

Brains wired differently: Supporting the Complexities of Twice Exceptional Learners

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Neurodiversity
is Coming of
Age

E. ENVIRONMENTS FOR GROWTH

Based on the information already collected about this student, as well as personal observations, what environmental conditions will encourage and support successful learning and development in the following five areas?

1. Intellectual/Academic (*i.e., consider the pace of learning, as well as the level of novelty and content across all academic areas*):

Paula is a bright student with high verbal abilities who enjoys reading, oral storytelling and making her family laugh.

1. Provide a variety of intellectually and linguistically advanced reading sources on different subtopics for her to choose from.
2. Expose Paula to quality humorous products, e.g. skits, poems, improv, etc. to expand her repertoire of references.
3. Compact her curriculum ensuring that she isn't working on content she already knows.

2. Physical (*i.e., what options are available to regulate physical needs through movement, quiet spaces, bathroom breaks, lighting, etc.?*):

Paula loves to move and spend time outdoors. She is sensitive to noise and gets overwhelmed with noisy activity.

1. Include a quiet space and noise canceling headphones for Paula to work in class.
2. Include thinking time after prompts when facilitating discussions so students have time to think before it gets noisy and use sensory-friendly learning structures, such as "quiet" popcorn activities. These can include movement and fun!
3. Integrate movement into class activities and provide spaces where students can move while doing their work, e.g. walking lane.

3. Social *(i.e., what opportunities are offered in which to build respectful and supportive relationships?):*

Paula likes to help others, especially adults, and she struggles to connect to her peers, especially girls.

1. Find opportunities for Paula to help adults in meaningful ways in class and then build on that with small group work where she can use those same skills.
2. Do activities where Paula can work in small interest-based groups in order to create authentic opportunities for her to have meaningful connections with peers.
3. Find opportunities for Paula to showcase her talents and skills in class so that peers can see her “at her best” and value her for her contributions.

4. Emotional *(i.e., where and under what circumstances does this student feel psychologically safe and free of negative stress?):*

Paula can shut down or have difficulty initiating tasks when she is feeling overwhelmed, anxious or annoyed.

1. Find ways for Paula to integrate her interests and choose her projects. Allow her to choose how she shows her learning.
2. Be on the lookout for ways to give authentic positive feedback and reassurance. Help her see all that she does well!
3. Identify ways in which Paula can regulate when she feels anxious, e.g. taking a walk outdoors, changing environments, listening to music, mindfulness techniques that connect to nature.

5. Creative *(i.e., think of access to and availability of materials, assignments that encourage divergent thinking and brainstorming, sufficient time for exploration, etc.):*

Paula is incredibly creative and enjoys when she connects with others through her creativity.

1. Provide open ended learning opportunities for Paula to use her imagination and ability to explore.
2. Encourage Paula to create products to show her learning that use divergent thinking and her creativity.
3. Plan enrichment activities that she can get excited about trying out and observe when she sparkles.

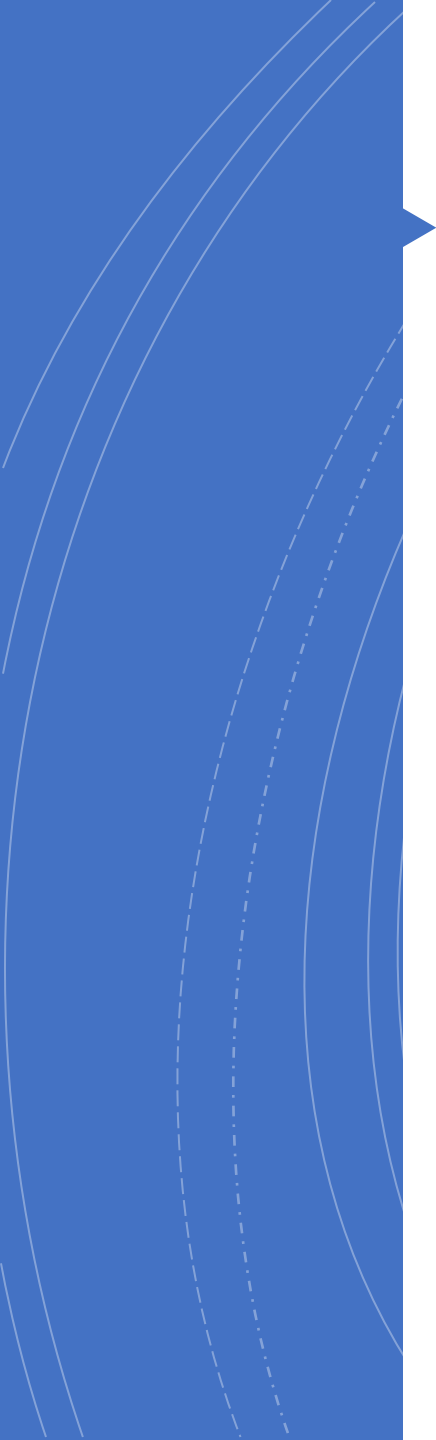
By Liz Attebery



Diane Swonk,
Founder of
Swonk
Economics



Elon Musk,
Autism
Spectrum
Disorder

- 
- **Growing up,** “the social cues were not intuitive,”
 - “I would just tend to take things very literally ... but then that turned out to be wrong — [people were not] simply saying exactly what they mean, there's all sorts of other things that are meant, and [it] took me a while to figure that out,” he recalled.
 - "To anyone who I've offended [with my Twitter posts], I just want to say I reinvented electric cars, and I'm sending people to Mars in a rocket ship. Did you think I was also going to be a chill, normal dude?"
 -



