

Combining Sensory Strategies
to Teach emotional regulation

PRESENTED BY NICKY BANK, CHILD DEVELOPMENT SERVICE, HVDHB & KELVIN MAXWELL, MINISTRY
OF EDUCATION

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Whakataukī

I orea te tuatara ka puta ki
waho

A problem is solved by continuing to find solutions

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Purpose

- ▶ Self regulation and Sensory concepts
- ▶ To identify how teaching self regulation skills can support ākongā
- ▶ Presenters Experience- successes and challenges

I orea te tuatara ka puta ki waho A problem is solved by continuing to find solutions

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Who are we?

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Context

Emotional Regulation Pilot Project

- ▶ Trialled in 2 school in Wellington region
- ▶ School wide approach
- ▶ Jointly funded by MoE and MoH
- ▶ Focus on Wellbeing and self-regulation. Alert program used

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NZ Context

- ▶ Childhood has changed
- ▶ Current "Life Stressors" Social Media, Climate change, Covid-19
- ▶ Digital hyper-connectivity- digital world vs real world
- ▶ Screen time +ve correlation with inattention in pre-schoolers
- ▶ Instant gratification, not tolerating boredom
- ▶ Less connected communities

- ▶ NZ Stats related to DV, Bullying, Suicide

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What are we seeing?

- ▶ Anxiety
- ▶ Focus and motivation
- ▶ Challenging behaviour
- ▶ Emotionally based school avoidance
- ▶ Kids opting out
- ▶ Increased exclusions

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What is Self-Regulation?

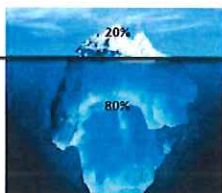
- ▶ Self-regulation is the ability to attain, maintain and change arousal/alert appropriately for a task or situation.
- ▶ Arousal/Alertness is the state of our nervous system, describing how one feels.
- ▶ Self regulation is ultimately the ability to control our thoughts, emotions and behaviour.

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Consciously-we *feel* a sensation and are behaviorally motivated to regain the internal balance

This is self-regulation



Unconsciously-automatic messages sent from our brain to regulate the body

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Why is self regulation so important ?

<p>GOOD</p> <ul style="list-style-type: none"> Steady relationships Good health Higher incomes Higher levels of education Higher levels of subjective wellbeing 	<p>POOR</p> <ul style="list-style-type: none"> Substance misuse Difficulty in relationships Lower incomes Higher risk of offending Poorer health outcomes Lower levels of subjective wellbeing
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Good News !!

Self regulation can be taught.....

- ▶ For those where SR does not occur naturally evidence shows that it is beneficial to teach these skills early.

It may be hard to teach...

- ▶ Even small improvements in ability to self regulate can have lasting impact on outcomes later in life.



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Benefits of Teaching Self Regulation

- ▶ Teaches how to regulate and alter arousal state
- ▶ Helps children recognise and expand their strategies
- ▶ Provides a framework (vocabulary, activities etc.)
- ▶ Helps with understanding- behavior reframed- reflects child's level of neural organization and their attempts to regulate

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Development of Self Regulation

- ▶ **Sensory based** – relies on neurological connections in brain
- ▶ Infants – reliant on caregiver to assist their regulation
- ▶ 3 year old – may be able to share a toy when the caregiver/parent is present but finds it hard when they are away
- ▶ 4 year old – more able to understand and manage their emotions, slow down their behavior and focus attention on task.
- ▶ Adults- self talk, develop own strategies

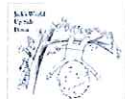
"children learn to regulate thoughts, feelings, behaviors and emotions by watching and responding to adults' self-regulation."

Source: Florez, L.R. (2011) Developing Young Children's Self-Regulation through Everyday Experiences.

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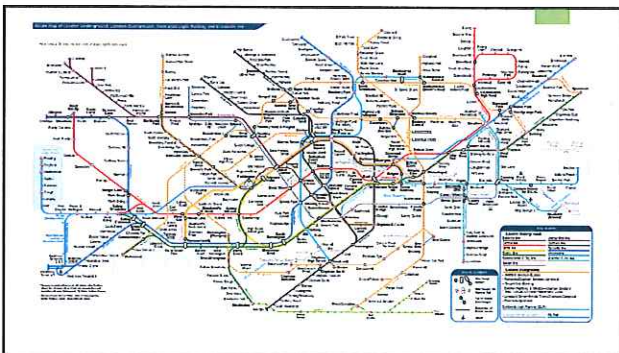
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Our senses give us information about the physical conditions of our body and the environment around us.



