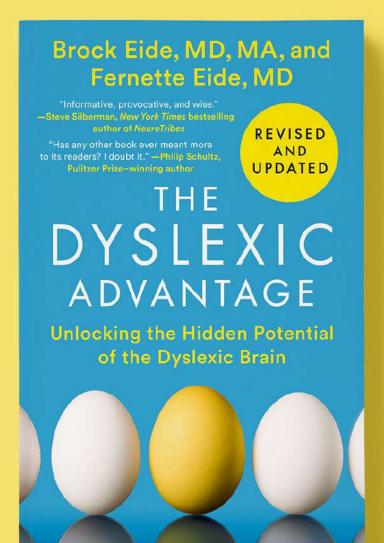
Dyslexic Advantage NEWSLETTER





Q & A with Dr Brock Elde

- ESPN'S STEPHEN A SMITH
- DYSLEXIA AND CHAT GPT
- VISUAL MATH & DYSLEXIA NEWS
- DYSGRAPHIA AND AI BATTLES



Multisensory solutions for reading.



















Dear Friends,

Thanks for joining us on this adventure! Our update is finally here!



Front Ends MD
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https://joom.ag/iD5d

The **NEUROLEARNING** Dyslexia Screening App is \$49.99 and available for children and adults 7-70 years old. iPad, iPhone, Android, and Kindle Fire.

The app may be used to identify and qualify for services such as Benetech's huge free library of e-books.

Thanks to Shelley Wear, Trish Seres, Michelle Wiliams, Cheryl Kahn, and Jack Martin. Thanks to Lady Grace Belarmino for design and layout and Andi and Freshea for their social media and admin help!

PREMIUM

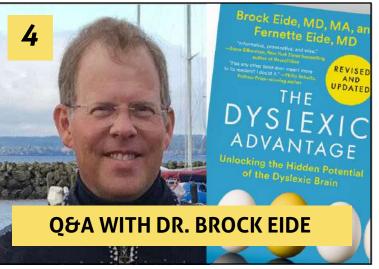
Editor's Note: to make our publications easier to read, we will avoid use of italics and certain types of fonts.

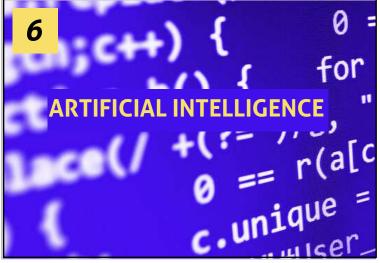
Newsletters can be read online **HERE**. This issue will be available on the Joomag site for 3 months and can also be downloaded as a pdf file.

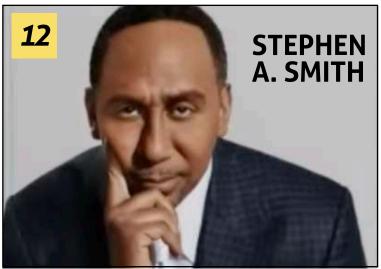


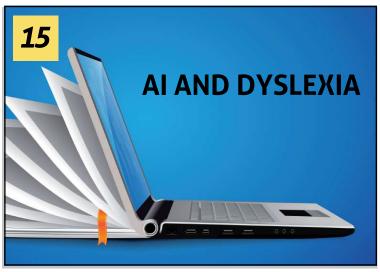
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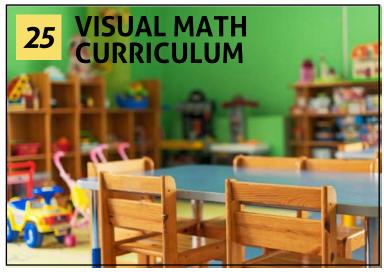
DYSLEXIC ADVANTAGE ISSUE 86 FEBRUARY 2023 NEWSLETTER













DYSLEXIC ADVANTAGE BOOK



Q & A with Dr Brock Eide

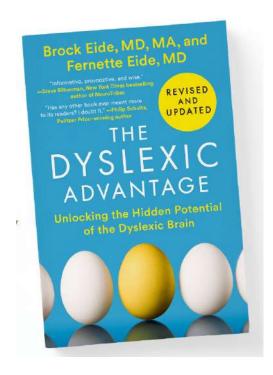
It's been 11 years since the first edition of The Dyslexic Advantage was published. Why is it time for a new edition?

