# FOUNDATIONS FOR LEARNING

A framework for special educators supporting students with complex learning needs

## MY STUDENT'S PRIMARY BRAIN AND BODY FUNCTIONS

## WAYS TO SUPPORT MY STUDENT

ENDORPHINS, SEROTONIN, DOPAMINE, OXYTOCIN, MELATONIN & GABA

SENSORY PROCESSING. REGULATION OF ALERTNESS & BEHAVIOURAL RESPONSES

### 4 THINKING

- in the zone for learning
- self awareness • independence • daily living skills
- academic learning • executive function • attention
- critical thinking • decision making • reasoning • problem solving
- impulse control • short term/working memory • social skills
- speech/language • imagination/creative thinking
- sensory information influences higher order processes

- Explicit teaching to enhance academic, leisure and daily living skills.
- Individualised tools for learning based on strengths and learning styles e.g. visual, tactile, kinaesthetic, auditory.
- Continued support to get in the zone for learning with tools for self regulation and co-regulation when needed.
- Careful planning of the environment, activity and interaction for learning, managing stress and building resilience.
- Allow for processing and response time to think and learn.

### 3 FEELING

- emotions/brain chemistry
- secure attachment to build relationships
- emotional memory and long-term memory processing
- understanding context • motivation • reward pathway • habit formation
- trigger protective fear/stress response of fright/flight/fight
- sensory information influences emotional and behavioural responses

- Daily routines full of meaningful interactions to connect with others.
- Emotional support to build a secure sense of self.
- Co-regulate to get in the zone for learning - to be calm and alert.
- Support to regulate and control behavioural responses of fright/flight/fight and develop coping/calming strategies.
- Support to develop helpful habits and establish strong motivators.
- Considered use of sensory input to influence mood and emotions e.g. smell, touch, movement.
- Visual and other multi-sensory tools for memory storage and retrieval.
- Provide processing and response time with patience and empathy.

### 2 MOVING

- sensory information used for motor action
- coordination of breathing with other actions • reflex integration/maturity
- muscle tone • body awareness and coordination
- bilateral awareness and control • postural control and balance
- fine and gross motor skills • hand-eye coordination
- motor learning and motor memory • refinement of planning, timing, sequencing and executing motor tasks with feedback

- Rhythmic, meaningful, whole body movement.
- Coordination of breathing with vocalising and other mouth and body movements.
- Develop self/co-regulation strategies through movement.
- Enhance learning through all the senses by actively participating.
- Practice and refine motor skills in meaningful and motivating routines.
- Develop strength, endurance, stability and flexibility.
- Facilitate mirroring, imitation and copying skills.
- Accommodate for processing and response time to learn by moving.

### 1 SURVIVING

- detecting and tuning into movement, body position, touch, taste, smell, sound and visual sensory information
- interoception • hunger • thirst
- bladder/bowel control • digestion/vomiting
- sleep-wake cycle • arousal/alertness
- temperature • heart rate • breathing • pain
- coughing and sneezing • hormone and chemical balance

- Support to feel safe, protected, secure and comforted.
- Support to regulate from a fear/stress response of fright/flight/fight.
- Safe spaces in classroom and school to calm down and regulate.
- Calming, soothing and joyful sensory experiences.
- Ways to make sense of their world and learn through all the senses.
- Predictability and consistency in routines and interactions.
- Tools to assist calm breathing. • Daily rhythms for rest - digest.
- Support for smooth digestion/elimination.
- Support to tune into bladder/bowel needs.
- Allow for processing and response time by simplifying and slowing down.

A calm, healthy and nurtured "surviving, moving and feeling brain" leads to a "thinking brain"

Foundations for learning framework - by Bloom, Y & Sansoni, N (2020) derived from Arwood, E.L. (2007) Perry, B.D (2009); Siegel, D.J & Bryson, T (2020); Wallis, N (2017); Taylor & Trott (1991) as cited in Williams & Shellenberger (1996); Wilbarger, P (1991)