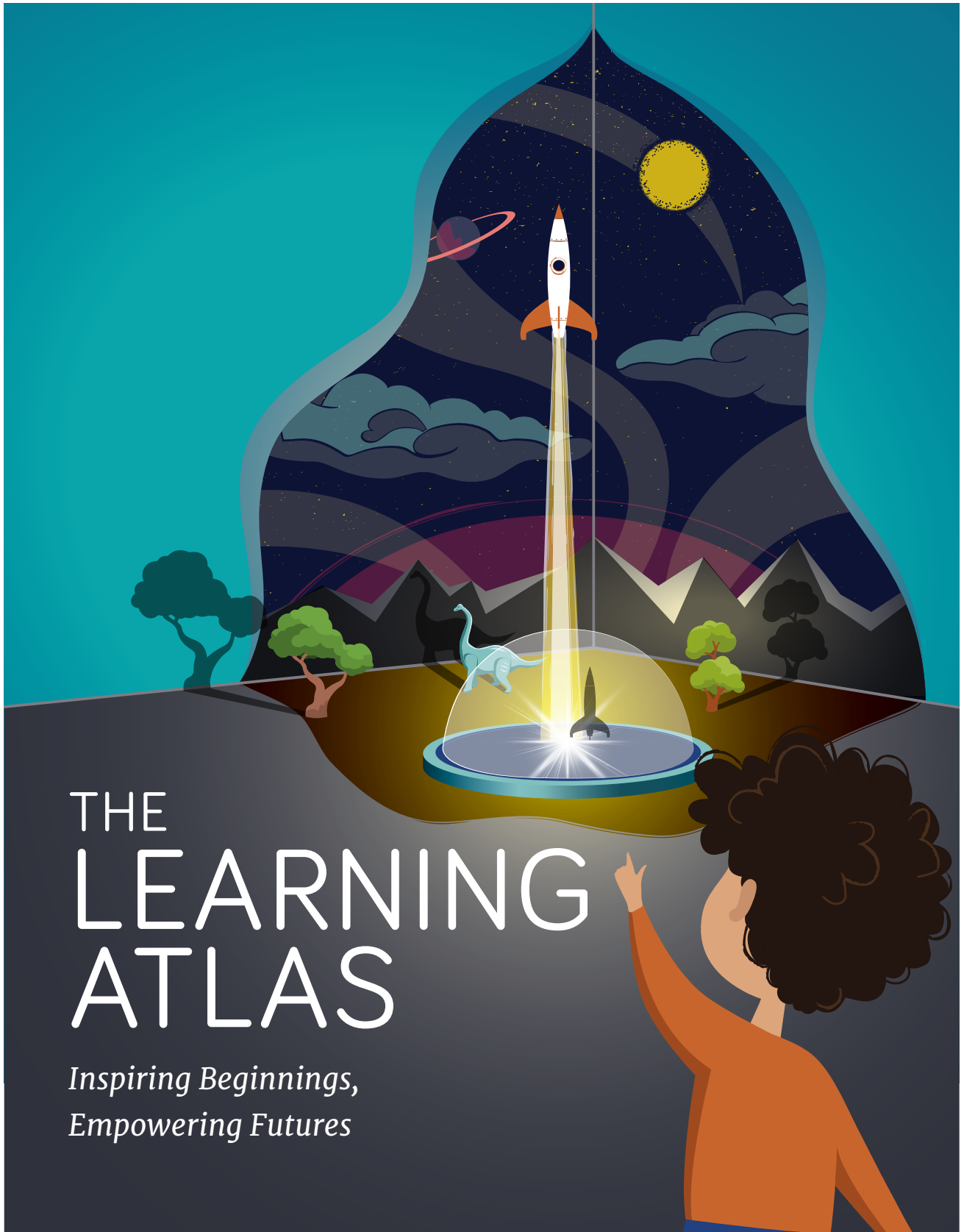


GLOBAL • EDUCATORS • LEARNING • INSPIRING




# THE LEARNING ATLAS

*Inspiring Beginnings,  
Empowering Futures*

SECOND EDITION





*Tell me and I forget.  
Teach me and I remember.*

Involve me  
and I learn.

*Benjamin Franklin*

# A Welcome Note from TTS



*Welcome to the second edition of The Learning Atlas:  
Inspiring Beginnings, Empowering Futures!*

TTS is passionate about sharing learning experiences and best practice from around the world to inform and inspire.

In this edition, we aim to bring to the forefront key themes that are unfolding in the Early Childhood sector on a global scale.

We explore the fundamental skills required for young children to thrive as they grow into their futures. We also share the importance of the learning environment and what you can do to enhance and maximise yours, both indoors and out. We hope you will take inspiration from our global educators on their tried and tested methods of implementing learning approaches such as STEAM, outdoor learning, Snoezelen and much more.

In The Learning Atlas you get to hear from diversity and inclusion specialists and learn of the importance of sustainability in Early Childhood, and how you can encourage children to develop love and care for the world around them.

As you read through an array of global insight, we encourage you to take a moment to consider what the future holds for Early Childhood; for you and the children

you help to nurture. How will we need to change to support our children in this ever-evolving world? How can we adapt our practice and our resources to truly underpin our children's learning and development? Are our settings equipped to lay the greatest foundations for children's futures?

**Lucy Thompson**  
Editor-in-Chief



**TTS is the UK's leading developer of innovative learning resources.**

Content Editor: Angelica Celinska

Production Managers: Ana Smith, Nicola Selwood

TTS Magazine Team: Rebecca Harrington, Marie Barr, Cinzia Ferella, Stefanie Williams, Sarah Keeling, Eliane Bandeira, Sasha Djordjevic, Lara Atkins

*Find us on:*



*With special thanks to our global contributors:*

Jan Dubiel

Angelica Celinska

Eliana Cocca

Kjell Gunnar Ytre-Eide

Catherine Clark

Alistair Bryce-Clegg

Jon Northwood

Martina Lundström

Alice Sharp

Paola Lopez

Naomi Clarke

Michelle Pratt

Richard O'Connor

Sue Egersdorff

Marina Robb

Maria Moreno Fernandez

Jodie Lopez

Juliann Garey

Kamilla Jawed-Rogers

Dr. Fawzia Reza

Beverley Smalley

Joanna Grace

June O'Sullivan

James Clarke

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These articles are  
a collection of learning  
experiences from around  
the world

*Sit down, relax and  
prepare to be inspired!*

FUTURE THINKING, DISCOVERY & WONDER





# Destination unknown:

## How can an early childhood education curriculum prepare children for an uncertain future?

In his 2009 book 'The Element', the late Sir Ken Robinson explored the conditions and barriers for how learners achieve their potential; how we can combine passion and talent to find meaning in life. Alongside this he warned of the challenges that an unpredictable future might bring, and the importance of ensuring that, as far as possible, we enable children to be empowered, prepared and equipped for what they might encounter; even though we may not know what this will be. In particular he identified aspects that, he believed, given the dramatic rate of contemporary change, would be most pressing and urgent:

"No other period in human history can match the present one in sheer scale, speed and global complexity of the changes and challenges we face...**We are preparing children for jobs that don't exist yet, using technologies that haven't been invented, in order to solve problems we don't even know are problems yet.**" (Robinson, 2009, p.19)

In the same year Trilling and Fadel (2009) drew from a range of existing disciplines and perspectives to create a lexicon of 21st Century Skills that they believed would provide the most effective basis for constructing meaningful and applicable learning. Their conclusions (see figure 1) pinpointed three considered components regarded to be vital for a sustainable and responsible future:



Figure 1: 21st Century Skills (Trilling and Fadel, 2009)

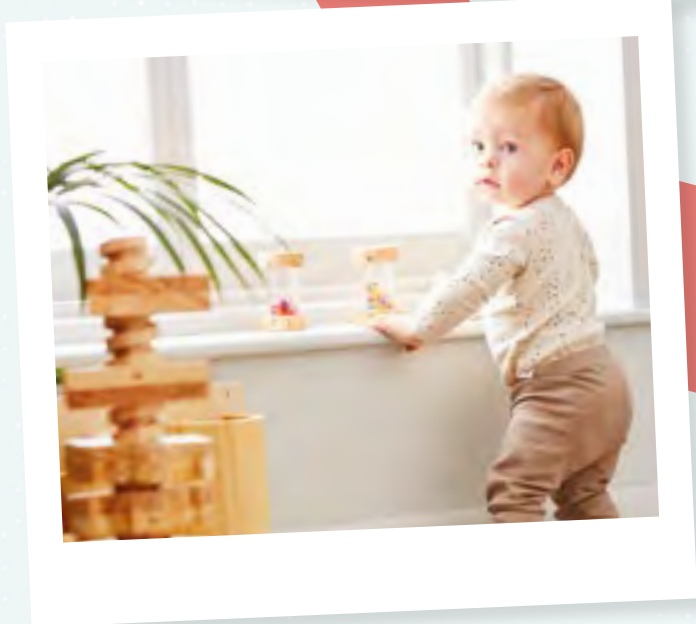
Learning and Innovation "The 4 C's"	Digital Literacy	Career and Life
Critical thinking & problem solving	Information literacy	Flexibility & adaptability
Creativity and innovation	Media literacy	Initiative & self-direction
Collaboration	ICT literacy	Social & cross-cultural interaction
Communication		Productivity & Accountability
		Leadership & responsibility



The intervening years have increasingly confirmed rather than challenged these conclusions and perspectives. As we continually refine, adapt and reconstruct the content of a responsible curriculum, especially in early childhood education, **we are constantly reminded that the world children will enter is changing rapidly**, and in order to be successful and able to participate, the precise nature of that content becomes ever more critical.

So how might these be most effectively articulated and facilitated in a curriculum for early childhood education? Considering the highly formative nature of these years and how the foundations for future learning are essentially established, how can we ensure that the content of a curriculum enables and empowers this and caters for the needs of future citizens?

Our recently published document – the AISL Harrow Early Years Curriculum (AHEYC) (AISL, 2022) – started from this exact premise, and aimed to recognise the realities of an aspirational, values driven early childhood education curriculum while acknowledging the specific dimensions of an international context. This provided an invaluable vehicle for exploring this arena, and devising an approach to constructing content that can prepare children for that unpredictable future.



## Learning Behaviours

One of the most significant elements of content was to embed the role of Learning Behaviours (described as 'Disciplines') as an integral part of the curriculum. Although the AHEYC's language of Wellbeing, Curiosity, Motivation, Cognitive Development and Creativity differ from Trilling and Fadel's (2009) '4Cs' and 'Career and Life' categories, their important, and possibly updated relevance provides overlaps that do exist. **These Disciplines are the 'engines' of learning and provide the context and drivers that fuel knowledge and skills.** While we shape, utilise and apply the more 'academic' and 'knowledge' elements of the curriculum, it is vital that these are propelled through the behaviours that enclose them. **These are not just valuable motivators and enablers in themselves but effective and transferable life skills that transform the purpose and make meaning of all future learning.**

Within the AHEYC, there is the expected coverage of expected 'domains' such as Language and Communication, Social Development, Physical Development, Literacy and Mathematics. However, to ensure that it also provided a responsible and future aware content, there were three specific additional areas that were also included.

## Digital Knowledge and Awareness

The rapid development and global impact of digital technology, so accurately predicted by Sir Ken Robinson, continues unabated, and we live in a world that is not only increasingly dependent on this but needs to constantly adapt to it and learn new skills as it grows in sophistication. While there are understandable anxieties regarding the issue of screen time for very young children, it is imperative that they are aware of the role and nature of digital technology and begin to understand both its purpose and how to operate and apply it safely and appropriately. Rather than an end in itself, many of the newest technologies support the nature of a holistic curriculum by enhancing to and elevating other learning domains while continuing to support the embedding of vital Learning Behaviours and Disciplines. Competency in this domain, and an early understanding of it, is, it could be argued, a vital element of a responsible curriculum that prepares children for the future.

## Cultural Identity, Diversity and Bilingualism

**A child's sense of self, their identity and place in their community is a vital component of self-awareness and security.** Being aware of their heritage, traditions and history also enables them to have a sense of belonging and connection with their own history. For children in an International School there is a critical additional dimension to this. The premise and purpose of International Schools, above all, is to instil in children a sense of diversity, an understanding of different cultures and cultivating an awareness of a world beyond their own community and nation. This knowledge will empower them to be ambassadors for their own society while able to communicate and engage with the cultural multiplicity of an ever shrinking and interconnected world. Additionally the role of bilingualism and the power of a second language that provides the context for this is also critically important. Woven into the everyday curriculum, rather than a 'subject' in itself, true bilingualism will both enrich children's lives and also provide them with a searing confidence for the future.

## Sustainability and Environmental Awareness

**One of the existential challenges that will further exercise future generations is the need to be acutely aware of the global environment and the impact on climate change and the use of finite natural resources.** Building up this awareness from a young age, and exploring some of the potential solutions, or generating alternative approaches will be vital for the children who will be adult citizens and decision makers in the future. Again, a responsible approach to an early childhood education curriculum will ensure that the knowledge and skills required to engage with this understanding are explicitly recognised within the content that is delivered. Children will learn how to develop their own ideas, and be able to think creatively and in an informed way to recognise their own role and responsibility as well as thinking and having a broader understanding about the issues involved.

While we attempt to predict the unpredictable, and create a vision of destinations that can never be realised, **we have to accept that our children's future, while exciting and laced with infinite possibilities, is ultimately unknowable.** While we cannot control the directions that this will take we can ensure that, as far as possible, we provide them with meaningful and responsible knowledges as well as adaptable and transformative behaviours and competencies.



**About the author:**  
**Jan Dubiel**

*Jan Dubiel is a nationally and internationally recognised specialist in Early Childhood Education. He was recently identified by the Times Educational Supplement as one of the ten most influential people in British education.*

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# Joyful learning

*We live in a busy, hectic world, where allowing ourselves to be still, to reflect, to ponder, is often seen as a 'luxury'. In recent years, this is something that has often pervaded my thoughts a great deal. Therefore I made a very deliberate decision to seek out the joy, to savour it, to mentally log those wondrous moments that are omnipresent in early childhood education. If as educators we truly pursue this, I can assure you that we are richly rewarded. I like to call it 'collecting treasures' and putting them in my metaphorical pocket, perhaps to be called upon at a later date.*

## UNLOCKING THE MAGIC OF CHILDHOOD

We share a common goal in that we want to enable and provide the very best possible provision we can for our children. We seek an environment that nurtures, supports, scaffolds, and unlocks their rich potential. We know that children are born innately curious, and we aim to enliven and build upon this fascination. Maria Montessori described it as the goal 'to activate the child's natural desire to learn'. After all, they are not as Plutarch expressed, 'empty vessels to be filled', but minds that are like a fire to be kindled.

I resonantly believe that we can try to make childhood as magical as we can. It needs to be a place of possibilities, where imaginations are free to soar. Children need time, as Loris Malaguzzi described, to 'marvel'. His recognition of the child having a hundred voices to be heard is central to enabling children to thrive and reach their true potential.