Because there's simply so much more that we can now say about dyslexia-associated strengths and the brain systems that underlie them.

This information is extremely helpful not only in understanding how dyslexic brains work and develop, but also how to best support, nurture, and get the most out of them.

In the first edition, you said that dyslexic minds are different because they are optimized to excel at big picture thinking in areas like 3D spatial reasoning, making connections, reasoning using personal experiences and examples rather than generalizations, and making predictions. Do you still stand by those ideas?

We stand by those ideas 100%, and we explain even more clearly in this new edition the developmental processes that lead to these changes. One of the things we're most excited about is the enormous amount of new research that's been produced over the last 15 years suggesting that the MIND strengths, rather than being four completely distinct patterns, are all different expressions of a common underlying set of brain networks. By collaborating both together and with other brain centers, these brain networks create the different MIND strengths.



If they arise from common sources, what do the MIND strengths share in common?

Each of the MIND strengths appears to use the brain's episodic or personal memory network as the main source of information as they go about their work.

The MIND strengths also use a network in the brain called the Default Mode Network (DMN) that combines imagery centers, personal memory centers, and attentional centers to engage in many kinds of imaginative and complex problemsolving processes.

Thirdly, each MIND strength also employs a network (grid and place cell network) that creates mental models of different kinds of information, whether spatial, or conceptual, or temporal, or experiential. It's important to understand this because it has implications for education and how dyslexic people can excel in their careers.

Finally, all of the MIND strengths use these 3 networks to engage in processes of mental simulation, where they create mental stages on which they play out the various kinds of processes that are the subject of the different MIND strengths.

Will there enough new material to interest readers of the first edition?

Yes. This update includes more information about each MIND strength, eighteen new inspiring stories dyslexic people, conclusions from our research comparing 2000 dyslexic and non-dyslexic adults, and an in-depth interview with the coauthor of an exciting new theory about dyslexic specialization for exploration. Our update also has new chapters with information about dyslexic advantages and their implications for education, work, and self-understanding.

Look forward to seeing you at our online event! Learn more here.

ARTIFICIAL INTELLIGENCE

THE FIGHT WITH ROBOTS: AI WRITING (CHATGPT) CAUSING TROUBLE FOR DYSGRAPHIC STUDENTS

Currently the educational world is being rocked about advances in artificial intelligence technology that are upturning ways students are being assessed and demonstrating their knowledge.

The AI Writing programs are dazzling and while there can be upsides to having this technology for free at your fingertips, there are definite problems and the challenge for teachers and schools will be to adjust to this new AI-reality without hurting students in the process. To see ChatGPT in action, check out the video below our link to sign up for a free account.



To see an example of ChatGPT in action, look at what happens when I ask the program to write a paragraph about how AI can be used for cheating.

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ARTIFICIAL INTELLIGENCE



How can Al be used for cheating? Write a paragraph



Al can be used for cheating in a variety of ways. One way is by using Al-powered writing tools, such as language models like ChatGPT, to generate essays, papers, or other written assignments that can be passed off as original work. Additionally, Al-powered tools can be used to generate answers to test questions, such as multiple choice or true/false questions, allowing individuals to cheat on exams. Another way Al can be used for cheating is by using machine learning algorithms to analyze and identify patterns in large datasets, such as past exam papers, to predict answers to future exams. It's important to note that using Al for cheating is a form of academic dishonesty and is prohibited by most educational institutions. Additionally, it is unethical to misrepresent someone else's work as your own. It's important to use Al ethically and responsibly.

Not surprisingly, free technology like this has been spreading like wildfire among students. With slight differences in rewording and editing, it may be next to impossible for anyone to detect that free AI programs were used to write it.

The bad consequences surely include a fraudulent education and schools trapped into graduating students who may not have deserved it.

The backlash and policy changes are already underway.

