Background and Behaviour Support

Background

Working in collaboration with numerous occupational therapists, Wellbeing Instruments products are designed to support the following sensory modalities:

- **Visual**: The design intentionally encourages a calming visual sensory input. A stainless-steel design reduces visual stimulation and is more accessible when compared to colourful instruments.
- **Auditory**: The resonating bars on our instruments are precisely tuned to minimise the potential for unpleasant overtones and subharmonics which can cause tension. The instruments' mallets are specifically designed to emit a soft musical tone within the human vocal frequency range encouraging a sense of calm.
- **Tactile**: Along with physical exertion required to use the instruments, the mallets are designed with an interesting texture providing the student with a tactile sensory input while playing the instruments. Additionally, the hard plastic handles are also considered to be more accessible to neurodiverse individuals when compared to softer materials.

Among other benefits, Wellbeing Instrument products have the potential to assist students with regards to:

- Sensory and emotional regulation
- Gross motor skills
- Hand function- Grasp and release
- Hand/eye coordination
- Range of motion
- Individuals with hearing impairments- communication engagement

The focus of this document is **Sensory and Emotional Regulation**.

Importance of Consistency

To successfully integrate Wellbeing Instruments products into behaviour support strategies, it is recommended, where possible, that the following activities are embedded within the structure of the students' day and conducted consistently. Predictable routines can be extremely beneficial for neurodiverse students, including those with autism, ADHD, anxiety, and intellectual disabilities. Reliable and regular implementation can support students by reducing anxiety, supporting executive functions, encouraging independence, encouraging emotional intelligence and minimising behavioural challenges. Over time, the routine itself can become a source of comfort and stability.

What impact do these strategies have on our students?

Soft, calming music can have profound effects on the human body and brain. It influences both the nervous system and emotional regulation, which is why it's often used to support mental wellbeing, stress reduction, focus, and even physical healing.

Activates the Parasympathetic Nervous System
Calming music can help shift the body from a "fight-or-flight" (sympathetic) state to a "rest-and-digest" (parasympathetic) state. This promotes:

- Slower heart rate
- Lower blood pressure
- Deeper, slower breathing
- Muscle relaxation

This shift makes it easier to calm down physically and emotionally, especially during times of stress or sensory overload.

Reduces Stress and Cortisol Levels
Research shows that calming music can lower levels of cortisol, the body's main stress hormone. This leads to:

- A greater sense of calm
- Reduced feelings of anxiety or panic
- Improved ability to cope in challenging situations

This is particularly beneficial for people who are neurodiverse or prone to overstimulation.

Improves Emotional Regulation
Music affects the limbic system, the brain area responsible for emotions. Calming music helps:

- Regulate mood
- Reduce irritability
- Provide emotional grounding
- Create a sense of safety and comfort

This can be helpful in classrooms, therapy settings, or at home for children and adults alike.

Supports Focus and Cognitive Function
Soft instrumental or ambient music (without lyrics) can improve emotional intelligence and concentration, especially during repetitive tasks or creative work. It works by:

- Reducing background distractions
- Providing a steady auditory environment
- Supporting sustained attention

This can be especially helpful for students with ADHD or anxiety.

Points coloured **red** are often observable in students and you may choose to record your observations when collecting data for effectiveness. This data is often helpful with regards to Disability Inclusion Profiles.

Suggested Implementation

"Studies investigating the effects of calming music on the human body discovered evidence of lower cortisol and lower heart rates of participants. The studies also showed that cortisol levels returned to base line levels significantly faster *during* a stressful event when music was used as an intervention *prior* to the stressful event."

Student Observations and Outcomes:

You may observe the student's interaction in the following ways:

- **Disengaged**- The student is not directing their attention towards the activity.
  Outcome: The student will still be receiving an auditory sensory input from staff participation.

- **Passive Engagement**- The student is looking and listening but not participating.
  Outcome: The student will be receiving auditory and visual sensory input.

- **Independent Participation**- The student is not directing their attention to the staff member but is independently participating in the activity.
  Outcome: The student is receiving auditory, visual and tactile sensory inputs.

- **Collaborative Participation**- The student is following the direction of the staff member and is actively participating in the activity.
  Outcome: The student is receiving auditory, visual and tactile sensory inputs.

- **Achieving Goals**- The student is following the directions of the staff member, participating in the activity and succeeding in the activity.
  Outcome: The student is receiving auditory, visual and tactile sensory inputs. Extension of activities can be explored.

It is important to note that these observations are valuable to establish where the student is currently placed regarding their engagement and participation levels and furthermore will help to define progressive steps forward.

