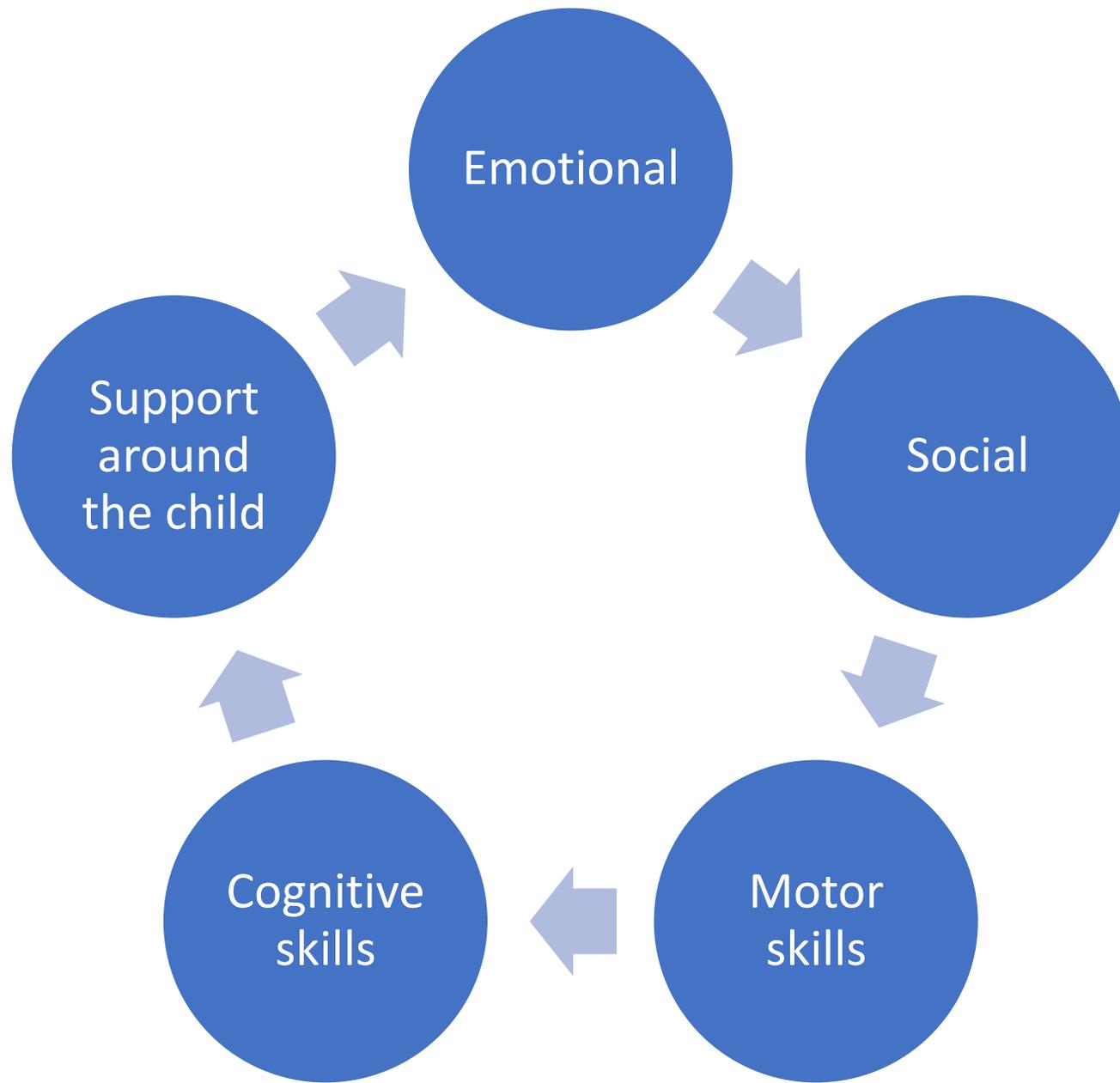


Thank you for coming and thank you Jancis for inviting me

- What being ready for school means
- The BUSS model
- Some direct links between early development and being ready for school
- LEAPlets
- Discussion and Q and A





