I Notice, I Wonder, I Think: Analyzing Interior Spaces to Support Neurodiversity

Katherine Wiley, RID, IIDA
Brenda Swirczynski, MSc, ALEP
Pfluger Architects

Never Settle

Create exceptional solutions
Learn more
Give more than expected
Be consumed by curiosity and imagination

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Cultivating Empathy

Open Mind with Dr. Monica [@openmindwithdrmonica]. (n.d.). Posts. Instagram. Retrieved September 9, 2025, from https://www.instagram.com/openmindwithdrmonica/

RECOGNIZE Empower attendees to recognize interior design features, including color, materiality, acoustics, and lighting, that significantly impact neurodivergent learners.

EXAMINE Strengthen participants' ability to assess how design choices can influence the cognitive and aspects of learning for neurodivergent individuals.

APPLY Utilize a provided framework to evaluate existing school spaces and determine their effectiveness in supporting neurodiversity.

RECOMMEND Develop actionable recommendations to modify or design spaces that better meet the needs of neurodivergent students, and ultimately, all learners.

OBJECTIVES

FRAMEWORK	Design basics for neurodivergent learners In relation to Color, Material, Light, and Sound
GUIDE	Lots of ways to get it ‘right’
THINKING STRATEGIES	I Notice…I Wonder…I Think…
GRADUAL RELEASE	I Do, We Do, You Do

MODES

UNIVERSAL DESIGN

Universal design is design that is usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

NEURODIVERSITY

The concept that neurological difference (often referred to as neurotypes) such as Autism, ADHD, Dyslexia, and others, are natural variations of the human brain.

NEURODIVERGENT

Individuals whose neurological development and functioning differ from what is considered typical or neurotypical.

BRAIN HEALTH

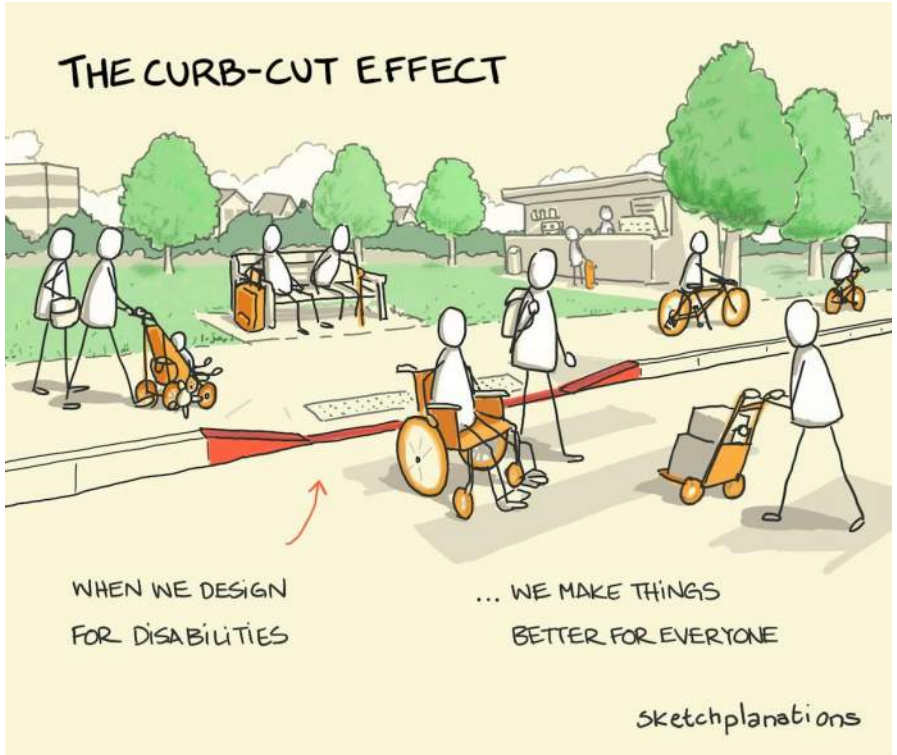
Harnessing brain skills to thrive in your context; continual promotion of optimal brain development, cognitive health, emotional wellbeing, connectedness to people and purpose, regardless of where you land on the spectrum.