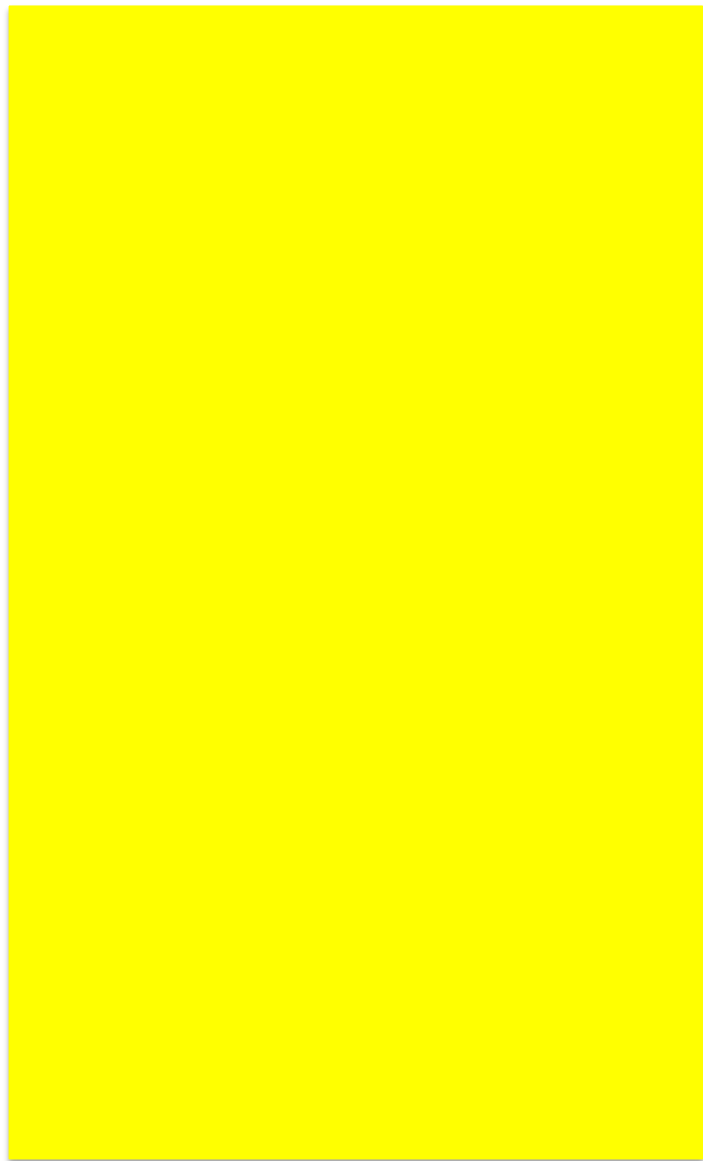
George
Cicci,

I would never amount to anything until I could “Sit down, shut up and being quiet”

My brain is wired differently----it needs stimulation and will create it

- **Race car brain and bicycle brakes**
- Learn to harness the energy– the world needs this brain.
- **Impulsivity, ingenuity, risk taking-**







With their notable abilities, gifts, and talents in certain areas, 2e students can also...

- become highly anxious
- use their creativity for survival
- have low academic self-efficacy (will say they feel like failures)
- feel negative about being different (avoid accommodations)
- experience depression