Fundamental principles of BUSS

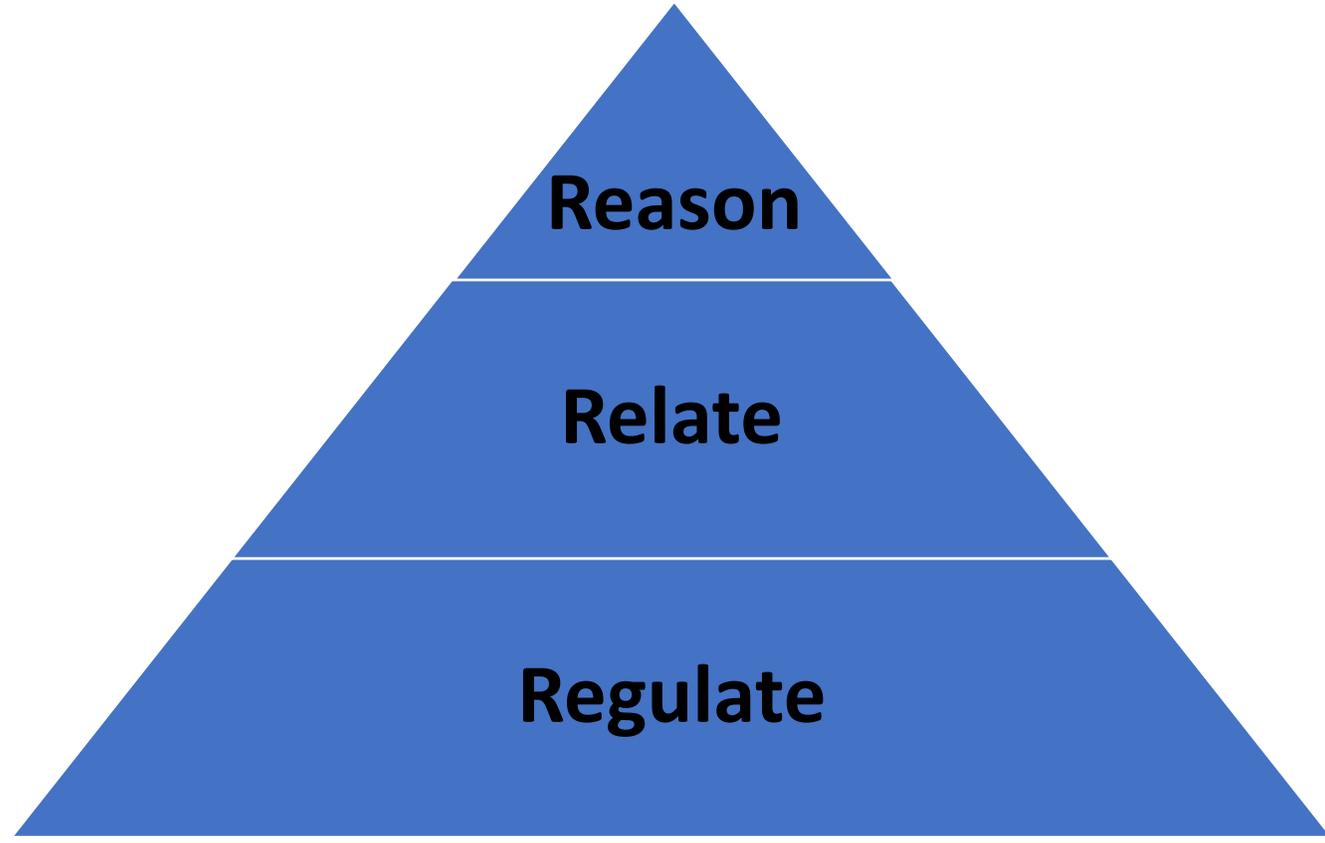


Fundamental principle #2

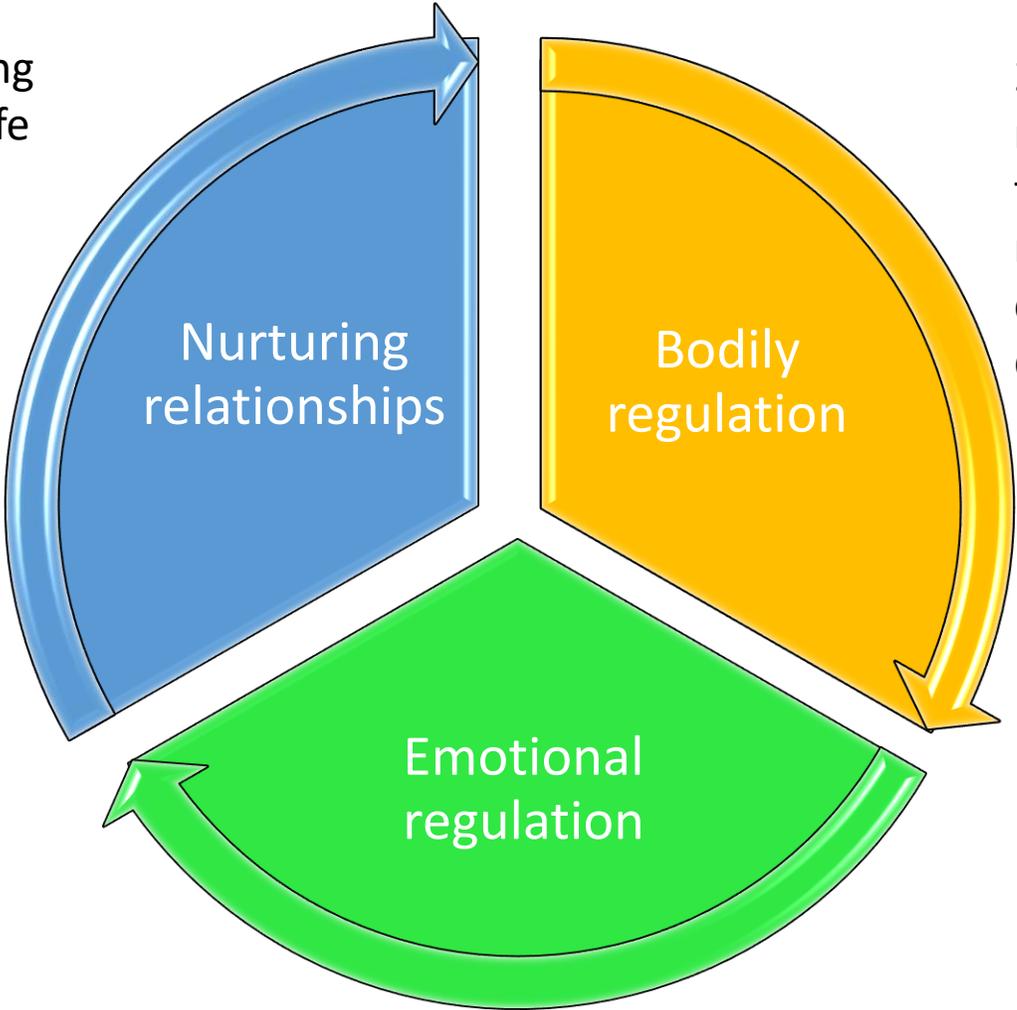
Babies need consistent, loving relationships that allow them to grow into themselves on a bodily and emotional level



Development is a Sequential Process – Bruce Perry, 2006



1. Babies need nurturing relationships to feel safe and happy enough to move freely



2. As babies move within these nurturing relationships, they go through the essential patterns of movement that their brain and central nervous system need to develop

3. As babies grow into their bodies, less energy is needed for this and there is increasing capacity for emotional regulation and relationships

4. So we have this lovely cycle of babies developing regulation through relationships and relationships through regulation



Babies move when they feel safe and happy – and they need a nurturing adult to support this.



