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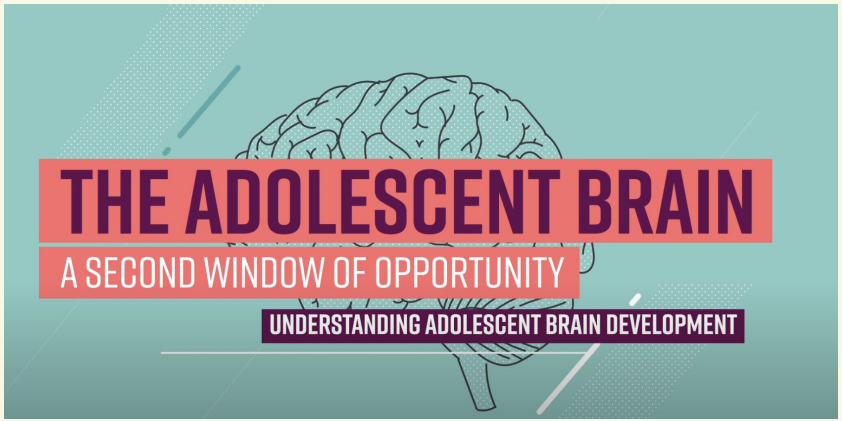
The Adolescent Brain and Understanding the Impact of Stress Years 7-10



Link to video

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Kupu whakatau
Ko wai mātou?

Karakia timatanga

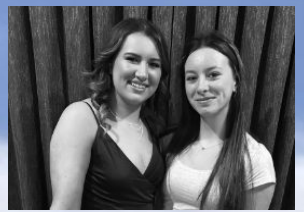
Kia hora te marino	
Kia whakapapa pounamu te moana	May peace be widespread
Hei huarahi mā tātou i te rangi nei	May the seas be like greenstone
Aroha atu	A pathway for us all this day
Aroha mai	Let us show respect for each other
Tātou i a tātou katoa	For one another
Hui ē! Tāiki ē!	Bind us all together!

Nick Bates, Kelly Wheeler
nickb@rtlb34.school.nz
kellyw@rtlb34.school.nz

Kelly Wheeler

Values

Integrity, honesty, fairness, service to others and optimism



Nō Ōtautahi ahau
Kei Ōpawaho tōku kāinga

Kei te mahi au ki Te Paeroa
He pou whirinaki RTLB ahau

Ko Jeremy tāku tāne
Ko Hazel rāua ko Lucy āku tamāhine
Ko Kelly tōku ingoa

Kei te ako tonu ahau i te reo Māori

He waka eke noa
Mauri ora ke te whare

Ehara taku toa i te toa takitahi, engari kē he toa takitini
My success should not be bestowed onto me alone, it was not individual success but the success of a collective

Interests

Catching up with friends
Travelling
Learning
Tennis
Trail Running
Orange theory gym

Nick Bates

Batesy

Tēnā koutou katoa
Ko Kāroro te whenua
Te Tai o Mahaanui to moana
Nō Ōtautahi ahau
Ko Christopher rāua ko Christine ōku mātua
Ko Bates tōku whānau
Ko Nick tōku ingoa
Ko Rebecca tōku hoa rangatira
Ko Noah rātau, ko Jackson, ko Luka, ko Hope, ko Obi āku tamariki
He Pouwhirinaki au ki te Kāhui o Te Paeroa toru tekau mā whā
Nō reira, tēnā koutou, tēnā koutou, tēnā koutou katoa

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Kaupapa

- The Adolescent brain
- An Insight into Adolescence
- The Neurosequential Model
- Stress and how this Impacts Adolescence
- How to calm
- Executive Functioning Skills
- Changing the lens

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Connection

Choose one of the following and share with the group...

1. Tell us about your worst hair day or worst hair cut
2. What's your favorite knock-knock joke?
3. If you could bring back any fashion trend or old slang, what would it be?
4. What's something you think is totally overrated?
5. What book do you wish you could read for the first time again?

