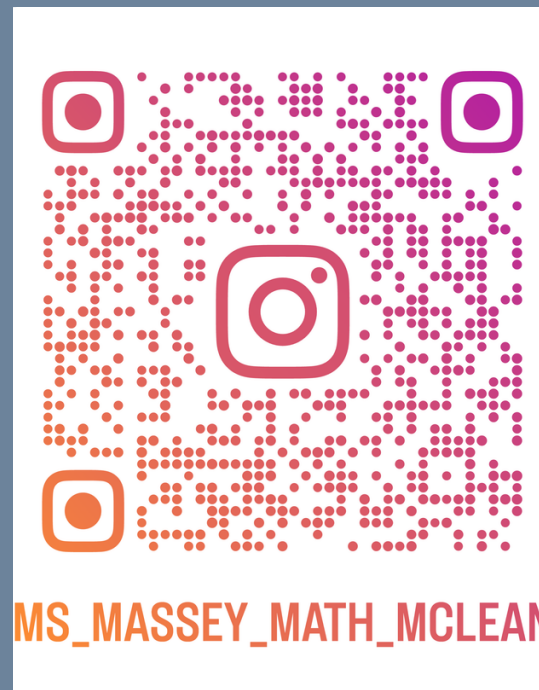


BTC & LEARNING DIFFERENCES: GOES TOGETHER LIKE PB&J

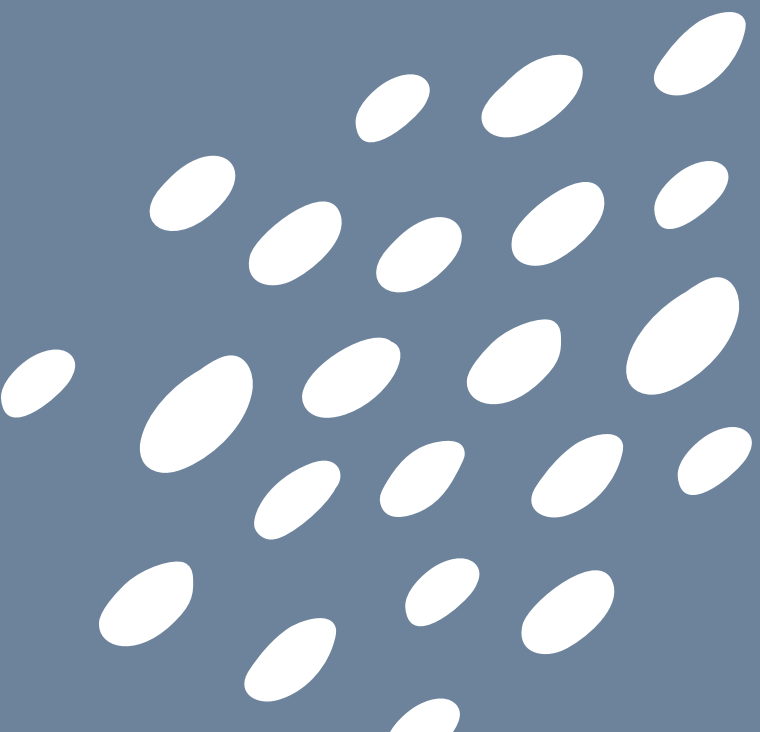


Jennifer Massey
June 20256



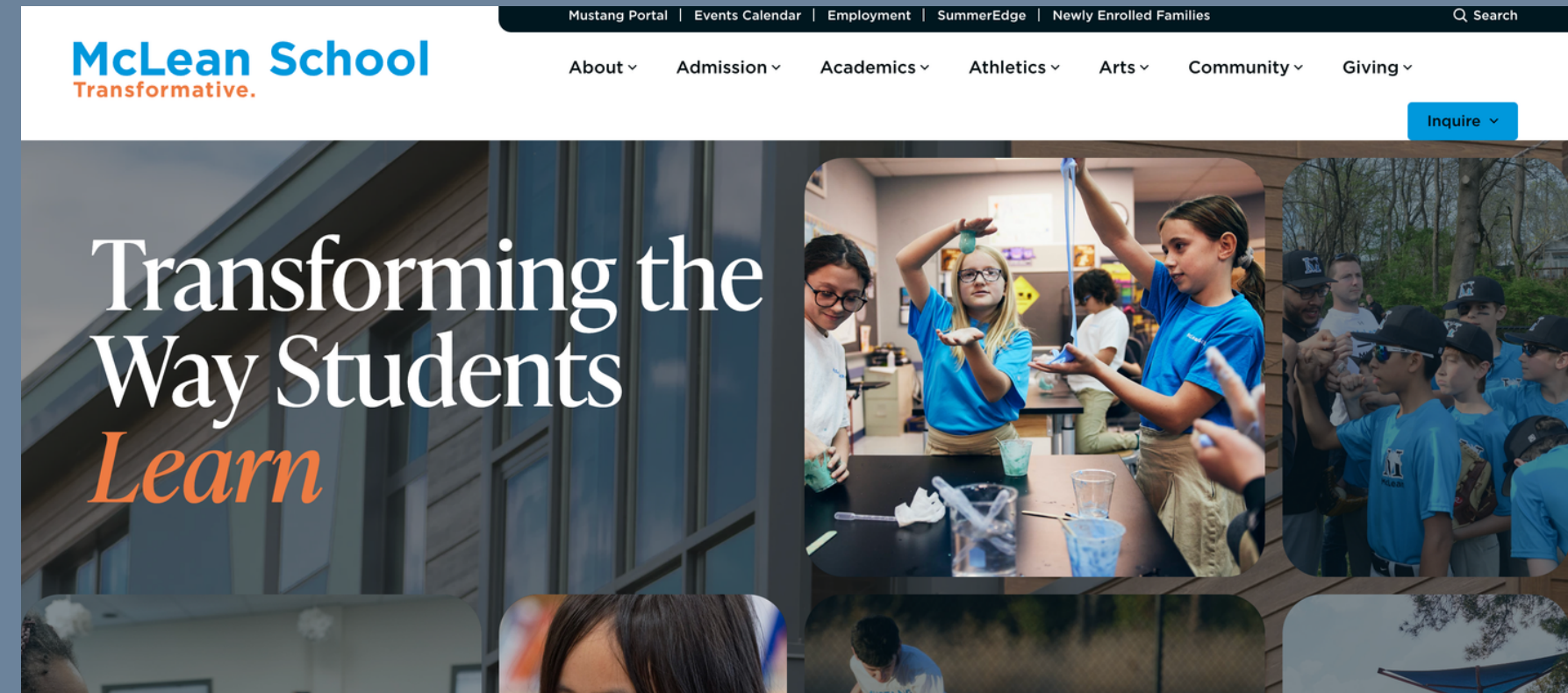
ABOUT ME

- Math Enthusiast – Math 7 & Pre-Algebra
- 23 year veteran teacher
- Grade 7 Team Leader, Mentor, Math Department
Liasion
- M.S. in Educational Leadership
- BTC Enthusiast – Year 4
- Restorative Practices
- McLean School in Potomac, MD
- Instagram: @ms_massey_math_mclean
- Email: jmassey@mcleanschool.org



ABOUT MCLEAN SCHOOL

- Independent K-12 school in Potomac, Maryland
- Serves bright students, including those with ADHD, dyslexia, anxiety, and other learning challenges
- Committed to a transformative approach that supports strengths and scaffolds challenges
- Emphasizes resilience, belonging, and the pursuit of academic excellence
- Belief: When students feel safe, seen, and valued, they thrive



NEPHEW & DOG TAX



QUESTION OF THE DAY

Which odd lip balm would you try first?



