Routines and Learning

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Agenda

Timetables/routines

Now and Next Board

Transitions

Communication

Learning/Work time

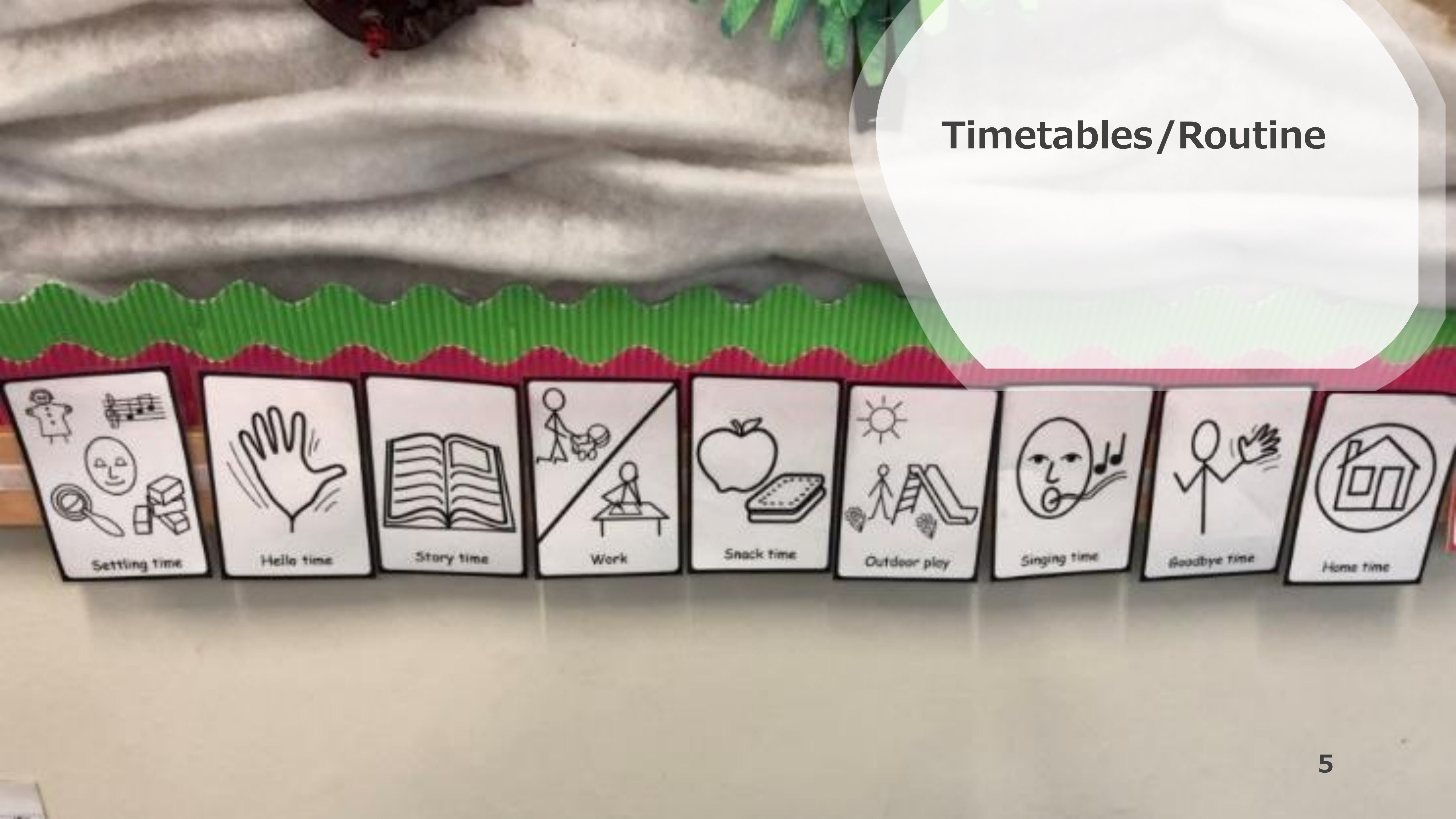
Introduction

Routine and predictability are both very important for working with children with ASC.

Aim to keep the routine very predictable and this will in turn reduce the levels of dysregulation and make the children more available to take on new information and learn new skills.

Routines and Timetables

Timetables/Routine



Now and Next

[Now and Next Boards 2 - YouTube]

Transitions

Understanding Transitions

Transitions refer to any changes in a pupil's environment or routine.