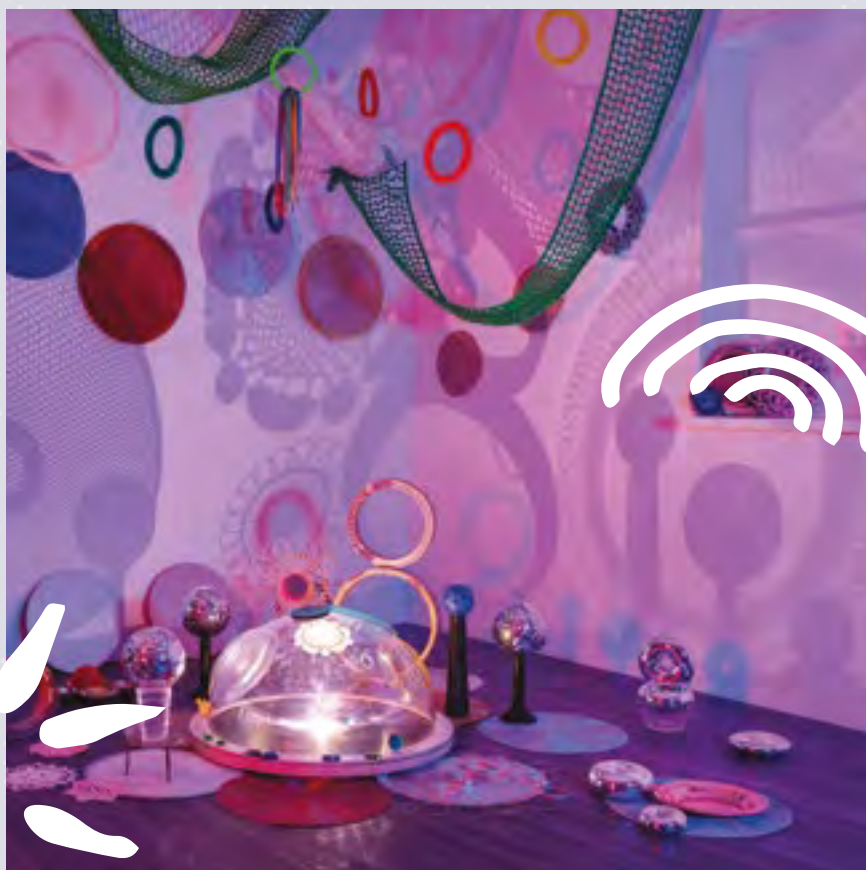
In nourishing the children's rich pedagogy, we also nurture ourselves as we are part of this fascinating and rewarding world of early childhood. We are fortunate to witness the joyous moments, the milestones, the special events and goals achieved. Although not every moment is joyful, if we take the time to really deliberate on the joy we do have and give it our focussed attention, we can really benefit as it has effects on both our mental and physical wellbeing.

## A WORLD OF IMAGINATION

Recently, I was extremely fortunate to be invited to visit a brand-new nursery in Glasgow. I was respectfully observing the play at a distance where four children were being very industrious in their new home corner. It was the kind of home corner that was beautifully curated. I witnessed a detailed narrative that was unfolding, relating to their bedtime stories. One child had assumed the role of the parent reading a book and was using carefully observed mannerisms and language. It was clear they were all imitating familiar routines and behaviours, modifying them to their interests. I recall thinking how incredibly observant young children can be and how not to underestimate their ability.

They had modelled real life experiences and used such subtleties. Guy Claxton and Bill Lucas, in their book *Educating Ruby*, discuss how 'curiosity is at the heart of all learning, being able to notice things is an essential component of curiosity'. They also reflect on children needing 'confidence, collaboration, communication, creativity, commitment and craftsmanship'. It occurred to me that being observant now is going to be an excellent, transferrable skill. It will certainly help when learning about a very complex alphabetic code that needs children to observe subtle differences in shapes and positioning of letters.

I was then delighted to be invited into the household, into their world of imagination. I was not the adult leading the play, but





‘WHEN YOU STOP AND  
LOOK AROUND, THEN  
LIFE IS PRETTY AMAZING’

DR SEUSS

playing alongside them, occasionally being directed by them. I was told it was night-time and a story began to unfold. My assigned task was to find my bed. If I was to join in this play wholeheartedly, I needed to abide by their elaborate conventions, so I waited for the nod of approval. The level of detail the children used in their communication and role play skills was complex, fascinating, and charming. They were happy that I was taking this all very seriously as I listened intently and smiled constantly. I too began to be lost and absorbed in this imaginary landscape, especially when I was then asked if I wanted to try their magic picture.

Hanging on the wall was a vintage portrait of a child. One of the children explained that if you press the nose, something happens. I was intrigued. I pressed it and all responded by revelling in the rainbows that were apparently cascading like stars around us. The children were totally engrossed in the play. Awe and wonder were tangible and there was a

rich lexicon of language accompanying the event. It was a moment of joy for all. I consciously did not take notes and I was truly privileged to play alongside them and learn from them. Why would we miss such a rare opportunity to have such riches? As Dr Seuss says, ‘When you stop and look around, then life is pretty amazing’, and this occasion certainly was.

This scene had made me reflect on Di Chilvers work, in her book about ‘Young Children Talking’. She describes how we are so fortunate and privileged to get such glimpses into their world and how it helps us to understand what interests and excites them.

Rachel Carson felt that a child’s view on the world is ‘fresh, new, beautiful, full of wonder and excitement and how it is important that it is not dimmed’. We are the ones who can help support this quest, whether it is through powerful provocations, fuelling and following their interests, or guiding them in their play.

## ELEVATE AND ENHANCE PLAY

The learning materials we can offer also may elevate and enhance the play. I was mindful of this when children were one day observing flowers and seeking out minibeasts amongst the petals. With the introduction of an Easi-Scope, which super charged the magnification, they were able to see an abundance of creatures teaming on this flora and fauna. It was a natural wonder to behold.

Now, there are many, many things that have made me ponder and smile. I vividly recall a child spending a considerable amount of time deliberating, curating, and collecting things to place in a magic potion bottle. She persisted when the objects didn’t fit, she carefully picked herbs and petals and then swished them around enthusiastically. The real joy was seeing her face light up as she proudly showed us her marvellous mixture, a powerful potion. The reason this particular moment resonated so strongly was I recall many



decades ago experiencing and collecting my own velvety, soft petals and swirling them around in my jam jar. I wonder if that child will have this memory for a lifetime, as I have? Yes, she was using motor skills, scientific enquiry, maths, language, etc, but it was also based in an exciting, stimulating multi-sensory play scenario. Susan Isaacs saw play as a 'perpetual form of experimentation' and hopefully children are given the time, freedom, and opportunities to experiment and make their own discoveries.

We are witnesses to so many catalysts, of which we do not know the effect they may have. The child that builds a castle may be a future engineer, the child that projects dinosaurs on to a shadowy wall may well be a future author. As practitioners, we are able to make these wonderful moments possible, which they may cherish dearly. Take time to reflect on memories from your own childhood that you hold dear and perhaps you will see them present in the children around you.

**When past pupils describe fond memories of squelchy mud pies, building Postman Pat's van or finding the bell from the Polar Express, it is truly heart-warming. They have their own pocket of treasures too and you may well have been the one who helped them to collect such treasured memories.**



**About the author:**  
**Catherine L. Clark**

*Catherine is the Divisional Director for product innovation at TTS Educational Resources and is a former teacher.*

*So, I encourage you to sometimes be still, to take time to ponder, to reflect, to savour and to collect these magical moments that may indeed last and nourish you for a lifetime.*

***Find the joy and cherish it!***





*The curious child wonders,  
explores and asks questions  
of the world and people  
around them.*



## Skills & Dispositions

Welcome to a whole new world! Imagine you have just landed on an unknown planet or even arrived in a city you have never been to. You are on your own, the people around you are speaking a language you don't quite understand, and the place is full of intriguing objects, curious items you are desperate and eager to explore, but you are not sure if its allowed, if it's dangerous or if you are courageous enough.

This may in fact be how our littlest humans feel as they enter our early years establishments. So, let's consider the skills and dispositions they may need to call upon to explore and investigate this whole new world.

**Dispositions**, the qualities of our character, the way of our mind. Are we born with a range of dispositions or are they shaped

by our experiences? Science suggests we are all born with unique dispositions, such as ways of responding to people and situations. Research also suggests dispositions are significantly influenced by environmental experiences before and after birth (Karr-Morse & Wiley).

The **curious** child wonders, explores and asks questions of the world and people around them.

The **thoughtful** child thinks critically, creatively and reflects on their engagement and learning.

A child who shares their thoughts, while being open to others' ideas, who enjoys learning with others, being part of a group has a **collaborative** disposition.

A child might approach play in a **methodical** way, they will be well

organised, have an efficient way of approaching their 'plans' in a logical way.

Children with **grit** and determination are passionate and courageous in their approach to interaction and learning. They persevere and stay on task even when mistakes and challenges occur.

There are so many positive dispositions for learning we may hope that every child has a little of each, that with each child we encourage them to be adventurous, imaginative, attentive, and open-minded, but do we ask and expect too much?

## Shared experiences

Let's take a shared experience, a resource used as a catalyst for thinking, such as Build-A-World.

As children gather to play, to explore and experiment with the creation and invention they are planning in their minds, is there stimulation for a wide variety of dispositions?

Stand back and ask whether there is something here that inspires the curious and adventurous child? Yes.

Will thoughtful and determined children be motivated to engage? Yes.

Can the thoughtful and methodical children gather with the collaborative child and create something of wonder and awe? Yes.

Would every resource, opportunity or invitation to play be a yes to the above? Do we ever just throw resources into spaces and hope the children play? If we are to support, extend and enrich each child to develop positive dispositions we must inspire and ignite thinking. Different types of thinking.

## Self-management thinking skills

If a child meets an interesting or an unusual item, such as a bag of little stars, the possibilities of their initial thoughts are huge. They may have sung Twinkle, Twinkle and explored a couple of stars, but imagine if we introduce stars as a loose part to enrich our Build-A-World. It could become a space station or an alien landscape.

As each child begins to hypothesise, predict and plan how the various stars could be used, they may hide them, try to problem solve by hanging them above a dinosaur land or bury them in the sand in their seascape. All the while they will be involved in managing their own ideas and thinking. They will be applying social skills as they collaborate, linguistic skills as they communicate their thoughts and ideas to make decisions with their friends, as well as lots of physical skills; both gross and fine motor.



Depending on their past experiences they may have limited knowledge or an extensive knowledge of what to build their thinking on. Most often these initial thoughts will be internal, not spoken aloud, and it is important to allow each child time to manage their own thinking before expecting a response through engagement.

If we are hoping to develop self-management thinking skills we need to consider whether the experiences available to our children encourage them to identify, plan, consider, debate, explore and reflect on their play. When we set up play situations, spaces, and experiences, do we always consider what will go on inside the head of the children as a result of being in that space? What thinking will take place in this game, space, process or learning journey?

How much debate does a child engage in firstly with themselves, without any need for an adult interaction? In fact, at this point, when they are managing their own thinking, it would possibly interrupt their thinking if we became involved. Do they try different methods of manipulation? Do they adapt and modify what they do before looking for help or advice?

Do we encourage remodelling and adjusting their self-management thinking through exploration and experimentation? We could also support them to reflect on their participation and trials before leaving the experience. We could draw out their sense of achievement of the process they have been involved in and highlight how much they have been thinking about!



## Participative and collaborative thinking skills

*I'm ready to participate and use my thinking in open adventures.*  
A child who is comfortable and capable of managing their thinking in some capacity might be ready to participate with their peers. They may do this with enthusiasm but equally may be a little hesitant and timid of playing alongside. Time and space in small groups may help build confidence in thinking and allow them to participate as they feel ready. Children being involved in play with each other enables them to explore and develop knowledge through engagement that is productive and shared.

What are the skills that allow children to participate and share their thinking? Here are a few that might help. To be a contributing participant, children will be involved in listening, negotiation, considering others, persuading friends, discussing ideas, and empathising with the group.

Take some moonstone black pebbles and other gems and jewels. As we notice the actions, the way they manipulate as they create transient art, we see their collaborative thinking skills blossom and grow. Two or three shared brains, shared thought paths, lead to deeper and richer creative processes. These processes may more strongly support manipulation of objects, strengthening grasps and grips and allow children to generate and design mathematical patterns.

When children are excited and deeply involved together in play and we see signs of them reasoning with each other over a disagreement or argument, they are developing their skills of persuasion. The skill of coaxing, prompting, or influencing another's thinking is a rich skill to have. These skills will only develop if prompted by peers or adults and by the artifacts and items offered for play.




## Enquiry thinking skills

**When we set up environments for play, we should consider what it offers the children in the way of stimulating enquiry thinking skills.** If we put out a vegetable rack in the home corner with pretend veg, wooden and plastic, does that spark deep enquiry about vegetables? Real vegetables allow the child to question what it feels like, tastes like and smells like. Picking up a leek and perhaps peeling a few layers off and looking closely at the details, examining it and analysing the twist in the stem and how the layers wind round, gives a rich door into enquiry thinking. As they peel the layers, they may notice the 'juice', the aroma and moisture on their fingers.

## Creative thinking skills

The final type of thinking skill we develop when engaging our positive dispositions support every child's inquisitive mind, creative thinking! When we hear the word 'creative' it often conjures up 'art.' If we watch children play and they are making links with materials and spaces and ideas, they are engaged in creative thinking. Take children who choose to play with a set of cars. They may begin to push them and pull them along the floor. They may bash them against each other. Then we see them stop, take the cars to another space where they can place a plank or pipe at an angle and then roll the cars. They may then begin to build a roadway, car park or garage for their car. They may begin to collaborate with other children. What we are noticing is a child involved in exploration and experimentation. They are questioning and explaining to themselves in internal dialogue or if collaborating with each other, external chat. They are demonstrating the ability to adapt and imagine other ways to play, they are being creative!





Pause a little and reflect on the environments and resources we share; are they encouraging the dispositions of our children to develop and impact on the thinking skills, not to mention their executive function skills too?



**The author:**  
**Alice Sharp**

*Following Alice's 30 years of experience as a primary teacher, she is now an associate of the London Early Years Foundation and holds a Scottish Qualification Authority Accredited Centre qualification, Alice also works with all four governments of the United Kingdom. Alice is a senior lecturer in Early Years at Glasgow College, has guest lectured at the University of Glasgow, University of Wales, University Carmarthen and Queens University.*

*Alice is a multi-award winner within the early years sector and is the creator of over 200 specialist courses delivered all over the UK and around the globe.*

*To find out more, please visit:  
[www.alicesharp.co.uk/adventures](http://www.alicesharp.co.uk/adventures)*

# The development of “Theory of Mind”:

## How pre-schoolers think about other people’s thoughts

### *Case study*

You are watching Niamh play with her favourite teddy bear. She’s getting hungry, so she packs her bear away in the toybox and leaves to get some food from the kitchen. While Niamh’s gone, you see Sinead come in. Sinead opens the toybox and takes out that same bear. She then wanders off outside into the garden with the bear to play, all without Niamh ever seeing her.

