

LEAPlets - A School Readiness Programme based on the BUSS model. A development between the Therapeutic Social Work Team, Leeds Virtual School and Leeds Gymnastics Club



Thank you for your interest in LEAPlets – whether you’re a parent, guardian, foster carer, or social worker, I hope I can introduce you to LEAPlets and help you to understand what we’re doing and why we’re doing it. If you have any queries, do please get in touch with me – [sarah.lloyd@leeds.gov.uk](mailto:sarah.lloyd@leeds.gov.uk)

LEAPlets started because there’s a lot of evidence showing that children who have been in foster care don’t do as well in education as their peers. Leeds virtual school were keen to try and reverse this trend and understood the idea of children needing to be ready for school on a bodily as well as a psychological level, and this is why we developed LEAPlets, building capacity in children before they start school.

During lockdown things are a bit different, but we’re trying to keep things going as well as we can! This means that things might change a bit, but hopefully it won’t be too long before we can get back to usual!

**How we do this – our guiding principles**



We know that for babies and young children to really thrive, they need to be in loving, supportive families where they’re protected from harm or too much stress. Baby brains need an attuned adult brain to develop alongside – a parent or carer who can notice how they’re feeling and what they need, and make sure that these needs are met.

We know that when babies don’t have this, they get stressed and when they’re stressed, their brain and bodies aren’t growing as well as they need to. This affects developing children on a bodily as well as an emotional level. Babies who feel safe and happy do lots of moving within the context of the loving relationships around them. They have lots of good experiences of touch and nurture, and these allow them to grow into their bodies and get really good at moving around before they can talk or tell someone what’s going on for them. Babies in frightening situations (during pregnancy and once they’re born) or who spend too much time under stress, don’t have these same touch experiences and they don’t move nearly as much as typically developing children and as such their brain and central nervous system can’t develop as well as it needs to. This affects how children move and the sense they have of themselves and their bodies.

This programme is based on the BUSS (Building Underdeveloped Sensorimotor Systems in Children who have experienced Developmental Trauma) model, that I developed. I’ve put a longer explanation of the model at the end of this letter. If you

prefer listening to something rather than reading, you might like to listen to the podcast that I did with a couple of adoptive parents as part of national adoption week 2020 - <https://youtu.be/qvRFNu5Eu3Q> (There's also a BUSS website – that's related to what I do in my non NHS working week – but there's lots of information on there that you might find useful – [www.bussmodel.org](http://www.bussmodel.org))

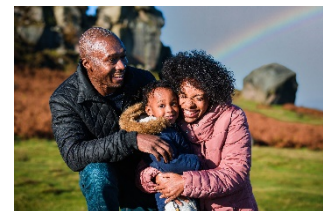
### **LEAPlets – the basics!**



We spend a lot of time in LEAPlets thinking about children's bodily regulation and development, because it's the foundation for all other development. We talk a lot about three foundation sensorimotor systems; vestibular, proprioceptive and tactile. These are a bit of a mouthful, but really they describe a child's sense of themselves and their bodies, whether their body is as strong as it could be, how they feel when they're running or jumping, and how smooth and well coordinated their movements are.

We don't usually spend much time thinking about development and how a child moves from one stage of development to another – we're really used to this just happening without anyone really having to give it any thought. If a baby is well cared for, not too stressed for too much of the time, and able to spend time on their tummy, rolling and then move onto commando crawling and crawling before they start walking, then things generally do just fall into place! From walking, children start jumping, running, climbing and generally getting good at increasingly complex movements. All of these in turn build a good foundation for fine motor skills – so things like cutlery, holding a pencil or threading beads. When children have missed out on those early touch and movement experiences in their first year of life, it's important to do some work to redress it, and this is the work that we do at LEAPlets. You'll get really good at analyzing how your child is moving and noticing changes if you come to LEAPlets.

As well as thinking about movement, we'll also think about a child's emotional development. On a psychological level, we know that being under too much stress can be really damaging to brain development – babies are born with a brain that has phenomenal potential, but how it actually develops is entirely dependent on the relationships and experiences that they have. We know that when babies and young children consistently well looked after, they can struggle to trust other adults or make good relationship. They can constantly be on the lookout for danger and thinking that the bad things that happened are going to happen again. When they're in this state of mind, they're not working with a part of their brain that will let them learn – they're just trying to survive. We spend a lot of time at LEAPlets thinking about this too, how



to help children shift from that state of mind where they're primed for survival, to a state of mind that allows them to stay in the moment of an experience and manage not knowing or not being in charge – to be open to relationships – and to have some space in their mind where they might be able to begin to play or to learn.