From Stephen Marche's Atlantic Article, The College Essay is Dead:

"You can no longer give take-home exams/homework ... Even on specific questions that involve combining knowledge across domains, the OpenAI chat is frankly better than the average MBA at this point. It is frankly amazing." (Professor Kevin Bryan, University of Toronto)



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ARTIFICIAL INTELLIGENCE

The Washington Post responded with <u>Here's how teachers can foil ChatGPT:</u> <u>Handwritten essays</u> (can only be read if you have an account)

Unfortunately, that's like using an atom bomb to kill a mosquito.

From a cognitive perspective, writing is one of the hardest things we can do. A student answering a question will need to retrieve information from long-term memory, prioritize and organize ideas, translate feelings and images into words, remember spelling, grammar, and letter formation information, and put that down on a page...often under timed conditions. Working memory is needed to juggle all the parts.

Students with dyslexia, dyspraxia, ADD, or autism may struggle with handwriting automaticity making the whole process 10 or 100x times as hard. Anxiety over not being able to finish may also swamp the whole process (including working memory) so that nothing or very little gets translated onto the page.

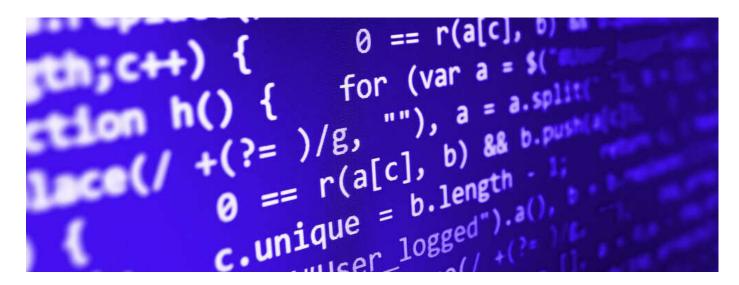
Many of these difficulties are not at this level of severity forever - but writing is almost always a late-blooming skill - and to demand what may be impossible will only further punish confidence and esteem to the point that even when these skills come online later, the psychic damage may already be done.

ALLOW TYPING OR DICTATION WITHOUT INTERNET ACCESS

The author of the Washington Post article actually suggested that typing in class without Internet access would be one solution to the AI dilemma, but the title of the article only mentioned handwritten essays.

Recently, we heard of a college student whose professor suddenly announced that all work had to be handwritten in class rather than any work being formed outside of class. He had significant dysgraphia and fortunately was able to advocate for his rights to be accommodated and he was able to change to a different course.

What of those who may be too embarrassed or encounter a less supportive student center? What about the more than 2/3's of students who are not formally identified? These students may withdraw from classes, degrees, and even careers.



OTHER CLASSROOM CHANGES THAT CAN AVOID SOME OF THE MOST OBVIOUS OPEN CHAT GPT CHEATS

Rather than assigning a topic based on a simple prompt that can be easily Chat GPT'ed, request further discussion based on points brought up by other students in class or specific aspects of your lessons. Ask for comments on certain slides, examples from the student's life or experience.

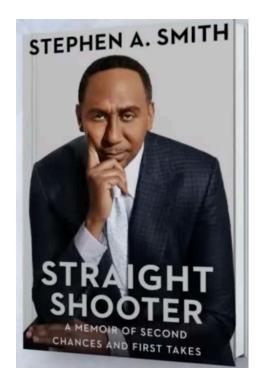
Longer step-by-step projects are activities that involve real world problem solving and activities (like interviewing primary sources) or creation of multimedia presentations. To eliminate longer projects all together is to miss out on some the best opportunities for deeper learning.

Finally, having students present or defend their paper or project in class may also be a way of that a paper or project is really theirs and not just pasted into a word document. Can they answer questions about it or defend the position?

A reality of today's academics is that many students consult non-academic sources for information whether it's Google or Siri or Wikipedia. Some of the information may be right and some may be wrong.

It can be a useful thing considering different opinions on a subject; students still need to learn how to go deep with material, taking time to analyze, synthesize, and defend what they believe. Requiring the physical process of handwriting under timed conditions satisfies none of these higher goals.