Now you see Niamh come back in from the kitchen. She says that she wants to play with her bear. If I asked you “Where will Niamh look for her bear?”, you would naturally answer “In the toybox”. Given that she didn’t see Sinead take the bear into the garden, Niamh is going to think that her bear is still in the toybox, even though we know that it is actually now in the garden.



## BELIEFS AND REALITY

This simple story highlights a key point – when we interpret other people's behaviour, what matters is understanding what other people *believe* about the world, rather than what we ourselves know to be the case. Often those two things agree – other people regularly share our own beliefs about the world – but sometimes they do not. Other people, like Niamh, can have *false beliefs*. A person can think something that we know isn't true. They will then act according to their false belief, rather than according to reality.

This all seems obvious to us as adults, **but when do children start to understand this critical distinction between beliefs and reality?** At what age do children become more like adults in this understanding, and how do young children understand the thoughts and behaviours of others? In order to answer these questions, Developmental Psychologists play structured games with children of different ages and record what they say and do. We play out stories like the one about Niamh and Sinead above, often with puppets so the children can see what is going on.

## WHERE WILL NIAMH LOOK FOR HER BEAR?

When a typical three-year-old watches the story about Niamh and Sinead and is asked “Where will Niamh look for her bear?”, we see a surprising result. Children at this age will often say that Niamh will look for her bear *in the garden*. They say Niamh will look for her bear *where it actually is*. It seems that young children may not understand that Niamh thinks her bear is somewhere it is *not*, that she has a false belief, and will therefore look for it where she falsely thinks it to be.

We can make the question more direct and just ask children “Where does Niamh *think* her bear is?”. A typical three-year-old will tell you that Niamh thinks her bear is in the garden. It is as though they expect Niamh to share the same thoughts about the world as they do: I know the bear is really in the garden, so Niamh should think this too. For a typical pre-schooler, it is as though other people's thoughts should simply copy reality, rather than being able to be different from it.

This finding is not simply because three-year-olds struggle to follow these stories. We can ask children questions throughout to check that they have remembered what has gone on. When we do this, three-year-olds will often be able to tell you that Niamh first put her bear in the toybox and that she did not see Sinead move it. But they will still then insist that Niamh now thinks the bear is in the garden. It is not until children are about four-years-old that they start replying that Niamh thinks her bear is in the toybox and that is therefore where she will look for it. It is at this age that children typically start to show a more adult-like understanding of what Niamh thinks and does: that she thinks something different to what the child themselves knows to be true, and it is that belief that will cause her to act.

## THEORY OF MIND

Of course, a four-year-old still has a long way to go towards fully understanding other people's thoughts, feelings and behaviours. But it is around this age that they at least begin to grasp the key distinction between beliefs and reality, and that people act according to what they think, even when what they think is actually false. Psychologists refer to the ability to understand other people in this way as having a “Theory of Mind”.

**Developing a Theory of Mind is considered a key step in a child's social development.**

The emerging understanding of other people's thoughts has been linked to children's school-readiness and their ability to successfully navigate peer-relationships. On the other side of the coin, Theory of Mind development also appears to support children's increasing ability to lie more convincingly to adults as they get older! Appreciating that people can have beliefs that are different from one's own is important both for understanding others and for misleading them.

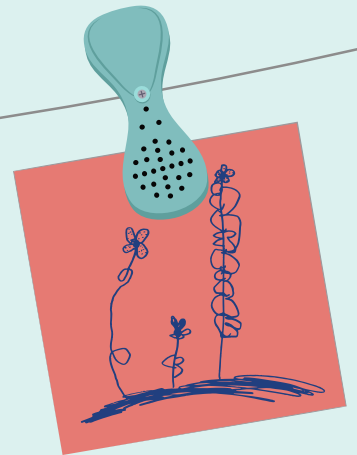
While psychologists will talk about the behaviour of a “typical” three- or four-year-old, of course not all children develop Theory of Mind at exactly the same age. Some children will develop earlier, others later. Indeed, recent times have been extremely challenging for many young children and families. Many early-years teachers report ongoing challenges in the classroom, with some children arriving at school with fewer practical and social skills, relative to children of their age pre-pandemic. Understanding the effects that the pandemic has had on different children's social development, their Theory of Mind included, will be a critical challenge for psychologists and educators over the coming years.



**The author:**  
**Richard O'Connor**

*Dr Richard O'Connor is a Lecturer in Psychology at the University of Hull, UK. His research, currently funded by the UK Economic and Social Research Council, investigates Theory of Mind across the lifespan.*





# LANGUAGE & COMMUNICATION



Technology  
to support

# Communication and language development

**When thinking about language acquisition in early years we imagine all of the activities in a setting which encourage listening and speaking (when developmentally appropriate). Singing nursery rhymes, discussions during play, practitioners speaking to babies in their arms during feeds, encouraging early words and sentences (asking for milk or a snack), describing leaves and things we pick up on a walk, practitioners speaking with each other and modelling conversations, listening activities with instruments and objects, putting music on, asking questions, pointing at objects while talking about them, reading stories...the list goes on and on.**

Many of these activities come naturally, especially to those who have dedicated their career to working with children. We know that this is where a great early years setting can make a huge and long lasting impact on child development which carries on throughout children's lives. Early language skills are highly predictive of later success in life and children can have very different skills at a young age. Exposure to language, especially with good modelling, is central to so much work in early years settings.

There is nothing which can replace the importance of a caregiver who speaks to a child and reacts when they start experimenting with sounds and languages themselves. A face lighting up when a child says a first word is a great encouragement which leads to further language acquisition. However, as we know, 1:1 is not possible at all times, but there are lots of creative ways we can continue to offer this motivation and encouragement.

## *Linguistic input with the help of technology*

**Technology is a great support in providing many different opportunities for linguistic input, both for first language acquisition as well as introducing new languages for children who may have moved or have a different home language.** Recordable items such as the TTS Talking Frogs and Talking Pegs are great ways to blend technology into the setting, and they can be used in a variety of flexible ways.

Talking Frogs could be used as part of a game to find rhyming pairs of words (a handy set of ten means you can record five rhyming sets of words – 'frog' and 'log' are good starting points!), or they could be used to record words and phrases specific to a small world set up (water, river, pond, leaf).

Talking Pegs can also be used to record phrases specific to where they are pegged, perhaps clipped to everyday objects to help with second language acquisition, or could be part of a game to clip them in order on a string to make a sentence or a word.

Talking-Point Premium Recordable Buttons are a great way to add some language around your setting, whether all grouped together for a game or dotted around the room so that children find them as they play. These can have one or two recordings added to each button, for example one activated by pressing the button and one activated by waving your hand over the button or even reaching across it. You could add prompts for children in different areas,



Adding a range of age-appropriate technology to an early years setting's provision is a wonderful way to build on, and supplement, excellent communication and language development opportunities.

a task instruction to complete, or perhaps a question which plays when a child reaches past and then they can press the button for the answer. These can also be used as multi language support by recording the same word or phrase in two languages.

### *Promoting conversations*

Socialising with other children is a hugely important element during child-led play, and the environment can encourage conversations while children play side by side. Starting to communicate with friends, and being understood, also helps to provide motivation to keep learning more words and phrases. **Recordable resources dotted around the learning environment create great conversation starters and encourage children to talk to each other about what they have heard.**

The TTS Rechargeable Mobile Phone Set is a great way to encourage conversation between children in any setting as they can talk with friends through the mobile phones. This two-way communication method helps children to mimic what they may see at home or elsewhere, when people speak on the phone, and we know how much children love to pretend to be adults! Great role modelling of language is fantastic, but children also thrive in an environment where they feel they can practise language with peers who are at the same level of acquisition as they are. Their initial conversations may be fairly monosyllabic, but it is wonderful to see this grow and develop when they have so many tools at their disposal; from chatting about their day, to booking pretend doctor's appointments over the 'phone'!

When children are getting used to using technology for speaking they can also move on to using Easi-Speak Microphones to record themselves talking and singing, and then easily listen back. This is great for giving them a safe way to listen to their own speech and keep improving. They also love being mini rock and pop stars as they record their latest 'big hit'! There is something about using these microphones which really helps children to become more confident and fluent speakers as they seek to improve on their last recordings, from very early speech sounds right through to making their own adverts just like they hear on the radio or television.



**About the author:**  
**Jodie Lopez**

*Jodie Lopez is an ex primary school teacher who won a number of awards for her use of technology across the curriculum. She moved from full time teaching into working with education technology companies to help bridge the gap between schools and products/services on offer. As a Teaching Awards judge she loves to see and hear about all the fantastic work teachers and schools are doing. You can find Jodie at @jodieworld on Twitter where she is always happy to answer any questions you may have about technology for your school or setting!*

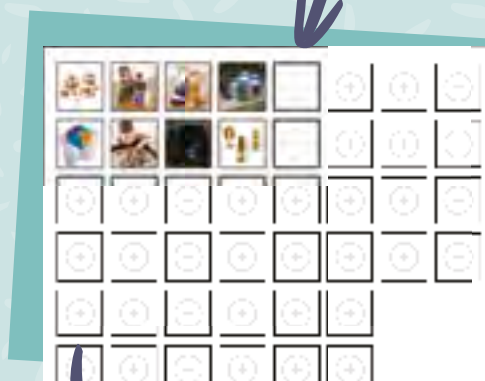
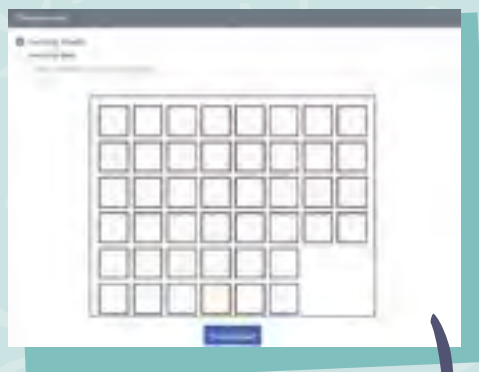
# French teacher creates online generator for

## TTS Chatter Boards!


TTS Chatter Boards are made of 44 blank, dry-wipe tiles, each of which can be recorded on individually for up to ten seconds. They are re-recordable, so can be used over and over with as many applications as you and your children can imagine!

Teachers are some the most resourceful people there are – thinking of a million and one brilliant ideas to engage children every day. And, as if to prove this, one teacher from France has taken Chatter Boards to the next level by creating a grid generator that allows all kinds of grids to be made from both pictures and text.

It really is ingenious – so simple and quick to use. Follow the instructions below to have a go. It is free and fool proof (even for someone as un-tech savvy as me!) and might inspire you to come up with ever more wonderful speaking and listening activities.



- ▶ To add an image (preferably square), choose the mode [insertion of images] and click in a box.
- ▶ To add text, choose the [insert text] mode, enter the text and click in a box.
- ▶ To delete an image or text, click on the box.
- ▶ To download the grid in pdf format, click on the [Download] button



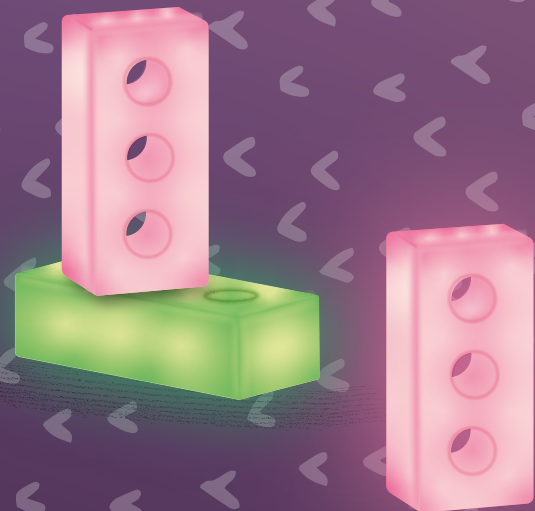
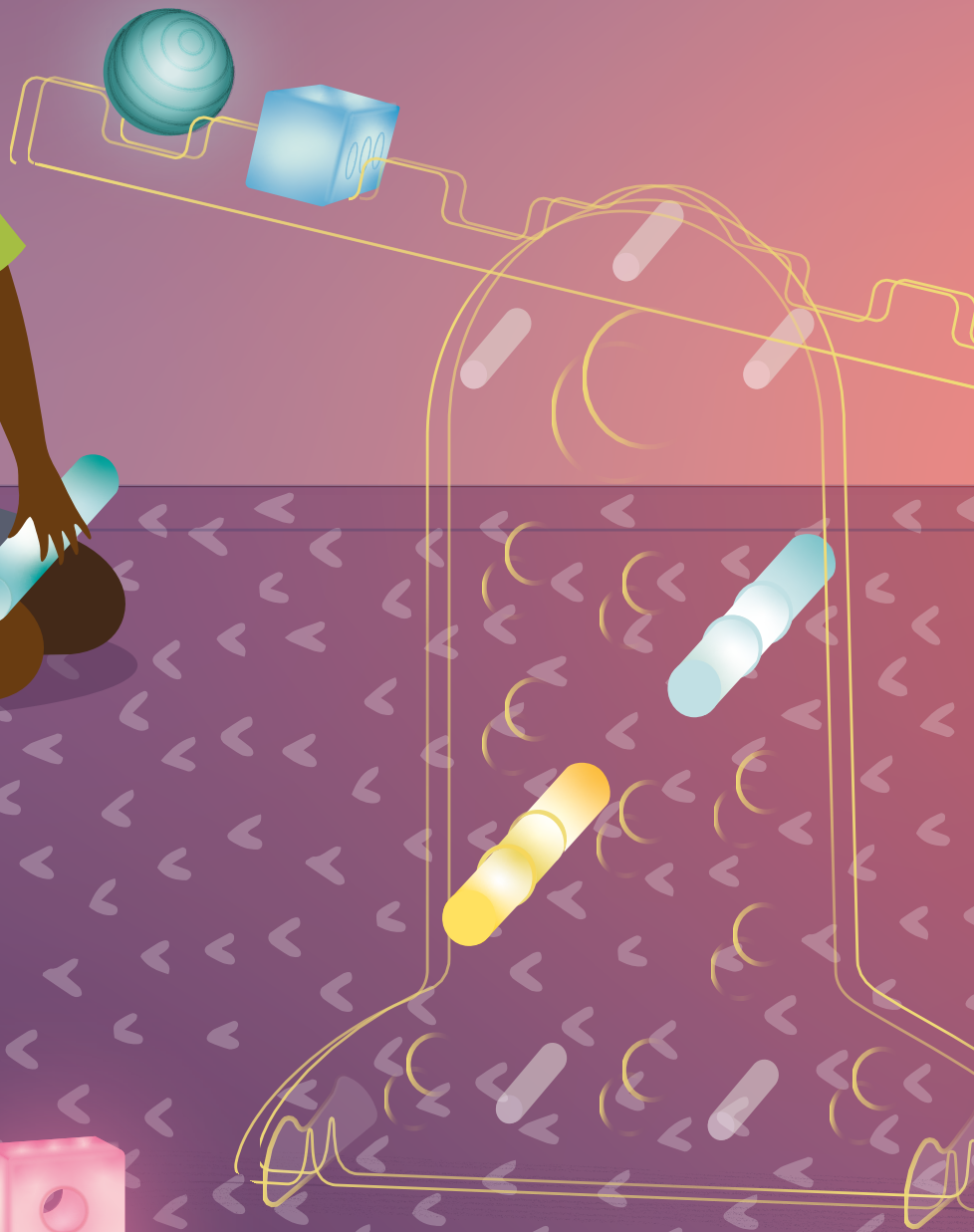
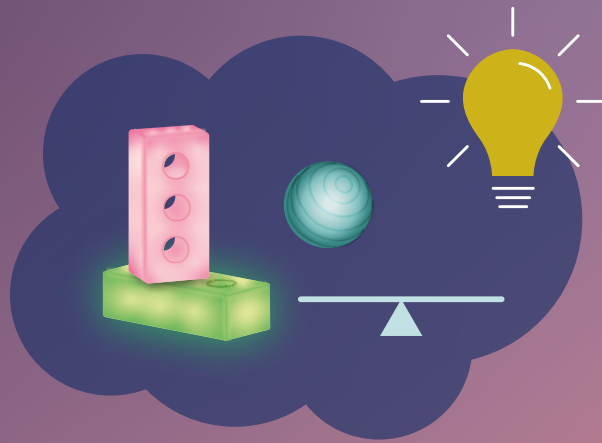
*Here are a few activity ideas. You will think of many more. Please share if you do. We'd love to hear them!*