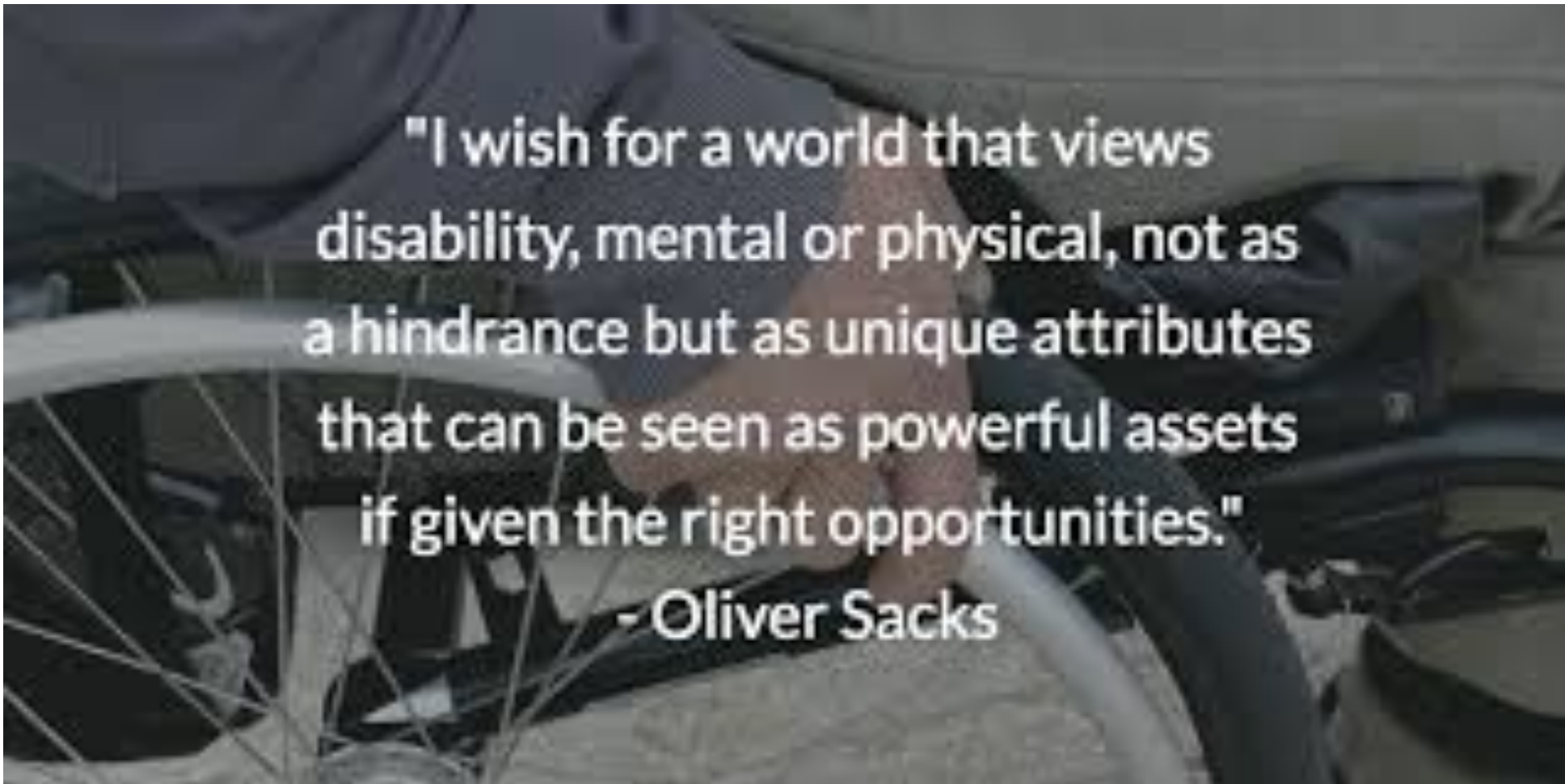


...It's not easy being green!



Treatment is not
just fixing what is
broken; it is
nurturing what is
best.

(Seligman & Csikszentmihalyi, 2000)

A grayscale photograph of a person sitting in a wheelchair. The person's hands are resting on the wheelchair's frame. The image is dimly lit and serves as a background for a quote.

"I wish for a world that views disability, mental or physical, not as a hindrance but as unique attributes that can be seen as powerful assets if given the right opportunities."

- Oliver Sacks



Dyslexic Wiring



Challenges:

Trouble decoding written language

Poor spelling and handwriting

Difficulty with rote memorization of facts and remembering details

Strengths:

Can be metaphorical thinkers. Because they make connections between and among disciplines, they can see things that others miss.

Seeing 3-D spatial perspectives is easy for them. For example, they may think like architects, engineers, or builders.

Excellent at narrative reasoning—recalling stories, episodes, and concepts. They profit from experiential learning.

What did you observe?

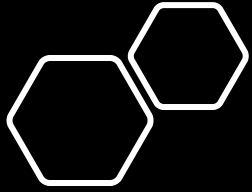
What should there be more of in the classroom

- Visual access to content
- Arts integration
- Creative thinking
- Big ideas

What should be less of in the classroom?