INSPIRATION



ESPN'S STEPHEN A. SMITH: NEW BOOK ABOUT HIS LIFE INCLUDING DYSLEXIA

"From the time I was six, I thought I was stupid. Although I talked well — and a lot — and articulated my thoughts fluidly enough that some folks swore one day I'd become a lawyer or a public speaker, it was all a facade. I couldn't comprehend what I was reading, a deficit that my oratory skills only served to hide.

It got worse each year, stunting my ability and willingness to grow intellectually. Before long, I was in the second grade but reading at a first-grade level. Then I was in the third grade — still at a first-grade reading level."

Stephen A. Smith, one of the country's most popular sports commentators at ESPN has a new autobiography called **Straight Shooter**. In the book, he talks about over hearing his father tell his mother that "This boy just ain't smart" led him to become extremely driven to become a sports journalist even though he was held back in the 3rd and 4th grades and his dyslexia was not recognized until middle school.

An excerpt from his book in the **Rolling Stone**:

"The fact is, the words my father had muttered about me did hurt like hell. They really did wound me deeply. Yet somehow I knew almost instinctively that blurting out those blunt, unthinking words was the best thing my father ever did for me. From the moment I heard him insult me, my determination kicked in."





INSPIRATION

Another great insight from the book excerpt is the conversation he overheard between his 7th grade social studies teacher and his mother (personal memory!):

"Sometimes he believes he's a dummy, because he never fails to acknowledge that he got held back twice in elementary school," Mr. Caravan went on. "It sticks with him. He never lets it go."

My mother nodded. I don't think she was sure where this was going.

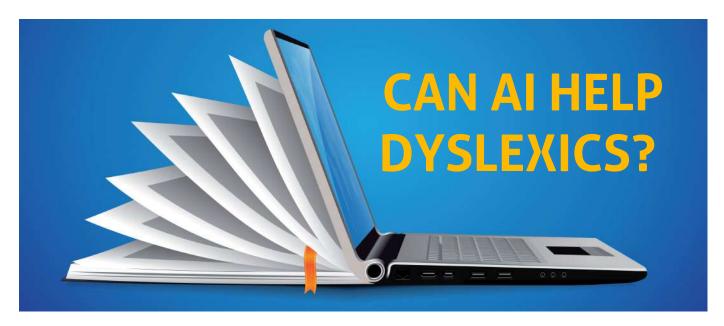
Neither was I.

"But here is what I've noticed about him," Mr. Caravan continued. "He gets extremely bored very easily. So, if there's something he is not interested in, he drifts. He pays little to no attention and misses things. But when he's interested in a subject, he's as sharp as they come. Find out what he's interested in and have him do that. You'll have a star on your hands...

When Mr. Caravan said those words to my mother — words so different from what my father had muttered just a few years earlier — they lit up all kinds of thoughts and dreams in my head. I suddenly fantasized about being a lawyer, a profession I knew about mostly through watching TV murder mysteries and dramas like Matlock and Perry Mason. I pondered becoming a politician, because I loved watching presidential debates. As a young teenager, I watched World News Tonight with Peter Jennings and Nightline with Ted Koppel. They defined credibility and substance, new concepts I'd learned about since my reading breakthrough, and traits I knew I would need if I was ever going to be taken seriously at whatever I chose to do."

What a great observation! We couldn't agree more that the most important goal for everyone in their early years of education should be to find out what they're interested in and give them time and experiences to develop it.

TECHNOLOGY



It's very clear that AI or Artificial Intelligence-informed software can be extremely useful in many ways for dyslexic students as well as adults. If you haven't tried any of these programs before, you're in for a surprise.

There are also downsides to the technology (see our previous article, [The Fight Against Robots) but AI is already embedded in many programs including Apple's Siri, Amazon's Alexa, and Google Assistant, and also programs like Grammarly and WordTune.

Many of the best text-to-speech programs are using Al.

So it's here and the applications are immense.