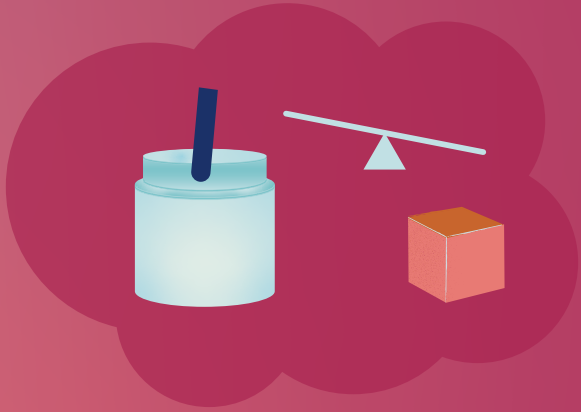
1. Generate phonics sounds children have learned so far and add them to the grid. Are children able to match the grapheme to the sound it makes?
2. Press tiles in order, to blend words.
3. Generate words to add to the grid. They might be decodable, common exception words, topic words etc. Children read them and press to see if they were correct.
4. Write and record digits randomly on the grid. Can children find and press numbers in order? They might be consecutive or perhaps for older children numbers in the 2-, 5-, or 10-times tables.
5. Children pick out a number card, then find the same number on the board. Have they said the number correctly?
6. Use the generator to add photos of children in the class and or adults around the school. Record their names. This is a lovely way for children who might be new to the class, or need a bit more support, to get to know the important people around them.
7. Add pictures or words in the setting's/child's first or main language. Children then press to hear them in any different language they are learning.
8. Ask a group of children to record a story a sentence or two at a time.
9. Record pages of a short book for children to listen to as they read. Label the tiles – press 1 to hear page 1 etc.
10. Generate children's names on the board. They press their own name to get an instruction (perhaps after completing an activity). For example, 'Make a list of all the things you can see in the classroom beginning with the sound /t/'.



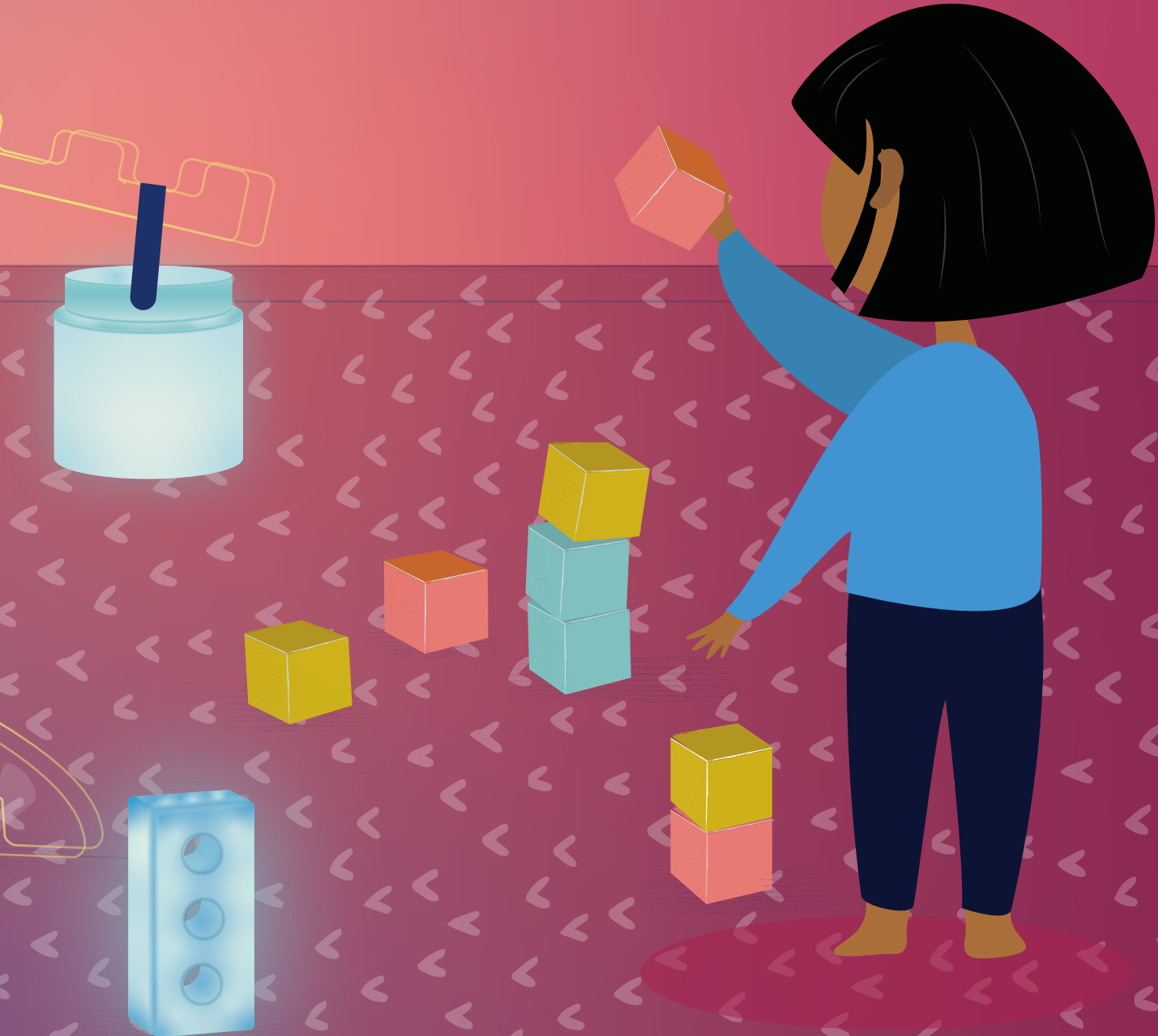
**About the author:**  
**Beverley Smalley**


*Beverley is a content editor and writer at RM Educational Resources. She was previously a primary school teacher for 20 years. Beverley has recently been working on a brand-new set of Decodable Reading books for TTS that she is hoping children will enjoy.*





# STEAM





## STEAM in the Early Years:

### *Creating curious learners through play*

One of the reasons that I have spent the past 30 years working in early years education is that my days have been filled with the joy of random questions like ‘Do chickens have belly buttons?’ and (after the death of the class fish), ‘do fish have funerals?’. Although they can appear a little random – especially in the middle of a carpet session on 2D shapes – these sorts of questions typify many of the characteristics of an early years child and their innate curiosity about the world that they inhabit.

*As early years practitioners, our role is to create an environment that nurtures curiosity and help it grow and flourish.* This should be easy, especially when you have children who are naturally motivated to explore and discover. Unfortunately, as adults, we are often encouraged to work towards outcomes that don’t have child development (or curiosity and creativity) at their centre.

#### WE ARE NOT TALKING ABOUT THAT NOW

This is a phrase used far too often. We talk to the children about something planned and during the discussion, a hand goes up on the carpet and a voice says something like ‘I had pancakes for my breakfast’, ‘my sister has got a scab on her knee’ or on one occasion, during an observation of practice by the Headteacher ‘my dog is dead!’

What we’re compelled to do is stick to the plan, because that is what we think successful educators do. Stick to the plan and get to the desired outcome. That is where I would have definitely used the phrase ‘we are not talking about that now’, and switch the conversation back to the prescribed outcome.

What experience has taught is that it is in those questions, random comments and unrelated statements – children reveal what is really important to them – the things that make them curious. Rather than being a distraction, they are a focus serving as a reminder about our role as educators and what real engagement looks like.



## COMPLIANCE AND ENGAGEMENT ARE NOT THE SAME

True engagement can be magical as well as transformative for children.

When we are engaged we are motivated, absorbed and inspired. We are listening or joining in because we *really* want to. It's at these moments of high-level engagement that we are most open to learning and that our levels of resilience and persistence are high. You are far more likely to come back and have another try at something if you are loving the experience.

Compliance, on the other hand, is doing what you feel is expected in a given situation because you feel like you have got to do it – or you are afraid of what might happen if you don't. There are occasions when children will comply because they are afraid of getting into trouble or disappointing a significant adult. But these behaviours are dominated by negative emotions and don't leave children feeling absorbed or inspired.

## CREATING A STEAM SPACE IN EARLY YEARS

It is easy to look at the component parts that make up STEAM (Science, Technology, Engineering, Art and Maths) and think they are not very 'early years'. But the truth is, **what children do through their natural play and interaction is a perfect grounding for STEAM** and there are lots of things that educators can do to enhance that experience even further.

To be a scientist, technologist, engineer, artist or mathematician there are key skills, attributes and dispositions that underpin your specific knowledge about your subject and talent. These can be easily woven into the fabric of an effective early years space.

**As early years professionals, we need to create places where children have the freedom to play, explore, enquire, investigate, show initiative, try, fail and try again.** To build their confidence and develop their understanding by having the opportunity to apply what they know. To allow them time to talk to each other and adults (sustained shared talk), have time to think on their own and with others (sustained shared thinking) and feel a sense of accomplishment.

Children will be most successful if they can acquire 'academic' skills in the course of developing their dispositions for learning, not at their expense.

And of course, as children develop these skills and dispositions, they won't limit their use to the early years' environment; they will take them out into their wider families and communities for the rest of their lives.



## EXPERIENCE VERSUS ACTIVITY

One of the ways that we can build a STEAM approach into our thinking and environment is to focus on children's skill development and experiences, rather than only providing them with structured activities that link to topics, themes and predetermined outcomes.

Teaching a 'topic' is a firm favourite, enjoying theming absolutely *every* activity that the children took part in whatever we were talking about. If we were talking about teddy bears we would talk about them, sing about them, write about them, draw around them, do maths about teddy bears while counting with teddy bears and even pretend to be them in our Music and Movement sessions.

If we were doing some painting (of teddy bears), the paper, paint pots, colours and brushes were inviting the children to paint a teddy, perhaps even with an example of one done earlier.

**How much more engaging would it have been if I had been able to say to the children:**

**"If you paint today, don't forget that you can choose any of the different sizes and textures of paper that we have got to paint on.**

- If you would like to have a go at painting on fabric, card or foil, you can help yourself to that too.
- Make sure you find a space that is the right size for what you want to create.
- You can serve yourself with paint from the dispensers or mix your own powder paint and water.

- It's up to you how thick or thin you want your paint to be.
- When it comes to what you want to use to apply your paint with, then the choice is yours. You could use everything from your fingers to any of the resources that are on the shelves. Or you could go outside and collect some natural resources and see what marks you can make with them".

This is the approach that I see successfully in place in many of the early years settings that I work with.



## STEAM IS AN ATTITUDE, NOT JUST AN APPROACH

In the example above, we might not get any teddy bears, but what we would see is a myriad of dispositions for learning underpinned by enthusiasm and engagement. As for STEAM, there is at least one example of Science, Technology, Engineering, Art and Mathematics skills in this one creative opportunity.

A more experience-based approach to teaching and the environment gives us lots of opportunities to observe what interests and engages the children. Plus, we are able to maximise their high levels of engagement which in turn enables us to support, scaffold, model and teach all of the skills and knowledge that we want them to have.

And best of all, it makes learning great fun. Not just for the children, but for adults too and that, after all, is what learning should be.





**About the author:**  
**Alistair Bryce-Clegg**

*Alistair is an award-winning early years author, blogger, product designer and advocate of play.*







*When children focus on  
problem solving, rather than  
on getting the right answer,  
they learn more.*

# Introducing the Glow and Go Bot

We are all aware that for many 21st century children they are immersed in a world where technology is omnipresent in their daily lives. It is imperative therefore as educators we really examine and scrutinise how it can support their learning. The caveat is that it needs to be in a really considered, quality, curated, safe and developmentally appropriate way. There is often attention drawn, frequent concern, and indeed criticism of how much time children spend on screens, absorbed in a virtual, often solitary world. However, technology can take many forms in early years education without a screen in sight and with the ability to support learning richly and developmentally appropriately. This is what the hugely exciting Go and Glow Bot is all about.

## *Children's development at the core*

From the initial stages of design we were galvanised in the belief that technology was being utilised to enrich, engage, enliven and to add value to the learning. It was also about blending what we know about how a child learns and at what stage. Dialogue about pedagogy abounded as did theoretical viewpoints. I do feel though that if such visionary influencers such as Montessori and Malaguzzi were pondering provision and skills today they too would have reflected on the possibilities that technology can offer. Now that does not mean we forget the traditional materials, the blocks, the manipulatives etc, but reflect how they can work seamlessly in harmony and be mutually supportive.

We may also want children to learn in a play based, STEAM led learning way, with rich quantities of awe and wonder, fascination, and creativity. The design and its capabilities had to align with understanding of how a child learns and the skills needed both cognitively and physically. The curious, capable, confident



child, eager to experiment, explore, to make connections, was at the forefront of the thinking. Children need the foundation skills, those key ingredients in their learning diet. The youngest children need a plethora of opportunities to make connections, to hone their critical thinking skills, to be immersed in an environment that is interactive, collaborative, and fulfilling their needs and interests.