1

2

3

4

5

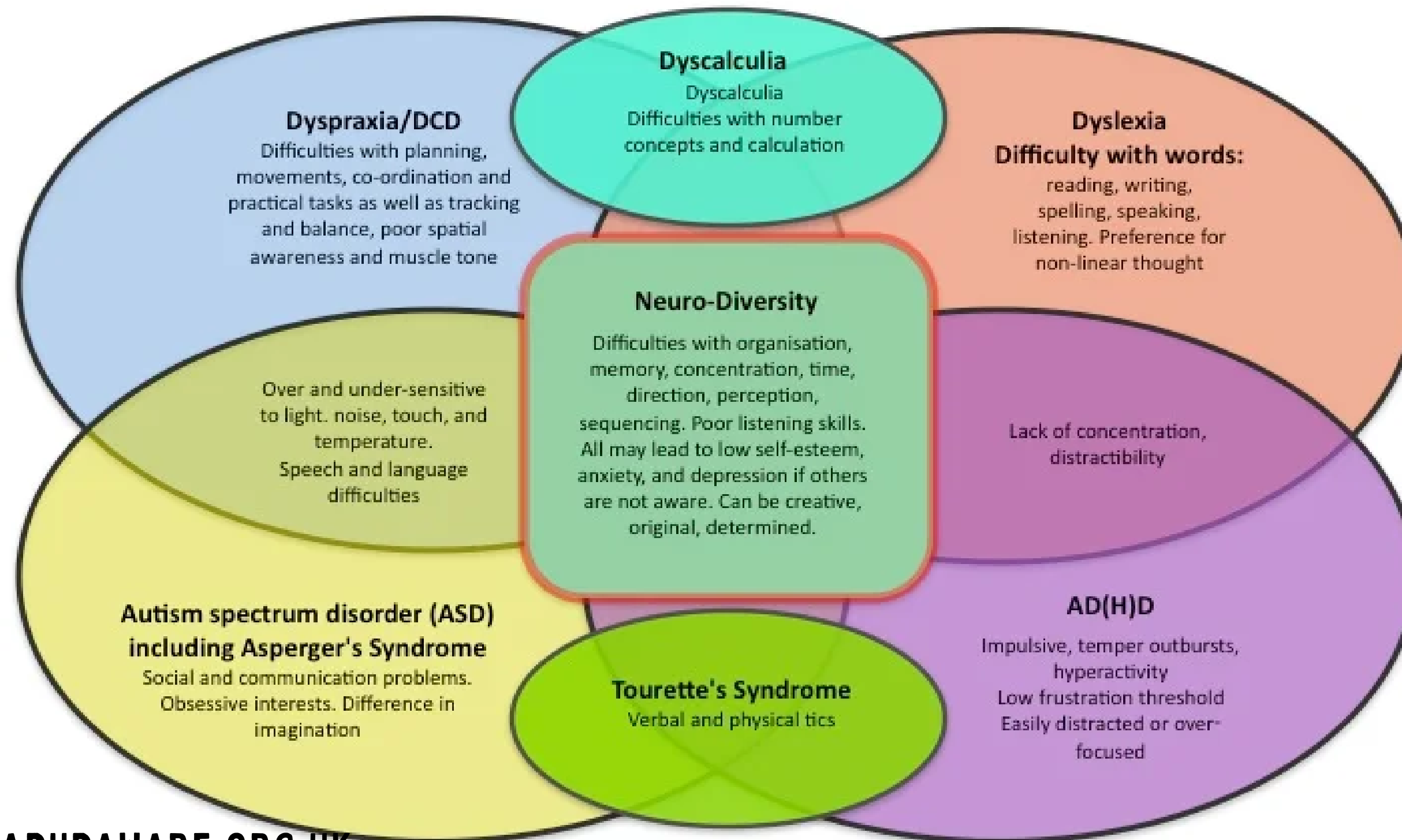
WHAT WILL WE DISCUSS TODAY?

1. Start with a Problem
2. Visibly Random Groups
3. Maximize VNPS
4. Thinking-Focused Directions
5. Clear Navigation Tools
6. Overcome Challenges

WHAT IS NEURODIVERSITY?

The Make-up of Neuro-Diversity

This is a document for discussion, concentrating mainly on the difficulties of those with neuro-diversity. It must however be pointed out that many such people are excellent at maths, co-ordination, reading etc . We are people of extremes.



START WITH A PROBLEM: CONNECTION BEFORE CONTENT

- Question of the day
- Weekly check-ins
- Mathematicians – Black History Month, Women's History Month
- Estimation 180
- Mashup Math – puzzles, WODB, 2T1L
- Fluency & Mental Math

CONNECTION ROUTINES & BTC - BUILDING THE CULTURE OF THINKING

Supports chapter 1: Culture of Thinking by creating the conditions where students:

- feel safe to take risks
- use their voice regularly
- trust their peers and teacher
- stay emotionally & cognitively regulated
- 80/20 rule

CONNECTION ROUTINES & BTC - BUILDING THE CULTURE OF THINKING

Neurodiverse Benefits:

- Predictable structure builds comfort
- Low-pressure sharing builds voice
- Daily touchpoints promote wellbeing