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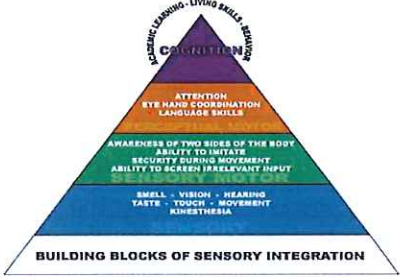
Sensory Processing/integration

- Registration
- Classification
- Memory
- Adaptation
- Response



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BUILDING BLOCKS OF SENSORY INTEGRATION

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The Sensory Systems

The Sensory Gang

The External Senses	The Internal Senses
    	  

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Hidden Sensory systems

The diagram illustrates how hidden sensory systems (like the vestibular system, proprioception, and tactile senses) influence behavior. It shows anatomical diagrams of the ear, mouth, and spine, with arrows pointing to images of a child with a bee on their back, a child with a dog, and a child with a hand on their head.

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Sensory Integration

► Sensory Integration is the organisation of sensation for use.

The diagram shows a child's head with arrows pointing to various sensory inputs: Hearing, Sight, Taste, Touch, Smell, Vestibular, and Proprioception. The child is also shown with a flower on their head.

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Alert/Arousal Level

- Alertness refers to our nervous systems activity level. It effects our ability to pay attention and engage in activities
- Different sensations effect our level of alertness
- Affected by other factors- e.g. Trauma, Attachment, Neuro Diversity

The graph shows Alertness level over time. A dashed line represents the level, and a solid line represents the level with a stimulus. The graph shows that alertness fluctuates over time and is affected by stimuli.

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Examples of Self regulation and Sensory Strategies/Programs

- ▶ Brain/Body Breaks
- ▶ Mindfulness/Meditation/Yoga
- ▶ Zones of Regulation <https://www.zonesofregulation.com/>
- ▶ Alert <https://www.alerttootam.com/>

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Lessons from our experience

- ▶ Education for staff: sensory processing, self regulation, behavioural theory
- ▶ Info dissemination and team commitment- how will this work, how to build consistency across classrooms
- ▶ Resourcing e.g. Classroom friendly sensory tools
- ▶ Teaching concepts to students- takes time, not one off, 'novelty' factor
- ▶ On-going support for teachers
- ▶ Sustainability and generalisation
- ▶ Caregiver involvement
- ▶ Sensory tool vs sensory toy language
- ▶ Any thing new must be 'braided' as part of what you normally do
- ▶ Co-designing a pilot

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PB4L Context?

- ▶ Creating a supportive learning environment
- ▶ Establishing and explicitly teaching routines
- ▶ Using Preventative strategies
- ▶ Providing feedback and encouragement
- ▶ Encouraging Reflective thought and action
- ▶ Developing self-regulated behaviours and strategies

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Summary

- ▶ Self regulation- complex process- but can be learned
- ▶ Levels of alertness vary throughout the day and are impacted by sensory experiences.
- ▶ We can modify our own alert levels using sensory strategies.
- ▶ As we get older, we develop awareness of our alert levels and the need for self regulation.
- ▶ Children can learn to modify their alert level. They need to have these skills taught.
- ▶ Assistance can be provided by: modifying a child's environment, teaching them to identify their alert level and emotions; teaching strategies to modify alert levels.

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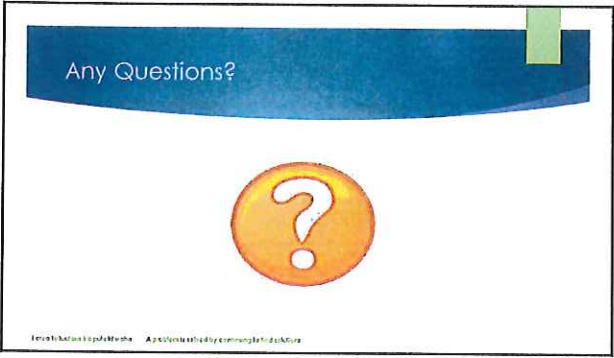
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Further Reading