- Reading
- Writing
- Memorization of facts

[How dyslexics learn](#)

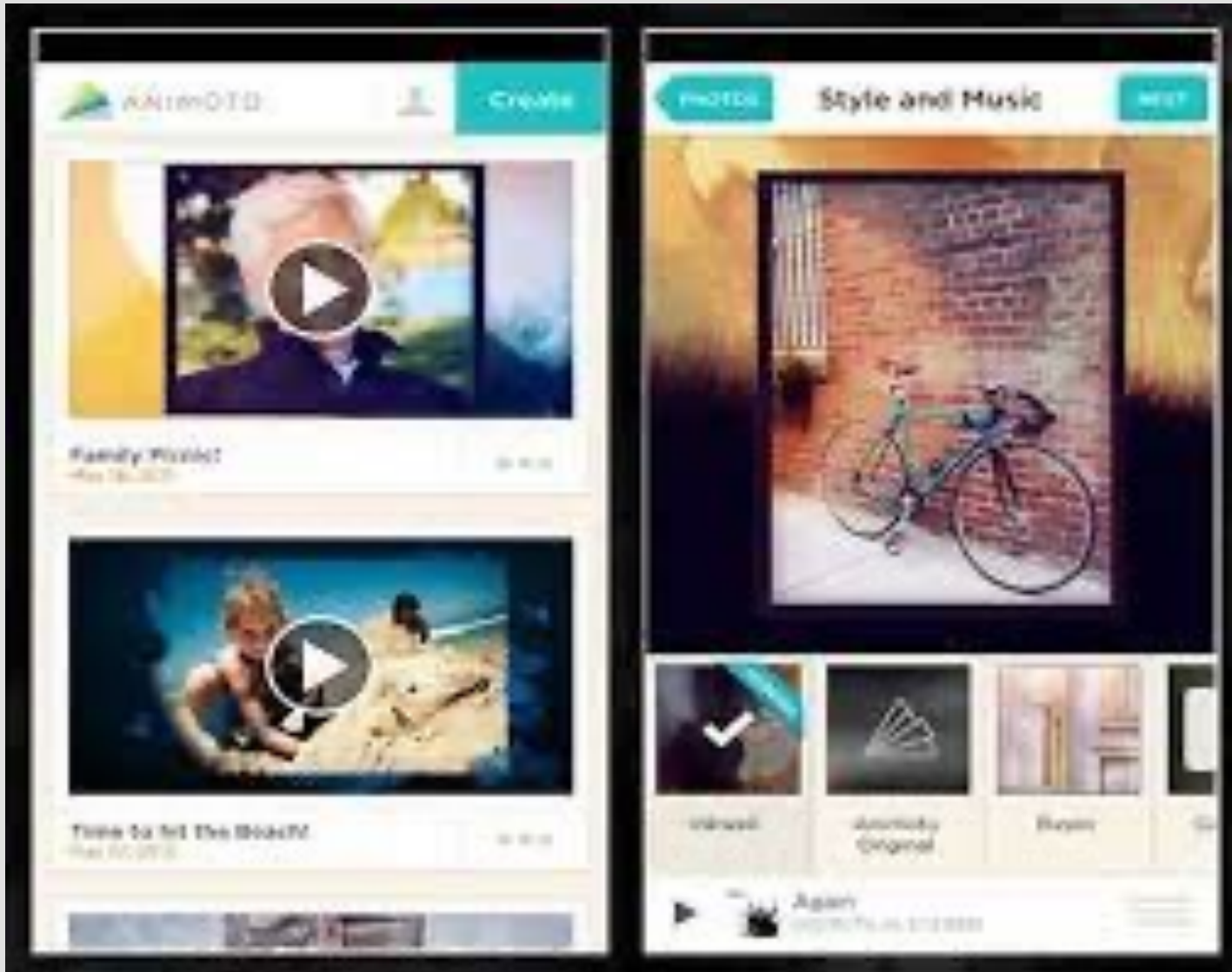


Graphic novels



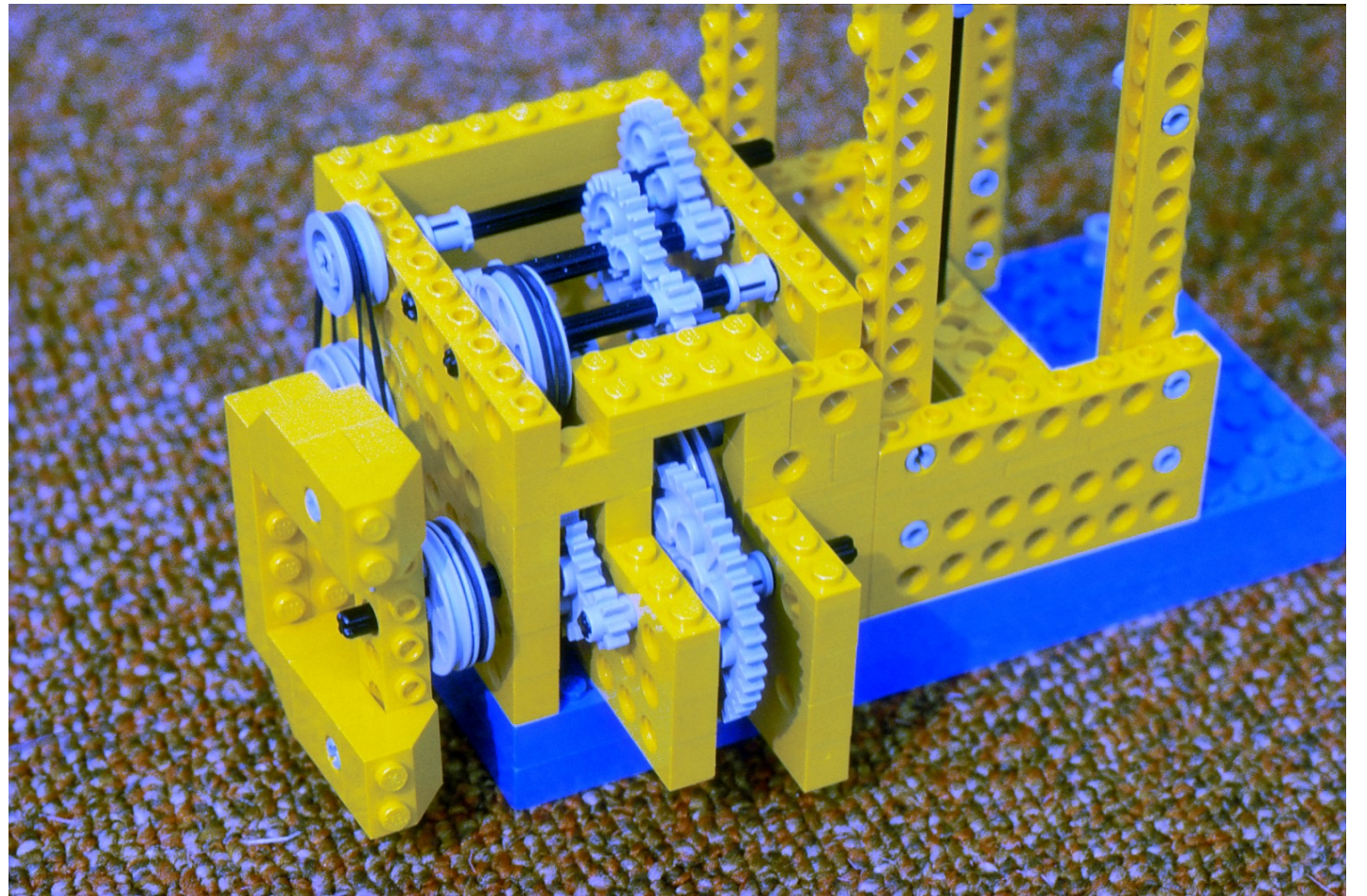
Audio books





Animoto and other video making apps







Cartoons as metaphors for elements
in the periodic table

Is dyslexia a disability or a gift?

Dyslexia is an ability within the sensory mechanism of the nervous system to perceive the world with a multidimensional view. When properly trained and informed, a dyslexic can use their natural abilities to shift perceptions, enhance creativity, refine thinking, and improve physical performance.



ADHD Wiring



Challenges:

Easily distracted,
selectively attentive,
difficulty completing tasks

Hyperactive,
needs stimulation
and movement

Impulsive
and disorganized

Strengths:

Often creative,
intuitive thinkers with
a flair for innovation and
out-of-the-box thinking

Can have high energy
and enthusiasm

May be risk takers,
adventurous spirits,
seek novelty, and
show curiosity

What did you observe?

What should there be more of in the classroom

- Movement
- Performing arts
- Creative thinking
- Novelty and choice
- Project based learning

What should be less of in the classroom?

- Sitting
- Writing
- Repitition

- Research says that sitting and listening and paying attention is developmental.