Preventative Strategy Example

The following is an example for a student needing additional support with regards to emotional and/or sensory regulation with the perspective of supporting the prevention of dysregulation. Note that each student will need to be assessed individually with the help of an occupational therapist to accurately prescribe any sensory interventions.

When:	Before transitioning into the classroom or stressful event. Examples include: - Start of day, end of recess and end of lunch break. - End of recess and end of lunch break. - Start of day and end of lunch break.
Duration:	Set a timer for **5 minutes** with the student and communicate the intended duration.
Additional Support:	The use of picture communication symbols (PCS) can be a useful additional support.

Disengaged and Passive Engagement Activities:

Slow and Steady: Staff member plays a slow and steady melody. Repeat a short 4 note melody 4 times and then repeat with a new melody.

You can think of this activity as mimicking a lullaby. Our goal is to re-trigger early associations of calming sounds to signal to the student's evolutionary instinctive response suggesting that the environment is safe and secure.

Independent Participation Activities:

When applicable, allow the student to explore the instrument and monitor how it is affecting their emotional regulation. Fast and loud independent play is great for students to self-regulate; however, too much may lead to the student being over stimulated.

Collaborative and Achieving Goals Activities:

Echo Games: (Call and response activities) Staff member plays a short melody (2-4 notes) and students echoes or repeats the melody.

Musical Storytelling: Create a simple story and use the instrument to represent different parts of the story.

For example:

"There was a tiny rabbit running through the woods."
Proceed to play fast high-pitched notes.
"It was being followed by a big heavy giant!"
Proceed to play slow low-pitched notes.
Etc.

Refer to the **Activities Resource** for more examples.

De-Escalation Strategies

The following is an example of a de-escalation strategy for a neurodiverse student needing sensory input to regulate their nervous system.

When:	When you observe the beginning of behaviours of concern/dysregulation in the classroom and/or school yard.
How:	If you can anticipate behaviours of concern, first try to encourage classroom resilience by implementing the use of "First/Then" visual aids. Example: "First"-work "Then"- break Setting a visual timer will help the student to know that their break is not far away. If behaviours of concern are observable in the classroom, utilise the use of "Social Stories" which encourages the student to communicate when they become overwhelmed and gives them clear directions regarding taking a break. *Conducting a motivation assessment will help you to determine whether the dysregulation is behaviour based or sensory based. Wellbeing Instruments products have the potential to help the student in either circumstance, but strategies may vary depending on the assessment outcome.
Duration:	Set a timer for **5 minutes** with the student and communicate the intended duration. (Some students may require more or less time)
Additional Support:	The use of picture communication symbols (PCS) can be a useful additional support.

Disengaged and Passive Engagement Activities:

High to low energy: Staff member plays a steady melody with the intention of matching the student's energy. You can repeat a short 3-4 note melody 4 times and then repeat with a new melody. As you repeat your melody progressively slow down.

You can think of this activity as a way to lower the energy and heart rate in the student. After a short period, try to encourage the student to participate and move on to either independent participation activities or collaborative activities.

Independent Participation Activities:

As with preventative strategies, allow the student to explore the instrument and monitor how it is affecting their body language. Fast and loud independent play is great for students to self-regulate; however, too much may lead to furthering the student's dysregulation. In these instances, encourage the student to progressively change their playing from fast to slow and/or loud to soft. During this time, you could encourage the student to stomp their feet in time with the music encouraging additional physical exertion.

Collaborative Activities:

Echo Games: (Call and response activities) Staff member plays a short melody (2-4 notes) and students echoes or repeats the melody.

Although there are many activities in the Activity Resource, Echo Games is a recommended collaborative activity as it is engaging and fun for the student and allows the staff member to influence the student's physical exertion and the student's energy in a preferred direction.

It is again important to note that each student is unique and prescribing any support should be carried out on a case-by-case basis.

Engagement and Regulation Observation Sheet		Duration:	
Student Name:		Date:	
Staff Member:		Time of day:	

Initial Student Engagement Level:

Disengaged: ☐	Passive: ☐	Independent: ☐	Collaborative: ☐	Achieving: ☐

Initial Presentation: What observable behaviours did the student present with? e.g. visibly upset, disrupting classroom, demand a break, too much energy, sensory seeking etc	**Notes**:
Observable Impacts: e.g. Did the student's body language change? Relaxed composure, reduced anxiety, increased focus, less oppositional, no change etc	**Notes:**

Conclusion Student Engagement Level:

Disengaged: ☐	Passive: ☐	Independent: ☐	Collaborative: ☐	Achieving: ☐

Did the activity have a positive impact on the student's sensory system and overall wellbeing?

YES: ☐ NO: ☐

Notes (Other):