MRI kissing a child Kissing causes a chemical reaction in your brain, including a burst of the hormone oxytocin. Oxytocin is often referred to as the 'love hormone' because it stirs up feelings of affection and attachment.

Kissing activates the brain's reward system; releasing dopamine which makes us feel good. It also releases vasopressin which bonds mothers with babies and romantic partners to each other. It also releases serotonin which helps to regulate our mood.

[#nhneurotraining](#)

[#love](#) [#neuroscience](#) [#neuro](#)



More fundamental principles..

- Brain and Central Nervous System development starts at conception
- We're all born with a genetic code, but how it develops is entirely dependent on our experiences. These experiences determine brain architecture going forward
- When we're born, we've got millions of brain cells but they're largely unconnected. We need experiences to make those connections.



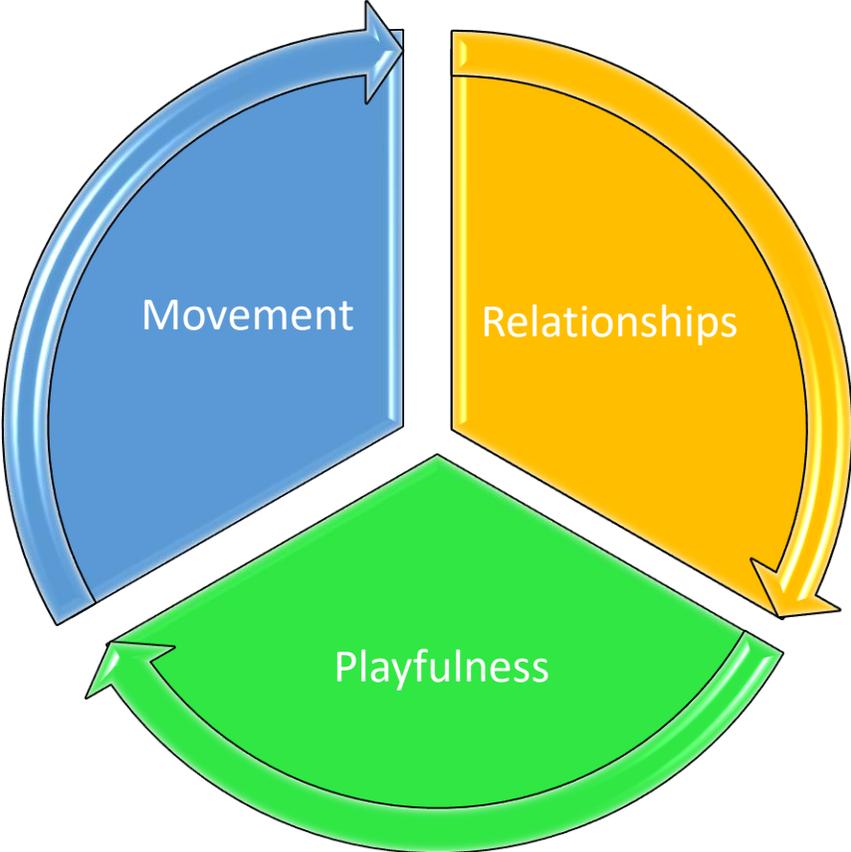
Centre on the developing child

Experiences build brain architecture