We involved leading experts in our quest to understand the right kind of provision to offer toddlers, pre-schoolers, etc. We worked with Carol Allen, a leading Technology and SEND expert who guided our choices. She steered us how to use light, texture, pattern, colour and sounds to not only make the bug more multi-sensory and therefore sending messages to our brains in an array of ways, but also to make it so much more inclusive. The size of the buttons, the way they were pressed, and the pace of the movements were all carefully engineered.

It was also imperative that it was cross-curricular, open ended and versatile. It needed to be accessible for children to work independently of the adult. It also was required to be rechargeable. Our audience gave us a huge list of factors to consider, and we were very grateful for their powerful insights.

Our much adored, global, and acclaimed Bee-bot has stood the test of time because of its simplicity and understanding of the child's needs. However, for the even younger children we realised that they would benefit from having something that moved more literally and behaved differently. They needed something that helped lay those early enquiry skills, in a non-prescriptive and precise way, where awareness of cause and effect was being fostered, where connections were being made and all in a fun, magical, illuminated and sound filled way.

## *Supporting a variety of ages*

The TTS Glow and Go Bot was designed to interest and engage children from ten months up. Now we know that their needs will change as they grow, so a variety of modes were created in order to offer adaptability. The older children could go on to devise journeys of up to 10 steps, carefully selecting the route. They could estimate, plan, predict and evaluate, often working collaboratively. They may choose to design the environment, the landscape for the robot and immerse it in an elaborate narrative. The robot took on various guises. The ten-month-old who is sitting up may joyfully take great delight in pressing the buttons over and

over again, seeing them light up and make a sound. For some children it really supported their schematic interests, from lining things up, making him rotate, to getting the bug to enter tunnels and houses.

Children's mathematical vocabulary can be extended and enriched with number games and maths challenges. As they press the buttons, they learn about one-to-one correspondence. It is also great for learning about space, shape and measure, as well as the development of estimation and prediction skills.

The safety for such young children was also paramount and stringent testing occurred throughout. Another considered feature was that the children move around with him and mirrored his actions. We wanted active participation. If the bot goes left, they go left, and the number of movements can be built up until a chain is formed for them to copy. There is also a dance mode that can be isolated. It is wonderful to see the children joyfully moving to the lively music.

With special thanks to staff at Dukes and Duchesses Nursery Liverpool, Paola Lopez and team at Kinderoo Children's Academy Florida, and Carol Allen.



**About the author:**  
**Catherine L Clark**

*Catherine is the Divisional Director for product innovation at TTS Educational Resources and is a former teacher.*



## THE GLOW AND GO BOT IN PRACTICE

**Our observations and work with various settings showed so many rich possibilities could unfold.**

Liz Ludden describes how children's skills across science, technology, engineering and language were supported:

**Science** – We observed the children investigating, testing, predicting, evaluating and gathering evidence.

**Technology** – We saw that the children negotiated with each other and with the team in developing real solutions to real problems, getting the Bot in and out of spaces, and had the skills to control change in the Bot. The literal buttons on the Bot gave children the opportunity to control beyond cause and effect.

**Engineering** – We noticed that the older children were able to begin to plan and design the environment space to manoeuvre the Bot around and through a given space, using blocks and tunnels and different surfaces.

**Language** – The robot is the catalyst for numerous conversations. Older children can make up stories, writing adventures around the character. Younger children may love to narrate, enriching their vocabulary and language skills. Scenarios can be created around the robot, with children coming up with names for it and deciding the adventures it goes on.



# Paola Lopez – Senior Program Director at Kinderoo Children’s Academy in Florida (USA)

## reviews the TTS Glow and Go Bot:

*Upon opening the box, we saw a beautiful and futuristic robot. The bot is a charming, magical merge between awe and wonder with technology. We were immediately curious to observe and analyse its potential.*

We observed this product in two classrooms with children of age four. I hope that after reading our observations, you can agree that there’s still so much that we need to explore! Both classrooms gave us different perspectives based on their experiences, and it’s clear that students and educators need more time to explore other pedagogical concepts and STEAM theories. Today’s observations were fascinating and positive!

Making a careful observation of how the students who participated behaved in front of this resource, we appreciate how the Bot, full of light, sound, and movement, can promote joy and cognitive development through a child’s specific interest.

### HOW THE CHILDREN INTERACTED:

We were able to see how the children who participated were capable of creating innovative strategies to have creative outlets in resolving inquiry questions that were presented to them. All the concepts described about the Glow and Go Bot on the TTS website were confirmed and observed today!

We also saw situations where the children were working on spatial orientation concepts and prepositions of place and direction (the Bot is in front of me/ I am behind the Bot). The directionality (the Bot moves forward, backward, to the right, to the left) thus adds to language development, providing the child with the possibility of increased exposure to speech and non-verbal language.

An aspect worth highlighting is the child’s ability to face obstacles through problem-solving. **Their predictions were so creative it led them to immerse themselves in a world of probing, testing, and investigation— with intensity.**

This innovative resource is full of exciting elements such as sound, light, and movement, also promotes the development of independent learning and organisation, leading the child’s thinking to the creation of STEAM ideas strategies, and purposes.

We noticed different interest patterns with the other group of



four-year-olds. A student who is interested in the study of light, the first thing she identified was the reflection of the Bot’s light on her hands. For this experience, we dimmed the lights to use the Early Years Projector. The children were able to see the Glow and Go Bot’s shadow, and its vibrant colours against the surface areas as one child moved the projector to follow the Bot.

We all have a natural bias towards pattern recognition. When we see something that is not entirely uniform, such as an object in shadow form, patterns will emerge. In this case, the Glow and Go Bot took on a new identity each time the children programmed the Bot to move in a different direction.

The Early Years Projector is an excellent companion for the Glow and Go Bot for their STEAM approach; both resources engage children who are learning about technology alongside other skills like math & science at developmentally appropriate levels; it enables them to explore different possibilities through investigation, which promotes creativity among all Early Years learners!

This innovative resource is full of exciting elements such as sound, light, and movement, and also promotes the development of independent learning and organisation, leading the child’s thinking to the creation of STEAM ideas strategies, and purposes.

Another student involved a friend, showing that collaboration and interpersonal relationships are nourished during these types of experiences; the children took turns handling the Bot

and programming it with instructions; they soon made up a game-using the Bot as a carrier, carrying an object in different directions. We witnessed math connections during this game as the children had to estimate how many times the Bot's button was pressed and then used that information to get the robot to its projected destination.

We also observed the children getting nervous when they saw the Glow and Go Bot move closer to the obstacles they had built around the carpet area. They had to react quickly so as not to allow it to collide, asking their friends for quick answers to solve problems. We noticed a social-emotional connection emerging. Empathy towards the Bot was demonstrated as the children were seen moving the obstacles so they wouldn't get "hurt." This is a concept that needs more observation and exploration. If children can develop empathy for a robot, can this behaviour translate to human compassion and social justice?

## DEVELOPING CRITICAL SKILLS:

**The Glow and Go Bot is helping our students navigate through a technological journey where they're learning to develop skills and gain an understanding of how technology works.**

One student used the Glow and Go Bot to engage in dramatic play; for him, the TTS bottles were used to give potions to the Bot. Thus, he could control his movements (recognising beforehand that it would happen).

The children spent a long period of time exploring the Glow and Go Bot; this enabled us to see an interactive robot designed to help the children learn about coding. They gained a new understanding of properties like early programming that will shape their future quest for knowledge on robots in this rapidly changing world we live in today!

The Glow and Go Bot can help us create a world where children can be creative and flexible in all aspects of their lives. TTS is helping Early Learning educators

accomplish this by fostering growth through technology, with an emphasis on emotional intelligence (EQ), cognitive flexibility (CF), creativity – also known as generative thinking or idea generation skills.

## EVALUATION OF THE GLOW AND GO BOT:

I am now convinced that we need more Glow and Go Bots for our other classrooms. **The value-to-cost ratio outperforms any resource we've tried so far with our students.** Unlike many other products on the market, which are designed to be played with only once or twice before they break down and cannot be used again due to their short lifespan (usually less than three months), the Glow & Go Bot is made of durable materials that will last for years.

After observing what four-year-olds can do with this resource, we are curious and excited to test theories with our toddlers and three-year-olds.

As a reminder, we are educators and play facilitators, we must take the time to play with this type of technology because we need to be 21st-century learners to be 21st-century Educators.

The educators involved in this pedagogical observation were: Jenny Gallego and Gabriela Urdaneta.



# MATHS





# Let's be mathematicians

*Maths, oh my goodness, I bet if we were to ask a thousand people if they enjoy and get excited by maths the percentages of no's would much higher than the yes'!*

*Why is this? It's often because people find maths boring and dull. It doesn't seem to apply to real life. The way concepts have been shared often makes it seem pointless.*

## IMAGINE A WORLD WITHOUT MATHS

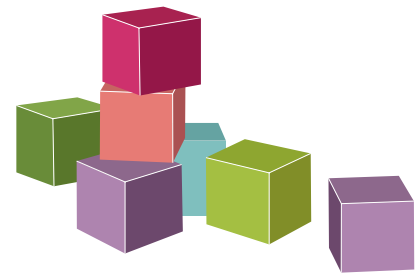
If we begin to imagine a world without maths we would have no time, calendars, clothes, buildings, transport, or food. Consider six things we do in our setting each day. We open a door that has been **measured** to fit in a frame. We sit on a chair that can take our **weight**. We share out snack **equally** and fairly. We **count** children, we know when it's **time** to go outside or for parents to come and we plan with the children how to build the **highest** and **broadest** tower in the world.

Mathematics and numeracy are an important part of learning for every child in their early years, and building strong foundations in this area of cognition is vital. As children engage in any kind of play, we can draw out mathematical

elements and concepts. Play in a home corner with different containers, utensils, food stuff, sizes of pots and pans, a variety of vessels for drinking from such as goblets, cups, beakers, or mugs help develop skills such as problem solving, understanding of weight and measure, thinking about sorting, matching, pairing, subitizing and developing their own spatial awareness. Maths knowledge is useful for all of us – from children to adults – in all aspects of our lives. We are constantly using and applying mathematics every day.

## A SECURE UNDERSTANDING

As children become absorbed in deep play, they can begin to combine separate ideas to form new concepts. Time, manipulatives, and meaningful contexts are important for learning mathematics.



Developing a secure understanding of early mathematical concepts takes time and lots of opportunity to engage. **When children focus on problem solving, rather than on getting the right answer, they learn more.** If we adults get excited about maths and numeracy, then the children will too. If we encourage exploration, trial and error and problem solving, embrace mistakes, then the children will be excited about their learning. Every child needs to have confidence in using mathematical skills.

Mathematical development depends on becoming confident and competent in learning and using key skills. Mathematical understanding should be developed through stories, songs, games, and imaginative play, so that children enjoy using and experimenting with numbers.

## INTERESTING, RELEVANT, AND EXCITING...

A number is a basic unit of mathematics. Numbers are used for counting, measuring, and comparing amounts. A number system is a set of symbols, or numerals, which are used to represent numbers.

There is no point in helping a child to read early or to be very numerate, if he lacks curiosity, creativity, or a delight in exploration. When we decide to introduce number, or our children demonstrate an interest in using them, we need to share experiences that are interesting, relevant, and exciting. The connections in the thinking process are formed by the experiences a child engages in and by the multi-sensory environment they find themselves in.

Make any mathematical engagement lively, energetic, and fascinating.





## THE FIRST THREE PRINCIPLES OF COUNTING:

**Stable order understanding** – the verbal sequence of counting, being able to say the number names in sequential order.

**Cardinality** – understanding that the last number spoken in a counting sequence, names the quantity for that set.

**One to one correspondence** – Understanding that when saying the names of the numbers in sequence, each object receives one count only.

Fill your play spaces with glorious resources to bring these concepts to life.

### The how of counting

Research is clear that these are essential for building a strong and effective counting foundation:

**Abstraction** – understanding that it doesn't matter what you count, how we count stays the same.

**Order irrelevance** – knowledge that the order that items are counted in is irrelevant as long as every object in the set is given one count.

### The what of counting

The following skills are not viewed as essential but children who are good at counting consistently often demonstrate these skills:

**Comparison** – being able to compare quantities by which one has more, and which has less.

**Subitising** – this means our children are able to visually recognise a quantity of numbers without having to count.

**Hierarchical inclusion** – when a child understands that numbers are nested inside each other, and the number grows by one each count (number bonds), for example, 4 is the same as 3+1 etc.

**Number conservation** – understanding the number of objects remains the same when they are rearranged spatially. For example: 5 can be... 4 and 1, 3 and 2, 2 and 3.

**Classifying** – categorizing something into a certain group or system based on certain characteristics. For example, creating a group of red objects is classifying by colour. Creating a group of metal objects is classifying by materials.

**Measurement** – the action of measuring something, the size, length, weight, or amount of someone or something.

Money can be defined as anything that people use to buy goods and services

Think about all of these concepts within the frame of golden threads of pedagogy.

The most important part of sharing all these concepts is **curiosity**. We need to present the play in ways that entice and exaggerate the manipulative possibilities.

While the children engage, they **connect** to themselves and their abilities, their peers as they share ideas and thoughts and their spaces as they use their environments to help and support their thinking. All through the play they will be communicating, sharing creative and critical thinking and together build their self-worth, value, and skill base, wallowing in a state of wellbeing and hopefully developing a love of mathematics!



**The author:**  
**Alice Sharp**

*Alice is a multi-award winner within the early years sector and is the creator of over 200 specialist courses delivered all over the UK and around the globe.*

*To find out more, please visit:  
[www.alicesharp.co.uk/adventures](http://www.alicesharp.co.uk/adventures)*



# Creating mathematically rich environments

*In this short article I am briefly exploring some important aspects when considering whether an environment is mathematically rich for young children. I will be taking a critical look at examples of maths provision and reflecting on the messages and opportunities afforded to young children. Whilst reading this article I encourage you to join me in being critical of your own and others' practice, reflecting on your environments and what mathematical opportunities you provide for children.*

## MATHS IS EVERYWHERE

What does maths look like in your setting? How does maths 'happen' in your provision? Are children consistently hearing and therefore naturally using mathematical language throughout their time in your setting? Or do they only engage in mathematical learning through specific activities or within a maths area?

Why not have a mathematically rich environment where children can explore mathematical concepts through their day to day lives? This imitates their lives outside of the setting and our lives as adults; we carry out and see maths in our daily routines and experiences everywhere we go, from shopping trips and baking to driving and basic DIY.

So consider ways in which you can encourage maths through everyday interactions, daily routines and across the whole learning environment, rather than just in a maths area...