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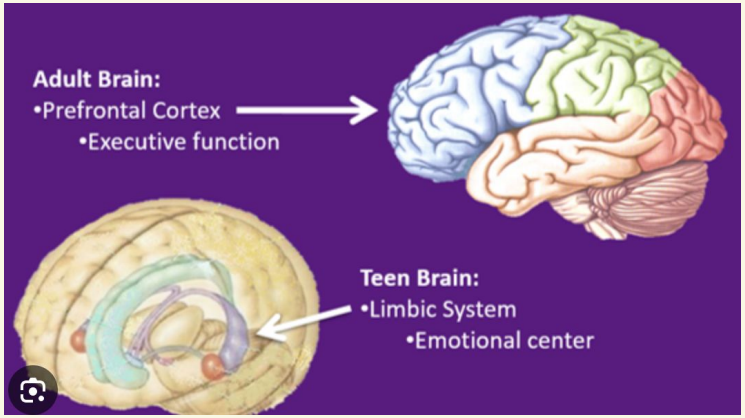
Brain development in adolescence



Key changes:

- Limbic system comes online during adolescence - *emotional centre of the brain*
- Amygdala (brain's watch house) grows in size considerably

What can we do?

- Ask how you are feeling? (not thinking)
- Provide reassurance

Changes happening within the teen brain

- Future thinking - can only think 1 or 2 months into the future - be aware not to plan too far into the future
- Develop the ability to think abstractly and about complex topics
- Struggles with reading emotions - we need to be explicit about how we are feeling and acknowledge their emotions

Adolescent Brain

nib New Zealand. (2023, February 16). *Nathan Wallis - Complexities of the teenage brain*. YouTube. https://www.youtube.com/watch?v=OhkfIp4Bfp0

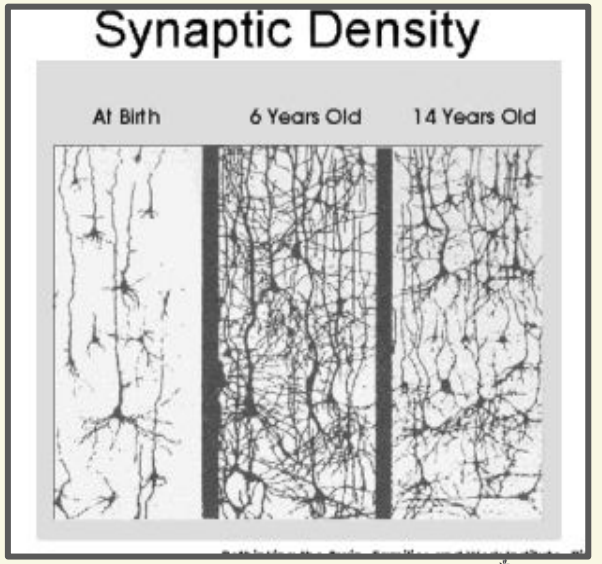
Synaptic Pruning

During sensitive periods of brain development ie adolescence synaptic pruning increases resulting in an increase in plasticity

Synaptic Pruning

- *30,000 synapses per second are eliminated during adolescence*
  - Use it or lose it- connections that are used are retained
  - Refining circuitry to improve communication
- When pruning is complete the brain is faster and more efficient

During pruning the brain functions less well eg teenagers lower executive functioning, less effective decision making



(Fuller, 2006).

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An Insight into Adolescence

Group activity

- Within your group discuss the content of your topic identifying key points and how they relate to your mahi *(10 minutes)*

- Feed back to the room your key points from group discussion
(5 minutes)

Topics

- 1. Adolescent Identity and Emotions
- 2. Social Cues and facial expressions
- 3. Risk Taking
- 4. Parents/ peer relationships
- 5. Learning and memory
- 6. Sleep

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Whakatā

Whakapainga ēnei kai

(Bless these foods)

Hei oranga mō te tinana

(for the goodness of our bodies)

mō ō mātou wairua

(and for our spirits)