<https://youtu.be/VNNsN9Ijkws>



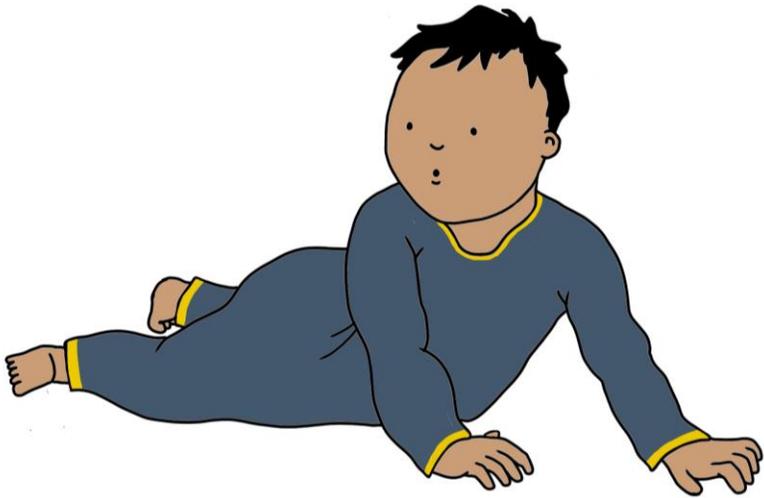
Key components of the BUSS model...



From Sensory Integration Theory - 3 foundation systems (A Jean Ayres, 1972)

- Vestibular
- Proprioceptive
- Tactile

BUT also need to bring this alongside our understanding of the impact of trauma, thinking about what state of mind a child or young person is in, and the role of relationships in regulating arousal.



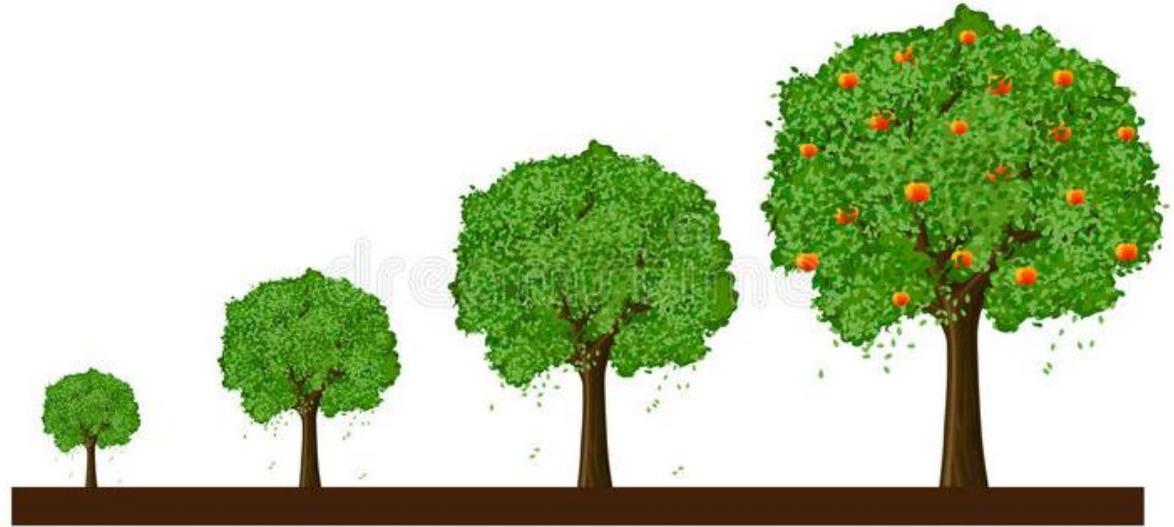
From Survive to Thrive

The tactile system is designed to evolve, with good enough physical and emotional care, from the state of arousal required for survival to being able to stay in the moment of an experience – exploration and discrimination. Defensive receptors recede so that discriminatory receptors can grow.



Defensive to discriminatory functioning

The BUSS model uses this physiological shift from a state of high arousal to staying in the moment of an experience to begin to recalibrate the limbic system. We're wanting that same shift, from survive to thrive.