- The amount of minutes is related to age up to 15.
- 10 minutes and attention starts to drift if information is boring monotonous
- Digital kids listen faster
- 2E students especially those with ADHD think better when moving



u16490945 fotosearch.com





March

1	2	3	4	5	6	7	8	9	10	11	12	13					
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Small Groups

Group 1	Group 2	Group 3	Group 4

21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Ss Tt Uu Vv

Yesterday was...	Today is...	Tomorrow will be...				
7	8	9	10	11	12	13

5 76 77 78 79 80
85
95 9
105 10
115 11

+ scratched his head
+ dance
+ jumping up and down
+ bounced like a kangaroo
- scratched his armpit
+ woo ha ha ha woo ha
+ laugh - some + sharp teeth
necklace
- funny
- silly
+ mean - sometimes he looked
hurt us angry
+ scratch us

At school today we saw
a ~~dancing~~^{dangy} monkey. Sometimes

he looked mean. We were
afraid that he might hurt
us and scratch us. But when

he was jumping up and down
like a silly kangaroo, he

he was jumping up and down
like a silly kangaroo, he
made us laugh. But then
he made this strange
noise, woo ha ha ha woo ha
and scratched his head. He
looked like he was thinking.
He was thinking he would have
us for supper! Beware of his sharp teeth.