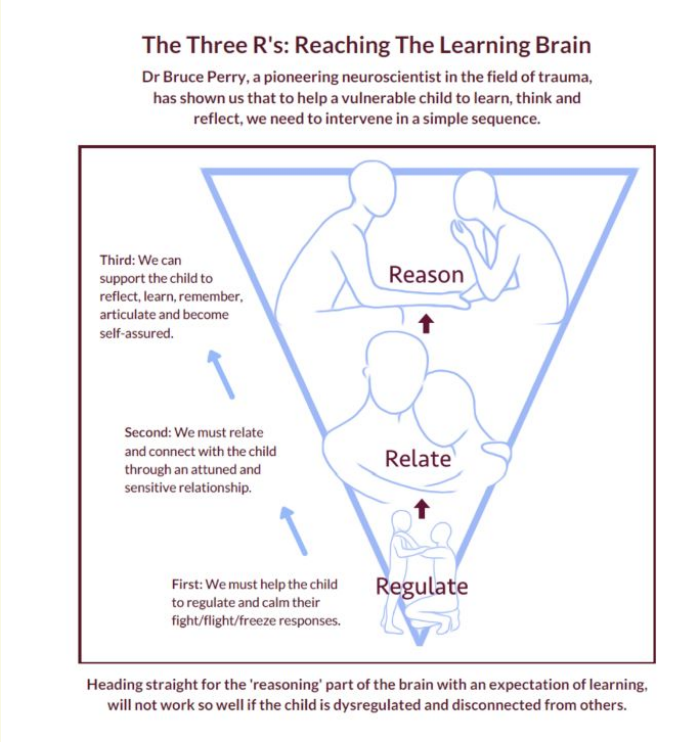
hoki

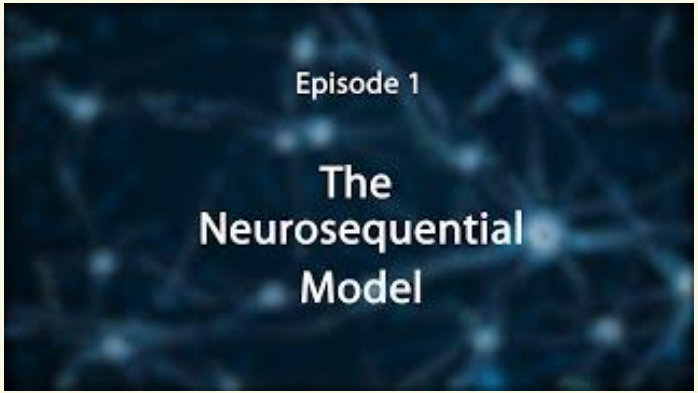
(as well)

Āmine

(Amen)

The Neurosequential Model





Stress, Trauma, and the Brain: Insights for Educators--The Neurosequential Model. (n.d.). Www.youtube.com. https://www.youtube.com/watch?v=_3is_3XHKKs

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Let's Regulate

All Right? (2018). *Hikitia te Hā Yoga.* [Video]. YouTube.https://youtu.be/VVAiH1eawno

If someone is feeling hyper or has a lot of energy they can try:

Grounding

- Take a minute to look around the room and count everything that is blue
- You can do this with colours or items e.g.all pencils, ceiling tiles etc.
- This is an exercise that can be done with individuals orthe whole class

Scribble or rip up paper.

Do squats against the wall.

Count backwards from 10

or

4 3 2 1

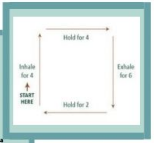
Take a moment to notice:

- 4 things you can see
- 3 things you can hear
- 2 things you can touch
- 1 thing you can smell.
- Say the name of each thing you have noticed

Hand Breathing

- Carry out a breathing exercise e.g. finger breathing.
- Use your finger to trace around the fingers of your other hand.
- Breathe in tracing up your finger and slowly breathe out tracing down.
- Trace all 5 fingers.

Square Breathing



- Find something square to trace your fingers around (like a book). If not picture a square in your mind and trace your fingers in the air as if the square was in front of you.
- Start at the bottom left of the square and breathe in for four counts as you trace the first side of the square
- Hold your breath for four counts as you trace the second side of the square
- Breathe out for six counts as you trace the third side of the square
- Hold your breath for two counts as you trace the final side of the square
- You just completed one deep breath!

Mental Health Foundation | GIG NHS | Resilience Project Prosiect Gwydnwch | Llywodraeth Cymru Welsh Government

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VISUAL RAINBOW

Remain seated. You may close your eyes or keep them open. Think of the last few times that you laughed. Remember who was with you and what the circumstances were that made you happy. For a few moments, think of that happy time. Now, think of the happiest moments in your life so far. Carefully consider the circumstances and what made you happy. For a few moments, think of that happy time. Try to remember specific details. Breathe slowly as you visualize.