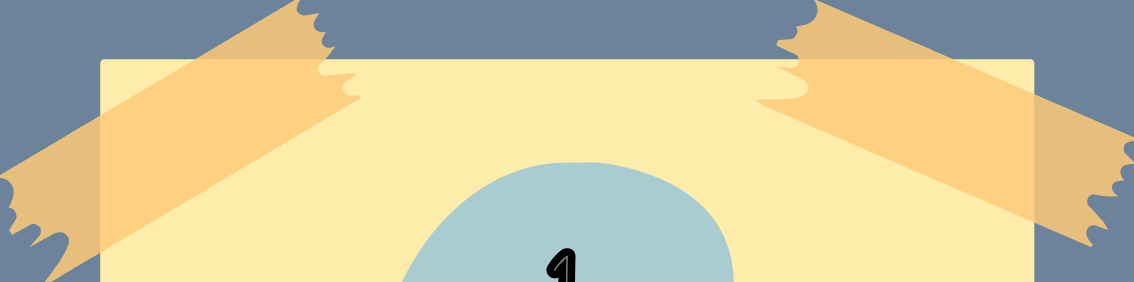
CONNECTION ROUTINES



EdTomorrow - The First Five

STRATEGY #2

VISIBLY RANDOM GROUPINGS



1

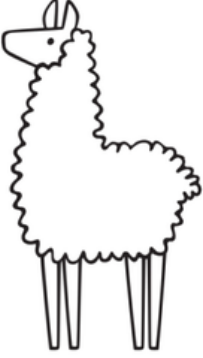
**RANDOM
SEATING**



2

**RANDOM
GROUP
ASSIGNMENT**



RED	RED	RED	RED	RED
E	D	C	B	A
5	4	3	2	1
				
cheerleading	track	football	baseball	basketball

VISIBLY RANDOM GROUPINGS:

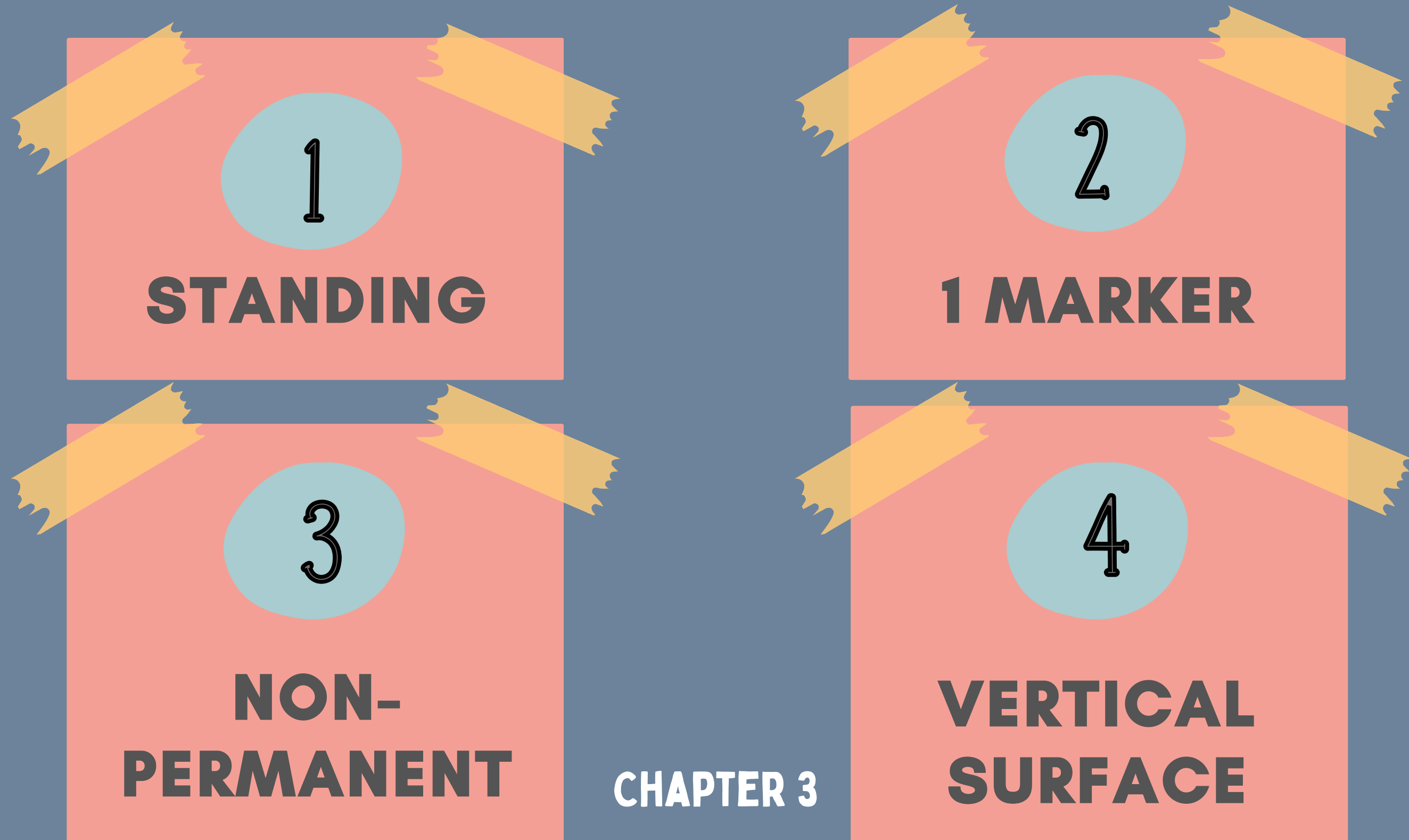
WHY I LOVE IT

- Learn to work with all types of people
- Short-term
- Increase capacity of others
- Students understand it
- Increase in thinking & knowledge mobility
- Remove social barriers & reduce social anxiety
- Increase empathy
- Easy
- NO MORE SEATING CHART CREATION

VISIBLY RANDOM GROUPINGS & NEURODIVERSE BENEFITS

- Reduces social anxiety
- Builds social flexibility
- Removes peer status pressure
- Builds confidence
- Builds capacity
- Reduces fixed labels ("smart" vs "struggling")
- 97% immediately accept group