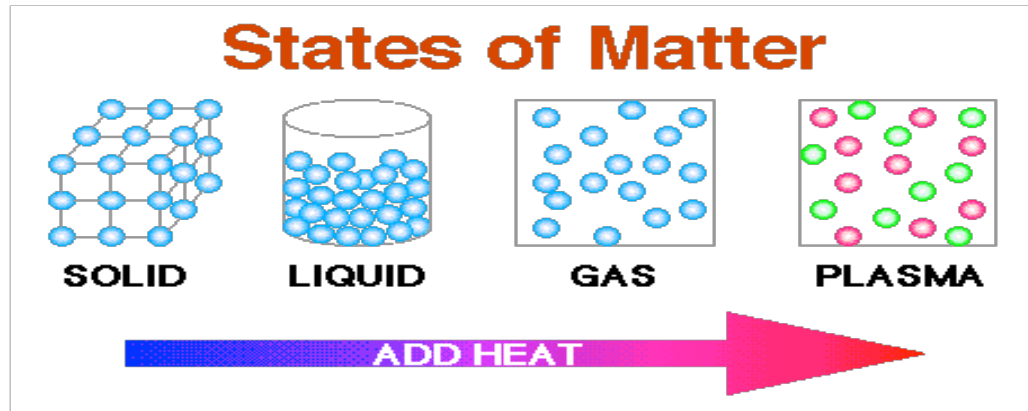
So if you see this monkey
monster, run for your life!

- Then, you face the wrath of the Lizarii.'
- The creature dropped its cloak, revealing its scaly body. It stood to its full height, slightly taller than a grown man. Its blue-green skin and yellow abdomen reflected the sunlight, but people didn't tend to notice this. They looked at either its long claws or its head, which was elongated and the long mouth had dozens of sharp teeth protruding from it.

- Threddy, April, 2008

Provide opportunities for movement within curriculum

$$\text{Distance} = \text{rate} \times \text{time}$$



Opposite Board





SPEED
LIMIT
20



Moving to think— -Thinking lane in or outside

Synecotics:
Making the
Strange
Familiar and
the Familiar
strange

one of the pictures below to fill in the first blank. Use the second blank to explain
the picture.

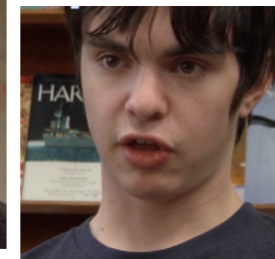
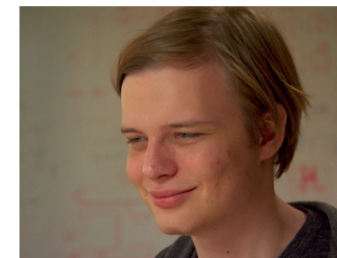
native assessment is like _____ because _____



- 
- Simply put, ADHD can be best understood as a brain with a very low boredom threshold. People who have it chafe against the mundane and routine, and yet they excel in chaotic situations.
 - (Archer, 2015, p. xv1).
- 



ASD Wiring



Challenges:

Inability to grasp the big picture or read between the lines

Social awkwardness, a lack of social skills and social awareness

A need for predictability. Often overwhelmed by exposure to sensory stimuli

Strengths:

Can be knowledgeable, skilled, and passionate in a particular area and highly motivated to pursue that area

Has the ability to focus intently on details of things and situations

Tends to be logical (very helpful in decision-making where emotions may interfere). Sees the world in black and white and communicates with total honesty

What did you observe?

