Are your students

IN THE ZONE For Learning ?

Presented by Natasha Sansoni and Elisha Obsioma

Are your students in the zone for learning?

A program to assist students with complex learning needs

"To teach me you need to understand my brain."
- Ylana Bloom , 2013

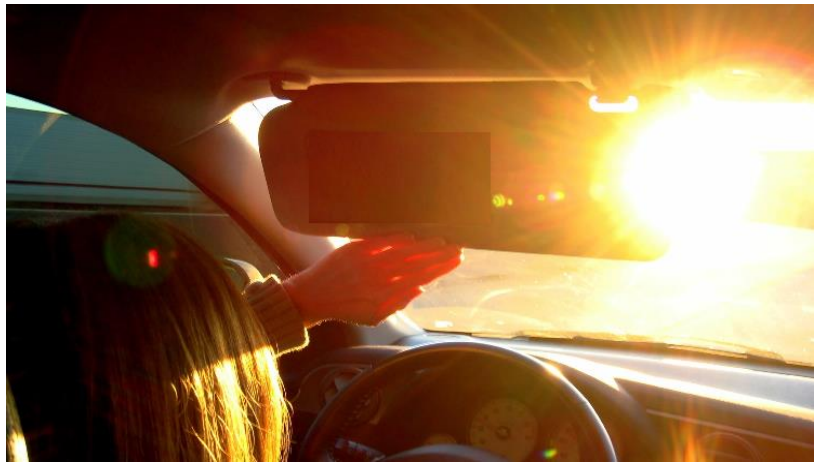
https://clarkerd-s.schools.nsw.gov.au/media---links/in-the-zone.html

Respect and thanks to Diane Robertson and Kavi Razzaghi-Pour from Clarke Road School, Peter Gurrier-Jones, Vita Williams, Mark Gosbell and Neale Rudland from The Hills School, Ylana Bloom – academic partner to both schools and all the staff who are on an In The Zone for learning journey with us.

In the zone for learning timeline for Elisha- preparing for this presentation in a noisy environment

Adapted from Dr. Bruce Perry, Dr. Dan Siegal, P&J Wilbarger, Taylor and Trott, Shellenberger & Williams, Patterns of Learning Protocol -The Hills School: Vita Williams and Ylana Bloom (2009- 2018) In collaboration with In the zone for learning –Clarke Rd School and Natasha Sansoni (2019)

We have a glaring challenge



- ***We've got students who can't sit still - rocking, pacing, jumping up and down***

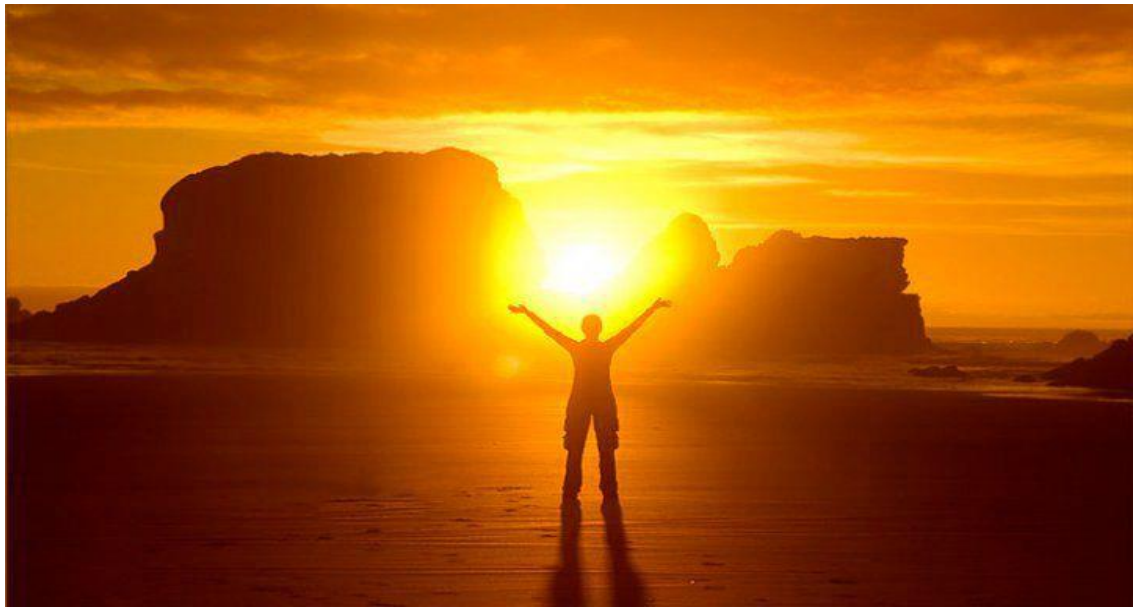
We need to figure out is this behaviour about avoiding desk work ? or due to their diagnosis of ADHD ? or is it their attempt to get in the zone for learning through sensory seeking?

- ***Students that are fussy about what they eat or touch or wear – is this a choice? Is it bad behaviour or is it due to sensory sensitivities?***

- ***Students who are aggressive to other students – is this jealousy, emotional dysregulation, or a fright/flight/fight response due to anxiety or being overwhelmed?***
- ***In these states none of these students are in the zone for learning. How do we help them to be calm yet alert- and get in the zone for learning?***

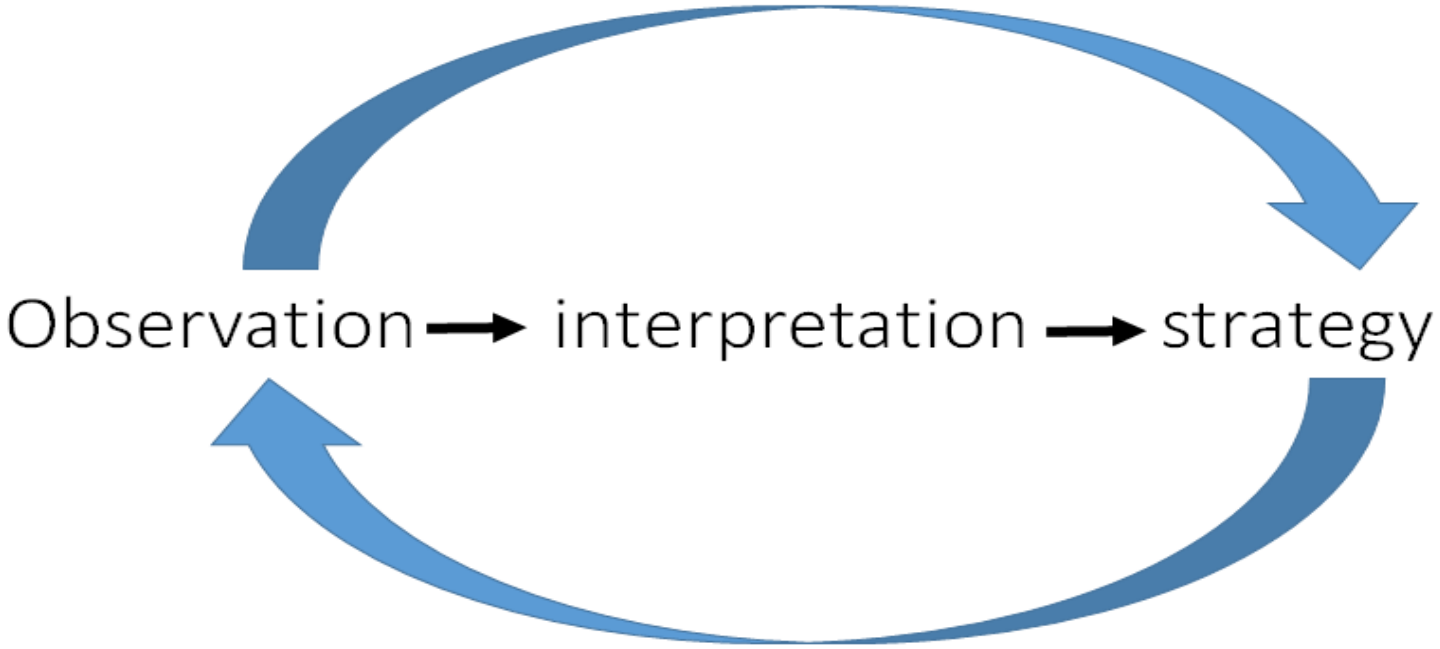
- ***For an educator this can be like driving into the blinding sun – we have to stop, collaborate and figure out a better way:***

Change our perspective:
from a glaring challenge into a celebration!!



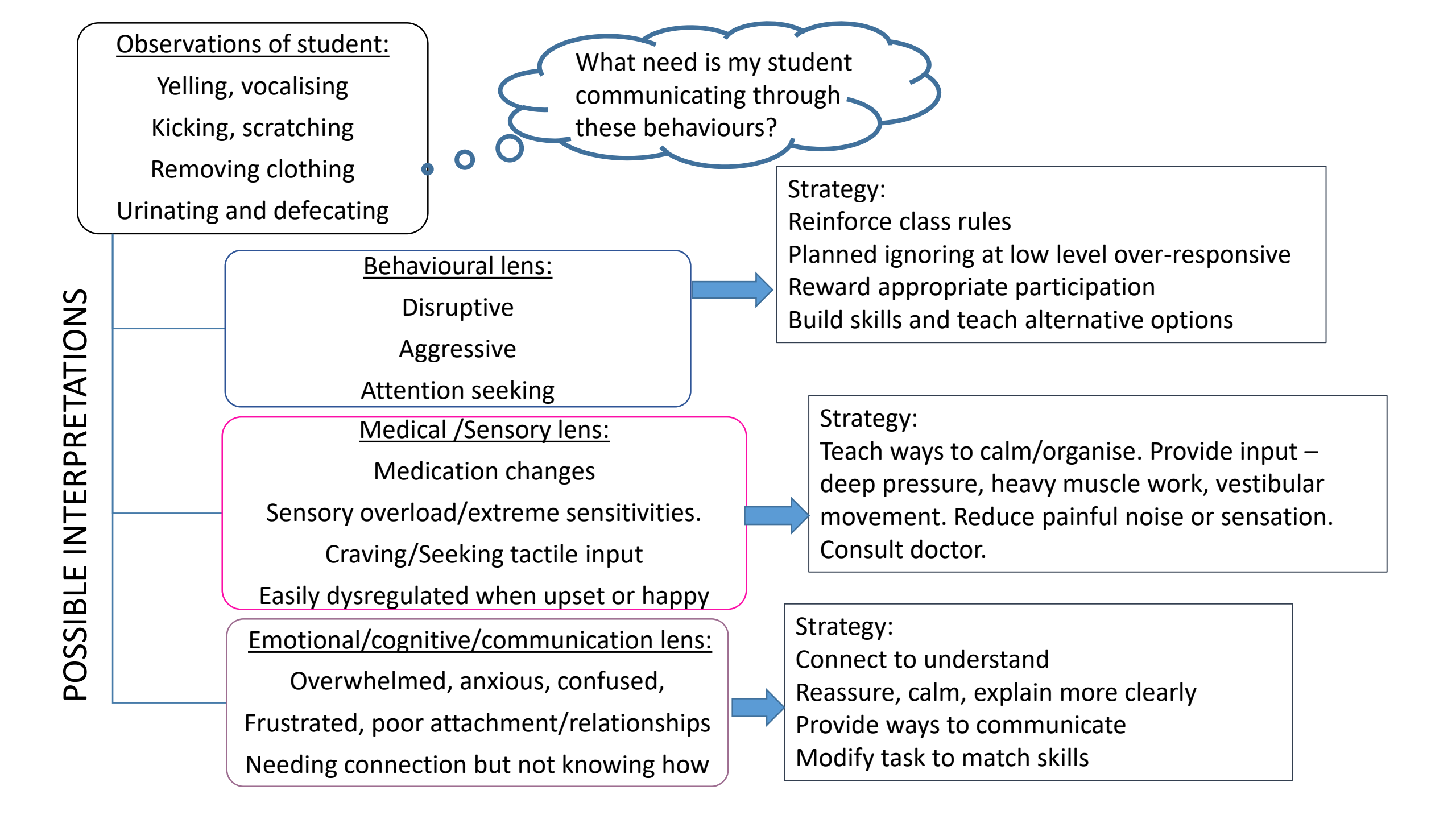
- ***We are committed to figuring out what our students are trying to communicate to us through their behaviours so we can turn these glaring challenges into celebrations of their unique personalities, skills and interests.***

- We need a tool to help investigate more
- We need a tool that will help us to be pro-active in prevention rather than reactive
- A tool that will give us strategies in managing these situations better.



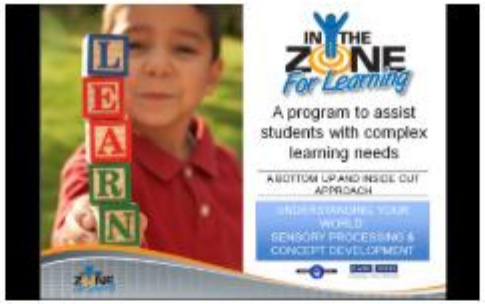
- **Aim to see the student through the lens of lacking skills or emotional challenges or medical complications or sensory processing challenges (rather than wilful disobedience or bad behaviour)**
- **This is not only more accurate and compassionate but also much more productive**

Dr.Ross Greene – Clinical Child Psychologist


Observations of student:
Yelling, vocalising
Kicking, scratching
Removing clothing
Urinating and defecating
What need is my student communicating through these behaviours?
POSSIBLE INTERPRETATIONS
Behavioural lens:
Disruptive
Aggressive
Attention seeking
Strategy:
Reinforce class rules
Planned ignoring at low level over-responsive
Reward appropriate participation
Build skills and teach alternative options
Medical /Sensory lens:
Medication changes
Sensory overload/extreme sensitivities.
Craving/Seeking tactile input
Easily dysregulated when upset or happy
Strategy:
Teach ways to calm/organise. Provide input – deep pressure, heavy muscle work, vestibular movement. Reduce painful noise or sensation.
Consult doctor.
Emotional/cognitive/communication lens:
Overwhelmed, anxious, confused,
Frustrated, poor attachment/relationships
Needing connection but not knowing how
Strategy:
Connect to understand
Reassure, calm, explain more clearly
Provide ways to communicate
Modify task to match skills

https://clarkerd-s.schools.nsw.gov.au/media---links/in-the-zone.html

Research Studies

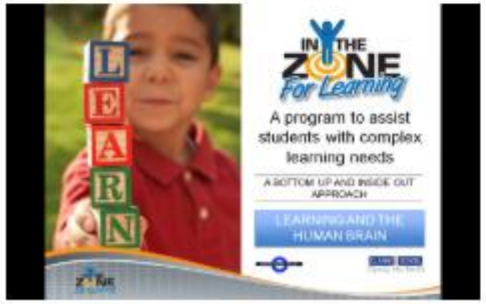


Sensory Processing Booklet

Student Profiling Tool

Learning and the human brain

Levels of Alerness



Wear a “sensory lens” to figure out the glaring challenge!

There are 7 sensory systems for potential learning. The famous 5 senses of:

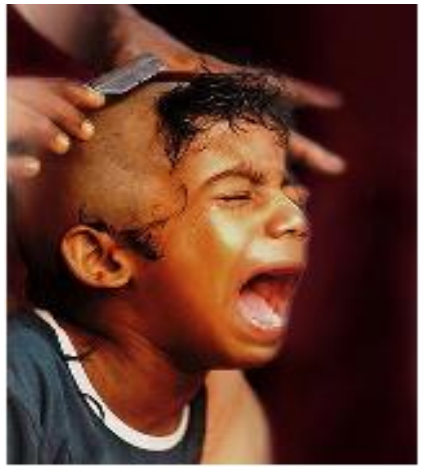
- sight, sound, touch, taste, smell and

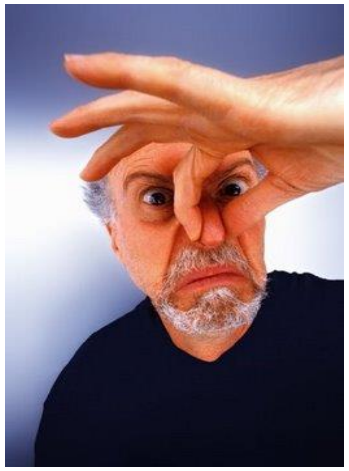
- The internal senses from internal organs (interoception), body position and movement (proprioception) and head movement (vestibular processing).
- The brain is a sensory processing machine – we learn through our senses.

- *Up to 93% of people with ASD have sensory processing challenges. McCormick et al (2016).*
- *Sensory processing challenges can be present on their own or a feature of other conditions such as Dyspraxia, Cerebral Palsy, Intellectual disability and other disabilities.*

In each sensory system we can experience

joy, comfort & meaning for learning or sensitivity, stress & trauma





Plan big – start small

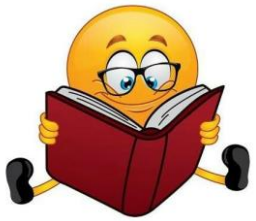
- Factors you can control

- Factors for which you can prepare

- Factors that you cannot control but you can be ready with tools and an action plan.