### **What we'll do each week**

The group will follow the same structure each week. You'll come into Leeds Gymnastics and we'll go upstairs, ready to get started! You might like to look up Leeds Gymnastics club so you know what it's like – [www.leedsgymnastics.com](http://www.leedsgymnastics.com)

We'll start our group each week singing a hello song. We lie on a mat on our tummies to do this (you'll understand why if you read the info about the vestibular system below!) Then we'll read a story together before we do the specific activities of that week. These games are all designed to work on areas of a child's sensorimotor and attachment systems that we know tend to be underdeveloped in children who have experienced developmental trauma. We'd really encourage you to play these games in between sessions too!

Please don't worry if your child doesn't seem to want to join in with what we're doing – we're here to support you and for some children, doing these things at home will feel much more comfortable than doing them when we meet together.



### **Who you'll meet**

You'll meet me and Lesley Naylor, from the Therapeutic Social Work team, as well as Jess and Emily who are coaches with Leeds Gymnastics Club and who I've been working with for a long time. There will also be 6 or 7 other parents / carers and their children in the group.

### **When is the group?**

We meet on a Wednesday morning, 11.15 – 12.00. We can't meet during lockdown but can meet when Leeds is in Level 3 COVID restrictions or below. The club take lots of precautions to make sure that it's as safe as possible for everyone. Because of the age of the children who come to LEAPlets, we don't wear masks, but you're welcome to if you'd like to.

### **What changes might I see and what different will it make?**

We hope that by coming to LEAPlets children will find starting school easier. By supporting each child and their carer to fill in gaps in their child's foundation sensorimotor systems, it will be easier for them to do things at school like concentrate, sitting and playing. By focusing on these foundation systems, children will be in a better position to learn fine motor skills, like writing, playing with lego or

drawing. We'll also think with each of the schools that children move onto about their individual needs and how school could be supported to continue the work if needed. We'd hope that by building good bodily regulation it'll be easier for children to enjoy all of the opportunities for learning, fun and friendship that school can offer.

### **How will we measure if it's working?**

We'll use a range of measures to evaluate this programme – we'll probably talk to your child's nursery (if they're in nursery) and complete an assessment called a Boxall profile, we'll look at each child's bodily regulation and development and we'll think with you about your experience of caring for your child. We also have a Clinical Psychologist in training who's working with us at the moment, talking to carers about their experience of the group and if / how you think it helps.

### **How to get in touch with us**

If you've got any queries, either now or when we get started, we'd really like to talk to you. The best way to get in touch with us is by email, so we can arrange a time to talk that works – [sarah.lloyd@leeds.gov.uk](mailto:sarah.lloyd@leeds.gov.uk)

Hope this is helpful and do get in touch if there's anything about the group or about a child that you'd like to discuss.

Best Wishes

Sarah

Sarah Lloyd

Children's Occupational Therapist and Play Therapist

Author of the BUSS model

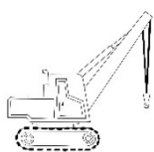
My usual working days are Wednesday – Friday

*A longer explanation of the **Building Underdeveloped Sensorimotor Systems (BUSS) Model** – the more you can understand why we're doing what we're doing, the more you can do at home too!*



In our work together we'll together about your child's foundation sensorimotor systems, and by that we mean:-

**The vestibular system** – if our body was a crane, the vestibular system would be



like the base of that crane. It helps us to feel grounded and gives a stable base for moving. On a bodily level, our base (or core) is our head, neck, shoulder girdle and trunk. The vestibular system has two main tasks. The first is to provide core strength and stability to our bodies and the second is what's called gravitational security – helping us to feel

secure in our movements, being able to go down steps or jump up and down without it feeling precarious or as if the world is moving with us.

The vestibular system starts to develop in utero and once the baby has been born is always at work in response to gravity and movement. But we know that when babies are in frightening environments, they tend to freeze rather than move freely. Babies need to feel safe and contained to move and flourish in relation to their caregiver.

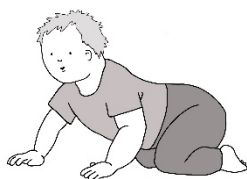
Children with under developed vestibular systems will often have poor posture and low muscle tone – they'll feel a bit saggy in the middle and might slide along walls or have poor balance and co-ordination. There might be a fearfulness about movement (you can often notice this when you watch a child going down a flight of stairs) or lots of sensory seeking behaviour – crashing, banging, whizzing around. None of us like to look foolish or as if we can't do things as well as the next person, and it's just the same for children. I find that children often use speed to make up for a lack of control and you might only notice how this system is working when you ask them to slow down.