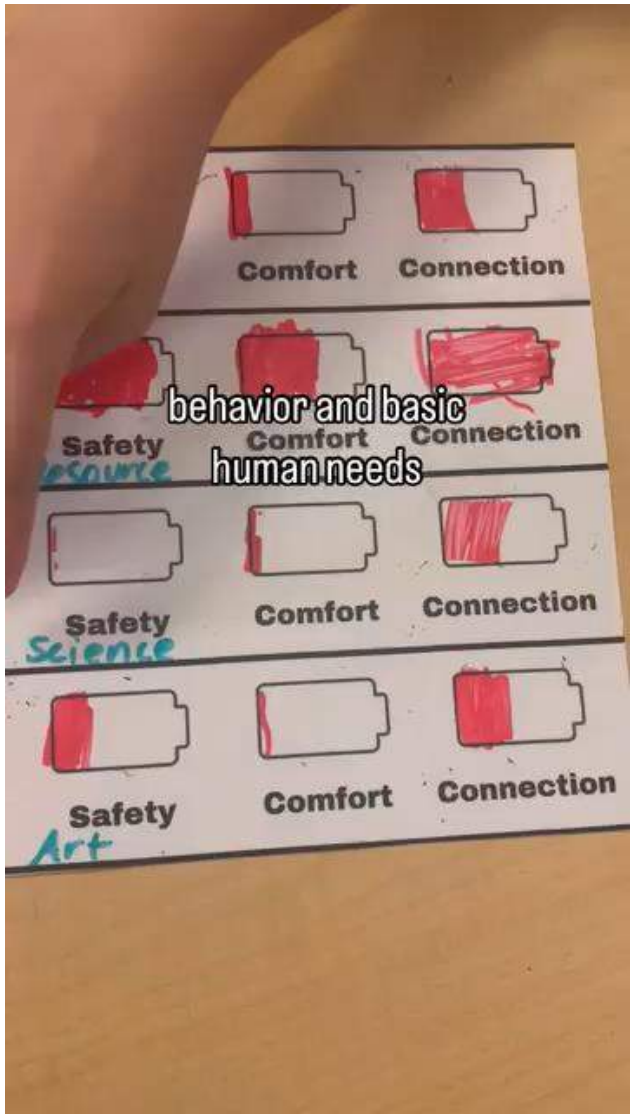
NEUROINCLUSION

Promoting awareness and undestanding of neurodiversity difference amongst students (and teachers) changing perceptions and providing accommodations and support

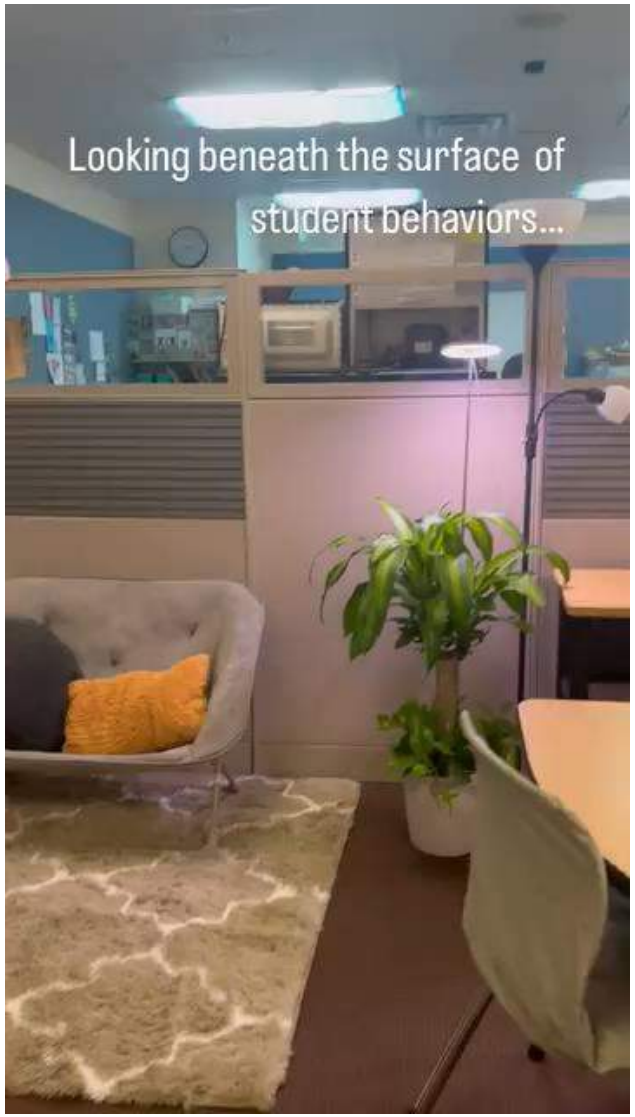
DEFINITIONS

EXCELLENT DESIGN IS INHERENTLY *INCLUSIVE*.





Cognitive Challenges



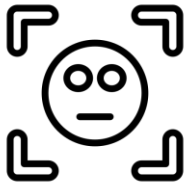
Recognizing Different Needs

“A Calm Brain is a Thinking Brain” – Dr. Kathryn Murray

Open Mind with Dr. Monica [@openmindwithdrmonica]. (n.d.). Posts. Instagram. Retrieved September 9, 2025, from https://www.instagram.com/openmindwithdrmonica/

Sensory Sensitivities and Overstimulation

Visual Processing Differences



Attention and Cognitive Regulation

Need for Predictability and Structure

Social and Behavioral Impacts

1 in 31 Kids are diagnosed with ASD+
Up from 1 in 150 in 2000, and 1 in 36 in 2020

6 in 10 children have ADHD+

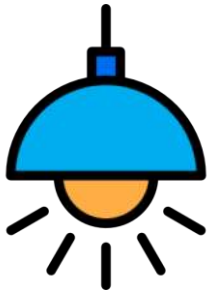
+ In many instances these can be co-occurring Autism, ADHD, and Anxiety Disorders , According to CDC