Factors within your power and control

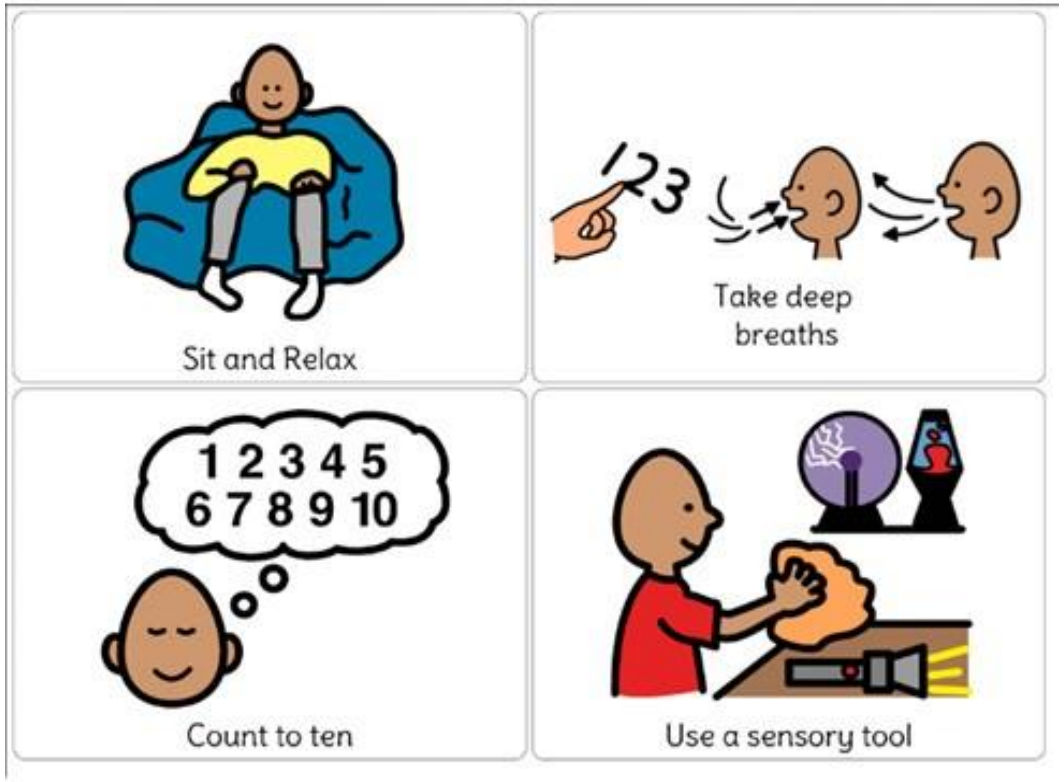
- Our attitudes and expectations
- Our own wellbeing (in order to be grounded and calm, agile and responsive)
- Team work and collaboration (class, school, family, community)



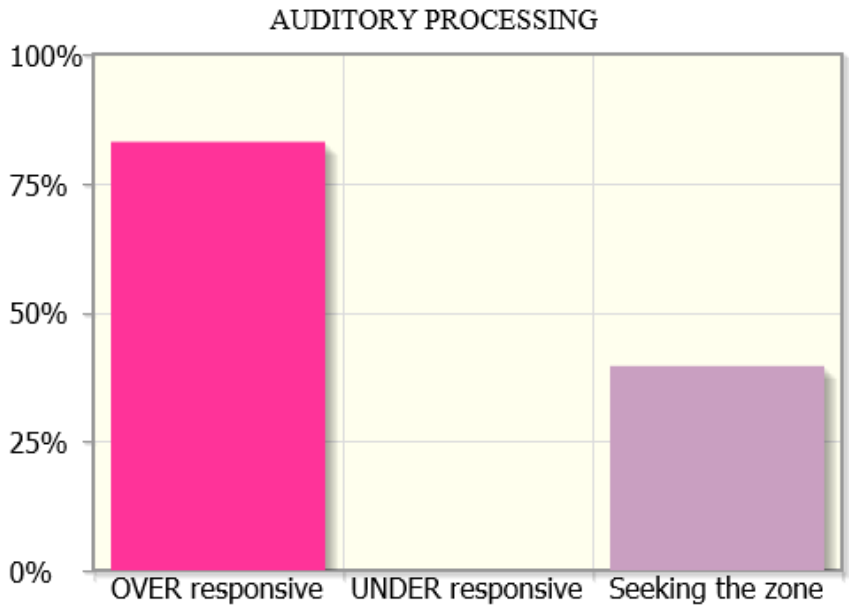
- Knowledge
- Preparation
- Every task has a clear beginning-middle-end and transition

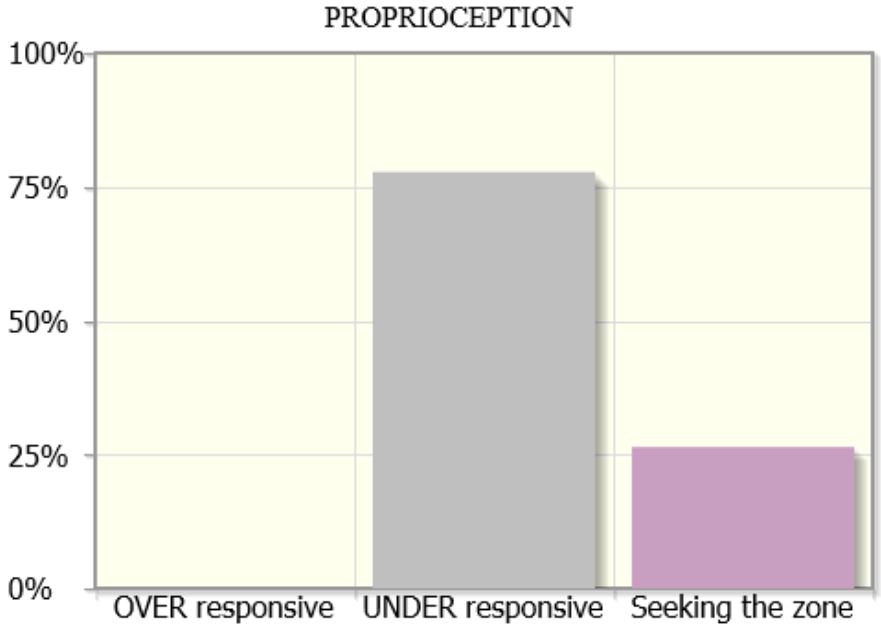
Factors within your power and control

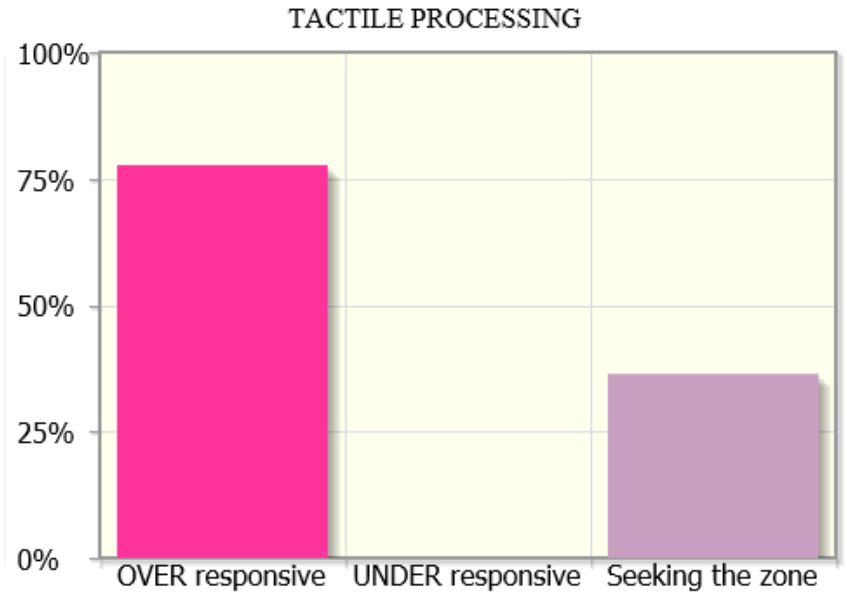
- Environment
- Regulation tools



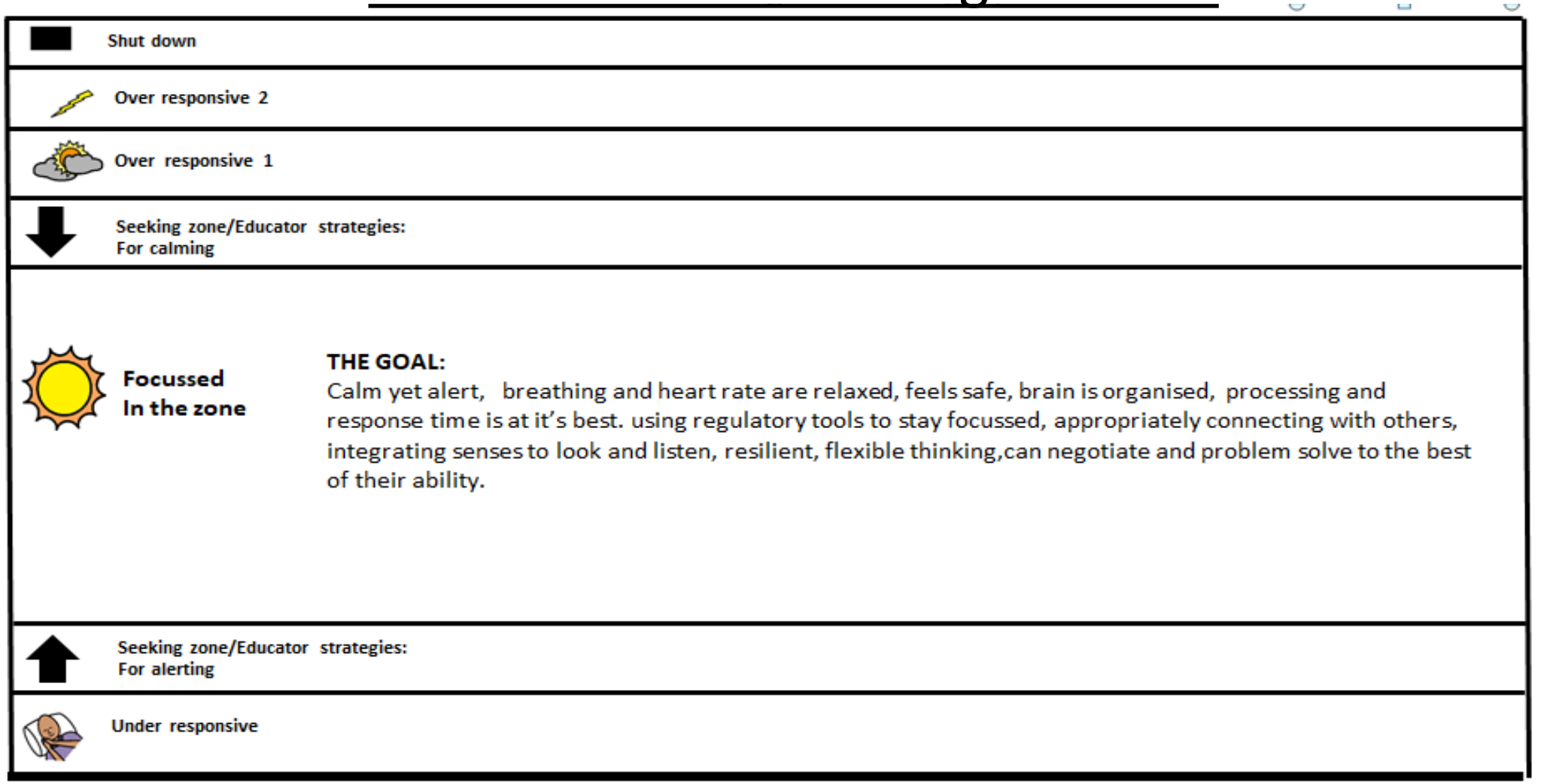
Observation and assessment – In The Zone for learning checklist for Matthew







In The Zone for learning timeline



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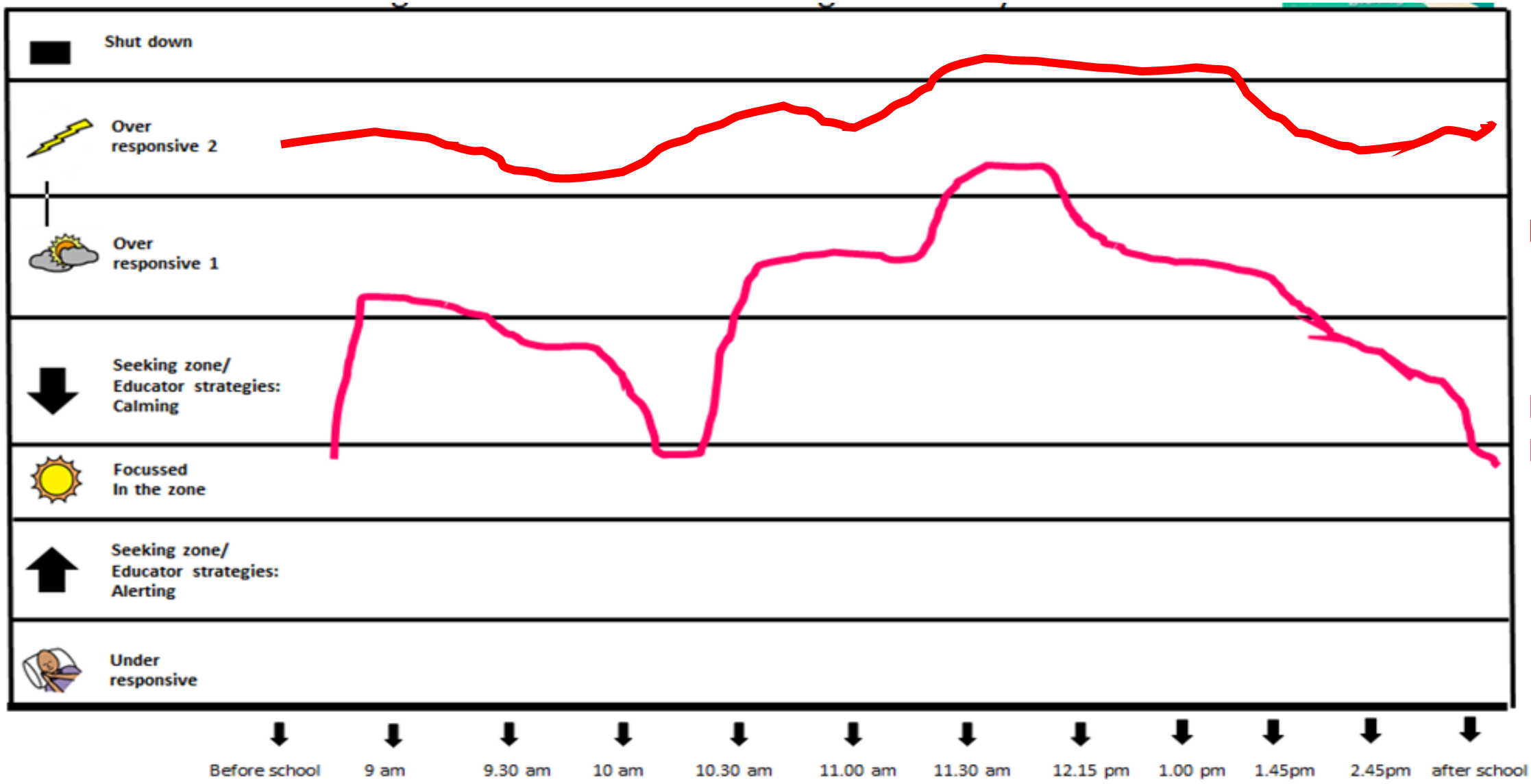
Matthew - In The Zone for learning timeline 2017



The Communication Passport, Patterns of Learning Protocol (Vita Williams) The Hills School and Ylana Bloom (2009- 2018)
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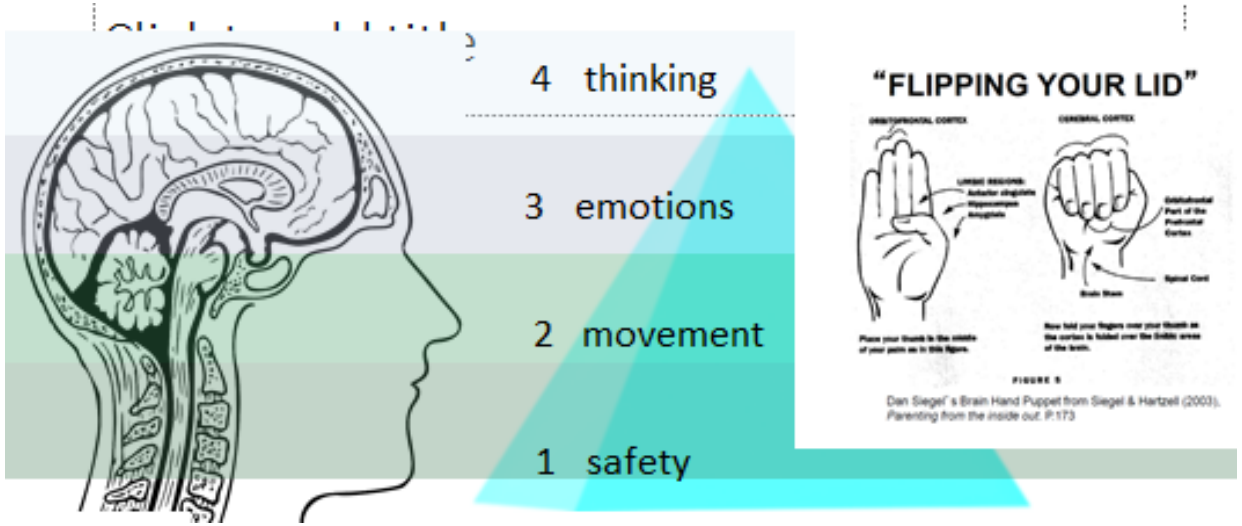
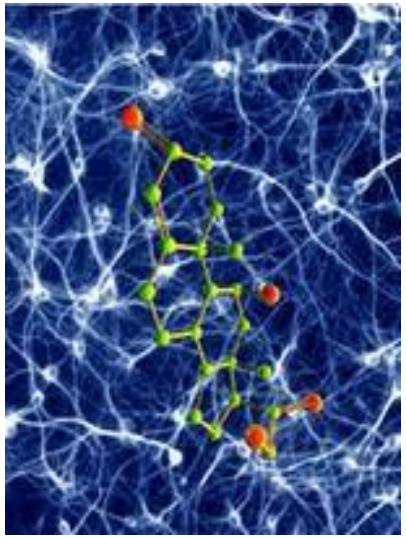
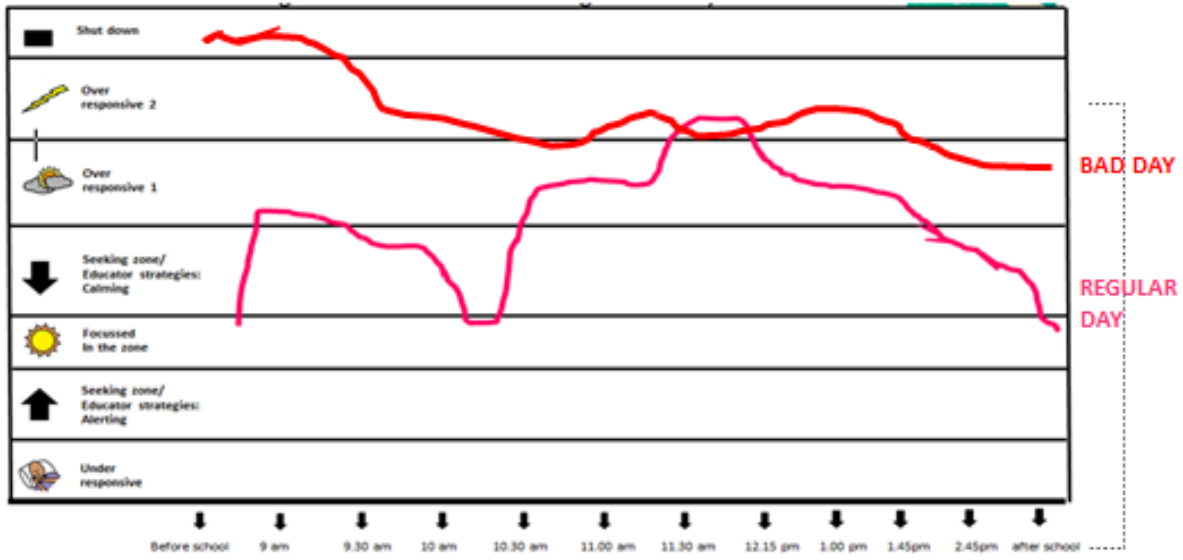
Brain cells that fire together wire together – Hebbian theory