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- ▶ Martinelli, B., Cramm, H., Egan, M., & Sikora, L. (2014). Scoping review of self-regulation: What are occupational therapists talking about? *American Journal of Occupational Therapy, 70*, 200s21001Ep1-15.
- ▶ Williams, S.W., & Shellenbarger, S. (2012). *How Does your engine Run? A Leader's Guide to the Alert Program for Self-Regulation*. Therapy works Inc. Albuquerque.
- ▶ **Dutied in Study:**
 - ▶ Childhood self-control forecasts the pace of maturing and preparedness for old age (2021). *Psychoneurology*. L3 & Caspi, A. et al. <https://pubmed.ncbi.nlm.nih.gov/33277629/>
 - ▶ Children with more self-control turn into healthier and wealthier adults (2011). Moffitt, T. & Caspi, A. <https://doi.org/10.1016/j.jrta.2011.05.005>

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Move	Mouth	Look	Touch	Listen
Stretch 	Deep Breathe 	Looking Toys 	Hug 	Quiet 
Push/pull 	 Slow Breathe/Blow	Read/look at book 	Something for your hands 	Music 
Run/Walk/Jump 	 Crunchy food	watch something 	Stretch/squeeze 	Silence 
Kapahaka 	Chewy food 	Bright Light or Colour 	Weighted toy/cushion 	Being read to 
Rock 	Drink 	Dim Light or soft colour 	fidget toys 	Nature sounds 
Rest/break 	Karakia 	Drawing 	Soft/Smooth 	 Background noise
Use your Muscles/ heavy work 	sweet, sour, spicy 	Less distraction 	Fresh Air/Breeze 	 Loud

Regulating Alert Levels using Sensory Adaptions

Modifications within the sensory environment of the classroom or home can help in managing alert levels in some children. These techniques are individual to each child but commonly fall within the following categories.

SENSE	CALMING	ALERTING
Vestibular (Movement)	Regular, rhythmical, slow Up and down and front to back movements e.g. bouncing on therapy ball or trampoline, rocking chair, swing, wobble cushion, skipping with rope	Fast, irregular and non-rhythmical movements Circular and rotatory movements e.g. Dance, playing tag, movement breaks, sports games, chasing games
Proprioception (body awareness)	"Heavy Work" meaning input to muscles, tendons and joints. Proprioceptive activities are very 'grounding' and can help us feel 'just right'. They are helpful for both calming and alerting. e.g. Wheel barrow walking, monkey bars, climbing frames, pulling and pushing furniture, carrying heavy objects, tug-o-war, digging in sand/garden, yoga poses, stretching, cleaning the whiteboard, isometric exercises (e.g. chair push ups), squeezing putty/playdough	
Oral – taste and chewing, breathing	Sucking e.g. hard sweets, thick liquids through a straw (e.g. milkshake) Crunchy and chewy foods e.g. pop corn, chewing gum, cut up hard vegetables Blowing bubbles, deep breathing Drink- especially warm Chewy toys e.g. silicon pendant necklace, rubber stopper on pencil	Sour, salty, spicy or bitter tastes Very hot or very cold foods Carbonated drinks Drink of water Crunchy and chewy foods e.g. pop corn, chewing gum, Mixed or wet textures, e.g. Stew Unfamiliar foods or textures
Vision	Soft, consistent lighting Minimal distracting objects Natural lighting Pastel colours Sparsely decorated rooms Organised spaces Familiar environments	Variations in colour/light e.g. flashing light Fluorescent lighting Artificial lighting Bright colours Cluttered rooms
Touch / Tactile	Fidgeting e.g. koosh ball, putty, pop-its Soft or smooth textures e.g. teddy bear, stroking a pouf Deep pressure touch e.g. massage Hugs, massage, weighted blankets/toys Warm e.g. bath or wrapping up in a blanket Playing with resistive equipment such as play dough or clay Petting an animal e.g. dog or cat Tight clothes	Light touch such as tickling, light back scratch, Unexpected touch Messy play e.g. glue, paint, mud, splashing water Sticky, rough, hard textures Fresh air/breeze/Wind on skin Cold Baggy clothes. Labels in clothes Rough textures Hair and nail cutting
Hearing	Consistency in noise levels Quiet calm and well paced voices Consistent rhythms	Variations in noise levels or rhythms Erratic, loud or screaming voices Sudden unexpected noises