UNIQUE CHALLENGES

COLOR – use of hues in a space

MATERIALITY – choice of surfaces and finishes

ACOUSTICS – sound control within a space

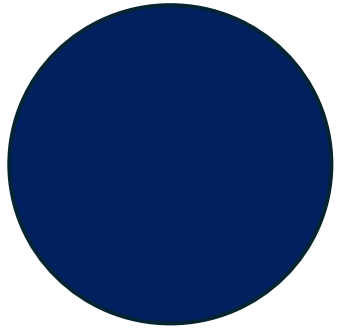


LIGHTING – Illumination of an environment

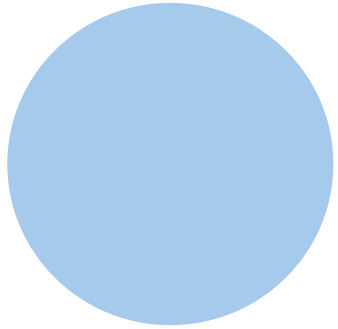
DESIGN ELEMENTS

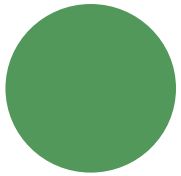
The overuse of strong colors can cause overstimulation

Research shows that students with ADHD may have distorted color perception along the blue-yellow spectrum



Where Autistic students can often perceive colors more intensely, with neutral/pastel shades being calming while bold or high contrast colors can be overwhelming.





Fun fact – what is the most pleasing color to paint a room?
Neuroscience says Green!

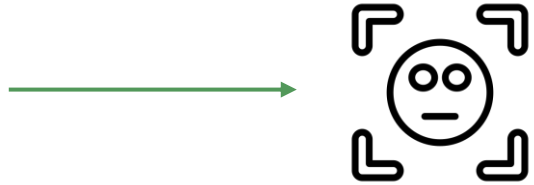
DESIGN ELEMENTS

Calming Zones for Learning

Flourishing Spaces for Collaboration

DESIGN ELEMENTS

Visual stimulation from high-contrast patterns or glossy finishes can cause distraction, agitation or difficulty sustaining focus.



High contrast patterns in flooring or walls

Abrupt material transitions

Cluttered multi-textured walls

DESIGN ELEMENTS

When auditory environments are uncontrolled, students show heightened aggression, irritability, or withdrawal.

ASD children often experience sensory processing disorder, making them hypersensitive to background noise.

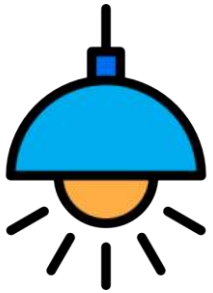
ADHD Learners already struggle with filtering distractions, poor acoustics make it even harder to distinguish speech from noise, reducing comprehension and task performance.

Studies show that restorative, quieter environments improve memory, comprehension, and improved outcomes for both ASD and ADHD individuals.

DESIGN ELEMENTS

Diversity of spaces within a space

Include areas of refuge



Adjustable, controllable lighting gives students and teachers a tool to match the environment to their needs

Colored lighting has been shown to improve reading accuracy and reduce headaches in students with visual stress

Bright, harsh light leads to overstimulation with ASD learners

ADHD learners may experience improved attention when lighting is adjusted to match circadian rhythm and task demands.

DESIGN ELEMENTS

recognize

Empower attendees to recognize interior design features, including color, materiality, acoustics, and lighting, that significantly impact neurodivergent learners.

examine

Strengthen participants' ability to assess how design choices can influence the cognitive and sensory aspects of learning for neurodivergent individuals.

apply

Utilize a provided framework to evaluate existing school spaces and determine their effectiveness in supporting neurodiversity.

recommend

Develop actionable recommendations to modify or design spaces that better meet the needs of neurodivergent students, and ultimately, all learners.

OBJECTIVES

COLOR & MATERIALITY

I DO

I Notice: facts
I Wonder: questions
I Think: inference

LIGHTING

WE DO

I Notice: facts
I Wonder: questions
I Think: inference

SOUND

YOU DO

I Notice: facts
I Wonder: questions
I Think: inference

YOU DO

I Notice: facts
I Wonder: questions
I Think: inference

Interior Design is not only *Cosmetic* — it's *Cognitive*. Thoughtful interiors can reduce sensory overload, support focus, and empower every learner to thrive.

- What are some small changes you can make in your space to reduce where overstimulation happens?
- With every project ask, How will this choice affect a neurodiverse student? Push for sensory-sensitive solutions.
- Invest in acoustics, lighting and materiality that supports learning outcomes.

References & Resources

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Tanner, C. K. (2000). The power of predictability: Examining the impact of structured routines on student learning and behavior. *Journal of Educational Research, 94*(2), 106–113. https://doi.org/10.1080/00220670109596579

These books explore sensory processing, brain imaging, and practical strategies for supporting neurodiverse individuals:

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Grandin, T. (1995). *Thinking in pictures: And other reports from my life with autism*. Vintage Books.

https://soelbergi.com/project/usdb/ - images of the textures in a school for the blind