Neural network: identity - 15,000 cells firing together



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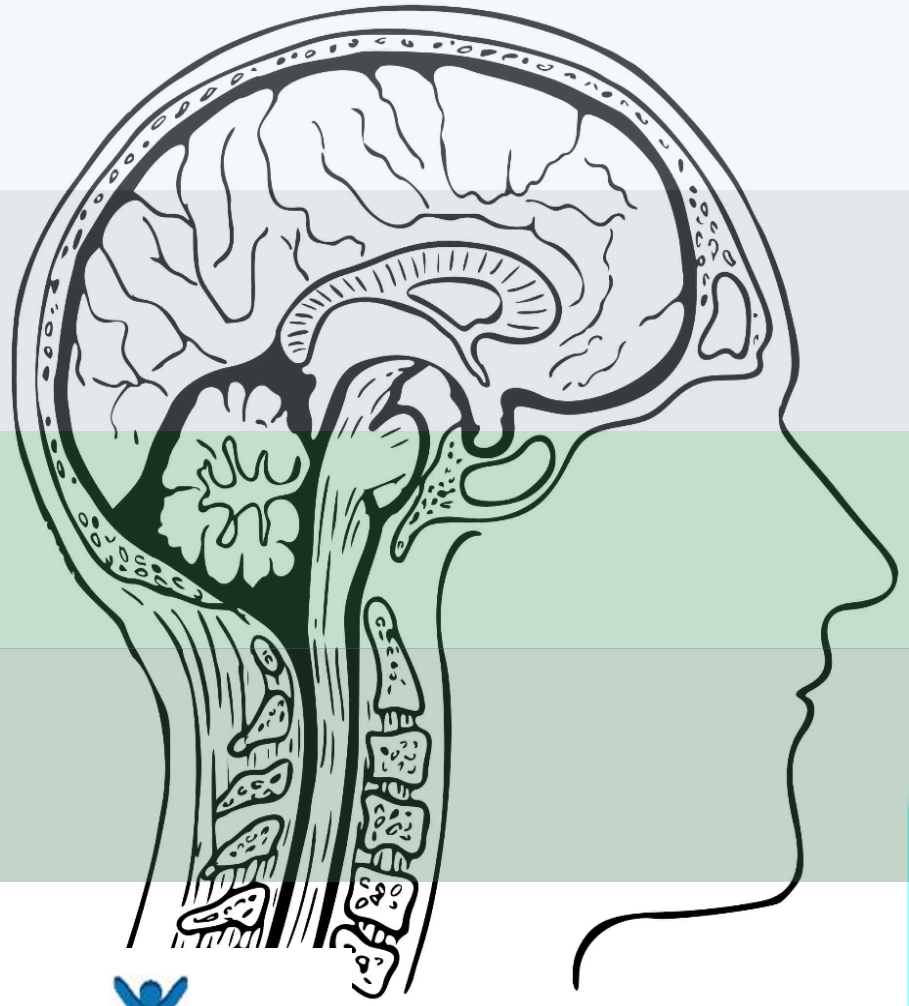
Neural network : anxiety

Too many stress hormones

Dr. Daniel Siegel, Dr. Bruce Perry, Nathan Wallis, Abraham Maslow, Dr. Jean Ayres

Foundations for learning – brain levels

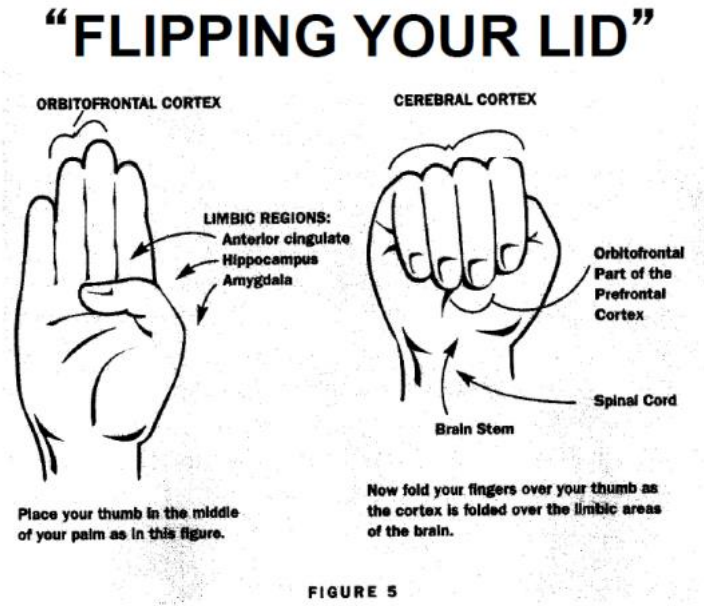


4 Thinking

3 Emotions

2 Movement

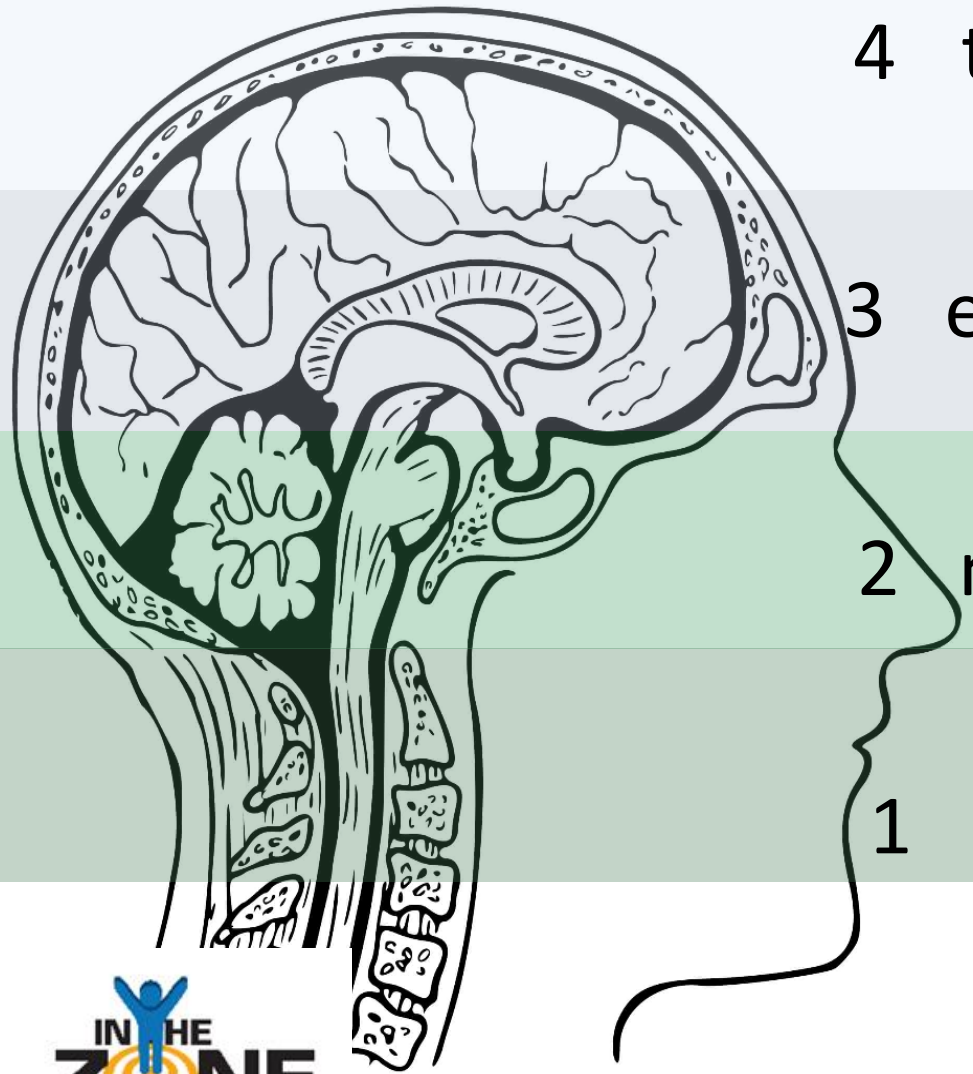
1 Safety



Dan Siegel's Brain Hand Puppet from Siegel & Hartzell (2003), *Parenting from the inside out*. P.173

Dr. Daniel Siegel, Dr. Bruce Perry, Nathan Wallis, Abraham Maslow, Dr. Jean Ayres

Foundations for learning – brain levels –needs of the students



4	thinking	respect for individual learning style and processing time
3	emotions	felt, connected, supported, nurtured
2	movement	rhythmic, repetitive movement
1	safety	seen, soothed, safe, secure (Dr. Daniel Siegel)

IN THE ZONE For Learning

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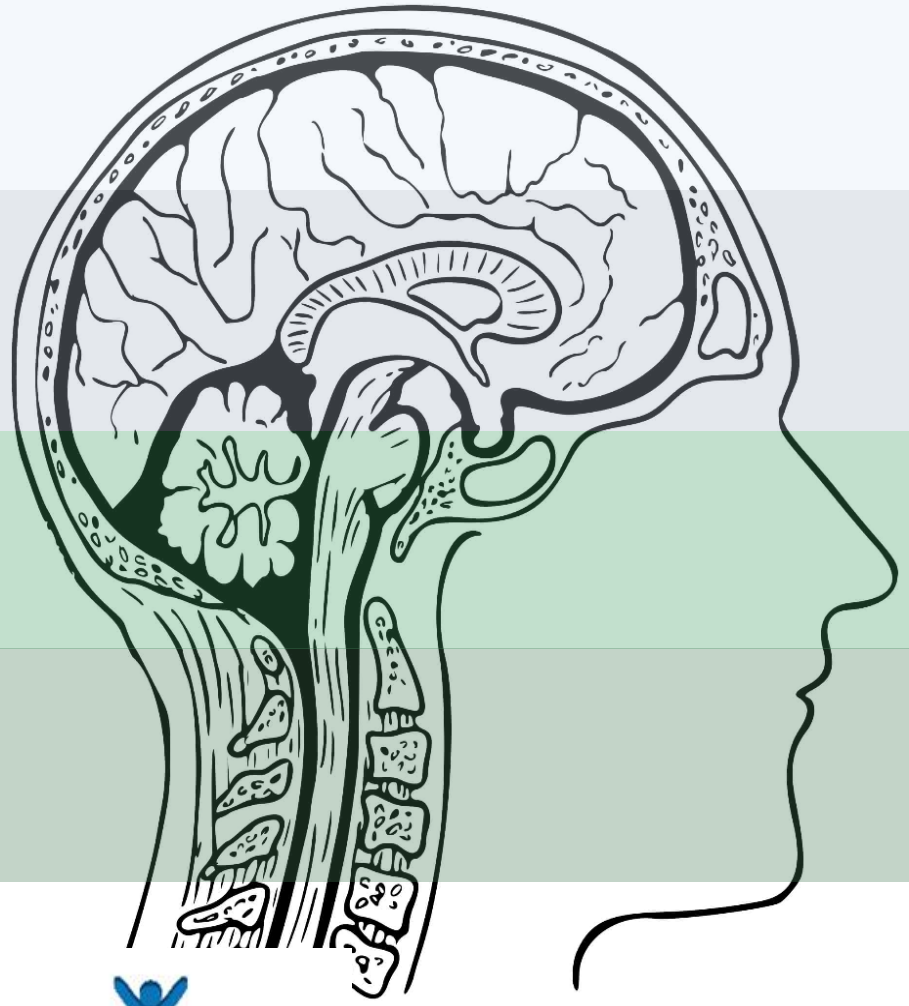
Foundations for learning – brain levels



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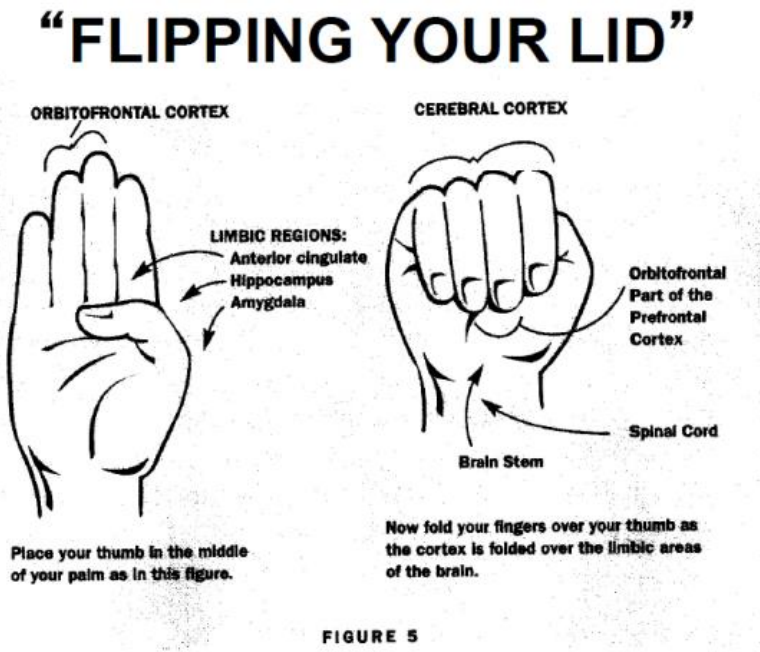

FIGURE 5

Dan Siegel's Brain Hand Puppet from Siegel & Hartzell (2003), *Parenting from the inside out*. P.173

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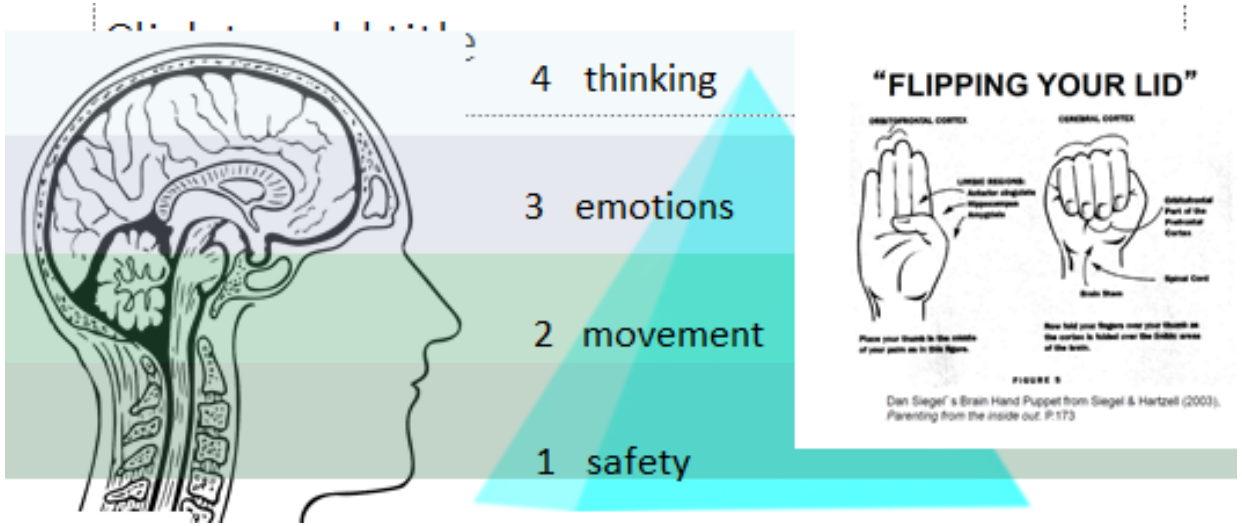