Types of Transitions:

Macro Transitions: Moving to a new school, classroom or working with a new adult

Micro Transitions: Changing activities, routines or adult within the same environment.

Reflective Point: Consider a recent transition your child/children experienced. What went well? What challenges arose?

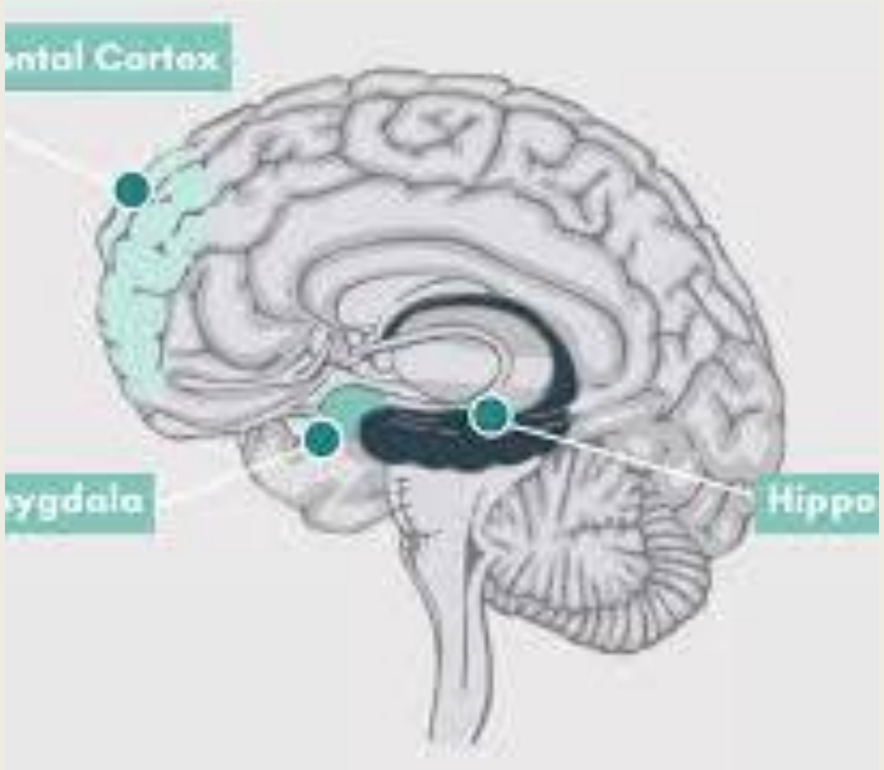
Brain Flexibility

Brain Flexibility – or Lack of It Autistic children often find it hard to switch from one thing to another.

Stopping one task and starting another can feel overwhelming.

Science: Difficulty with 'cognitive flexibility' (Geurts et al., 2009). Autistic brains show subtle structural and functional differences compared to neurotypical brains, such as more symmetrical hemispheres, unusual brain folding, and weaker long-distance connections between regions.

These differences can affect how efficiently the brain communicates, making social interaction, flexible thinking, and shifting between tasks more difficult.



Sensory Overload

Transitions bring new sights, sounds, smells, or touch.

These changes can be overwhelming for children with sensitivities.

Science: Many autistic children process sensory input differently

Sensory Processing Sensory processing involves the brain receiving, interpreting, and responding to sensory input from the environment.

Here’s what happens in a neurotypical brain:

1. Reception:
a) Sensory organs (eyes, ears, skin, nose, tongue, and proprioceptive/vestibular systems) detect sensory stimuli from the environment.
b) These stimuli are converted into neural signals and sent to the brain via the nervous system.
2. Filtering:
a) The brain filters and prioritises sensory input. For example, it suppresses unimportant stimuli (e.g., background noise) while focusing on relevant information (e.g., a conversation).
b) The reticular activating system (RAS) in the brainstem plays a crucial role in this filtering process.
3. Integration and Interpretation:
a) The thalamus, the brain’s sensory relay station, directs sensory information to specific areas of the brain for processing: i. Visual input to the occipital lobe. ii. Auditory input to the temporal lobe. iii. Tactile input to the parietal lobe. iv. Vestibular and proprioceptive input to the cerebellum and somatosensory cortex.
b) The brain integrates multiple sensory inputs to create a coherent understanding of the environment.
4. Response:
a) After processing, the brain generates appropriate responses. These could be: i. Reflexive (e.g., pulling your hand away from a hot surface). ii. Cognitive (e.g., recognising a face or understanding speech). iii. Emotional (e.g., feeling calm in a quiet room or anxious in a noisy environment).