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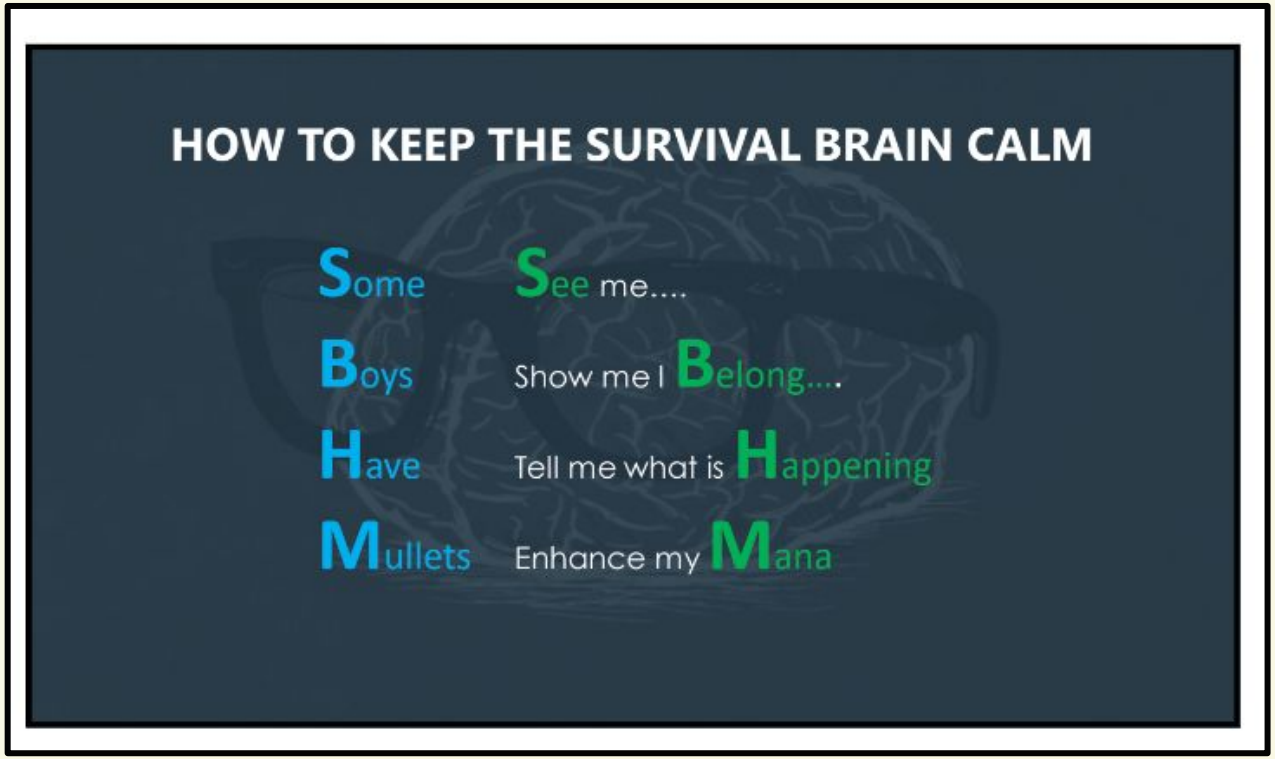
THE GREEN BEAN

Remain seated. Place your left hand in your lap, palm up. With your right fist, slowly press your knuckles into left palm 20 times. Breathe slowly as you rock the knuckles across your hand. Now, place your right hand in your lap, palm up. With your left fist, slowly press your knuckles into right palm 20 times. Breathe slowly as you rock the knuckles across your hand.

ThinkTVPBS. (2020). Stress, Trauma, and the Brain: Insights for Educators--How Stress Impacts the Brain. In *YouTube*. https://www.youtube.com/watch?v=COMwI2akgqM



(K. Berkett, personal communication, August 10, 2022.)

EXAMPLES	Looks Like	Sounds Like *Be specific*
SEE me	• Adults smiling (a smile means I like you) • Non verbal praise and communication (thumbs up, visuals etc) • Providing positive feedback for everything that _____ does well (no matter how small it may be)	"Hi _____, it's great to see you today" "Hi _____, I missed you yesterday" "I am looking forward to hearing about _____ _____." "Great job at...." "Well done, you are back after the bell, where are you going to choose to sit?"
Show me I **BELONG**	• Opportunity to connect with peer/s i.e sitting at table together • Adults providing support • Opportunities for celebrations • Non-verbal for prosocial behaviours (thumbs up, smiling, high five)	"I am so happy you are here, _____" "Why don't you show..... the amazing effort you put into ...."
Tell me what is **HAPPENING**	• Adult checking in and checking out at break times (two medals and a mission) • Supporting transition back to space • Universal visual (for the whole class) what to do after break time (supporting transition)	"You have done a great job at...." "It's time to...." "When you have.... Then you can...." "Kai pai to mahi, you _____....."
Protect my **MANA** and allow me control.	• Choice of where to sit i.e. sitting at the table (visual to support) • Potentially a wobble stool or cushion for seating (movement seeking) • Provide a job	"Show me where you would like to sit..." Remind me of the expectations of sitting at the table.... That's right, you need to ..... Awesome" "_____, I need your help.... Could you do me a big favour....?" "Tell me what you would like to do at break time..." (potential to add options here)