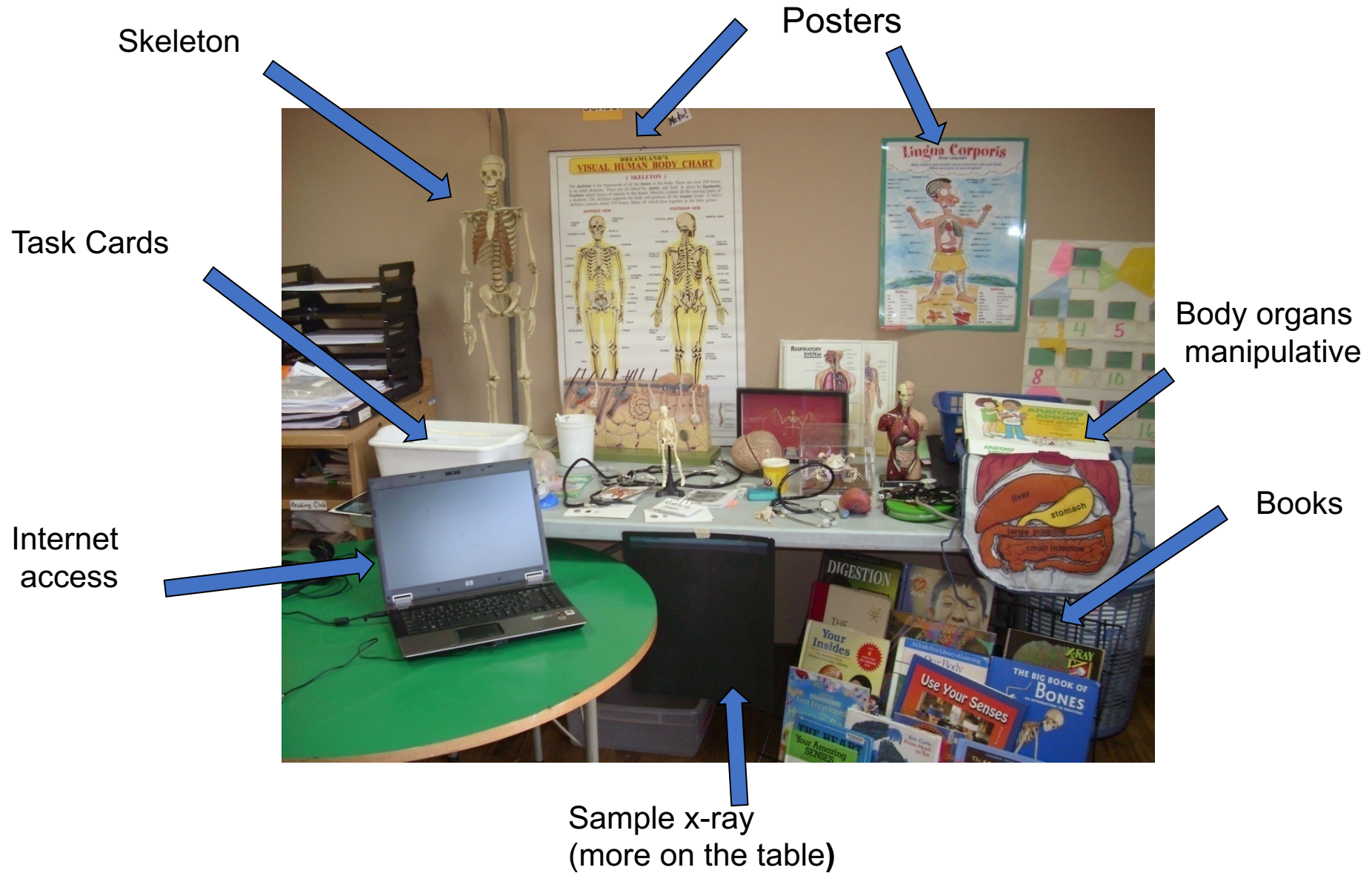
What should there be more of in the classroom

- Quiet zones
- Headsets
- Asking the student to develop fact sheet for information and facts
- Time to pursue topics in depth
- Interest peers or pair share

What should be less of in the classroom?

- Forced group work
- Open-ended assignments

The Interest Center



Animal skeletons

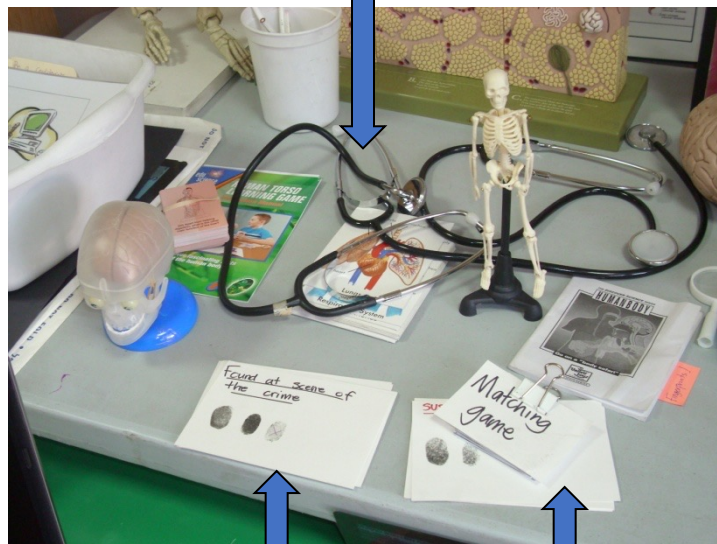
Art and writing supplies



Manipulative model

Stop watches, measuring tape

Stethoscopes



Fingerprints game

Matching game

Task cards



Model of skin

Model of brain

Resources

- Various books – non-fiction and fiction, interactive
- Magazines, journals, some to be cut up
- Human skeleton model
- Stethoscope
- Charts, posters , diagrams of body organs
- Measuring tape, timer
- X-rays of bones
- Writing and art supplies, stamp pads, fasteners, glue, chalk, poster board, construction paper, butcher paper etc.
- Computer with internet access
- Hand lens
- Model of human skin

Task Card

Be a Cardiologist!



A cardiologist is a heart doctor. A cardiologist uses a stethoscope to listen the hearts of patients. A stethoscope allows the cardiologist to listen to the heart very clearly.

The challenge:

Find out what kinds of activities make your heart beat fast or slow.

Find the stethoscope and the timer at the center. Use the timer to do one of the activities on the data sheet for 3 minutes. Then listen to your heart for 1 minute and record how many times your heart beats. Do 4 more activities and record the number of times you heart beats in a minute right after the activity.

Use the data sheet to make a graph showing which activities make your heart beat faster and which activities don't and compare the results of the activitie

Why do you think you had those results?