## WHAT'S WRONG WITH A MATHS AREA?

There are many nurseries and schools that create specific maths areas, which may take the form of anything from a 'maths corner' to an outdoor 'maths shed'. This is something which I have seen across a number of settings I have visited, as well as had insight from discussions with my students around the settings they have attended as work experience, and of course, this is also evident throughout social media platforms. It is vital to critically reflect on these practices of specific curriculum areas, and what I have found as three recurring questions on this matter are:

- 1 What messages is this giving children?
- 2 Why are we encouraging more formal, subject-based practice in early childhood?
- 3 Is this more useful for the adults rather than beneficial for the children?

We must consider why we are doing what we're doing, who for and whether we are influenced by top-down pressures of more formal learning making its way into early childhood practice, which is not developmentally appropriate. It is important to reflect on whether the presence of a maths area is suggesting more formal practice with separate subjects, rather than maths skills being developed and used across all areas of the setting. It is also vital to reflect on the messages we send out to children. Although you may believe that maths is everywhere, the provision of a maths area is not supporting this belief and is sending unhelpful messages to children. A maths area is suggesting maths learning is specific to this area. And is this also perhaps limiting the opportunity for maths resources to be used across all areas? Is having a maths area, shed or shelf only helpful for the adults in terms of containing the resources in one place?

As mentioned previously, maths is everywhere, and taking this out of the everyday context and placing it in a specific area of a room does not demonstrate the vast affordances of maths. Which brings me onto my next point of contextual learning.

## MATHS IN CONTEXT

A mathematically rich environment is one which encourages children to use their mathematical knowledge and skills across the various areas of provision on offer (Bennett and Weidner, 2012). This can be across role play opportunities for instance, which may include the provision of a variety of receptacles in sand and water play, and a choice of construction resources ranging in size, weight and material. All supported by knowledgeable adults modelling mathematical language and allowing children the time and space to explore, experiment and practice their skills.

Providing maths opportunities through real-life and play contexts, rather than through abstract tasks or activities, allows children to put mathematical knowledge into practice, and therefore develop concrete, in-the-moment interpretations of mathematical concepts (Chilvers, 2021). Consider whether you make the most of day-to-day routines for demonstrating maths in context and allowing children to put their skills to use. For example, do you allow children to hand out plates and cutlery at snack time? Do you allow them to work out how many cups are needed, or do you provide them with the set number?

## CONCLUDING THOUGHTS

**When creating a mathematically rich environment we need to consider if children have opportunities to naturally incorporate the mathematical knowledge they have learnt within their play and across all learning environments, rather than within specific areas or activities. We therefore need to reflect on whether, through our practices, are we in fact perpetuating formalised learning in early childhood? Children need to be given the opportunity to hear and use mathematical language,**

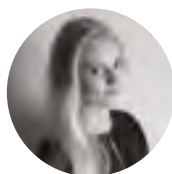
**and use their mathematical skills, through real life contexts and day to day situations. We as educators need to continuously reflect on our practice and consider whether the learning environments we are providing for children are mathematically rich.**



Children need to be given the opportunity to hear and use mathematical language, and use their mathematical skills, through real life contexts and day to day situations.

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### About the author:

**Angelica Celinska**

**Lecturer in early childhood and founder of The Voice of Early Childhood**

Angelica is an early childhood advocate who has worked in the education industry across a range of roles. Some of these roles have included nursery nurse, teaching and childminder assistant, pre-school leader, woodland leader, quality improvement officer and pedagogical lead. After working in practice leading children's and adult's learning, Angelica moved into the world of creating content to enhance training and development for educators on a wider scale, both nationally and internationally. This has involved working in publishing, educational training events and resourcing learning environments. Currently Angelica is a lecturer in early childhood and education, whilst continuing to work with the wider sector and promoting the voice of early childhood globally.

You can connect and collaborate with Angelica through Instagram @theearlyyearswriter, Twitter @Angelica22ac and LinkedIn Angelica Celinska.

# INCLUSION & DIVERSITY







## A human ecosystem for every age!

# Reimagining intergenerational pedagogy

**In this article we explore intergenerational pedagogy developing in the heart of a recently opened care village complex in Chester, England. It offers a new way of making sense of a shared world for children and older people based on the values and ethics of our oldest pioneers Froebel, Steiner, Montessori, Schiller, Pratt, Malaguzzi and others.**

### INTRODUCTION

It was Virginia Woolf that said:

*Think we must. Let us never cease from thinking what is this 'civilisation' in which we find ourselves?*

*Woolf (1938)*

We are in a time when new ideas and models of education and care are courageously surfacing, making themselves heard and seen. People are craving for more human approaches that are both ethical and dignified, placing ordinary people firmly centre stage. These approaches are resolutely focussed on how we live, interact and learn from and alongside each other to create stronger nurseries, schools, families and communities. I like to call them *intentional models*, as they purposefully prioritise time for individual stories to be heard and used to build spaces that are invitational, inclusive and respectful.

Such new ways of thinking make no apology for challenging the pervading transactional view of education and care systems

that silo provision into restrictive boxes, usually delineated by chronological age. At worst, these boxes compound difference, status, dislocation and isolation. By sensitively removing such tight gloves magic begins to happen! Previously unexpressed voices emerge – whispering quietly and then growing in confidence with a loud unified bellow of 'this is what I want – hear me – see me – know me!'

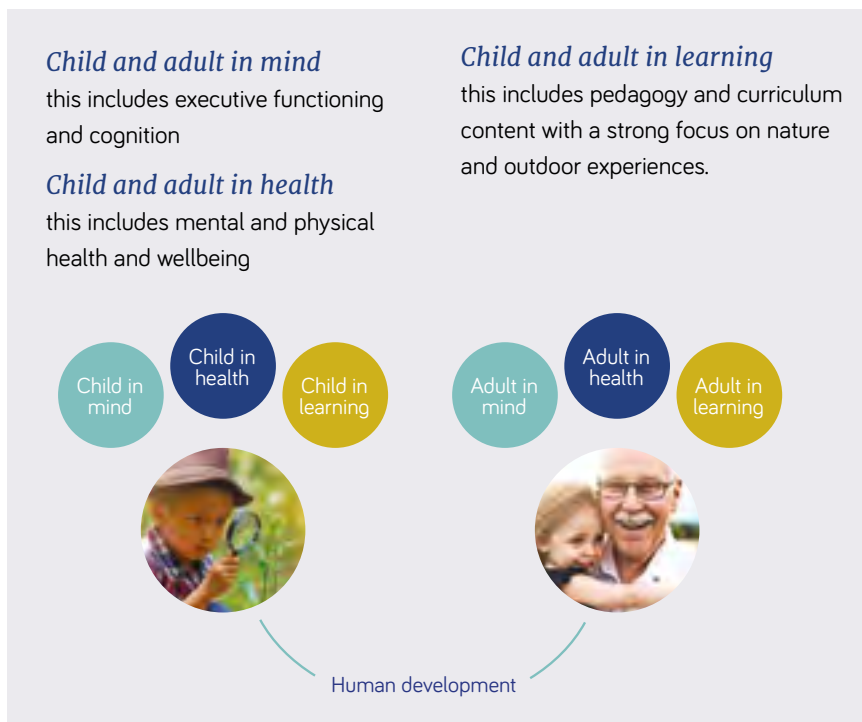
It may sound like a description of an imaginative, dreamlike utopia but it isn't!

The *Nursery in Belong* situated in Belong Care Village opened in July 2022 after over five years of planning by my charity, Ready Generations and Belong Ltd. Residents and children live and work alongside each other every day and follow a fully integrated curriculum called the *Mirrored Curriculum Framework*. This allows for learning and wellbeing outcomes to be planned and assessed for both groups. Children and older people come together for specific experiences and also mix and meet spontaneously within the village, for example, at mealtimes and in the gardens, creative room and library.

### PRINCIPLES OF THE MODEL

Although fortunate to be located in a care village, the fundamentals of the model can be used by early childhood and school settings who may wish to expand the potential of their current intergenerational offer. Many settings are already doing fabulous work in this area and the three simple principles

outlined below are intended to support deeper thinking about the quality and quantity of relationships and what actually supports *human flourishing* across all ages. The principles focus on:



At *Ready Generations*, we align these with a focus on working towards a set of enduring life gifts which we believe are universal for everyone. As humans, we all actively seek out certain states of mind, personal characteristics and experiences in order to protect ourselves and feel that we belong and have purpose. We have defined these as *life gifts*. We researched the work of Ward and Brown (2004) on the *Good Life Model of Rehabilitation* which promotes the idea that we need to actively support people to build their unique strengths and capabilities. Achieving a balance of *life gifts* is fundamental to feeling in control and having meaning. This involves achieving consistency in our environments and the behaviour of those around us. Everything we do at the Nursery reflects the importance of working towards demonstrating these gifts for both age groups, in both planning and practice.

## THE LIFE GIFTS

- a good life – feeling in control, having choices and being happy
- inner calm – experiencing freedom from emotional upset, turmoil and stress
- relatedness – feeling connected to caregivers, educators and significant others
- meaning making – making sense of the things that matter most to us
- community – connecting with the local environment and our neighbours
- healthy habits – making good choices and having purpose in life
- joy – feeling good in the here and now
- creativity – expressing individuality in uniquely personal ways
- empathy – understanding and responding to the perspectives, feelings and situations of others
- cognitive fitness – building and sustaining executive functioning skills e.g. memory, attention, processing speed and problem solving
- playfulness – experiencing playfulness through imaginative and fulfilling opportunities
- learning – experiencing high quality and consistent learning opportunities including mastery experiences
- personal agency and identity – feeling noticed, listened to and able to make a unique contribution

## THE MIRRORED CURRICULUM FRAMEWORK

### Playful learning

The *Mirrored Curriculum Framework* recognises that being playful and enjoying opportunities to play should not be restricted to childhood. Being playful is equally important at every age and everyone has an intrinsic need to play. Play requires sophisticated executive functioning, perseverance and collaboration and is fundamental to health and wellbeing. Both children and older people gain from being surrounded by playful educators and carers. Playful adults fuel imagination, creativity, problem-solving abilities and emotional wellbeing. In this way, playfulness brings added joy to life, relieve stress, supercharge learning and build stronger relationships.

The fun and laughter associated with playfulness are also significant components of strong relationships. Laughter and smiles often offer the shortest distance between two people, irrespective of age. Laughter is a social behaviour which the *Mirrored Curriculum Framework* harnesses to encourage bonding, bridging and effective communication. It is contagious and can be *caught* from others resulting in happy learning environments, elevated mood and reductions in stress and anxiety.

### Creativity

*Creativity is a way of being not a set of activities.*  
Egersdorff (2022)

Creativity is frequently linked to positivity and healthy living, yet often intergenerational experiences are pre-planned, tightly structured and time-bound. Such restrictions make it more difficult to be flexible and adaptive, in order for both children and older people to lead their own learning without too much guidance and control. Greater freedom encourages children and older people to come together to create at their own level and understand the life about them through the use of:

- curiosity
- open-mindedness
- imagination
- problem solving

The *Mirrored Curriculum Framework* promotes creativity through experiences that foster:

- awe and wonder
- multi-sensory opportunities
- regular interactions with people who are different from yourself
- story-telling and guided visualisations
- use of block play and mathematical patterning
- mindfulness and spirituality

## Storytelling

*Empathy is remembering that everyone has a story. Multiple stories.*

*And remembering to make space to hear someone else's story.*

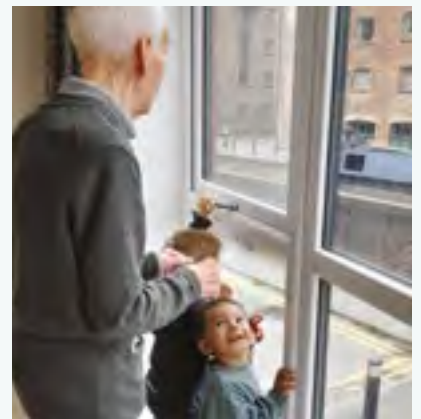
*Kae Tempest*

Stories and oral storytelling are critical in intergenerational work as they facilitate, scaffold and extend the potential of formal and informal interactions. They do this by allowing us to immerse ourselves in other people's experiences and increasingly use a set of relational and emotional skills to observe, perceive and empathise.

The *Mirrored Curriculum Framework* prioritises enhanced levels of storytelling and listening to:

- empower children, older people and their families through communication rich environments
- create a respectful opportunity to be *heard*
- develop empathy and reciprocity

- provide contexts for change and improvement
- support mental health and wellbeing
- encourage oracy and talk, build vocabulary and facilitate new ideas
- locate decision-making powers with children, older people and their families
- promote personal responsibility and active social involvement
- build greater understanding amongst parents and families of the benefits of quality intergenerational practice



*What our growing intergenerational tribe are saying!*



### THE VOICE OF CARE VILLAGE RESIDENTS

'When your day starts with a teddy bear you know you're in for a great time!'

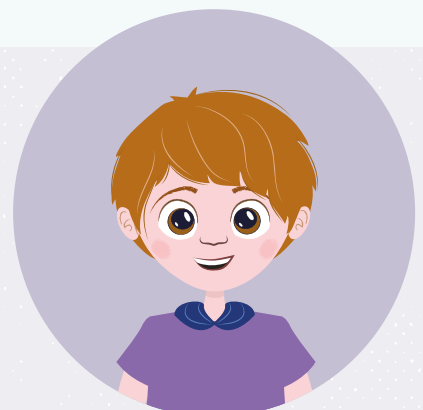
**David aged 83 years**



### THE VOICE OF PARENTS

'My child is going to be so nurtured here. We will be a real family and community.'

**Rachel aged 33**



### THE VOICE OF CHILDREN

'Joan makes me laugh!'

**Jacob aged 2, Joan aged 85**

## THINGS TO THINK ABOUT WHEN BRINGING GENERATIONS TOGETHER

There are many ways to engage, learn and get involved in intergenerational work. All require careful planning around inclusion, diversity and integration.

Here are a few important things to think about from what we have learnt so far:

- Try to build sustained relationships that develop over time rather than one off events
- Involve parents and families from the start to help them to understand the positive impact of intergenerational activity across both age groups
- Encourage children and older people to spend time getting to know each other. Prioritise opportunities for talk and dialogue. Let conversations flow naturally and try not to interfere.
- Think carefully about the set-up of the physical space to ensure safe engagement and management of risks for both groups e.g. infection control, slip and trip hazards, uncluttered walking routes, adult wheelchair and walking frame access
- Consider comfort and the availability of appropriate and attractive seating and tables, particularly for older people who may have restricted mobility and movement
- Think sensitively about resources to make sure they are appropriate for older people e.g. not perceived as childish by them
- Air temperature and ventilation matter – many older people feel the cold much more than children, particularly when outdoors so length of activity is important in colder conditions e.g. have blankets available for those who are less mobile.
- Noise levels and acoustics matter – a calm and quiet environment reduces levels of anxiety for both age groups and increases participation and involvement particularly for children and older people with hearing and/or cognitive impairment e.g. dementia. So, it is important to think about flooring, furniture and separate spaces for noisier activities.
- Keep things simple and don't rush – both children and older people can become confused and anxious if they feel pressured and rushed. Keep planning simple and don't try to do too much in any one session. Let the children and older people set the pace!
- Design from the inside out rather than the outside in to ensure the needs of children and older people are kept at the centre of all thinking.