What happens in the Neurodivergent brain:

1. Reception:

- Sensory organs (eyes, ears, skin, nose, tongue, and proprioceptive/vestibular systems) detect sensory stimuli from the environment – but the signals may be amplified, dampened, or disrupted
- These stimuli are converted into neural signals and sent to the brain via the nervous system.

2. Filtering:

- The brain filters and prioritises sensory input. For example, it suppresses unimportant stimuli (e.g., background noise) while focusing on relevant information (e.g., a conversation). - fails to filter out irrelevant stimuli
- The reticular activating system (RAS) in the brainstem plays a crucial role in this filtering process - equally important.

3. Integration and Interpretation:

- The thalamus, the brain's sensory relay station, directs sensory information to specific areas of the brain for processing: i. Visual input to the occipital lobe. ii. Auditory input to the temporal lobe. iii. Tactile input to the parietal lobe. iv. Vestibular and proprioceptive input to the cerebellum and somatosensory cortex - process sensory signals inefficiently or inaccurately. Sensory signals may be misinterpreted or struggle to integrate multiple sensory inputs.
- The brain integrates multiple sensory inputs to create a coherent understanding of the environment - heightened fight-or-flight response due to overactivation of the amygdala.

4. Response:

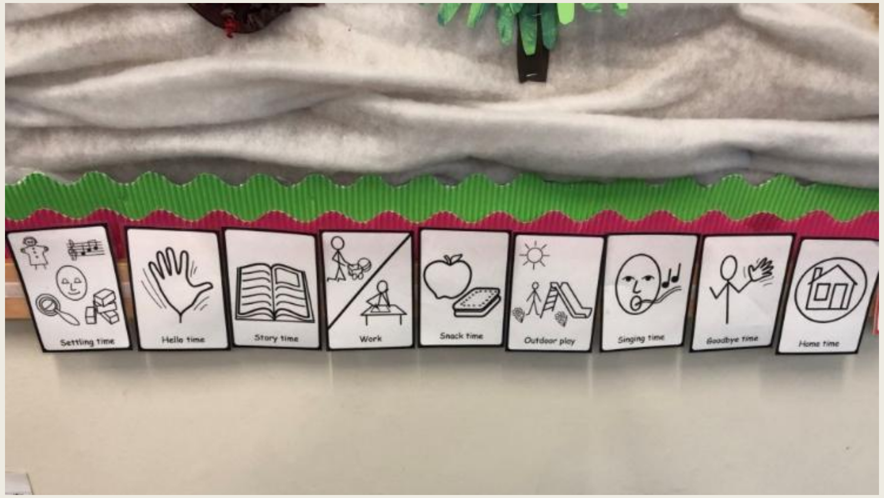
- After processing, the brain generates appropriate responses – Hypo, hyper – sensory seeking or avoidance

Language and Social Cues

Some children may not understand what is happening.

Without clear instructions, transitions can feel confusing.

Visual or verbal cues help reduce stress – it allows them to process less information



Strategies to Support Macro Transitions

Visual Supports: visual timetables and now-and-next boards to provide structure. Implement countdowns to prepare pupils for upcoming changes.

Social Stories: Develop short narratives that explain upcoming changes in a clear and relatable manner.

Transition Plans: Collaborate with pupils, parents, and staff to create individualised plans.

Buddy Systems: Pair pupils with peers to provide guidance and reduce anxiety.

Environmental Preparation: Arrange familiarisation visits and gradual exposure to new settings.

Learning

Neurotypical children and adults generally are more motivated by person-to-person interactions. This is due to the levels of dopamine released when we have these interactions.

Increased dopamine is addictive, and this leads neurotypical children and adults seeking out interactions. Therefore, creating social beings.

Neurotypical children and adults, tend to show a bias towards objects over people. Studies have shown that objects produce elevated levels of dopamine as opposed to people.

Therefore, for children to learn and take notice of the us we need to be the most interesting we can be as we are competing with objects that release more dopamine.

Learning

- Study of third trimester pregnancies
- Purpose of intensive interaction
- To engage with favourite interests or toys with the children
- Limit screen time
- Be competitive!!