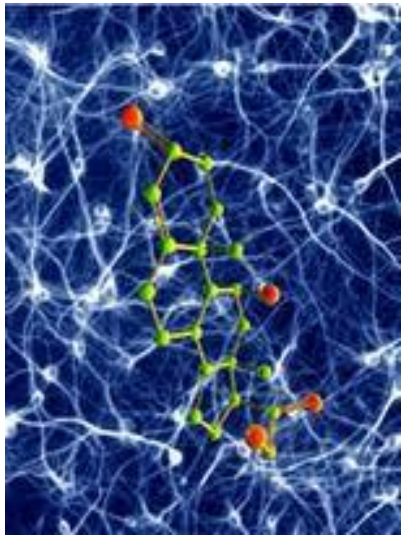

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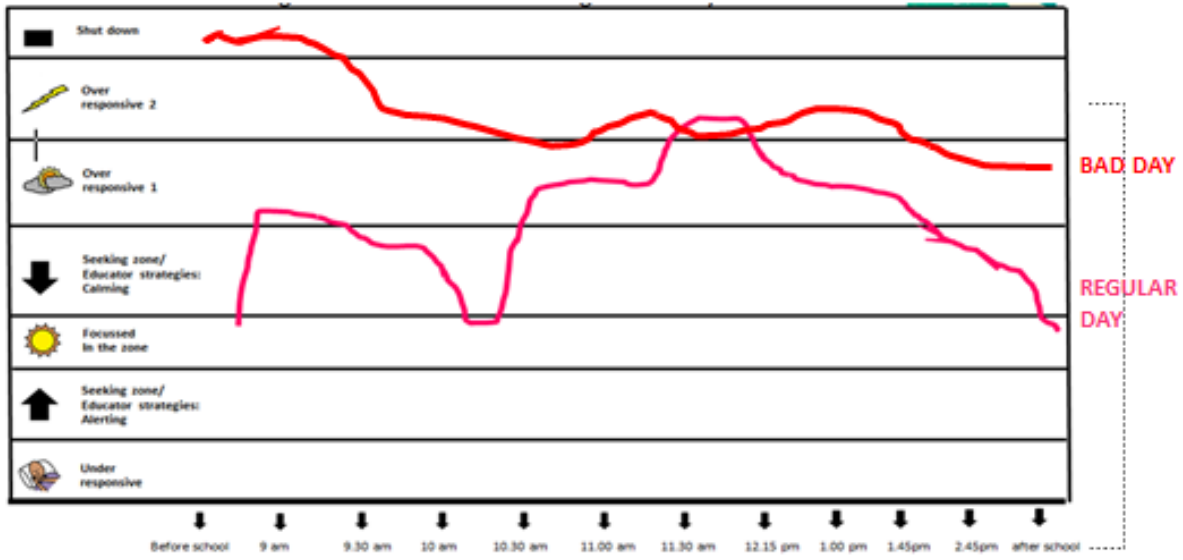

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Use antecedent exercise to feel calm yet alert - in the zone for learning –

Routine morning walk.

Be prepared: engineer the classroom

- Calm classroom
- Clear zones for various activities
- Desks facing the wall
- Obstacle course for movement breaks
- Variety of seating
- Lighting issues and glare minimised
- Visual distractions minimised

Use visuals and minimise unnecessary verbal/auditory input.
Use timetables, schedules, routines, first-then, timers etc.

Sensory rich environment in a small space

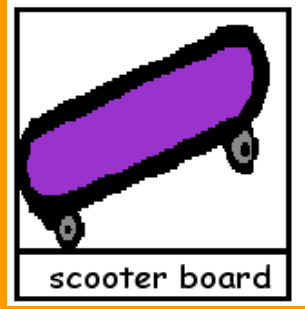
Prepare the classroom environment:
A variety of seating options

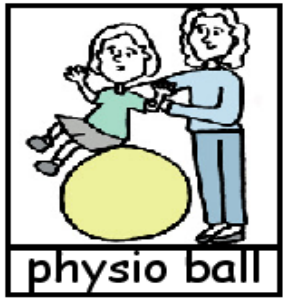
Photo courtesy of School Specialty/Integrations

Research shows antecedent exercise (before the desk work or cognitive task) can prevent dysregulation and behaviours of concern.

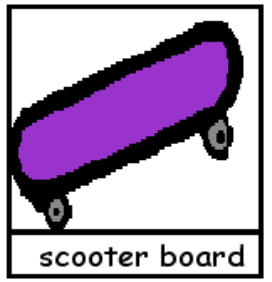
Sensory activities that are organising for the child

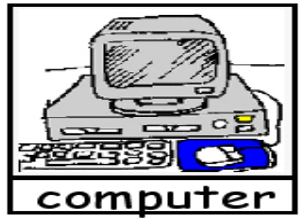
Movement Activity Choices

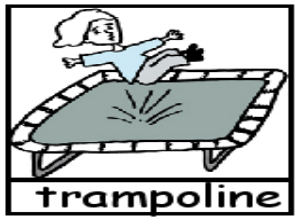


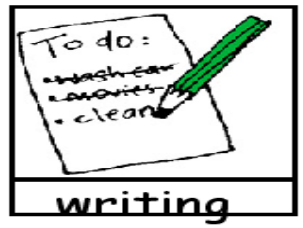


Schedule





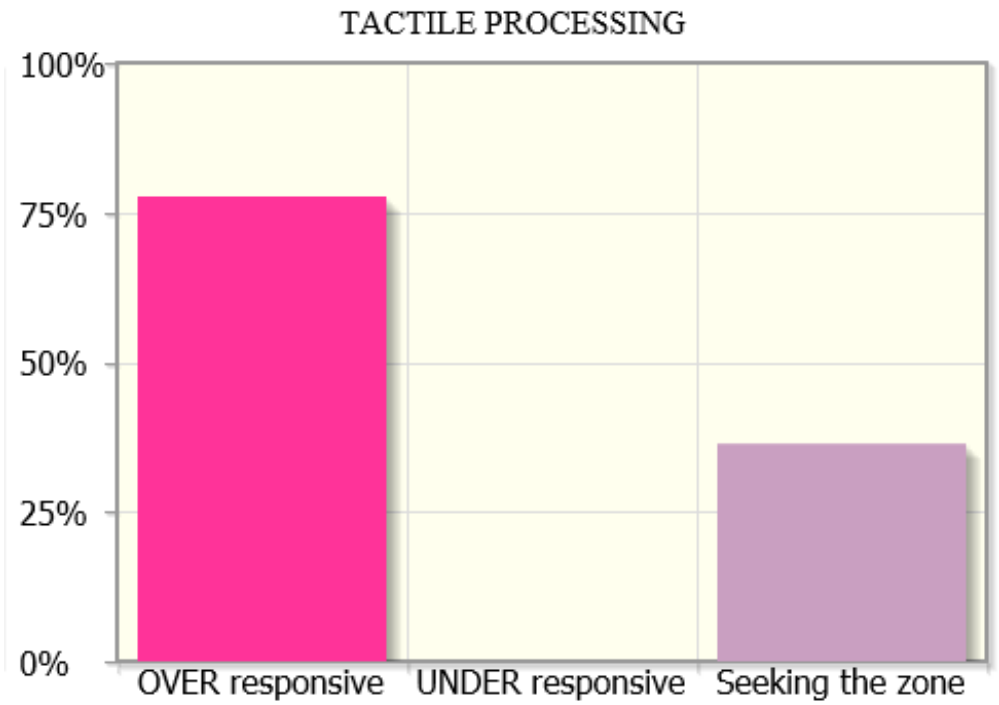


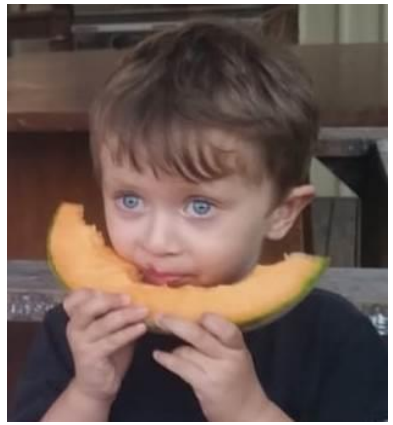


Ylana Bloom – Softpics images.

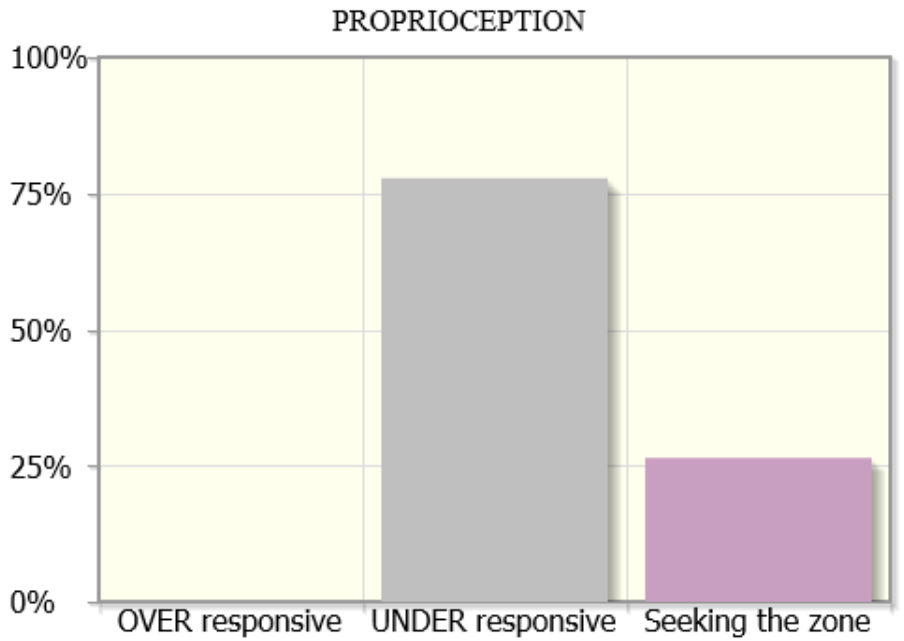
Use antecedent exercise to prevent dysregulation/challenging behaviours

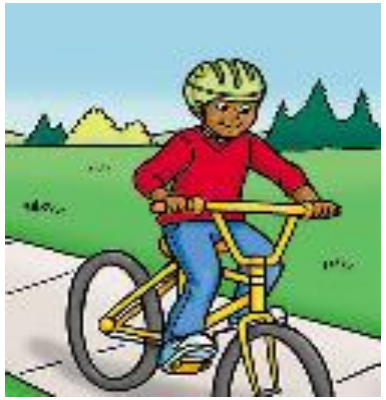
Interpretation and strategies: Seeking tactile – touch input

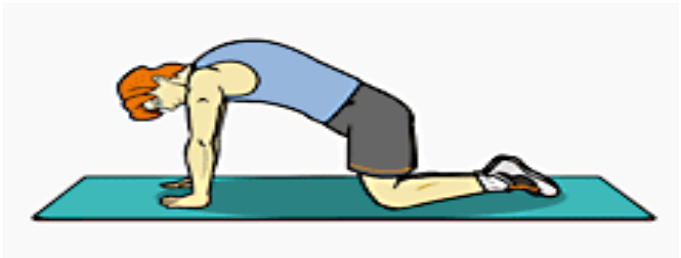




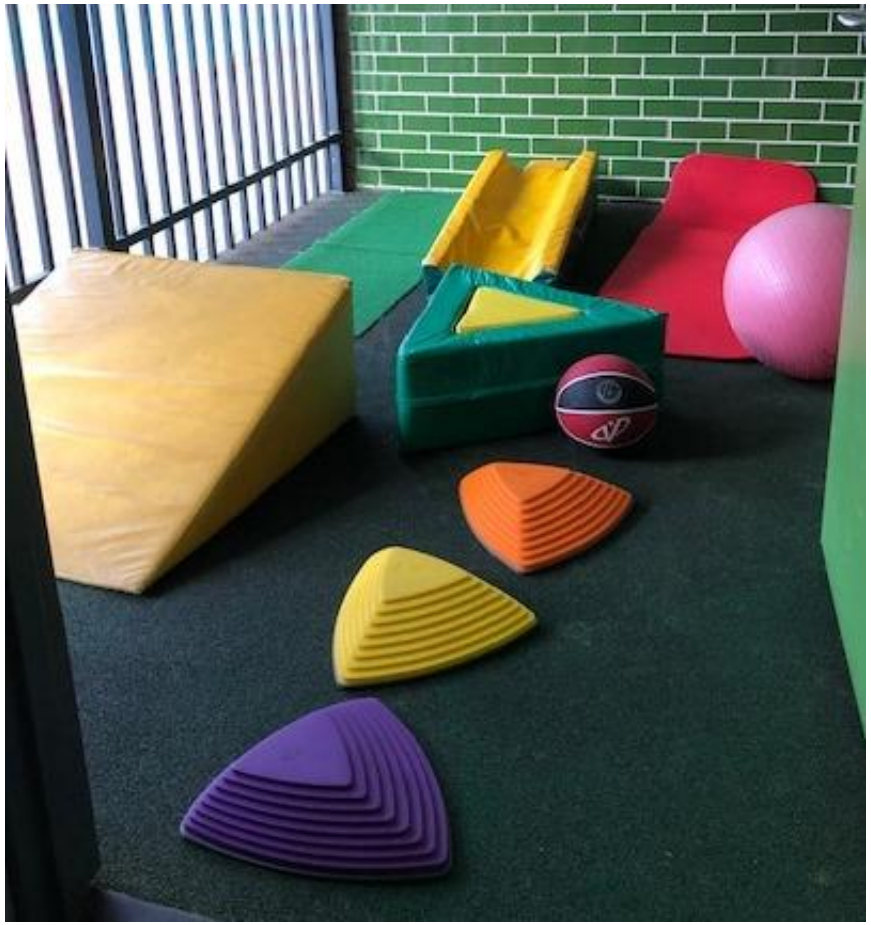
Proprioception – input to joints and muscles = very organising for body and brain







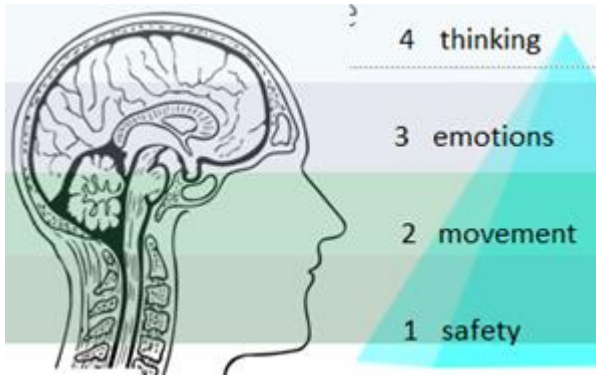
Proprioception for students with physical limitations- incorporate more weight bearing, more movement and trial vibration



Obstacle course to roll and crawl over

Lycra body sock

Calming input : Deep, firm, even, pressure



Seen
Soothed
Safe
Secure
Dr. Daniel Siegel

Calming deep pressure input through physical contact from an educator is sometimes necessary:

The process:

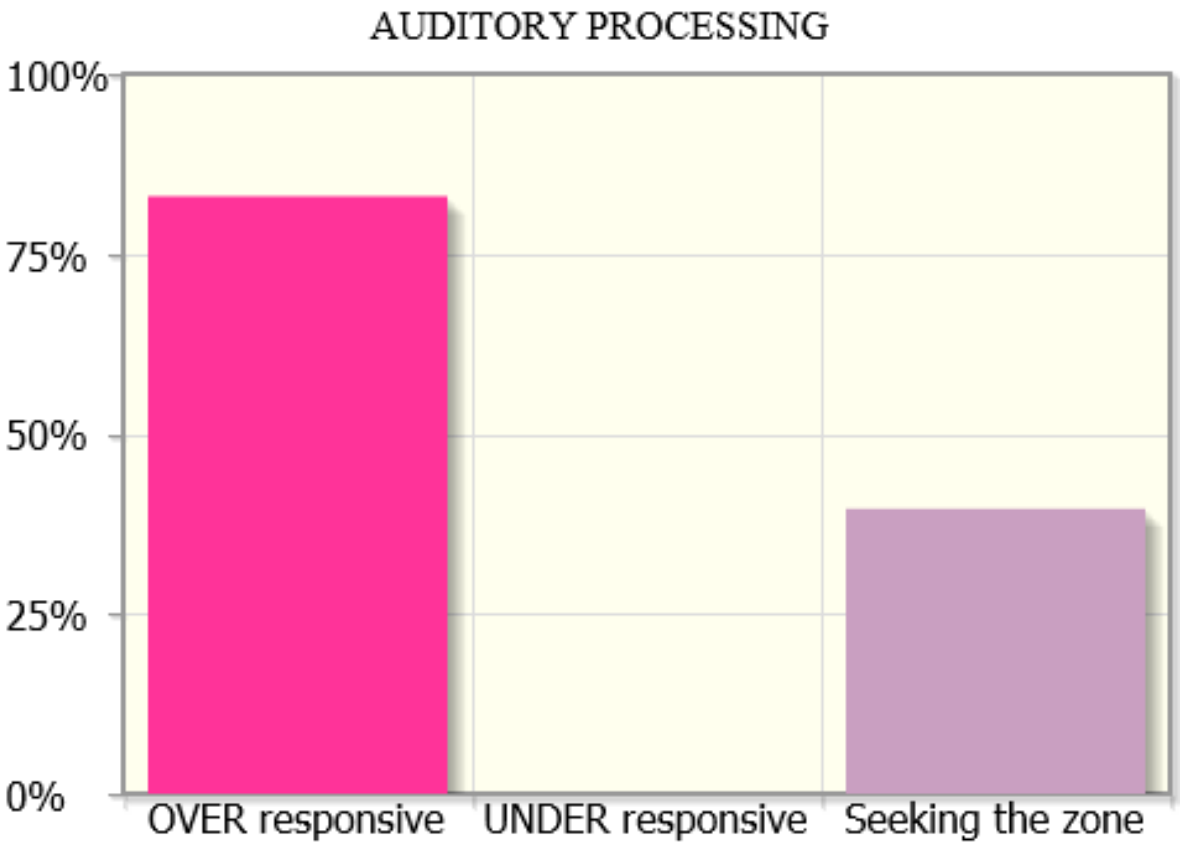
- Assessment and safety checks
- Permission from carers and the student
- Plan and protocol (who, how, what, where)
- Ongoing evaluation of effectiveness
- Develop independence from co-regulation (being hugged or massaged) to self-regulation (independent strategies).
- Choice for students – “more”, “finish”, “yes”, “no”