Created By Elesha Robinson and Megan Wright, 2021

Edutopia. (2019). *What's Executive Function—and Why Does it Matter?* [Video]. YouTube. https://youtu.be/JhbNxXbJ5qw

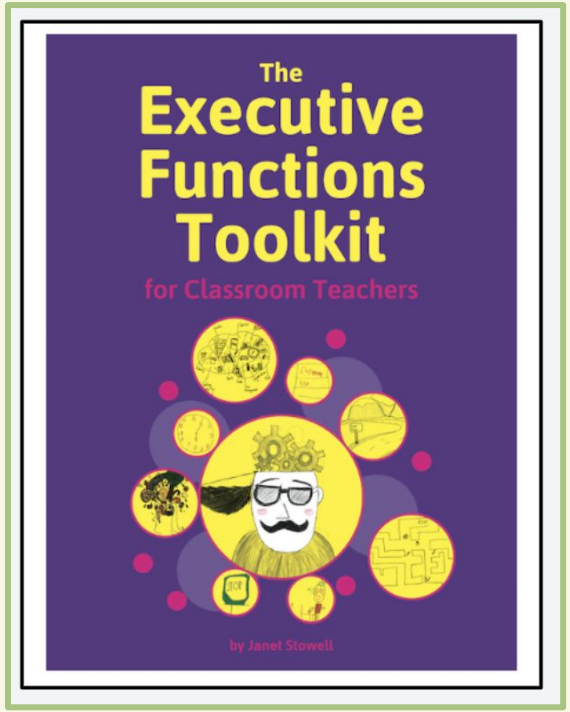
Executive functions - checklist

Executive Function Checklist - Overall Teacher Judgement

Student: _____ Year Level: _____ Date: _____

Teacher: _____ School: _____

EXECUTIVE FUNCTION		Almost never	Some-times	Often
Response Inhibition	Acts on Impulse, either verbally or physically			
	Interrupts people			
	Calls out, does not put hand up			
	Makes inappropriate/insensitive comments			
	Has difficulty waiting their turn			
	Has physical contact with peers			
	Easily upset / throw temper tantrums			
Subtotal				
Cognitive Flexibility	Finds transitions difficult - requires support and cuing			
	Gets frustrated and upset by changes in plans, disruption of routines			
	Unable to change a strategy or idea if the first one doesn't work			
	Gets stuck when facing obstacles, setbacks, mistakes, new information			
	Tries only one way to solve a problem			
	Insists on things being a certain way - perfectionist			
	Excessively rule-bound			



Stowell, J. (2018). *The Executive Functions Toolkit for Classroom Teachers.* Janet Stowell Publishing.

Developing academic resilience and growth mindset through Executive Function

Edutopia. (April, 2021). *Bolstering Executive Function in Middle and High School Students. [*Video]. YouTube. https://youtu.be/NqOsPl2OqT0

Foundational executive functions:

- *Cognitive flexibility*
- *Response inhibition*
- *Working memory*

- **Reflect on Checklist**
- **Unpack each Executive Function**
- **Brainstorm strategies with partner**

Cognitive Flexibility

Stroop Test:
Say the colour of the word, not what the word says

Stroop Test Retrieved from
https://youtu.be/E92GSwr46DY

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Cognitive Flexibility

“Being able to switch the way you think about something and think about it in a new way,” (Stowell, 2018).

Ākonga with underdeveloped Cognitive/ Mental Flexibility may:

- Unable to participate in classroom learning activities
- Not be able to “roll with the punches” or “go with the flow”
- Become frustrated if asked to look at something from a different angle or perspective
- Give up when confronted with a roadblock
- Become overwhelmed with change and have rigidity of thought
- Struggle to adapt their behaviours according to the context
- Find it difficult to try different strategies to solve conflict

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Cognitive Flexibility

Cognitive flexibility skills that need development	Strategies to support this skill development	Specific Activities
Ākonga is rule bound and is unable to adapt when changes occur	• Self talk strategies • Feedback	• Self talk log • Modelling think alouds • Explicit feedback on the use of strategies to support • Incorporate jokes, riddles, brain teasers as a starter activity (encourage ākonga to see multiple meanings and ways of interpreting language)

Response Inhibition

Igniter media(2009). *The Marshmallow test* [Video].
https://www.youtube.com/watch?v=QX_oy9614HQ

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“Being able to stop and think before acting. Choosing to pay attention and ignore distractions,” (Stowell, 2018).

