McDaniel. For example, "The hungry man got into the car. The strong man helped the woman. The brave man ran into the house." And so on. In one of his studies back in the '80s, college students had trouble remembering the bare statements. They did better when researchers gave them explanations for each man's action. And the students remembered a whole lot better when they had to answer questions about why each man did something.

"Good understanding produces really good memory," McDaniel says. "And that's key for a lot of students." If information just seems sort of random, ask more questions. Make sure you can explain the material. Better yet, he says, see if you can explain it to someone else. Some of his college students do this by calling home to explain what they're learning to their parents.



10 MAKE A PLAN — AND STICK TO IT

Many students know they should space out study periods, quiz themselves and practice other good skills. Yet many don't actually do those things. Often, they fail to plan ahead.

Back when Rawson was a student, she used a paper calendar for her planning. She wrote in the date for each exam. "And then for four or five other days," she recalls, "I wrote in time to study."

Try to stick to a routine, too. Have a set time and place where you do schoolwork and studying. It may seem odd at first. But, Kornell assures you, "by the time week two rolls around, it becomes a normal thing." And put your phone somewhere else while you work, adds Nebel.



Allow yourself short breaks. Set a timer for 25 minutes or so, suggests Sana. Study during that time, with no distractions. When the timer goes off, take a five or 10 minute break. Exercise. Check your phone. Maybe drink some water — whatever. Afterward, set the timer again.

“If you have a study plan, stick to it!” adds McDaniel. Recently, he and psychologist Gilles Einstein at Furman University in Greenville, S.C., looked at why students don’t use good study skills. Many students know what those skills are, they report. But often they don’t plan when they intend to put them in action. Even when students do make plans, something more enticing may come up. Studying has to become a priority, they say.



BE KIND TO YOURSELF

Try to stick to a regular routine. And get enough sleep — not just the night before the test but for weeks or months on end. “Those things are really, really important for learning,” Nebel says. Exercise helps as well, she says.

Don’t stress out if all of this seems like a lot, she adds. If a lot seems new, try adding just one new study skill each week or two. Or at least space out your study sessions and practice retrieval for the first few months. As you get more practice, you can add more skills. And if you need help, ask.

Finally, if you struggle to follow the advice above (such as you can’t keep track of time or find it very hard to just sit and focus on your work), you may have an undiagnosed condition, such as ADHD. To find out, check with your doctor. The good news: It may be treatable.

Doing schoolwork during a pandemic is a tough situation at best. But remember your teachers and classmates also face challenges. Like you, they have fears, concerns and questions. Be willing to cut them some slack. And be kind to yourself as well. After all, Kornell says, “we’re all in this together.”



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