STUDENTS

A student in New Zealand recently <u>spoke</u> anonymously about their use of AI for written assignments in college. They rationalized that it was like writing with Grammarly, which in the paid version will offer up rephrasings of text which could be clearly. Wordtune does similar rewriting. The student interviewed for the article said that the software helped raise grades from C's to A minuses.

Because the technology is new, schools and teachers are still in the process of developing policies. Some school districts (like New York's) have banned access to ChatGPT.

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Offices in California:

San Francisco Bay Area 925-939-7500 Los Angeles Area 310-478-6505 www.summitcenter.us info@summitcenter.us



TECHNOLOGY

If all a student is doing for assignments is pasting in the prompt and copying it over to homework, attributing it to themselves, then this would seem like fraud or plagiarism and I'm sure it's not what most employers or parents would be looking for in a student's education.

Currently, a significant problem with AI technologies is that it has been stealing content (whether writing or art) without permission and then using computer algorithms to study patterns to make things that are new. But despite the evils that are clearly evident with this technology, it is also true that it could help those who otherwise could not even hope to write or draw something at the level that AI could produce.

WRITING STARTER

As with concept artists using AI art for ideas like a Pinterest idea board, writers can use ChatGPT as writing starters.

Many dyslexic writers do have difficulty with starting. When they talk over their ideas with a partner, whether it's a parent, tutor, or friend, it helps them organize what they want to say. In that sense, prompting AI with different responses could provide an all important start rather than staring at an empty page or screen for hours.

Chat GPT also gets around the problem of not having an example to write from. As valuable as it is for students to learn how to structure essays and arguments, teachers often don't give away examples and like the apps that solve math in step-by-step ways, the ChatGPT can also be helpful in teaching motivated students how to write.

AI WRITING MAY STIFLE THINKING, BUT...

Now experts who write for a living have bemoaned the fact that the software that helps with word prediction and more will stifle independent thinking and voice - and that certainly may be true. But it is also true that writing can be the ultimate gatekeeper for many professions and careers and if a person may be otherwise suited for a career - having help writing college-level papers may help them get their dream job that may not require writing at all.

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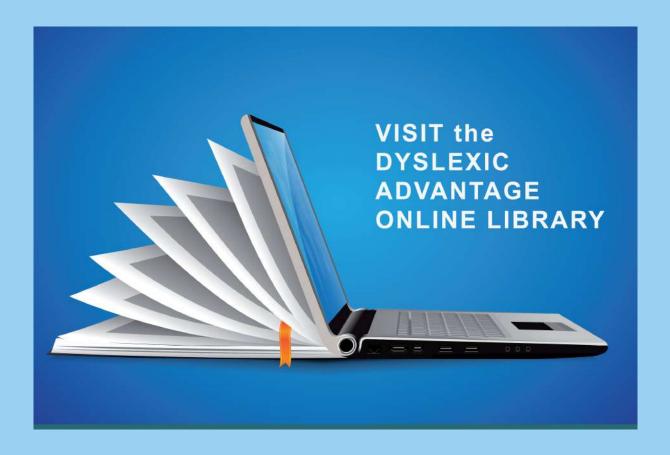
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TECHNOLOGY

Over the years, I've talked to so many accomplished dyslexic adults who told me that in their 20's they weren't able to write fluently. Some went on to become professional writers. People who loved words, loved telling stories, continued to hone writing skills their whole life long.

Some only got through by sending every paper through a roommate, parent, or writing center tutor, but they eventually got through and succeeded in whatever they wanted to do.

So, I guess, my hope is that AI technologies will ultimately have more upsides than downsides. Those who want to become professional writers will recognize what sounds like AI writing and what is better - just like good artists aren't usually fooled by robot-generated art.

DEATH TO THE DREAD OF OPEN-ENDED PROMPTS

There are many highly creative and knowledgeable people who are paralyzed by open-ended questions. They have so many ideas and knowledge at their disposal that they don't know where to begin (this is very common in gifted children for instance).

Well, with AI as a buddy, they may never really have to experience these deer-inthe-headlights moments anymore.