MAXIMIZE ENGAGEMENT WITH VNPS

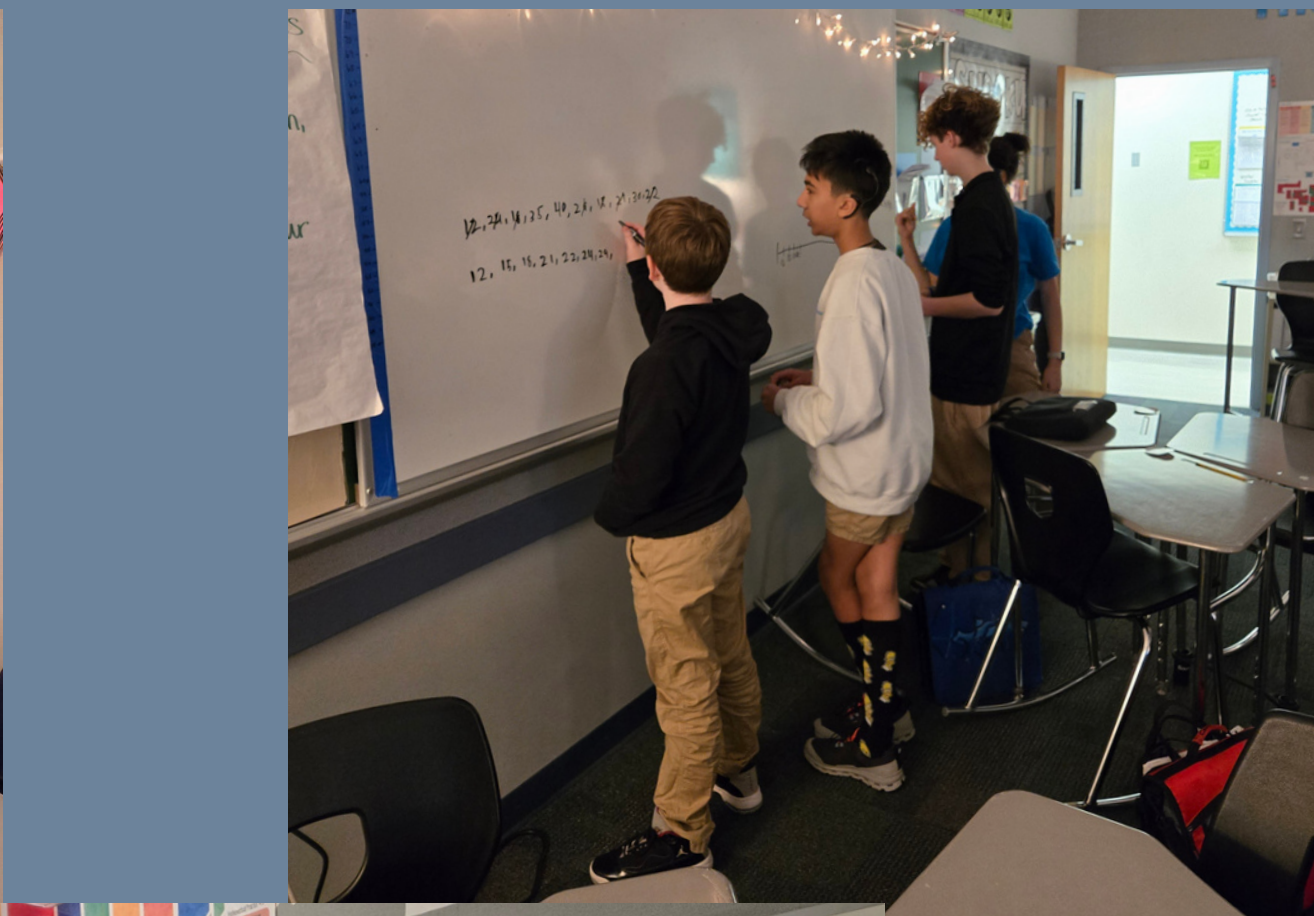


VNPS: WHY I LOVE IT

- Sitting $\neq$ thinking
- Listening
- Active participation
- Easily visible
- Eraseable
- Versatile
- Risk-taking

VNPS & NEURODIVERSE BENEFITS

- Movement improves focus
- Low-risk sharing builds confidence
- Mistakes become learning moments
- Bypass perfection tendencies
- Reduce evaluation anxiety
- Errors are simply wiped away



INCORPORATING THINKING-FOCUSED DIRECTIONS

- The Routine: Concise, action-oriented directions delivered while standing
- Why it Works & Benefits for Neurodiversity:
 - Prevents passive listening
 - Reduces cognitive load
 - Allows learners to immediately engage
 - Supports working memory & focus - attention is on immediate action
 - Standing → immediate readiness for thinking
 - Protects auditory processing limits

NAVIGATION TOOLS & EXECUTIVE FUNCTIONING

- Began in 2024
- Requires time, patience, and practice
- Move from a points-gathering system to a mastery system
- Move from task completion to thinking & learning
- Focus on learning & thinking rather than grades
- Helps students see what matters in their learning & where they can go
- Work in progress

NAVIGATION TOOLS & NEURODIVERSE BENEFITS

- Clarifies expectations
- Reduces anxiety
- Supports executive function with visible goals
 - organization, tracking, prioritizing
- Promotes student agency in learning & assessment
- Natural scaffold for complex concepts

Unit 2: Angles

Objective #	Enter Each Objective Below	Not Yet Approaching Expectations (2)	Approaching Expectations (3)	Meeting Expectations (4)	Exceeding Expectations (5)
2-1	Classify geometry terms (point, segment, ray, line, vertex, angle, endpoint)	Student can recognize some geometry terms but cannot define or identify most correctly.	Student can give partial definitions and sometimes identify terms in diagrams.	Student can define and identify all terms accurately and explain why a figure fits a term.	Student can compare and contrast terms, identify them in complex diagrams, and/or create original examples and non-examples.
2-2	Identify types of lines (parallel, intersecting, perpendicular)	Student can recognize lines but cannot distinguish types.	Student can sometimes identify line types but may make mistakes. Definitions may be incomplete or inconsistently applied.	Student can identify and explain parallel, intersecting, and perpendicular lines accurately.	Student can identify lines in complex diagrams and create original examples and/or non-examples with explanations.

RETHINKING GRADING WITH NAVIGATION TOOLS

tinyurl.com/BTCrubric



WHY IT WORKS - A RESEARCH SNAPSHOT

 Movement + collaboration improve learning (Fisher et al., 2014)

 Executive functioning supports improve outcomes (Diamond, 2013)

 Belonging boosts engagement and persistence (Durlak et al., 2011)

 BTC increases thinking and reduces status issues (Liljedahl, 2021)

ANTICIPATING CHALLENGES: YES, BUT...

Common Barriers:

- time & logistics
- student resistance
- task/routine anxiety

Quick Wins:

-  Connection-before-content
-  Scaffolded non-curricular task
- Adapt routines, not curriculum
- Radical transparency – explain the “why”
- Start with ONE thing

 Prompt: “What feels hard? What feels doable?”

**“ Most of my work as a
math teacher isn’t even math.**

**IT’S HELPING STUDENTS
BELIEVE THAT THEY
CAN ALSO DO MATH.**

We don’t talk about that enough.

Jose’ Vilson

THANK YOU

THIS SLIDESHOW



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