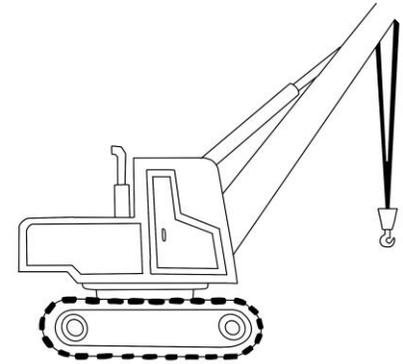


The Vestibular System – The Foundation of All Systems

Gives our body a stable base for movement.

2 main tasks of the vestibular system

- Core stability (core being head, neck, shoulder girdle and trunk)
- Gravitational Security





The Proprioceptive System

- This system is all about quality of movement. We want smooth, well coordinated and well modulated movement, with body sides of the body working in an integrated way.
- To enable this, we need to build up a good BODY MAP, so that there's a constant exchange of information between the muscles and joints and brain and central nervous system.





Repeated patterns of movement building neural pathways

Control from the top down...



Child Development



- Innate patterns of movement that 'come on line' in good enough environments (Ayres)
- Motor planning – learned movement that requires conscious attention, like holding a spoon or riding a scooter
- Each stage of development builds a platform for the next





Points for reflection

What implications does this have for babies who spend extended periods in cots or propped in seats?



What happens when babies are held and carried?



Early motor development –
but don't forget the relational
context!



Crawling - Why it's such an important part of development

Gross Motor Skills

- Advances bilateral co ordination – the baby needs to use both sides of their body – as the right hand goes forward the left leg moves. This massively strengthens connections between the left and right sides of the brain
- Development of proximal joint stability- head, neck shoulder girdle, hips
- Development of postural control – blending of the different movements – co contraction – stable trunk and moving limbs
- Enables rhythmic moving



Fine Motor Skills

Lengthening of the long finger muscles as the baby rocks back and forward

Development of the arches of the hand – these help the hand form correctly around differently shaped objects when grasping

Separation of the 2 sides of the hand – ulnar side for stabilisation, radial side for working



Sensory Advances

Strengthening the structures related to breathing, eating and talking by lengthening and strengthening the muscles around the ribcage

Huge visual advances – creeping and crawling gives the baby the experience of tracking their hands as they move forward – developing the ability of the eyes to cross the midline when tracking

Develops binocular vision – looking towards where they're going and then back at their hands – depth and space perception and balance





LEAPlets

Building foundation sensorimotor systems and relationships

LEAPlets – a project with the virtual school

‘Front load’ an intervention for a group of children’s whose foundation sensorimotor systems we knew would be compromised.

Focusing on building tactile, vestibular and proprioceptive systems
Everything is done with foster carers. Do things in the group for carers to continue at home – gave resources each week

Building regulation through relationships and relationships through regulation

Building links with schools, growing capacity within education by working with / alongside SENIT.



LEAPlets

Looking to work with all 2 and 3 year olds in foster care in Leeds

Pre covid we met twice a week at the children's centre at Meadowfield Primary School

During covid, we've met once a week at Leeds Gymnastics Club

Children and carers generally attend for 6 months. Link with nurseries in the preschool years then are keen to be meeting with schools before children start and contribute to PEP

Measures – Boxall measures before and after, foster carer evaluation. This year have a service evaluation project, University of Leeds Clinical Psychology Dept.



What a session might look like

Welcome – play activities set up

1st Activity – whole group, lying on our tummies, singing a welcome song, commando crawling and reading a story

2nd Activity – building oral strength – e.g. bubble mountain

3rd Activity – sensory circuit – activities pitched at child's developmental level, initially building core strength and stability and gravitational security

4th Activity – snack time / with straw games – building oral strength, encouraging communication or interest in each other

5th Activity – creative activity – e.g. foot printing, again floor based

6th Activity – goodbye song, parachute





Bubble Mountain

<https://youtu.be/TFyi3wT1u8I>