Here are some results when I asked ChatGPT to come up with three story ideas about how to improve dyslexia education. They aren't particularly earth-shatteringly creative, but if you really had trouble knowing where to start, it could help:

"1. A story about a dyslexic student who overcomes their learning challenges through the use of assistive technology, such as text-to-speech software or a specialized reading program. This story could highlight the importance of individualized education and the ways in which technology can help level the playing field for students with dyslexia.

TECHNOLOGY

A story about a school that implements a multisensory teaching approach for students with dyslexia. This approach incorporates visual, auditory, and kinesthetic elements into the curriculum, and has been shown to be effective in helping dyslexic students learn to read. The story could explore the successes and challenges of this approach, and the impact it has on the students, teachers, and school community.

A story about a dyslexic adult who, despite struggling with reading and writing in school, goes on to achieve success in their chosen career through the use of accommodations and support. This story could highlight the importance of perseverance and self-advocacy for individuals with dyslexia, and demonstrate that dyslexia does not have to be a barrier to achieving one's goals."

At <u>Education Week</u>, teachers discussed how they can manage the new reality of Al Chatbots. Again there were many bad suggestions for just increasing handwritten responses, but some of the positive suggestions included having students involved in generating writing prompts more than students.

"might we invite AI into our process as we draft? For example, once those students create a worthy question that their reading of Long Way Down provokes, might they write a 10-minute draft in a notebook. Next, they can submit their question to ChatGPT. Now, students have two drafted answers, one purely from their brains, one grammatically precise and AI-generated. Perhaps we will finally move more of our instructional time to that most important and most avoided stage of the writing process: revision."

Another interesting point, was the idea that having to contend with chatbots and AI may help redirect the emphasis on process (taking a draft, then revising it to get it closer to your ideas and voice) over end product.

OTHER PURPOSES FOR CHATGPT

Ryan Porter on Medium suggests using AI to book flights (incorporating data such as budget, length of stay, time), scheduling appointments or meetings, researching information including telling you things you don't need to buy anymore, translating, making book recommendations.



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National Center for Learning
Disabilities, the International
Dyslexia Association have
evaluated the Sonday System(r) and deemed that the
program contained the required elements for teaching
reading identified by the
Nation Reading Panel.

TECHNOLOGY

For dyslexic entrepreneurs, AI ChatGPT can be used in many ways - especially as writing can be so time-consuming. For example, from entrepreneur Isaac Sesi: generating content for your website, social media, and marketing materials (in one survey 40% of marketers said they were using AI for copywriting), answer customer questions, generate SEO friendly product descriptions, generating email responses, generating reports and summaries, generating social media posts, generating media notes, generating business plans, generating sales scripts, coming up with ideas.

Currently ChatGPT is in research phase so it is free to use now, but that is likely to change in the near future.

HOW CAN PARENTS AND TEACHERS USE AI?

Answer: If you are using technology, you probably already are using Al.

Al-voices power the most life-like voices for text-to-speech, whether it's Siri, Google Assistant, Cortana, or something else. Al also powers adaptive learning programs like <u>ALEKS</u> for math or <u>Grammarly.com</u> for writing. Most of the best math problem solving apps are all Al-powered.

As long as you remember that AI isn't necessarily truth - that it is a brainstorming tool just like a Google search or Wikipedia doesn't always provide correct answers.

One interesting function is that you can ask it how to explain something to a younger child, for instance. Here's what answer I received when I gave it the prompt, "How to explain dyslexia to a 10 year-old child":

"Dyslexia is a learning difference that makes it hard for some people to read and spell words. It's like a special way that the brain works, that makes it harder to learn certain things. Just like some people have different eye colors or hair colors, some people have different ways of learning. It's not bad, it's just different. And with the right help, people with dyslexia can learn to read and spell just as well as anyone else.

It's important to remember that people with dyslexia are just as smart as anyone else. They just learn differently. And with the right kind of help and support, they can do great things!"

Not bad, but I wish it would've also mentioned strengths associated with dyslexia.

If you are a parent or teacher worried that a student's paper wasn't actually written by your student, there is a tool that may be able to figure out if it was written by ChatGPT. It's called ChatGPT and the creator (a 22 year-old Princeton student) based it on an earlier version of ChatGPT. There is a free version called ChatGPTZero. If you can't get through, it's probably because it's super busy and he hasn't been able to scale up his program yet.