Stretchy swing

Compression or Weighted blankets and vests

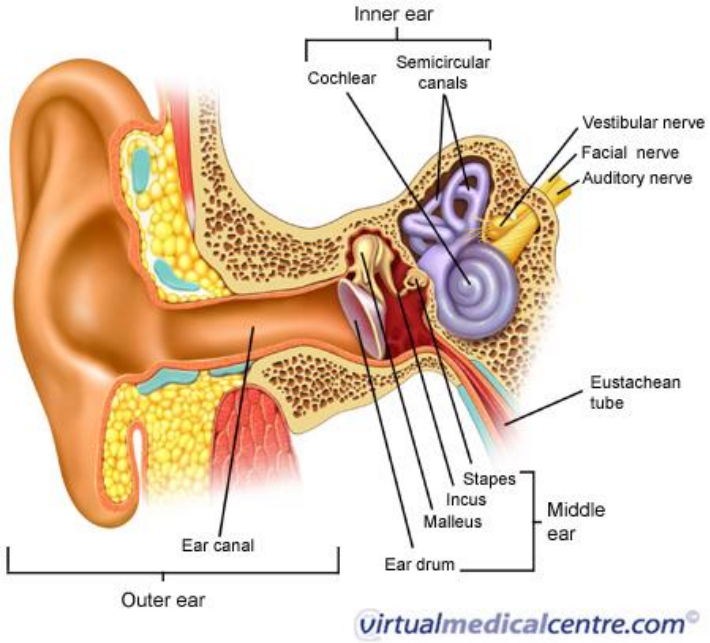
Calming clothing

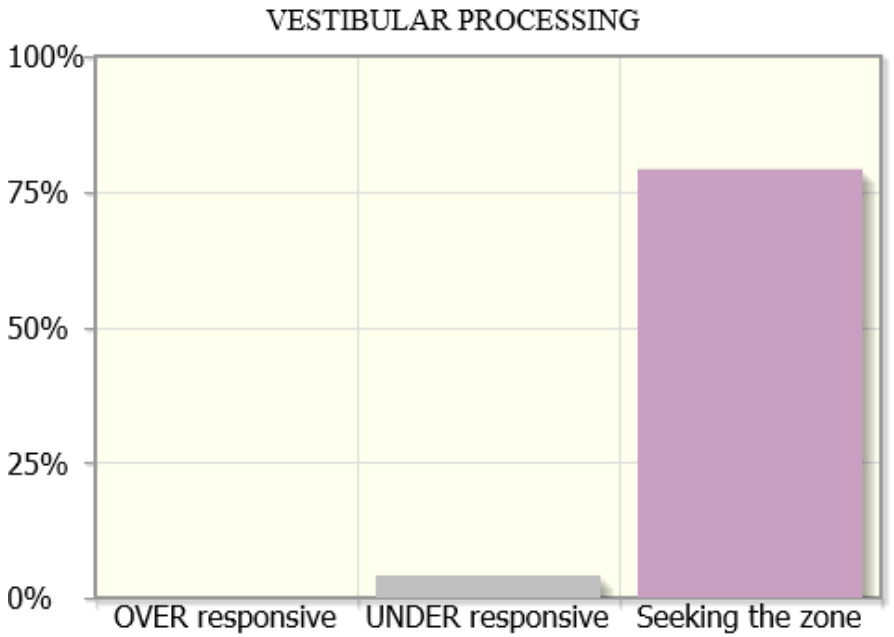
Seeking and sensitive to auditory input – makes a lot of his own noise but sensitive to other noise.

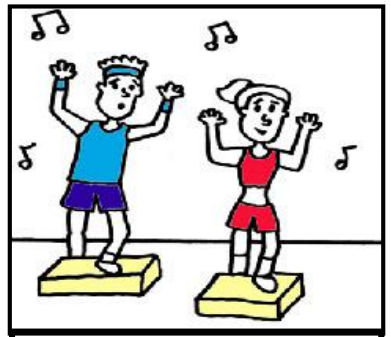


Anyone with auditory processing challenges needs vestibular movement exercises.

We all need vestibular movement and exercise







dancing

gym ball

Ylana Bloom – Softpics images.

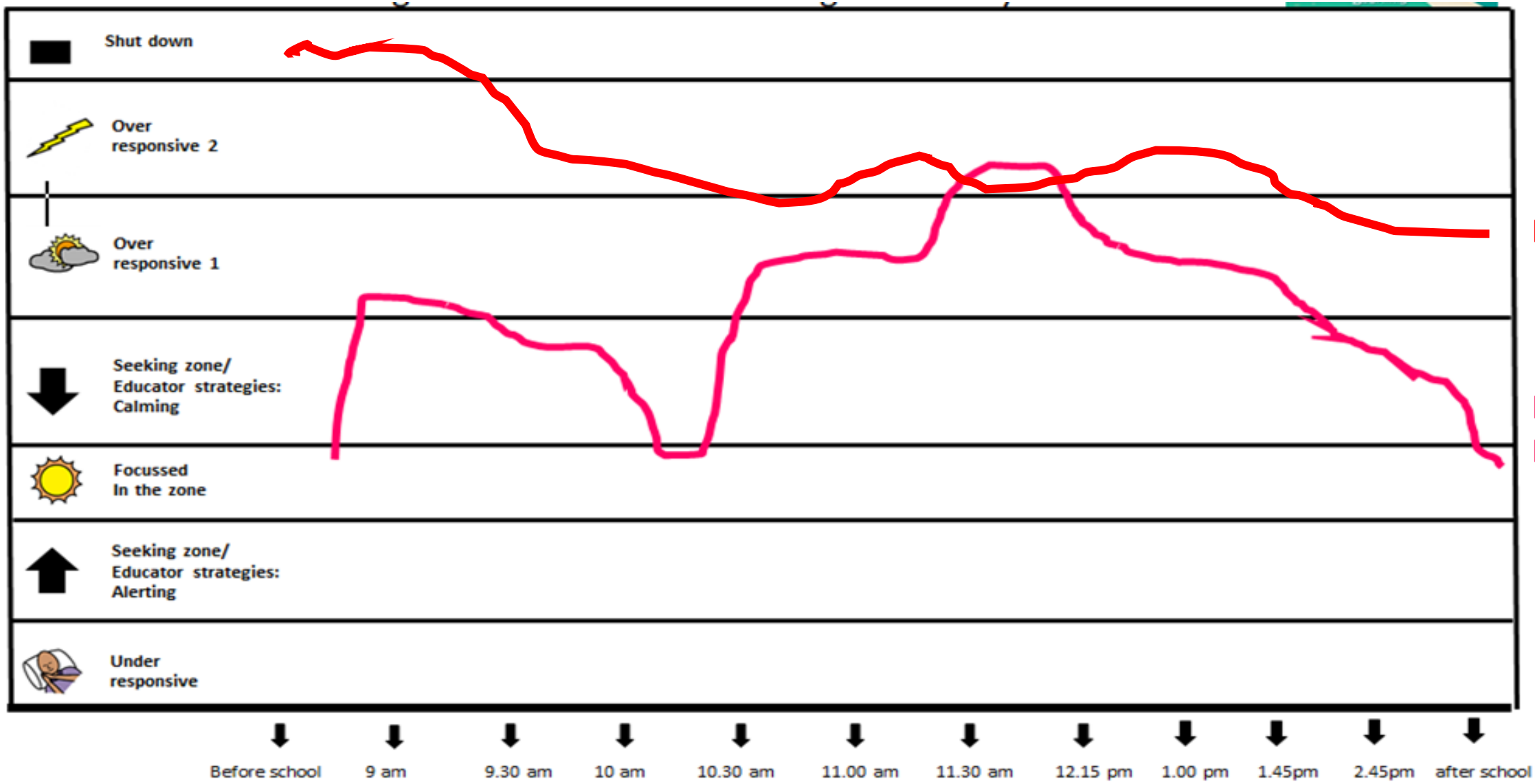
Wheelchair accessible movement options

Every person has a unique brain and individual sensory needs.

The sensory strategies will be useful when you strike a balance between:

- type
- time
- intensity
- frequency
- duration

In The Zone for learning timeline for Matthew 2017



The Communication Passport, Patterns of Learning Protocol (Vita Williams) The Hills School and Ylana Bloom (2009- 2018)
In collaboration with In the zone for learning –Clarke Rd school and Natasha Sansoni (2019)

In The Zone for learning timeline for Matthew 2019

Shut down

Over responsive 2

Over responsive 1

Seeking zone/Educator strategies:
For calming

Focussed
In the zone

THE GOAL:
Calm yet alert, breathing and heart rate are relaxed, feels safe, brain is organised, processing and response time is at it's best. using regulatory tools to stay focussed, appropriately connecting with others, integrating senses to look and listen, resilient, flexible thinking,can negotiate and problem solve to the best of their ability.

Seeking zone/Educator strategies:
For alerting

Under responsive

Before school | 9 am | 9.30 am | 10 am | 10.30 am | 11.00 am | 11.3

Adapted from Dr. Bruce Perry, Dr. Dan Siegal, P&J Wilbarger, Taylor and Trott, Shellenberger & W
Vita Williams and Ylana Bloom (2009- 2018) In collaboration with In the zone for learning

Foundations for learning – brain levels – needs of the students

4 thinking — respect for individual learning style and processing time

3 emotions — felt, connected, supported, nurtured

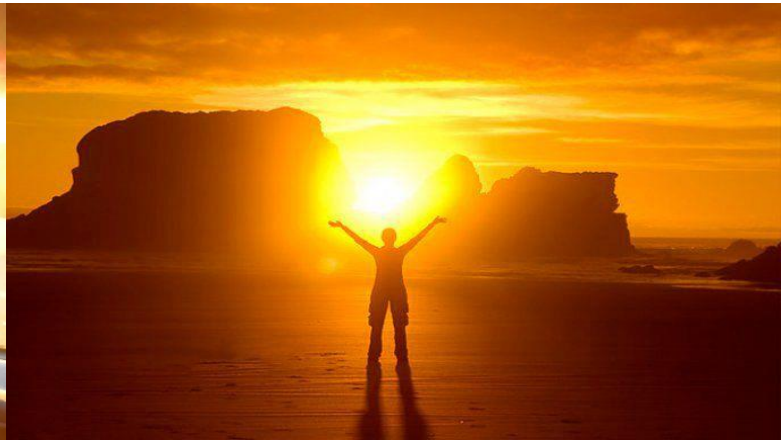
2 movement — rhythmic, repetitive movement

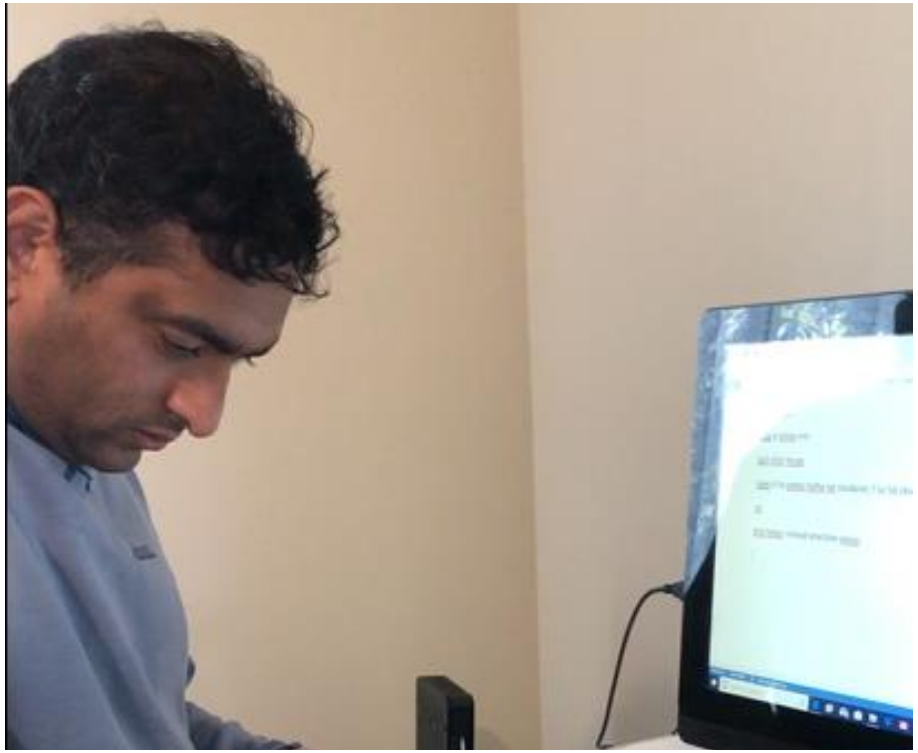
1 safety — seen, soothed, safe, secure
(Dr. Daniel Siegel)

Sid's message:

"Please keep trying. Don't give up on them"

"please, see your student's skills as well as their challenges". June 2019





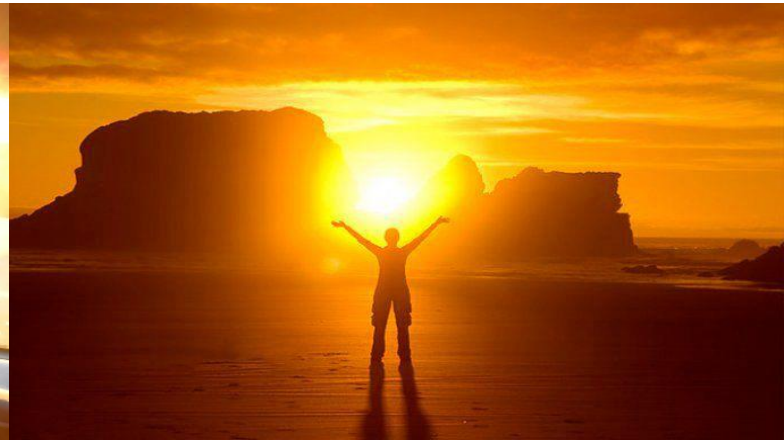
Sid's message:

"Please keep trying. Don't give up on them"

"please, see your student's skills as well as their challenges".

Plan big – start small – what tool or strategy will you try this term?

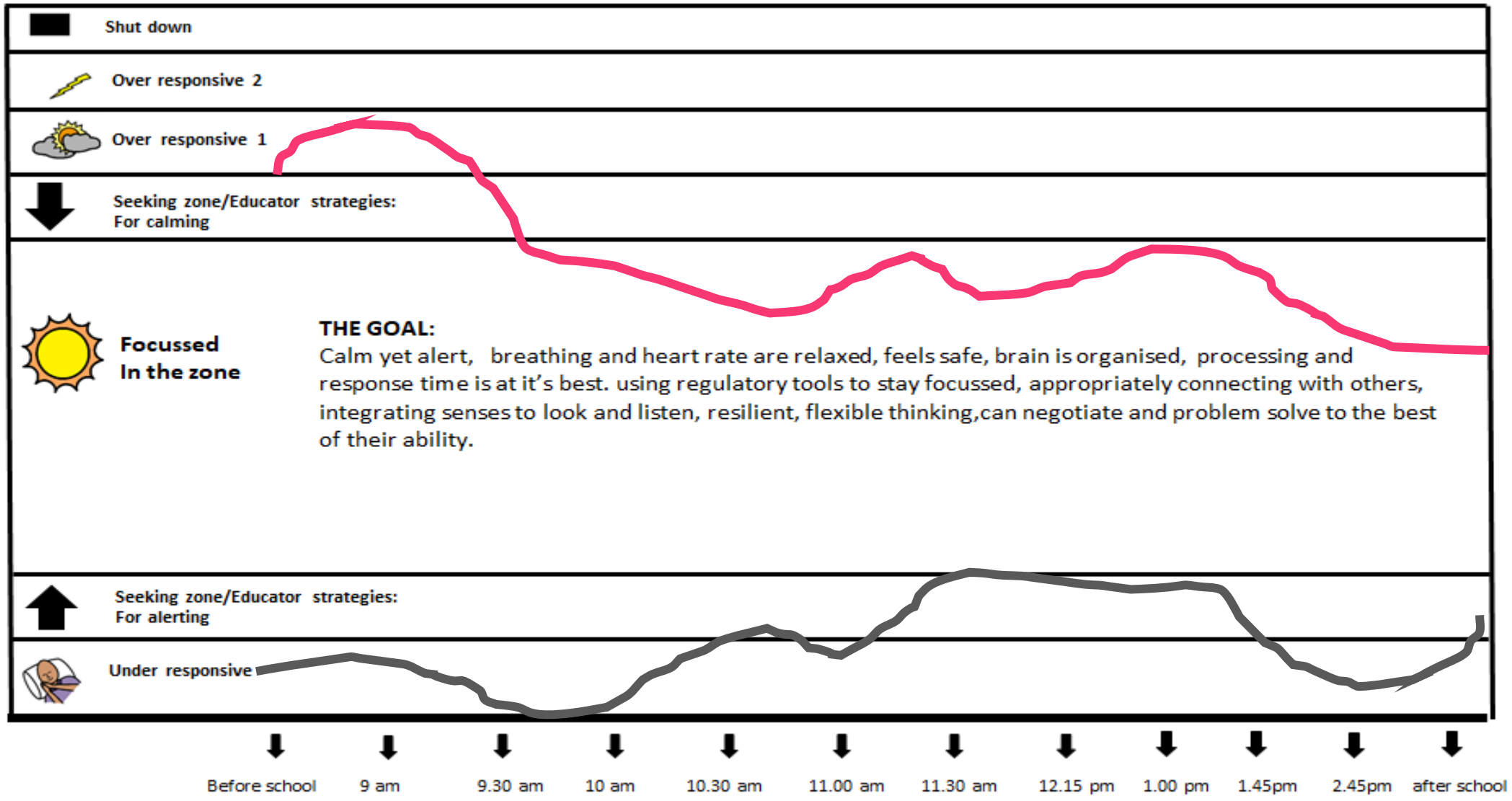
- ❑ look through a sensory lens at your student's behaviours of concern.
- ❑ Flipped lid brain model
- ❑ In The Zone checklist
- ❑ In The Zone timeline graph
- ❑ sensory tools and supports
- ❑ Engineer the environment
- ❑ Visuals and schedules