**The Proprioceptive System** is all about the smooth, well-coordinated working of muscle groups. In this system the messages travel from the muscles and joints inside our bodies, up to the brain and Central Nervous System and back down to the muscles and joints, telling us how much pressure, force or strength to use in a movement.



Our proprioceptive systems are always working to give us information about where our bodies are in relation to our environment– you can try this by just closing your eyes and reaching out for something that you know is in front of you, like a drink. You shouldn't need to use your eyes to find your drink and you don't have to think about how to pick it up. Our brain will have been working hard without us being consciously aware of what its doing, mapping out our environment, alerting us to things we need to know about, deciding what we don't need to be consciously aware of. If you stop now and really tune into all the noises that are around you, you'll see how much our brain has been filtering out, so we can focus on what we're wanting to do without constantly being distracted. It's just the same on a bodily level, good proprioception is knowing what your body is doing without having to use your eyes to track or plan how your body is going to move or work – how much pressure or force to use in a movement. When you bend down from your chair to pick something up off the floor, you're not having to think about how far to lean forward or how to stop yourself toppling forward onto the floor – your body knows how much pressure or force is required for the movement.

Like all of our foundation systems, the proprioceptive system grows through repeated patterns of movement when a child is feeling safe and happy. Think of a baby learning to crawl – all those times of being up on all fours and then rocking



back and forward as their muscles and joints prepare for the movement – all of those movements are vital in developing bodily awareness – hands flat on the ground, wrist movement, the body getting used to being off the ground, supporting itself ,

eyes getting used to judging distance, the body working out how much pressure / how much force to use. When you watch a young child at this stage of development, when they're moving from creeping on their tummies to crawling we see lots of trial and error – lots of overshooting the movements or not using enough pressure and collapsing back down. All of this builds up those neuronal networks about the position of our bodies and what we need to do to be moving around.

A child whose proprioceptive system is inadequately primed might struggle to know where the different parts of their body are (older children talk about not knowing what their feet are doing unless they can see them). If you don't really have a sense of where your body is from the muscles and joints inside your body a good way to find out is to move around a lot, or bump into things and we often see a lot of extra movement in children with underdeveloped proprioceptive systems. Movements are often poorly modulated – too floppy or too jerky.

**The Tactile System** develops from one that is primed for survival in the new-born baby, when all the receptors are alert to danger and function to protect the baby from harm. With nurture, love and care the system shifts from this defensive functioning to discriminatory functioning. As the baby no longer needs to be constantly looking out for danger because someone else is taking care of them, the receptors change so that instead of being alert to danger, they allow the child to begin to discern what they're touching. We're wanting the child to be able to stay tuned into the moment of an experience and explore, rather than being so preoccupied with protection and safety. Early feeding experiences are an important part of the tactile system. Children who have experienced abuse and neglect are often stuck in a defensive mode and their systems are on high alert.



This links very well with the **Limbic System**, the system that's all about what state of mind the child is in and it's helpful to think of it as the music that constantly plays in the background. It's the unconscious process that sets our state of mind –flight / fight / freeze – or a state of mind that allows us to stay in the moment of an experience, be able to manage the uncertainty of now knowing or letting someone else be in charge of things, and make and store memories and experiences in a way that they can be usefully retrieved when we're under stress. It's in this state of mind that children can start to play or learn; they need to be able to stay in the moment of an experience and be able to tolerate uncertainty or not knowing everything.

#### **These Systems are Underdeveloped not Broken**

Understanding how the foundation systems typically develop and viewing them as underdeveloped rather than broken in children who have experienced early abuse and neglect underpins this model. This understanding allows us to take the child back through essential patterns of movements that have been missed, within the context of the safe and nurturing environment that foster or kinship carers or adoptive parents are able to offer. This can help to re-lay these foundations, re building the child's sense of themselves on a bodily level. This gives a platform for emotion regulation, building relationships and learning.





***There's more information about the BUSS model in Sarah's books, 'Improving Sensory Processing in Traumatized children' and 'Building Sensorimotor Systems in Children who have experienced Developmental Trauma' (Sarah Lloyd, Published by JKP) if you're interested in learning more. We've got a few copies in the Therapeutic Social work team if you'd like to borrow one, or you can buy a copy on Amazon.***