## RESOURCES AND TOOLS WE USE IN OUR WORK

- UNICEF – Convention on the Rights of the Child
- UNITED NATIONS Principles for Older People
- UNICEF Sustainable Development Goals
- Early Years Foundation Stage Framework – England
- Welsh curriculum for funded non-maintained nursery settings
- The Scottish Early Years Framework
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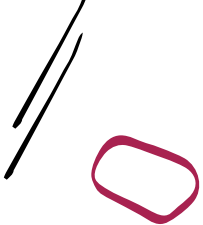
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**About the author:**  
**Sue Eggersdorff**

*Sue Eggersdorff is the Founder of Ready Generations, a charity looking to make a difference to lifelong learning and care by becoming a leading provider of intergenerational practice and provision.*



# Diversity and inclusion

## in early childhood education

**As the world becomes more connected, our countries, cities, communities, and classrooms are becoming increasingly diverse. Diversity can encompass, and is not limited to, cultural, ethnic, and socio-economic differences. It also includes children who are differently abled and children or parents who may have a variety of gender identities and sexual orientations. If educators understand how to embrace diversity and implement inclusion practices in their classrooms starting when children are very young, the learning environment will be far richer. The earlier we start instilling the values of diversity and inclusion in our children, the more we lay a foundation for them to grow into globally minded, open-hearted and empathic citizens. But educators need to be aware of how they treat children and families who are different from themselves. Even without intending to, many of us have preconceived ideas or can be biased when faced with these differences.**

"All of us were raised in different households and many still hold on to the values and beliefs that were imparted to us when we were young," says Dr. Faweza Reza, Diversity and Inclusion Coordinator at the American College of Education. "This is the reason we need to inculcate tolerant and nonjudgmental values in our young students." Below Dr. Reza provides answers to some fundamental questions educators frequently have about how to promote and embrace diversity and inclusion in their classrooms and in their very young students.

### *What do diversity and inclusion really mean and how are they different from one another?*

Dr. Reza: Diversity and inclusion are often paired together like salt and pepper, however, the concepts are separate and complementary. Diversity is the presence of individuals from different races, ethnicities, ages, abilities, religious and political beliefs, sexual orientations, or socio-economic status. In contrast, inclusion implies allowing diverse individuals to have a voice or giving them a seat on the table, or a sense of belonging.

### *Why is it so important to consider?*

Dr. Reza: As diversity increases in Western society, inclusion has become extremely relevant. Some institutions might hire employees from diverse cultures only to "check the box", which is tantamount to tokenism. However, this does not create an environment, where everyone is equally valued. Consider our educational institutions. Several schools might celebrate a "multicultural night" to celebrate diverse cultures once a

year. However, these celebrations often do very little to foster awareness or appreciation of diversity if there is no recognition of the diverse community represented in the school throughout the year.

### *Are there any misconceptions—either about what diversity and inclusion mean or anything else you frequently encounter?*

Dr. Reza: Some people think we should not celebrate differences, because we divide people by highlighting their differences. Such a viewpoint fosters a "McDonaldization" of the world syndrome, where everyone, everywhere is the same and works in the same standardized manner without any consideration to our difference in learning. This is an antithesis to inclusivity.

### *How can we embrace diversity and be inclusive in our teaching and interactions with parents and young children?*

Dr. Reza: An inclusive teaching pedagogy serves the needs of all students, regardless of their backgrounds. Teachers can be inclusive by intentionally adopting and implementing an anti-bias curriculum. Such a curriculum should be developed, incorporated, and integrated into all aspects of the programme rather than being used for occasional events. By implementing an anti-bias curriculum in all aspects of teaching, educators can empower their students with the knowledge and tools to foster and develop tolerance, empathy, respect, and social justice. These skills are necessary to create and foster an inclusive classroom environment and develop global citizens.

### *How can we encourage our children to embrace and include?*

Dr. Reza: A house that is built on a strong foundation will be able to overcome strong winds, tornadoes, and other catastrophes. In the context of children, they are young and malleable, and if we built a strong foundation by providing them opportunities to appreciate others, they will be better prepared to overcome hatred, biases, and stereotypes that are unfortunately so prevalent in our society today. I remember when I was young, my mother would often give an example of a person who was asked to break one brick and he was able to do it easily. He was then given several bricks to break at once, this was difficult. In the same way, unity strengthens us and makes us stronger. No one can *break* people if there is unity between them.



### *What can educators be doing in their own practice to include all children regardless of ability and background?*

Dr. Reza: Educators must continue to educate themselves. There are many resources available online which can help them develop greater awareness of how to promote inclusivity. I also recommend that school administrators provide regular training on how to foster inclusivity to their employees. Many educators still feel that it is their job to save their students from their home culture and assimilate within the institution's culture. A Messiah complex or Hero Complex often creates an *us vs. them* dichotomy and inadvertently excludes and isolates those parents and students who are different from them.

### *What behaviors should teachers be modeling?*

Dr. Reza: Teachers should maintain an open-door policy and encourage all parents to discuss any concern that they might have regarding their children. They should be respectful to their students' upbringing including their religious practices and cultures. Teachers should move away from a deficit model, which implies that parents do not have skills to be the best advocate for their children and require guidance on how to become better parents. More importantly, teachers must remember that **implementing inclusive practices is not a static attempt but**

**an evolving process.** Therefore, they should continuously work towards modelling behavior that is respectful and welcoming to all parents and children.

### *What are possible challenges educators might face and how might they be overcome?*

Dr. Reza: Recognizing that personal biases can create roadblocks and deteriorate the teacher-parent relationship is the first step to appreciating diversity and promoting inclusivity. There are several online tests that educators can take to see if they have a bias against a certain religion, culture, ethnicity, or orientation. A relevant resource in this context is the Implicit Bias Test (see <https://bit.ly/3TDdQlp>) developed at Harvard University.

### *Is there anything teachers should not be doing?*

Dr. Reza: Some educators may have preconceived bias about a certain culture (thanks to the media) and may assume that everyone who is from that background follows the same tradition. They might also subconsciously ignore the parent or the student because of their bias. Such an outlook is not healthy, nor does it promote inclusivity. Teachers must be open to all students no matter where they are from. They should routinely check their own biases and if they realize that they are biased, then they should take steps to address these.



#### **About the author:**

#### **Juliann Garey**

*Juliann Garey is a journalist and novelist and educator. As a clinical assistant professor at the NYU Langone School of Medicine, she taught courses through the Child and Adolescent Mental Health Studies Department. She was a visiting professor of Creative Writing at Sweet Briar College in Virginia. Her work has appeared in the New York Times, Los Angeles Times, Marie Claire, Glamour, More, The Village Voice, Slate and LA Magazine among others. Her debut novel, Too Bright To Hear Too Loud To See, was an American Library Association award-winner and NPR Best Book of the Year in 2013. Ms. Garey holds a BA in Literature from Yale University and an MS in Journalism from Columbia University's School of Journalism.*



## Tips and advice

# for promoting and embracing diversity and inclusion

**1** First and foremost, educators must model appropriate behavior. Are they welcoming to diverse students or parents? Children often learn by watching or hearing others. If teachers show respect, children will follow suit. When I taught in a preschool, I often had children from diverse cultures. During circle time, I would ask them to teach us words from their home language (there were several children from different cultures who spoke a language besides English). Because I was very keen to learn their language or some words, students, even those who were very shy shared words in their home language.

**2** In the context of education, a commitment to diversity requires that every stake holder in the school or setting be invited to a school/

team meeting. Inclusion would allow all attendees an opportunity to share their thoughts on the issues discussed.

**3** Teachers should ensure that their classroom does not separate students based on their gender. For example, in many preschools, there is a pink kitchenette and a blue tool/block area. Teachers sometimes divide students by gender so that it is easier to manage them. While I understand the reasoning behind this divide, it also solidifies the stereotypical gender role expectations. Such a divide first introduces young girls to focus on home related activities and discourages them from STEM related fields. Currently there is a lack of female representation in STEM, especially in children from a non-white background.

**4** With increasing awareness of diversity, teachers often celebrate Martin Luther King Day, President's Day, or Veterans Day. These are designated holidays celebrated during a particular month and there are books and activities to celebrate and honour these significant contributors. However, once the month passes, there is no continuing discussion about the underlying message. Teachers should extend these celebrations into the curriculum. The books are often set aside, to be pulled out again the next year. Instead, we should have them available and let children read them whenever they want.

**5** Encourage children to ask questions. Use their questions as a teachable opportunity and develop an appreciation of inclusivity.

**6** Classrooms should mirror and foster inclusivity. I recommend all teachers should critically evaluate their classrooms to see if they promote a sense of belonging. A few things to consider:

- Are there resources in the classroom that represent diversity? Specifically, do any resources celebrate children with disabilities? Having toys that represent diverse abilities allows children to appreciate and accept others.
- Are there books that represent diverse cultures? Differently abled children?
- Family make-up is evolving. Some of us live in nuclear families with a mum and dad, some live with extended families, some families have two mums or two dads. There should be some representation of diverse family make-ups. Lego blocks recently launched an LGBTQ-themed set, “Everyone Is Awesome.”

All of these “differences” make for a richer learning environment and an environment that promotes diversity and inclusion is the best way to ensure that our children grow into accepting and enlightened adults. The key is to start as early as possible so that these values simply become part of the fabric of everyday life.



**About the author:**  
**Dr. Fawzia Reza**

*Dr. Fawzia Reza, Diversity and Inclusion Coordinator at the American College of Education*





### Think about this scenario...

Imagine a cat born into a world of dogs. The dogs look at the cat's tail twitching and see it is happy, but when they interact with the cat her claws come out. The dogs hear the cat's purr and recoil concerned by the growl...and yet the cat does not look angry. In time the dogs realise that the cat is communicating wrong. The cat doesn't know to wag it's tail when it is happy, it doesn't know that growling is an expression of anger. The cat is terrible at communicating.

The dogs feel kindly towards the cat, they worry about the cat being left out. The cat doesn't socialise with them, doesn't play with them. They worry that the cat is in its own world, unable to play. It needs to learn. So they develop a training program to help the cat. It takes a long time, but little by little the cat makes progress. It stops purring when it is content. After many years it seems to wag its tail to signal, not exactly happiness, but a response to situations that dogs find happy.

Even after all their years of work the cat is still noticeably different to the dogs, it does not leap into the water to chase the stick, it does not fetch the ball. The dogs worry over how they will ever be able to help the cat do these things, the dogs that love the cat most feel very upset about all the life that the cat is missing out on.

Suppose the dogs succeeded, suppose they found a way of training the cat to swim, to fetch the ball, to do all of the things they do. Would they have 'fixed' the cat? Would the cat now be a dog? Or would it be a very, very broken cat? What the dogs are missing from their evaluation of the cat is an awareness of key fundamental differences between them, namely that the cat is a cat, and they are dogs. What it is for a cat to be happy, for a cat to socialise, for a cat to communicate, is very different from what it is for a dog to be happy, for a dog to socialise, for a dog to communicate. Would we argue about which do it right? Is it dogs that have got communication right? Is it cats that have got socialising right? Or would these questions be a nonsense. These are not things that have rights or wrongs, these are collective things, decided socially, these are personal things, decided for oneself, no one else should rule about what it is you should enjoy or should not enjoy.

### What about children?

The mistake the dogs made is one I witness made often in real life. Young children with autism are given the target to 'make eye contact', they are taught to play, their natural methods of connection and enjoyment are conditioned out of them. This is not done with malice. It is done with the best of intentions. The

dogs in my story are not mean, they are kind. It is not done in a uniformed manner. Imagine the dogs who learned so much about teaching the cat that they made a career out of it, maybe they went to dog-university and became qualified, they gained an exceptional depth of knowledge about how to teach the cat to be a dog... It's still no good is it?

If we make that fundamental mistake of assuming that this person's true self is a defective version of another self which they were supposed to be then we are at risk of doing the harm that the dogs in my story did.

### *Not a defect to be corrected*

Autism is a neuro identity, no amount of training, support, therapy, and so on will ever make an autistic person into a non-autistic person, any more than conditioning the cat turns them into a dog. We are surrounded by huge organisations, great archives of research, vast professional expertise all built off the assumption that being autistic is a defect to be corrected.

Imagine the story another way. A cat is born into a world of dogs. The dogs recognise that the cat is different to them, they worry for the cat, that the cat is left out, that the cat cannot communicate successfully with them, that the cat does not seem to play. They get together to discuss what to do and ultimately develop a twofold strategy:

Some dogs venture off in search of other cats. If they have a cat amongst them,

maybe there are other cats out there. Maybe if they met other cats those cats could help them to understand this cat. Maybe other cats could tell them about how cats play, how cats communicate. Other dogs watch the cat closely, they try to figure out what the odd noise it makes when it lies in the sun means, they try to work out why its claws always seem to come out moments after its tail flicks like that. They try to join in with the things the cat seems to like to do. They find sprawling in the sun is actually quite nice, they do not like to do it for as long as the cat likes to, they get bored more quickly, but they enjoy time basking in the sun with the cat, and the cat seems to enjoy time basking in the sun with them.

Overtime the dogs develop their awareness of cats, they accept that being a cat is as valid as being a dog. The cat remains different and there are still places that they do not understand each other, but the dogs no longer worry about that difference. They know that it is a cat's right to be a cat and a dog's right to be a dog. Both the cat and the dogs benefit from hanging out with each other. The playfulness of the dogs tempts the cat to join in from time to time, and the leisureliness of the cat calms the dogs from time to time. They enjoy the exposure to each other's worlds.

The dogs that love the cat most spend a lot of time being cat like, they know they will never be a cat but they enjoy being close to the cat and are willing to adapt their behaviour to be so. They want the cat

to know that they respect their nature as a cat, so they never ask the cat to adapt its behaviour to them. Instinctually they know that choosing to adapt your behaviour is very different from being asked to adapt your behaviour.

The dogs and the cat live happily together, the dogs get to be dogs and the cat gets to be a cat.

### *Listening to autistic voices*

This world is just emerging for us, we are beginning to listen to autistic voices, to hear them over the fog horns of autistic services or autistic charities, we are beginning to see research done by, for and about autistic people (see Damien Milton's Double Empathy work as a prime example). Autism is being recognised as a difference, a disability and an identity – and there are glimmers of hope as people accept that these things are not contradictory positions.