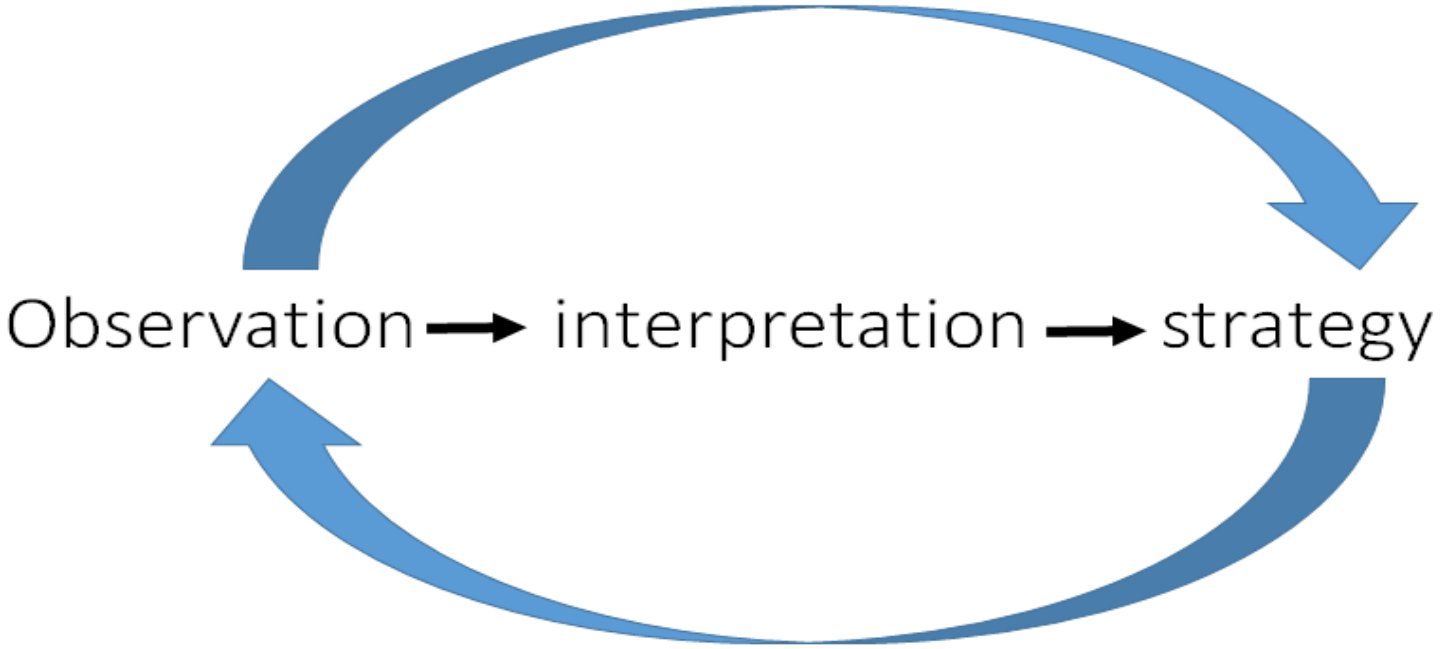
APPENDIX

- Additional information from applying In the zone for learning principles at The Hills School

Calm environment, sensory tools and exercise helps to get In The Zone for learning



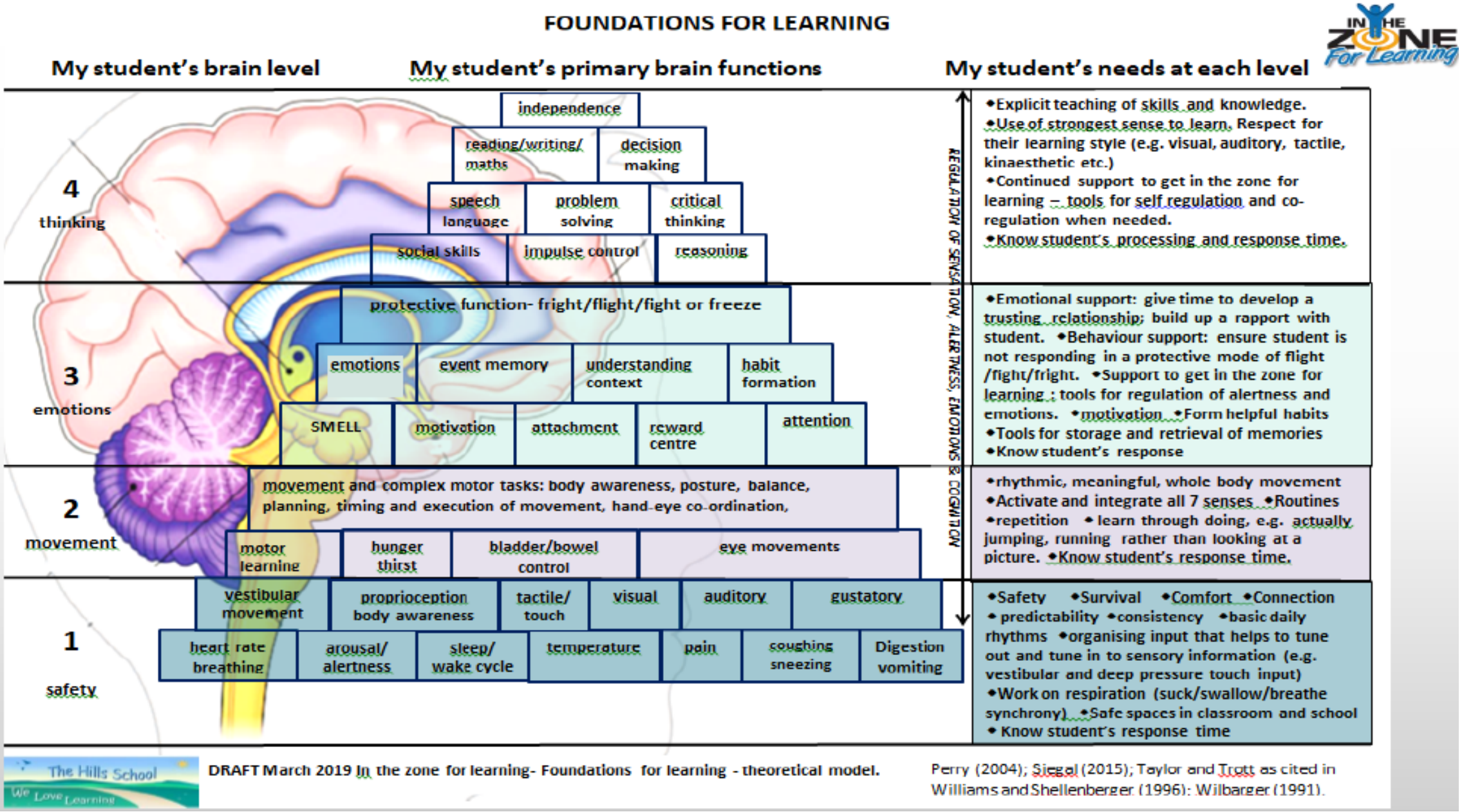
Adapted from Dr. Bruce Perry, Dr. Dan Siegal, P&J Wilbarger, Taylor and Trott, Shellenberger & Williams, Patterns of Learning Protocol -The Hills School: Vita Williams and Ylana Bloom (2009- 2018) In collaboration with In the zone for learning –Clarke Rd School and Natasha Sansoni (2019)



- **Aim to see the student through the lens of lacking skills or emotional challenges or medical complications or sensory processing challenges (rather than wilful disobedience or bad behaviour)**
- **This is not only more accurate and compassionate but also much more productive**

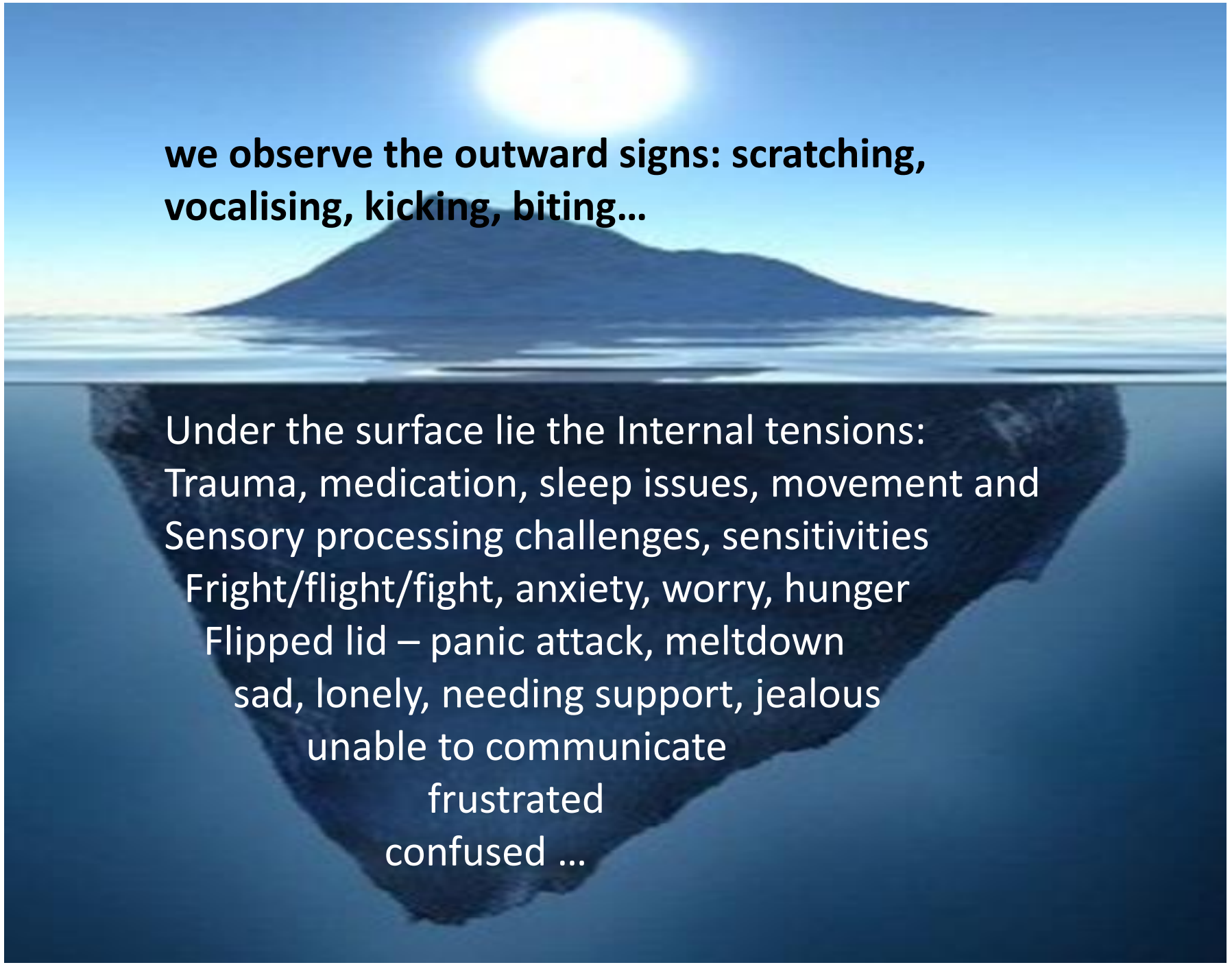
Dr.Ross Greene – Clinical Child Psychologist

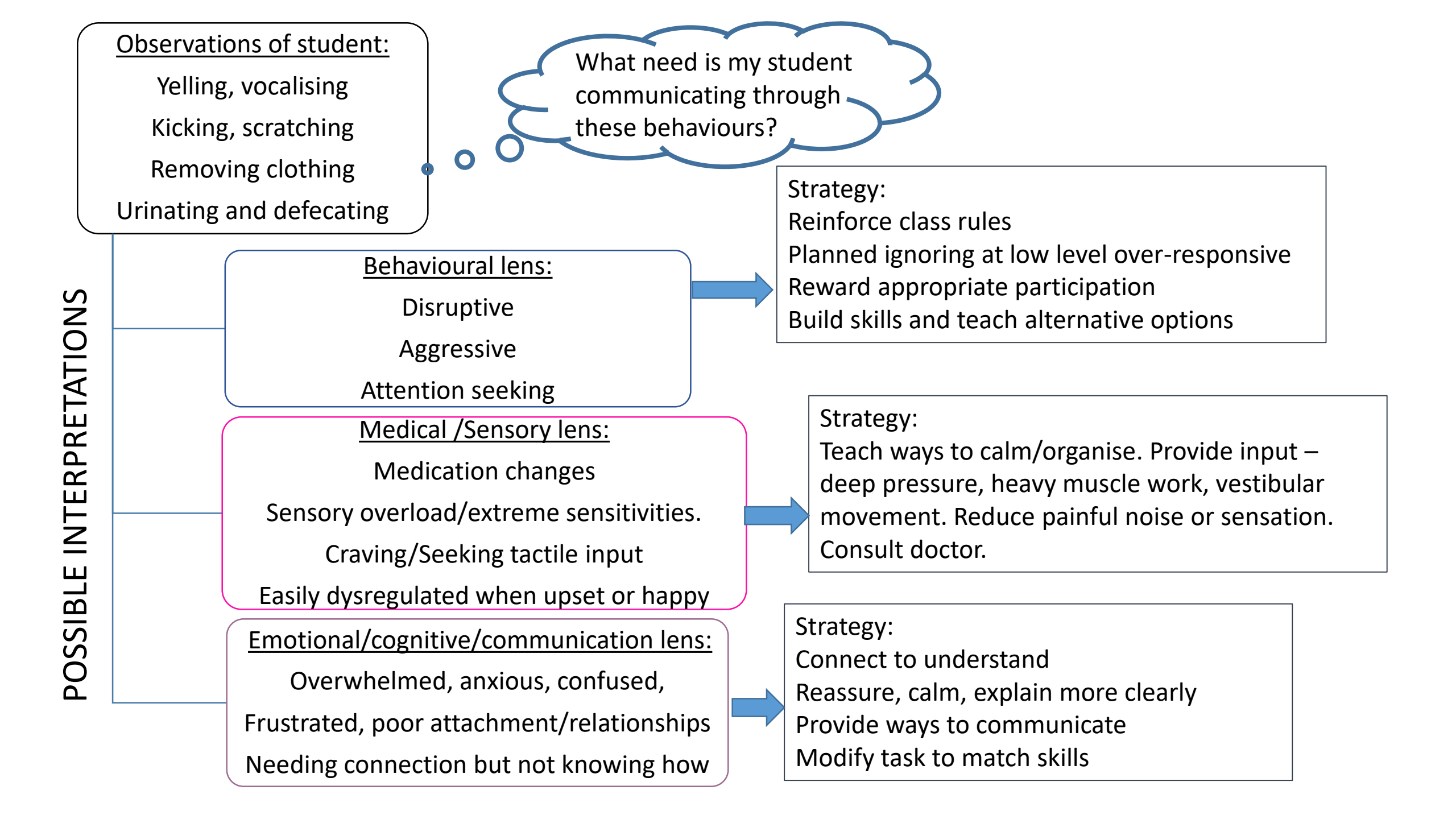
To teach a student we need to understand their brain



Iceberg theory

The observable responses (behaviours) of a student are just the tip of the iceberg.


we observe the outward signs: scratching, vocalising, kicking, biting…
Under the surface lie the Internal tensions:
Trauma, medication, sleep issues, movement and
Sensory processing challenges, sensitivities
Fright/flight/fight, anxiety, worry, hunger
Flipped lid – panic attack, meltdown
sad, lonely, needing support, jealous
unable to communicate
frustrated
confused …