Obviously, this tool could be helpful for exposing completely AI-generated essays and papers, but it also hasn't yet been shown how good this tool may be. You can read more about this tool here.

Like many powerful technology tools, AI has tremendous potential to do good as well as to evil.

Get acquainted with these tools, but also if you choose to use them, use them with some critical thinking and skepticism as you should with any bit of information found on the Internet.

For dyslexia people with severe difficulties in writing, these tools can be a tremendous help. For children who are just learning how to write and organize their thoughts, ChatGPT and similar programs may help get the ideas flowing.



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Michelle Lucas, M.Ed., AT



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FREE VISUAL AND HANDS-ON MATH CURRICULUM: BRIDGES

Recently, I discovered a free visual and hands-on math curriculum from **The Math Learning Center,** a non-profit organization that grew out of a National Science Foundation project.

The curriculum is for Pre-K through 5th grade and it may be helpful as an addition to some students' math learning or possibly as a standalone.

What is helpful about the curriculum is that students are taught concepts several ways - for instance place value is taught with regrouping popsicle sticks (experiential / personal or episodic memory), while paper and pencil work reinforces math learning with visual examples, and then finally pencil and paper number work. The curriculum involves games and supports multiple ways of solving problems.



MATH

Here's an assistant superintendent providing an overview of the curriculum.



Many parents didn't learn math with hands-on activities such as this, so without a systematic approach, it might be hard to teach students who need this.

Look at their excellent variety of free math lessons and downloadables.

There are core curriculum activities like Learning to Think Mathematically (K-15), Math and the Mind's Eye (K-12), and Algebra Through Visual Patterns (5-12+).

For parents or math tutors who want to encourage math enrichment, there are a wide variety activities for K-5 students in their Math at Home series, too.



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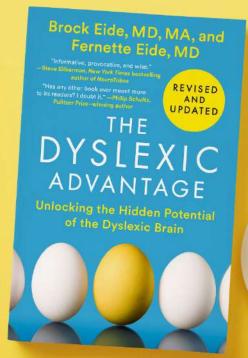


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It's Here!

"Simply put, the Eide's new edition is an improvement upon perfection. Think of it as a software update for the dyslexic operating system."

—Dean Bragonier, Founder and Executive Dyslexic, NoticeAbility





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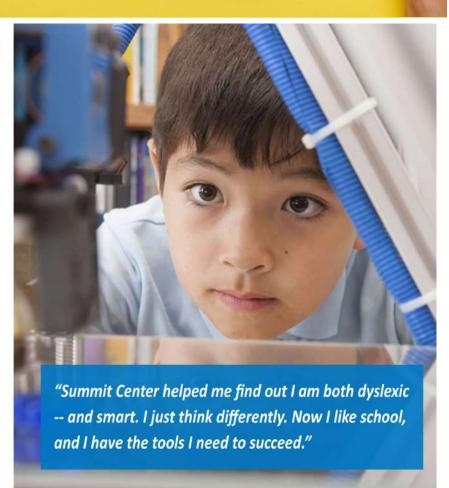
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DYSLEXIA NEWS



Art & Science - Digital Depiction of Dyslexia - Artist Rebecca Kamen

Penn Today



US Senator Bill Cassidy Focuses on Dyslexia
74 Million



Dyslexic Thinking and Sustainability
Forbes Magazine



BBC Apprentice Star Thomas Skinner Says Show Changed His Life Essex Live



Dyslexics Feel More (Research)

Arije-Aike de Haas on Youtube



Our Dyslexic Advantage Book Trailer

Youtube



"Artificial intelligence helped me overcome my dyslexia...
I only ever advocate for AI systems in the workplace if they have a human in the loop approach...many aspects of jobs are going to be assigned to machines, but they can never do everything that humans can..."

- Tabitha Goldstaub, co-founder Cognition-X, Chair,
Al Council, author, How to Talk to Robots,

co-founder,

Future Girl Corps