Task Card data sheet

Pick from the following activities to do for 3 minutes

Reading quietly hopping on one foot running as fast as you can
Taking to a friend singing lying down
Running in place walking around marching

Activity	Heartbeat after activity

Task Card



The Hip Bone's Connected to the...

Look at the video at this link

<http://www.youtube.com/watch?v=x2ABc5LINCY> Hanna Montana sang a song to remember the names of the bones in the body. The Hanna Montana song is accurate.

The challenge:

Make another version of the first song, or learn the song as it is.

Find materials that tell you the names of the bones in the human body. Using the information from the books and the chart, write your own song that tells the names of the bones.

OR write down the words to the song, and learn it.

Maybe you can even come up with a dance to go with the song that you can perform!

Task Card

Life Size Art!



Throughout the past and the present artist have made many kinds of models of the human body. Sometimes they used clay, sometimes they paint or draw, or sometimes they use other materials like crumpled paper or string.

The challenge:

You will make a life size 3 dimensional model of the human body

Find the white butcher paper as the center. Have a friend lay down on the sheet and trace the outline of their body. Be accurate.

Next use a book or a diagram that shows the different organs in the body. Make a life size model of the human body. using the art supplies at the center and using the books and charts as a reference.

Use the other art supplies to make your model as real looking as possible.

“There needs to be a lot more emphasis on what a child can do instead of what they cannot do.”

Temple
Grandin





Talent
development –it's
not an option, it is
a necessity



Enrichment Clusters: Culinary Critics

A group of children are engaged in a project involving cardboard boxes. In the background, a library with bookshelves is visible. In the foreground, children are working with stacks of cardboard boxes, some of which are filled with sand. A large, dark, abstract graphic element is overlaid on the right side of the image.

Intersession, Talent
group projects
The Egyptian Museum

MATHEMATICIANS AND
BUILDERS AT WORK



Scientists



Artists



Young Expert Program

- Interest Exploration Badge
- Game Design
- Vector math and Math for 3D Environments (in progress)
- Game Marketing & Focus Groups (in progress)

- Professional Development Badge (professional-level skill)
- Game Development with Unity
- Programming with C#
- Debugging and Troubleshooting
- 3D Vector Operations



JamFest IV
made possible by
THE AL SHERMAN FOUNDATION 2010

March 14th
THE ROXY THEATER
9009 Sunset Blvd
2:00 - 5:00 PM

FEATURING BANDS FROM:
BRIDGES ACADEMY NEW COMMUNITY JEWISH HS



BRIDGES WINTER
COFFEE HOUSE

MONDAY, DEC. 5TH, 7 - 9.30 PM
[doors open at 5.30pm]

THE FEDERAL BAR
5303 Lankershim Blvd
North Hollywood, CA 91601

FEATURING
THE ROCK BAND
BLUES EXPLOSION
SHREDDERS
ELECTRIC POP ORCHESTRA
+ Guitar Workshop
+ The Shaunt Avakian Trio

Music Program



- ROBOTICS FIRST COMPETITION



“I discovered that being a little bit different actually sets you aside in show business; it makes you special. You always try to turn your negative into a positive.”

I had wonderful teachers. I would not be in show business without them. I remember Mrs. Hawke, my English teacher, who said to me, 'You know, you're always telling jokes in the hall, why don't you write some of those stories down and maybe you can tell them to the class?' It would have never occurred to me to do that, because that just seemed like homework. And for the first time in my life, homework was actually enjoyable. I'd write something down, and then cross it out, saying now that doesn't sound right, and then write it again. And then she'd have me stand up in front of the class and have me read these stories and I realize now that they weren't very good, but at the time I got a few laughs and she said, 'Maybe you could be a comedy writer or something like that.' It was an eye-opener. It was something I've always been grateful for."

- And hang in there he did, shaping his career according to his strengths. “I realized that I was not going to be an accountant or a banker, and so what am I good at? Well, I’m pretty good at talking and telling silly stories. I had always assumed I’d go into sales like my dad because you have to do things to amuse customers, but I took it to the extreme. But that’s what it is: you find out what your strengths are and what your weaknesses are and you play to your strengths.”

Because not all great
minds think alike

Programs

- Certificate in Twice-Exceptional (2e) Education
- Master of Education (M.Ed.) in Cognitive Diversity
- Doctor of Education (Ed.D.) in Cognitive Diversity



2e News and Variations <https://www.2enews.com/>

2e News

TEACHING & LEARNING

HEALTH & WELLNESS

CHILD DEVELOPMENT

HOME & FAMILY

CONTACT & POLICY

EDUC

EDUCATION

BOOK REVIEWS

MAGAZINE

DE NEWSLETTER ARCHIVES

SUBSCRIPTIONS



Full Text

How to Educate For 2e Kids in Public Schools

As people notice the reality more with just the students with multiple exceptionalities, it becomes increasingly important for everyone to advocate.

Read More