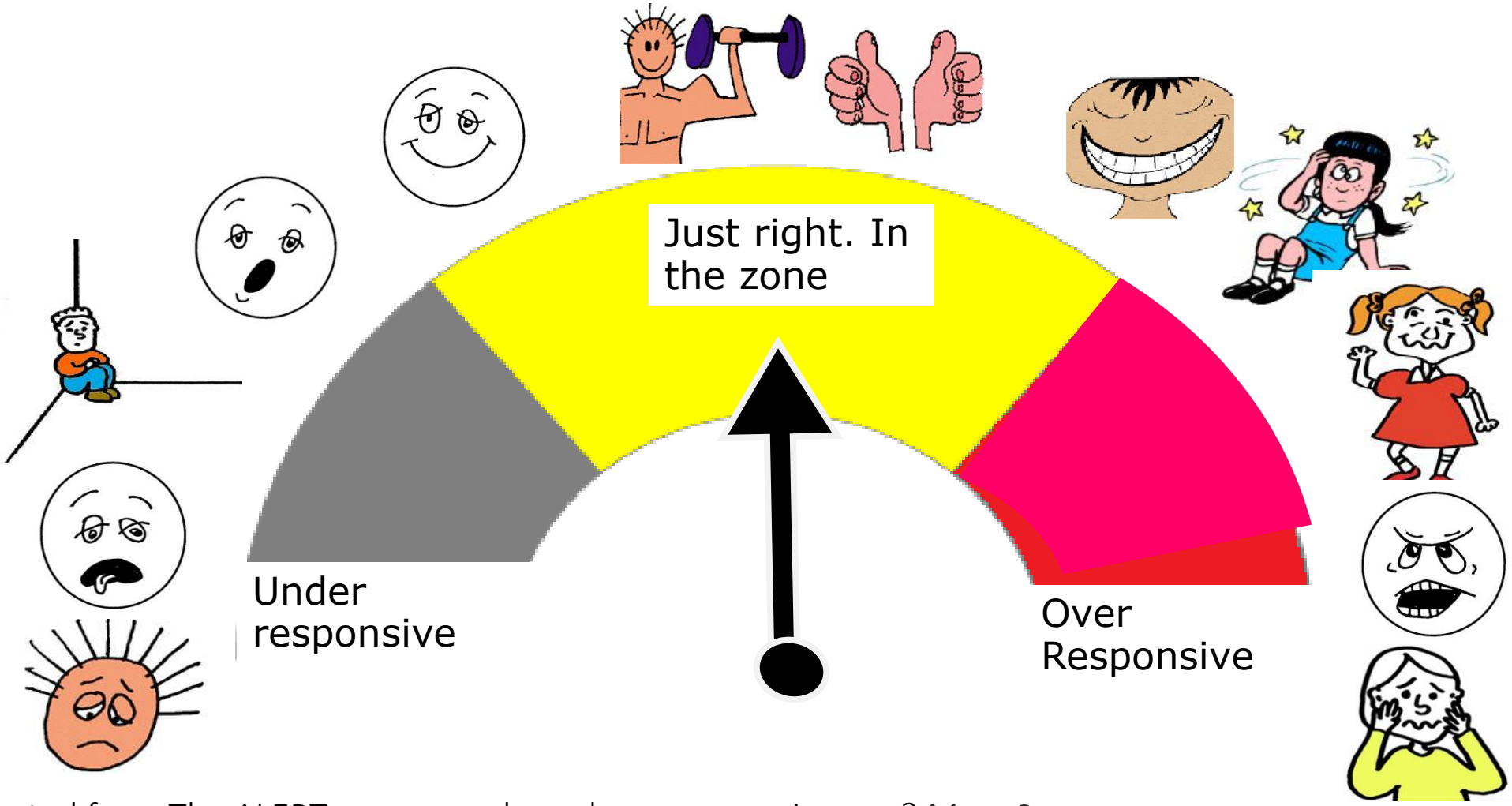

Observations of student:
Yelling, vocalising
Kicking, scratching
Removing clothing
Urinating and defecating
What need is my student communicating through these behaviours?
POSSIBLE INTERPRETATIONS
Behavioural lens:
Disruptive
Aggressive
Attention seeking
Strategy:
Reinforce class rules
Planned ignoring at low level over-responsive
Reward appropriate participation
Build skills and teach alternative options
Medical /Sensory lens:
Medication changes
Sensory overload/extreme sensitivities.
Craving/Seeking tactile input
Easily dysregulated when upset or happy
Strategy:
Teach ways to calm/organise. Provide input – deep pressure, heavy muscle work, vestibular movement. Reduce painful noise or sensation.
Consult doctor.
Emotional/cognitive/communication lens:
Overwhelmed, anxious, confused,
Frustrated, poor attachment/relationships
Needing connection but not knowing how
Strategy:
Connect to understand
Reassure, calm, explain more clearly
Provide ways to communicate
Modify task to match skills

- When calm yet alert (in the zone for learning) your student can learn self –regulation skills

Student response speedometer

too much sensory input → over responsive

too little sensory input → under responsive



Adapted from The ALERT program – how does your engine run? Mary Sue Williams and Sherry Shellenberger

Softpics pictures- Ylana Bloom

Patterns of learning and In the zone for learning – summary

	**Shut down**	Parts of the brain have switched off, shock state, completely overwhelmed, appears unresponsive but different to under responsive state. May comeout of shutdown through over-responsive states.
	**Over responsive 2**	Flight fight fright-freeze Flipped lid, meltdown, Stressed, traumatised, Extremely anxious extremely sensory sensitive and avoiding - defensive angry, aggressive, self harming, destructive feeling unsafe
	**Over responsive 1**	Sensitive Overwhelmed Flipping lid Heightened Dysregulated Flighty Nervous "twitchy" Anxious irritable Vigilant watchful Controlling Robotical Quick to complete task
	**Seeking zone/ Educator strategies: Calming**	Student may be stressed or over-excited and is seeking or craving input for calming – vestibular movement – rhythmic and linear (up and down or forward and back) deep pressure, heavy muscle work Touching, mouthing. Could be seeking sensory input that blocks out painful or unpleasant sensations.
	**Focussed In the zone**	Calm yet alert, brain is organised, processing and response time is at its' best. using regulatory tools to stay focussed, appropriately connecting with others, integrating senses to look and listen, breathing and heart rate are relaxed, feels safe
	**Seeking zone/ Educator strategies: Alerting**	Student may be at time under-responsive and is seeking input for alerting - vestibular movement – spinning , changing directions, lots of stops and starts Seeking visual input or sound or touch input to alert and increase sensory registration.
	**Under responsive**	Slow to register sensory information, slow to respond, May appear lethargic,

Before school | 9 am | 9.30 am | 10 am | 10.30 am | 11.00 am | 11.30 am | 12.15 pm | 1.00 pm | 1.45pm | 2.45pm | after school

Educator strategies and responses

Shut down	Calm environment safety security reduce sensory input - no talking, dim lights, monitor heart rate and breathing
Over responsive 2	Calm environment, remove hazards, safety for all, security, reduce sensory input - no talking, dim lights, Guide to calm down space in class & calming tools Give time to calm down
Over responsive 1	Calm environment, remove hazards, reduce sensory input – calm voice or no talking, Guide to calm down space in class & calming tools Give time and instructions to calm down
Seeking zone/ Educator strategies: Calming	Calming and organising input – just right type, intensity, duration, frequency,
Focussed In the zone	Regulatory tools and motivators to maintain calm yet alert state
Seeking zone/ Educator strategies: Alerting	Alerting and organising input – just right type, intensity, duration, frequency,
Under responsive	Encourage student using expression and energy to utilise alerting and organising input – just right type, intensity, duration, frequency,

PREPARE
PLAN AHEAD

TOOLBOX OF REGULATORY TOOLS

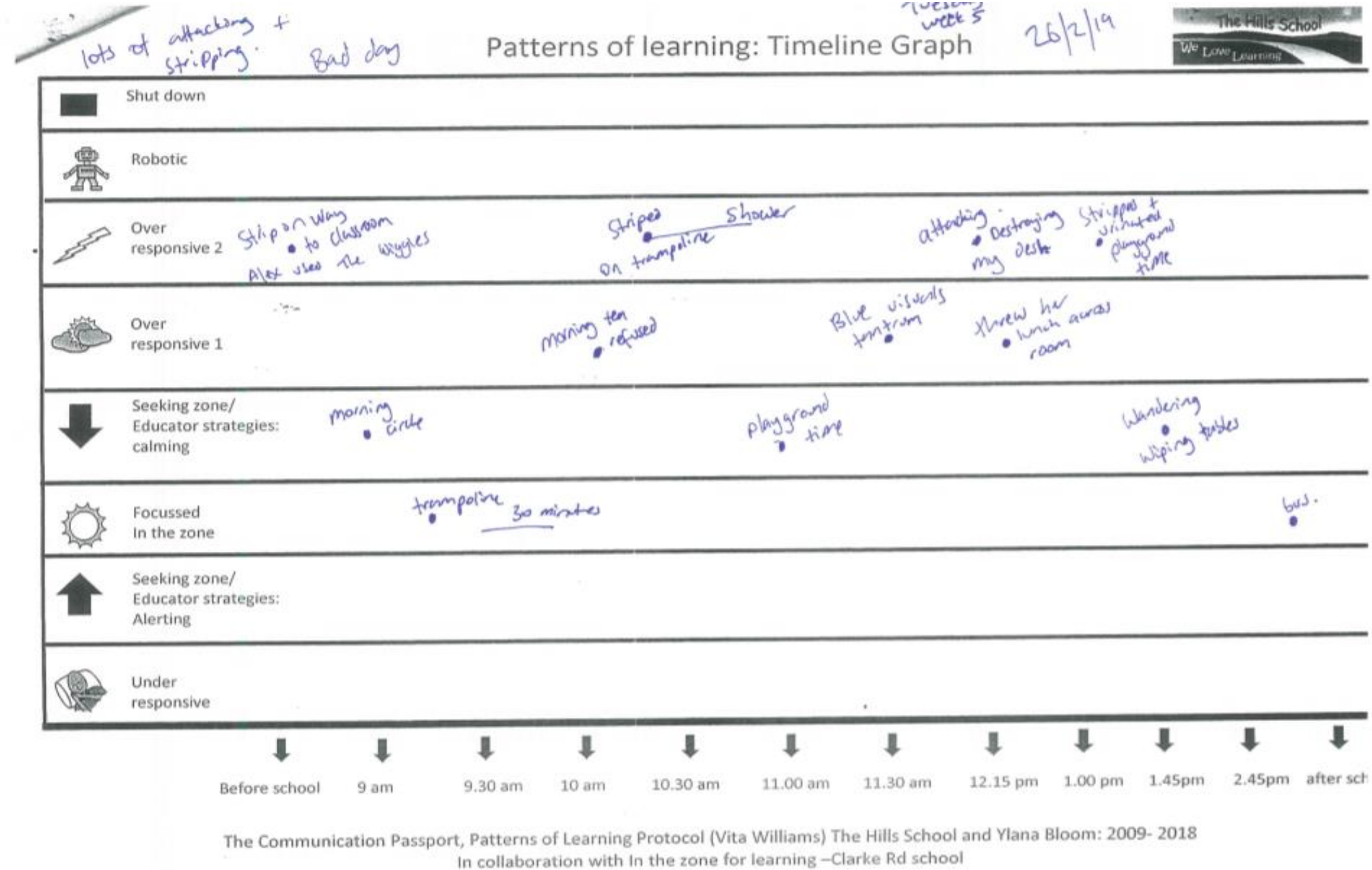
ENGINEER ENVIRONMENT

DIVIDE and CONQUER

MANAGE YOUR OWN RESPONSES AND NEEDS

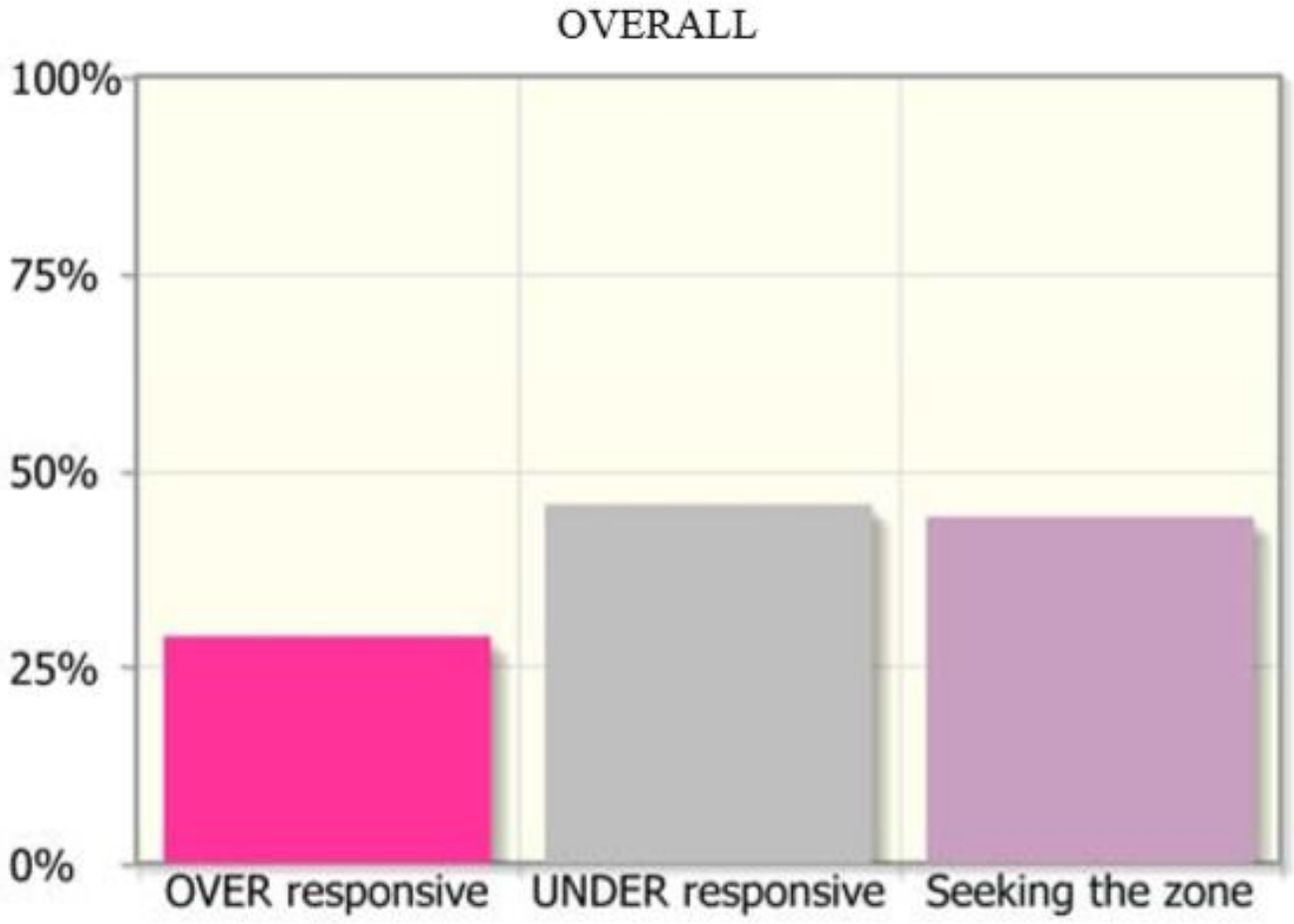
Before school | 9 am | 9.30 am | 10 am | 10.30 am | 11.00 am | 11.30 am | 12.15 pm | 1.00 pm | 1.45pm | 2.45pm | after school

Isla - Heightened state/ over-responsive week 5

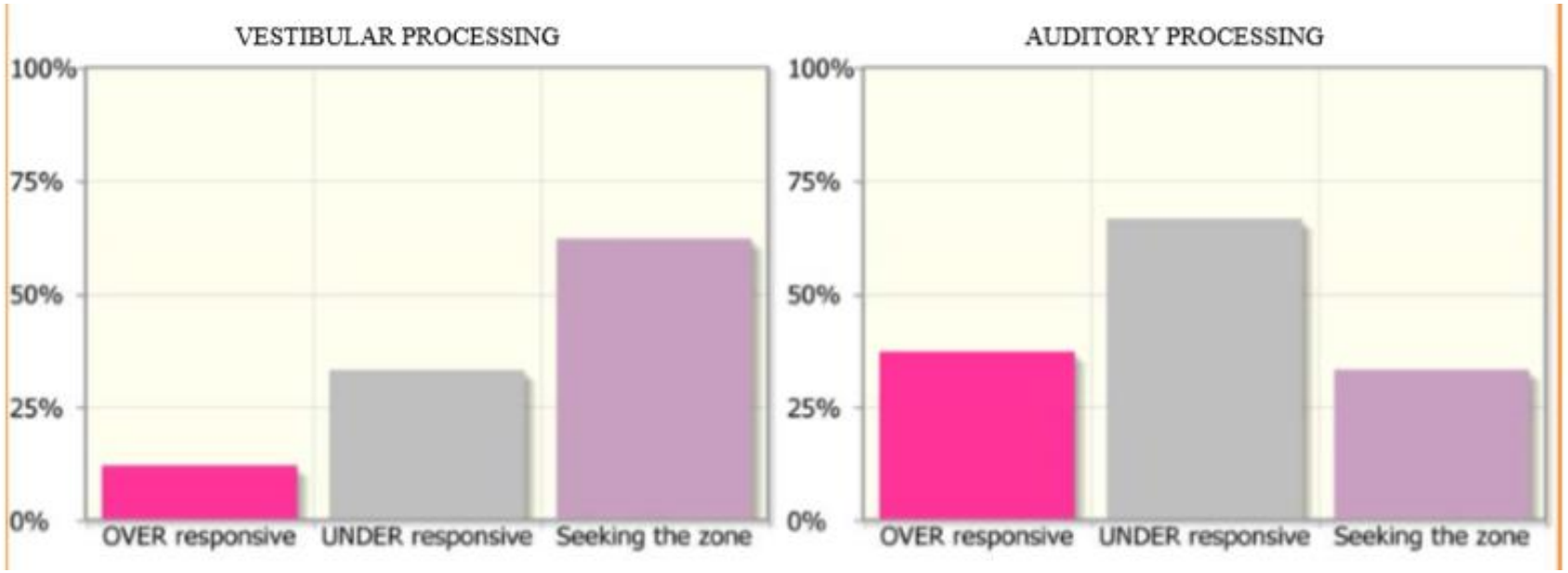


The Communication Passport, Patterns of Learning Protocol (Vita Williams) The Hills School and Ylana Bloom: 2009- 2018
In collaboration with In the zone for learning –Clarke Rd school