A child with underdeveloped Response Inhibition may:

- Blurt out inappropriate things (inability to bite tongue)
- Be more likely to engage in risky behaviour
- Be unable to stop themselves from lashing out verbally or physically even when something happens that is an accident i.e. a child bumping into them.
- Constantly be scanning and easily distracted by everyday or unexpected things for elongated periods of time.

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Response Inhibition

Response inhibition skills that need development	Strategies to support Response Inhibition	Specific Activities

Working Memory

MrSocktag3 (2012). *Classic Generation Game 30-11-74* [Video]. https://youtu.be/f5aYT9iBml8

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Working Memory

“Being able to remember information and use it either then or later on, such as when you are learning a new game, obeying rules, recalling facts, following instructions or directions and so on„” (Stowell, 2018).

A child with underdeveloped working memory may:

- Struggle to remember instructions
- Struggle to connect prior learning to new information and to solve maths problems with more than one step
- Struggle to play games that involve strategy eg keeping track of the moves and making a logical next step in a game of checkers,
- Find it difficult to rejoin a game after moving away to go to the toilet or get a glass of water

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Working Memory

Working memory skills that need development	Strategies to support Working Memory	Specific Activities

Changing the lens

Kids do well if they can

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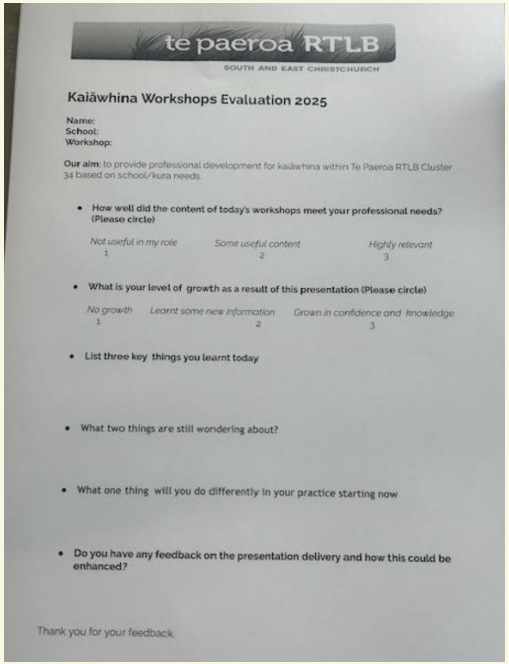
Reframing Behaviour - Won't vs Can't

What are the barriers? Identify the skills that need to be developed…

- ☐ Maintain focus
- ☐ Regulate activity level
- ☐ Handle transitions, shift from one mindset to another
- ☐ Consider the likely outcomes or consequences of actions (impulse control)
- ☐ Persis on challenging or tedious tasks
- ☐ Sense of time (time that has passed, time needed)
- ☐ Consider a range of solutions to problems
- ☐ Flexibly handle ambiguity, uncertainty
- ☐ Shift from original idea, plan, or solution
- ☐ Express concerns, needs, or thoughts in words or other means of communication
- ☐ Understand what is being communicated by others
- ☐ Appreciate how their actions affect others
- ☐ Regulate emotional response to problems and frustrations
- ☐ Empathise with others, appreciate another person's perspective or point of view
- ☐ Interoception (ability to understand and feel what's going on inside their body)
- ☐ Tolerate and manage the sensory environment

Link

Reflection



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SOUTH AND EAST CHRISTCHURCH

Kaiāwhina Workshops Evaluation 2025

Name:
School:
Workshop:

Our aim: to provide professional development for kaiāwhina within Te Paeroa RTLB Cluster 34 based on school/kura needs.

- **How well did the content of today's workshops meet your professional needs? (Please circle)**

  Not useful in my role 1 | *Some useful content* 2 | *Highly relevant* 3

- **What is your level of growth as a result of this presentation (Please circle)**

  No growth 1 | *Learnt some new information* 2 | *Grown in confidence and knowledge* 3

- **List three key things you learnt today**

- **What two things are still wondering about?**

- **What one thing will you do differently in your practice starting now**

- **Do you have any feedback on the presentation delivery and how this could be enhanced?**

Thank you for your feedback.

He karakia whakamutunga

Kia whakairia te tapu

Kia wātea ai te ara

Kia turuki whakataha ai

Kia turuki whakataha ai

Haumi e, hui e, tāiki e!

Restrictions are moved aside

So the pathway is clear

To return to everyday activities

Enriched and unified!