Results of In the zone checklist for Isla



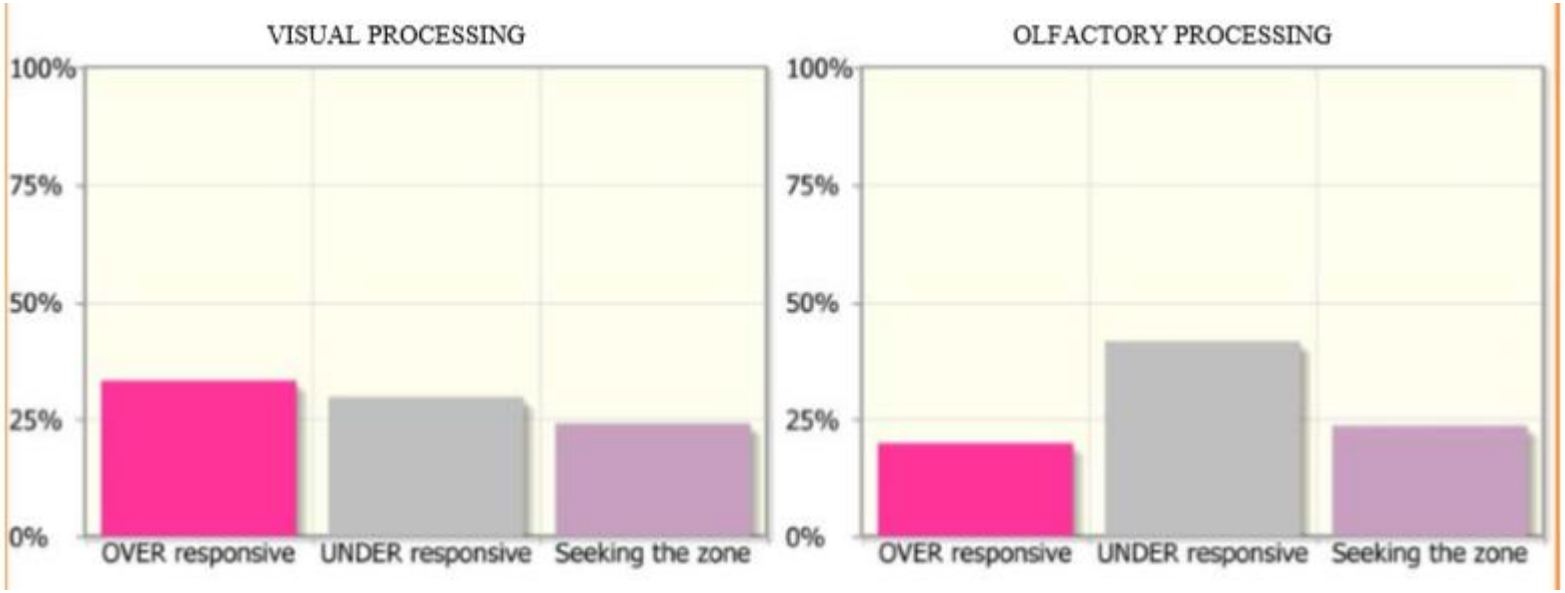
- *Surprising result for someone who is presenting as over-responding most of the time (which is seen clearly in Patterns of learning timeline data)*
- *Need to analyse the individual items and results to understand the student better.*



- Seeking -huge need for vestibular (inner ear) movement. This is very common as the inner ear connects strongly with looking and listening, balance, posture and arousal/alertness.
- The vestibular system tells you where you are in space
- Vestibular movement makes us happy! Releasing happy hormones balances out stress hormones – less likely to get stressed or have meltdowns.
- Over and Under responsive to auditory input.

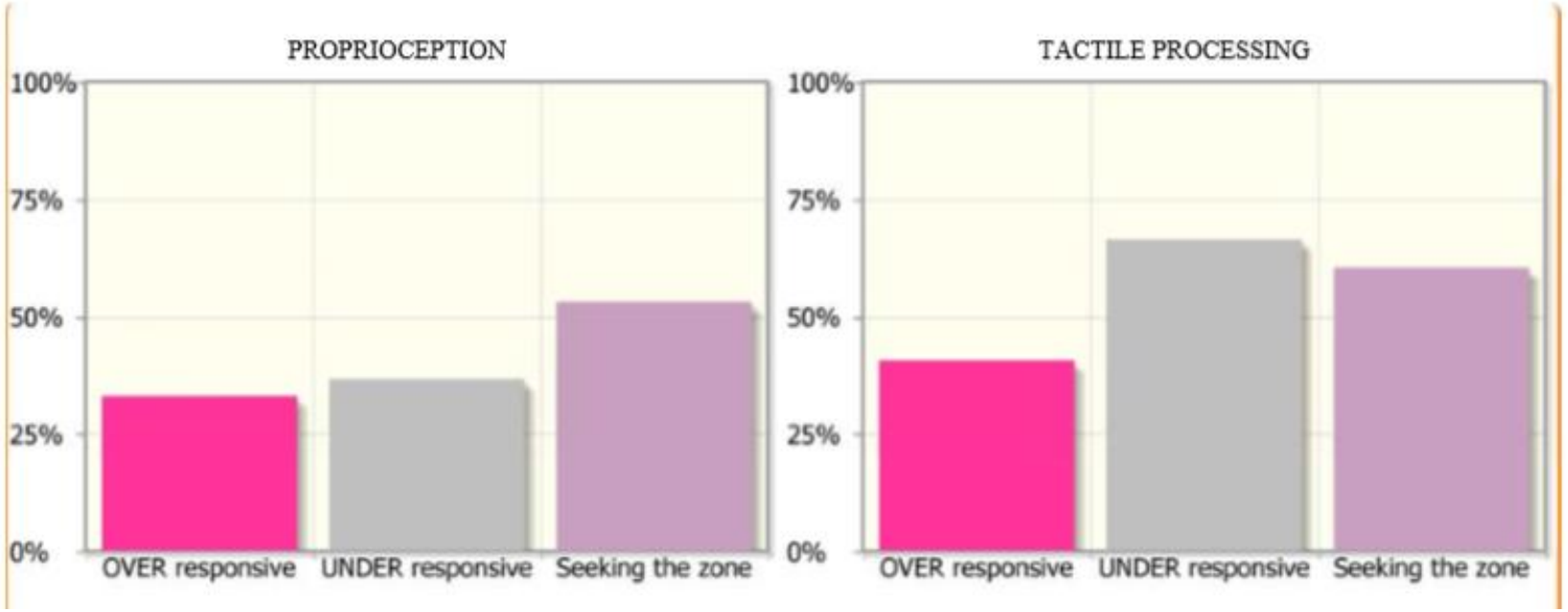
- Under responsive result reflects ***long processing time.***

- Over responsive result reflects sensitivity to sound and being easily over-whelmed.



- Mostly Over-responsive to visual input – vigilant (anxious) about what's going on and who is doing what. Looks from the corner of her eye – maybe to reduce visual input or to fix and focus eye muscles.

- Under-responding in taste and smell processing: doesn't always notice food on face or in mouth.
- Seeking smells
- Can be fussy about food – content of lunchbox very important.



- Proprioception: Under-responsive to body position – ***reflects challenges with planning movement – huge implications for how you teach – needs more modelling, cues, prompts, guidance, time to observe and process, repetition –*** but not too exciting as it dysregulates Isla.
- Tactile processing: Over-responsive to touch – very fussy about clothing, gets heightened with light touch or tickle.
- Seeking deep pressure input and tactile input esp. water.

Brain cells that fire together wire together -Hebbian Theory

- Flipped lid (Dr. Daniel Siegel) – higher order thinking centres shut down. Control is lost.
- Brain goes into survival mode - Flight/ Fight / Freeze response
- left with raw emotions, protective responses, super-human strength (fight response), speed (flight response), rhythmic movement, “base” survival instincts.
- Becomes a habit, it’s all they know
- Need opportunities for brain cells to fire in positive ways and wire into neural networks that are functional, useful, helpful, organised and meaningful for lifelong learning.
- The student must first feel safe, secure, understood, calm yet alert, have basic needs met, have sensory needs met, have someone to trust, rely on and to co-regulate with in order to learn how to self-regulate and keep the lid down

When Isla is starting to reach an over-responsive state –

"FLIP her LID":

Signs:

- Grab staff
- Try to remove visuals or throw items
- Go to remove her clothes

Act quickly – re-direct, calm her, move to quiet space, distract, sing a song, connect to support, show visual of bathroom or change clothes when about to remove clothes.

If Lid has flipped then:

- She has “lost control”
- Is unable to use critical thinking
- Is unable to problem solve
- Is unable to be reasoned with
- Is Over-whelmed
- In flight/fight/fright-freeze
- Emotional dysregulation
- May lose control of posture and movements
- May revert to known, habits that are wired over time such as removing clothes, scratching, smearing etc.

If Isla has reached over-responsive 2 – totally flipped her lid

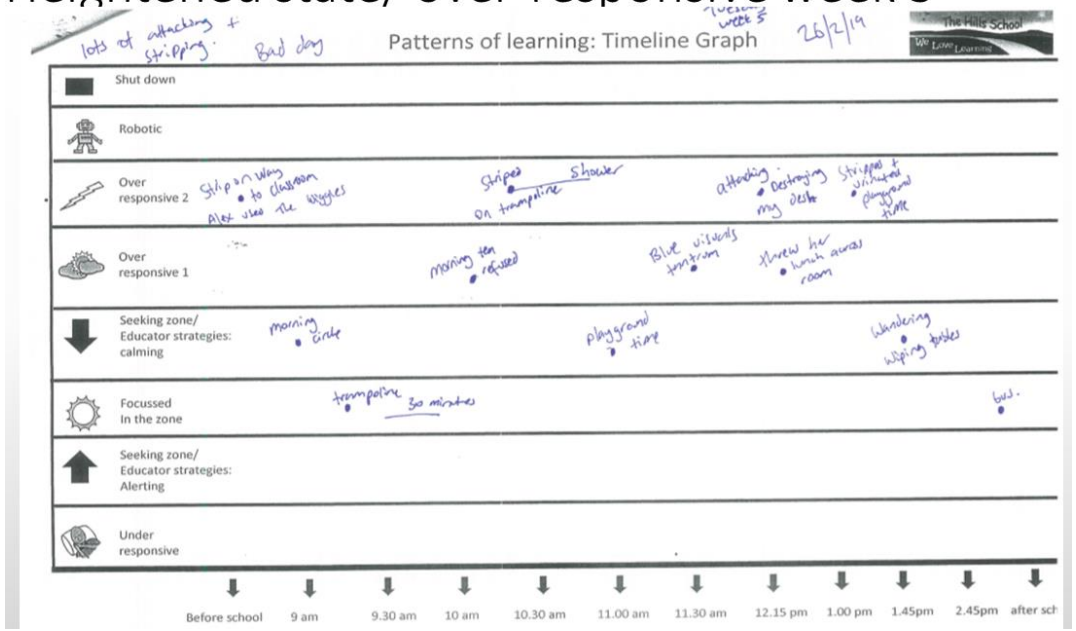
Staff response:

- Isla needs safety, security, calming, regulating breath and sensory processing
- Time to process – slow down, reduce input, lie down in canoe(bean bag/peapod) with blanket (deep pressure tactile input).
- Give her time to calm down.
- Use calming tools that help Isla feel safe and calm to reassure and reconnect. Help her to organize her brain and body again. E.g. calming movement, singing (with hand actions), reassuring touch (on own terms), reduce sound and visual input

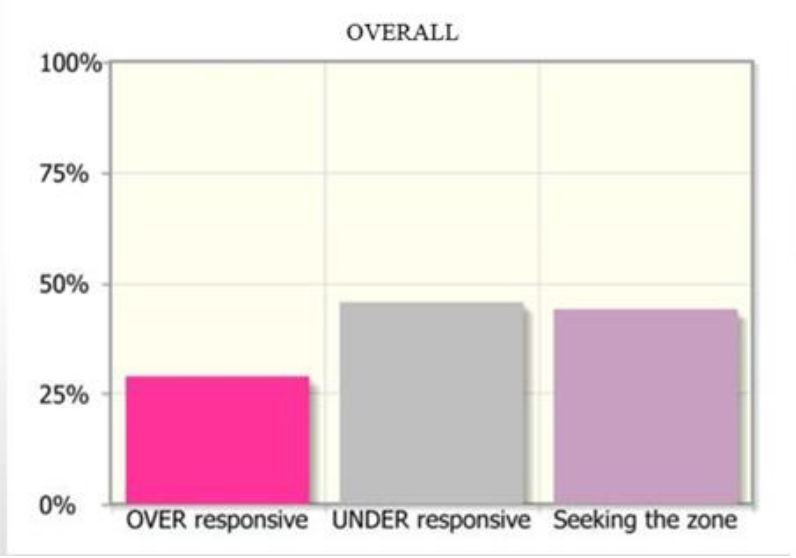
Implications for IEP and teaching methods

- ❑ Factors you can control
- ❑ Factors for which you can prepare
- ❑ Factors that you cannot control

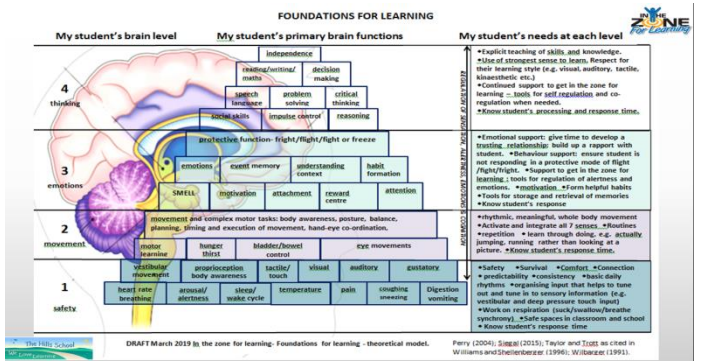
Heightened state/ over-responsive week 5



Results of In the zone checklist



Factors you can control



- School, home and support services work as a team.

- Attitude and expectations e.g. Isla needs to feel safe and secure before I can teach her anything.

e.g. Expect some tantrums and meltdowns – these are developmentally expected for her stage. BUT let's try to reduce severity and frequency.

e.g. Wearing the school uniform is now optional as it is causing a lot of issues.

- Engineer environment – calming spaces, alerting spaces, meeting sensory and emotional needs. "lie down zone" – has been very successful. Isla needed explicit teaching on how to use this space.

Factors for which you can prepare:

- Plan timetable to meet sensory seeking needs – water based activities, vestibular movement and exercise

- Accommodate for processing time and poor motor planning/praxis – go slow, model, guide, teach explicit skills:

-e.g.1 how to hug when needing connection instead of scratching (with permission from parents).

-e.g. 2 how to use “lie down” space for calming and preventing meltdowns

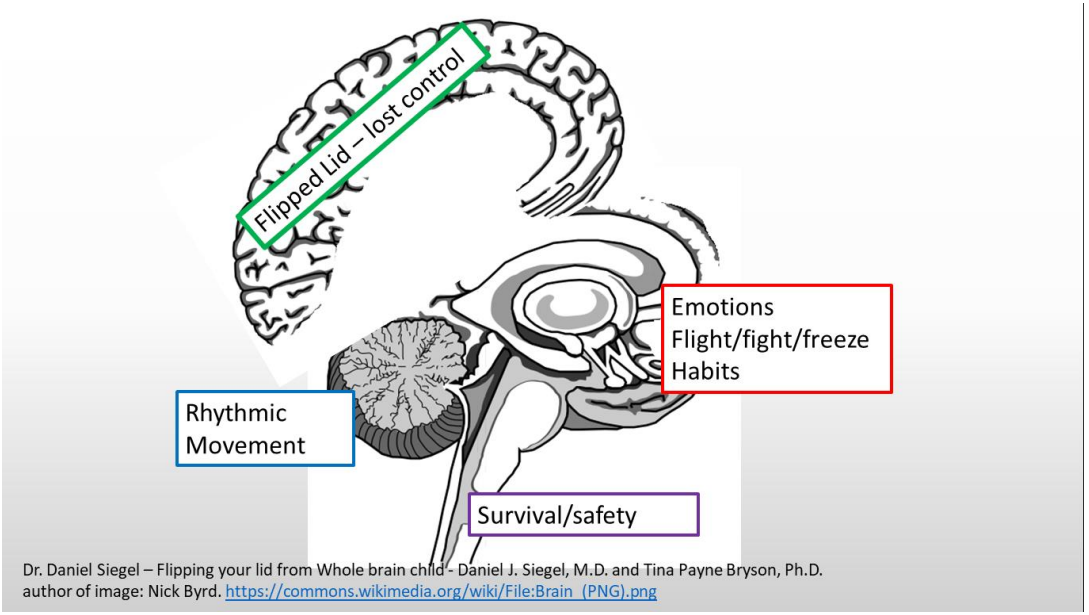
- Develop a mode of communication – quiet, controlled, key words, not too animated as this can send Isla into an over-responsive state.
- Use visuals – “bathroom” or “change clothes” the moment Isla looked like she would remove her clothing.

Factors for which you can prepare continued

- Request certain items in the lunchbox
- Staff or routine changes
- Staff and student dynamics
- Dynamics between students
- Favourite activities vs non-preferred activity
- “rewards” and positive consequences
- Other

Factors that you cannot control

- Not liking content of lunchbox or reaction to planned timetable
- Accidental/incidental interaction with other students
- Weather
- Poor sleep
- Sickness or bowel issues
- Transport issues
- General mood



Dr. Daniel Siegel – Flipping your lid from Whole brain child - Daniel J. Siegel, M.D. and Tina Payne Bryson, Ph.D.
author of image: Nick Byrd. https://commons.wikimedia.org/wiki/File:Brain_(PNG).png

BE READY WITH A PLAN OF ACTION

WHEN THESE OCCUR – TO **CLOSE THE LID – know what is calming centring and organising**

Thanks for all your amazing work

You can reach us at The Hills School or Clarke Road School for support or further information.