I created a set of FREE online training films for people who are curious about how they can support autistic children in their settings. Each is around seven minutes long, this article explores a theme from the first one, so if you have enjoyed it you might also enjoy these videos. You can find them here:



**About the author:**  
**Joanna Grace**

*Sensory engagement and inclusion specialist, internationally recognised author, trainer, doctoral researcher, and the founder of TheSensoryProjects.co.uk*

*Twitter: Jo3Grace*

*Facebook: JoannaGraceTSP*

*LinkedIn: JoannaGraceTheSensoryProjects*





# An inclusive world

**The word 'inclusion' is now everywhere. From politics to advertising campaigns and social media, passing through the world of information. However, if we were to dig a little deeper beyond the slogans we would realise that there is very little real inclusivity, beyond the good or bad faith of those who choose to use this term. For this reason, I am deeply convinced that we must begin to make good use of it already within schools, returning it to its practical, as well as theoretical, dimension.**

Too often we are convinced that exclusion on the basis of ethnicity, disability, religion etc. (made explicit in various forms such as bullying, isolation or verbal violence to name a few) begins in adolescence. In fact, we have to start working to prevent it as early as the age of three and then, with even more awareness, throughout the duration of primary and into secondary school. How? By proposing reading, games and group activities that aim to expand the 'panorama of reality' that children have around them. It means making sure that everything that twenty years ago was considered an exceptional event or a particular situation compared to the norm, becomes instead a simple fact for the young 'generation alpha' (digital generation).

## 'HOW TO BE GOOD ALLIES FOR THE BATTLES THAT SURROUND US'

My children's book 'The Dream Glasses', an adventure between reality and fantasy, tells a story of how to be good allies for the battles that surround us, even if they do not touch us personally. Both through the text and with the help of illustrations, characters of different ethnicities, religions, people with disabilities, same-sex parents and many other examples of

how everyday life can be so diverse have been included in the book. There is no need to give explanations or to make these presences something special; read inclusive stories to children from a young age and you will have already built a good basis for the future. If they have questions about traits of the story that sound unfamiliar to them, welcome them and answer them with serenity and honesty; do not hide from them problems such as racism or gender stereotypes, instead convey these issues in a way that is accessible to them and they will be able to understand them. Acquiring the habit of diversity, of the richness of facets, will make children more capable in the future of recognising a lack of inclusion in the various contexts they find themselves in, including school.

## FOLLOWING OUR PASSIONS

Alongside the readings, a great help to inclusion can be given through games and workshops to grow together. First, let each child choose their own games without constraints or judgments. Alas, already in the three to six age range children are influenced by marketing and people around them in categorizing entertainment on the basis of gender; if there are conflicts between children due to these "labels", treasure them and take advantage of the opportunity to grasp the various signals... there can be so many valuable learning opportunities in these situations.

A really simple idea to communicate the battle against stereotypes and adapt it to children's imaginations can be to play a mime game, where children can take turns to role play a character to the rest of the group. This can stimulate very thought-provoking discussions depending on the children's

choices and answers. Does a policeman always have to be a man? How about a ballet dancer being male? Here you can begin to break down any gender stereotypes with the children together. An activity like this which looks at different career roles can give children the understanding that anyone can follow their dreams and passions without discriminatory obstacles, and if they do come across obstacles, children can stand up for themselves and others with confidence.

## THE HOME ENVIRONMENT

Finally, not to be forgotten is the very important role of educators in recommending books, activities, cartoons and films to enjoy at home. Discussing these together with children and proposing activities related to them in class will allow children to take these ideas home with them. It is important to remember that children will pick up all kinds of messages from media and people around them, so listening to children's views and experiences will allow you to create learning opportunities and discussions in the setting which children can take away with them. It is also important to understand children's interests in media, such as different shows and characters, in order to be able to discuss and build on this, showing children that you value their interests.

You can start from international hits such as the recent animated series Baymax (available on Disney+) or focus on children's own created cartoons. Don't forget that children pick up all the signals, listen daily to TV and conversations of adults; therefore don't avoid discussing current issues with children which may be happening in the world around us, in our country or in the local community. Some of these big issues can be around anti-racism, LGBTQIA+, women's rights...which can be explored through books as well as children's media which they engage in.



**About the author:**  
**Eliana Cocca**

*After graduating from the University of Bologna, Eliana began working in the world of children's book publishing, first as a bookseller and then in a publishing house. Today she is a teacher of history and philosophy, but she continues to navigate through books, as an author, curator and consultant, so she is always in contact with children and young people. In June 2022 she published 'Gli occhiali da sogno' The Dream Glasses, (currently available only in Italian, however, to read it and have it published in other languages you can write to [foreignrights@sonda.it](mailto:foreignrights@sonda.it)). She has a space on [ilfattoquotidiano.it](http://ilfattoquotidiano.it) – one of the major Italian newspapers – in which she recounts the battles for human and civil rights, with particular attention to bio-ethics.*

Image credits: Caterina Manganeli, 2022



Expand the  
'panorama of reality'  
that children have  
around them



# OUTDOOR LEARNING





# The power of outdoor play

Whether it's going for a simple walk in nature or immersing children in an unstructured nature play session, the benefits of stepping into the outside world with children are undeniable. The power the great outdoors can have on our mind and soul, both adult and child alike, has a direct correlation to our wellbeing and happiness as people.

The importance of how educators facilitate opportunities for children to engage in outdoor play has never been more crucial. Connecting with nature not only impacts upon children's happiness and their psychological health, but also upon their ability to cope with the demands of learning new concepts. As high stress and anxiety reach epidemic levels in society, outdoor play allows children's minds to be refreshed through relaxation and this allows children to reset their brains, being in a stronger position for further learning.

As an early years practitioner I have made outdoor play one of my highest priorities in the learning programmes I offer children. I have personally seen the benefits of this in young children from three years of age in early learning settings to school aged children in primary school.

## SKILLS BUILT THROUGH NATURE EXPLORATION

As well as the obvious mental health benefits gained through nature play, children also build a variety of skills crucial to a healthy physical development and social skills vital for their future. Children benefit in an outdoor environment by developing physical skills such as co-ordination and balance, whether it be from simply walking over uneven surfaces and navigating a natural terrain or balancing on a log or rock. They also develop fine motor skills by simply being free to play with sticks, leaves and pebbles. Outdoor play also provides an immense opportunity for children to develop socially as they learn social skills such as empathy, engage in cooperation, problem solving, and conflict resolution as they play together with their friends.

## RISK THROUGH OUTDOOR PLAY

Many children these days are used to comfortable, convenient environments that promote instant gratification. As children engage in nature play activities, which encourage an element of risk and unpredictability, it allows them to 'tread their own path' and build the physical and emotional resilience they desperately need.



Children who have the opportunity to engage in unstructured outdoor play on a regular basis will build a greater sense of independence as they have the chance to explore and investigate their own capabilities. Outdoor play allows children freedom to try new things and test their own limits. It is encouraging to see children grow in their own confidence as they attempt activities that would not be possible indoors. As children overcome personal difficulties and challenges presented in outdoor play, they build a victory file of personal emotional resilience.

## MAXIMISING THE POTENTIAL OF OUTDOOR PLAY

**Plan for the chosen time** – the amount of time you allocate to head out for an outdoor play session is not important. This could be as short as half an hour or as long as a day. Choose what suits your schedule. The main thing is that you are prepared for the time you are planning to go outdoors.

**Find a spot** – look for a spot that looks interesting from a child's perspective. This could be a space that other passers-by do not notice. The key is you're on the lookout for a space that can capture the child's imagination. There may be a fallen tree or strange tree root system that becomes the perfect nature playground. The main thing is that from a 'child's play perspective' you think it has potential for children to engage in free play.

**Free play** – now the real fun begins! It's important that you step back as the adult and just let the children go for it. Try not to intervene and suggest too much. Let the children make up the play as they go and let their imagination run wild! Sometimes we as adults want to show children something or get really involved in children's play, but sometimes it is also vital that we take a step back and watch the children develop their own investigations. Risky play does not mean children need to be unsupervised; however, adults need to step back rather than controlling how children play. Our role as adults is to facilitate and create opportunities for unstructured play, allowing children to build their own capabilities to identify their own limits. It is so incredible to watch children build something out of things they find or engage in through pretend play.



*Some possible goals for play sessions could be:*

**To get dirty** (sculpt with clay or mud, or just free play in mud)

**To build coordination or climbing skills** (climbing over rocks, climbing trees)

**To experiment with water** (create rock dams and change the flow of water)

**To build stamina** (walk up and down a small hill or slope)

**To build balance skills** (walk along a fallen tree)

**To go out and find where the water runs in the environment when it is pouring rain** (this is one of the best sessions ever – but you will have to be ready and waiting for a down pour! Also as a caution do not go anywhere near flooded waters)



**About the author:**  
**Jon Northwood**

*Jon is an educator, educational toy designer, innovator, and outdoor play advocate, located on the Sunshine Coast, QLD, Australia. With 25 years of experience as an educator teaching in preschool settings as well as in primary schools his main goal is to design open-ended educational resources that promote resilience, problem solving skills and inspire innovation in preschool aged children around the world.*

*No matter how little time you have in your schedule the benefits outweigh the effort it takes to get started on your adventure as an advocate of outdoor play. It's time to put on your educator outdoor boots, find a spot and make it happen!*





## Inclusive outdoor play

Children's outdoor play serves important and diverse purposes, including physical exercise and opportunities for growth in all developmental areas. In recent generations, children have spent significantly less time engaged in unstructured, child-directed outdoor play. Today's children tend to be less active and less connected to nature for many reasons, including the allure of technology and the pressure to achieve higher academic attainment. Housing location is also a factor, with more and more families choosing to settle in cities and busy urban areas for increased work prospects as the costs of living soar.

### A BRIEF HISTORY OF OUTDOOR PLAY AND LEARNING

Current efforts to encourage more children to have outdoor play are grounded in a movement that began over two centuries ago. Friedrich Froebel (1782-1852) was a German educator who invented the kindergarten. Play, according to Froebel, is the highest expression of human development in childhood. According to him, children construct their understanding of the world through play.

By the late 1800s, many social reformers were concerned about the needs of

children living in congested urban environments. Margaret McMillan (1860-1931) was an educator, and a child and family advocate who fought for children's causes in urban areas and inspired legislation on a local and national scale. She stressed the importance of free play, especially outdoors – and ensured large and varied areas were available for this.

John Dewey (1859 - 1952) believed humans learn through doing. According to Dewey, children must interact with their environment to learn and adapt. Dewey believed the same was true for teachers and that it was important for teachers and students to learn together.

*“Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results.” –*

*John Dewey*

Despite the ebbs and flows of movements over the last several decades, there have been consistent efforts by many educators, philosophers, and advocates to make lives better for children through engagement in outdoor play and nature in educational settings and in homes.

### BENEFITS OF OUTDOOR PLAY

There are many ways in which this generation's childhood is different from that of the last generation, but one of the most abrupt contrasts is the degree to which it is being spent indoors. There are lots of reasons, including the marked increase in time spent interacting with electronic devices, the emphasis on scheduled activities and achievements, concerns about sun exposure — and, for many families, the lack of safe outdoor places to play. It's not just children; adults are spending less time outdoors as well.

Children should be active for a large part of every day and getting outside to play is one way to be sure that happens.

There are many benefits to outdoor play, including:

- **Improved motor skills** – Many outdoor activities naturally help children develop essential motor skills like coordination, agility, balance, and dexterity. Children who are encouraged to explore outdoor environments will put their abilities to the test and constantly develop new skills through trial and error.
- **Sensory engagement** – Children will naturally engage all five of their senses while playing outside, which strengthens their ability to process sensory stimulation. Outdoor play can help children build familiarity with a variety of sensory experiences and promotes more positive responses to them.
- **Creative thought and executive function** – These skills help us plan, prioritize, troubleshoot, negotiate, and multitask; they are crucial for our success. We can use our imagination to problem-solve and entertain ourselves. These are skills that must be learned and practiced — and to do this, children need unstructured time. They need time alone and with other children, and to be allowed to make up their own games, figure things out, and amuse themselves. Being outside gives them opportunities to practice these important life skills.
- **Confidence and independence** – Engaging in outdoor play introduces children to new situations and encourages them to take positive risks and try new things at their own pace. By being presented with opportunities to try something new, children independently test their own abilities and learn new skills. This allows them to develop stronger self-awareness and a sense of independence as they grow more confident in their capabilities.
- **Teamwork and socialisation** – Children need to learn how to work together. They need to learn to make friends, how to share and cooperate, how to treat other people. These skills are encouraged and enhanced in the freedom of outdoor settings.
- **Appreciation of nature** – So much of our world is changing, and not for the better. For children to learn to love and respect our natural environment they must spend time in it, playing, learning, and resting. These fun childhood experiences tend to promote an appreciation for natural spaces and the environment as a whole.

Outdoor play spaces should provide opportunities and potential for all children, regardless of their ability. Inclusive play spaces should ideally consider six contrasting factors:

- Enclosed and open spaces
- Fast and slow movement opportunities
- Light and shade
- High up and low-down areas
- Loose parts and fixed equipment
- Spaces that are noisy and quiet

There should be a commitment to include some areas, resources and activities which can be easily accessed by children whose social competence, language and play skills are at varied levels.

## PROMOTING A FUTURE OF PLAY

Many people around the world are collaborating to improve education and development for children in the midst of rapidly expanding cultural and technological changes. Excellent play and educational provision balances sedentary, structured, academic instruction with open-ended experiences in the world of nature, art, and creative play. Choice is the key, and high quality indoor and outdoor play and learning environments must be centred in future city planning.

Outdoor play is essential for healthy development, especially in children's early years. Being active outside provides children with valuable experiences that can directly impact their physical development, social skills, creativity, and their intelligence.




**About the author:**  
**Naomi Clarke**

*Naomi Clarke is a writer, educator, and parent. The goal of her work is to raise awareness of taking an intersectional approach to outdoor education and to centre children's rights. Naomi is also the director of a democratic learning community for home-educated children and a freelance outdoor education consultant. Based in London, Naomi has worked in outdoor education, community gardening, permaculture design, ecotherapy, playwork and disability support across the charity, public and private sector for over 15 years.*

*Instagram: @intersectionalmotherhood*



A child is playing in a sandbox. The child's hand is visible on the left, holding a wooden shovel. The sandbox is filled with sand and contains several white plastic buckets, some of which are stacked. A clear plastic shovel is also visible in the sand. The background is a grassy area with fallen leaves, suggesting an outdoor setting. The image is framed by a large green circle on the right side, which contains the text.

*Outdoor play allows children freedom to try new things and test their own limits.*

# Why

is the outdoors so important for both you and children?

*This article focuses on the many benefits that the outdoors provide to both children and ourselves as practitioners, including some helpful tips to make the most out of your outdoor learning opportunities.*



## DIGGING AND DIGGING...

Day 3, and the child is still digging!

Adult: "Are you sure you don't want to have a look at the other activities?"

Child: "I think I will keep digging".

There are many different reasons for why a child may be so engaged in digging. It could be the hope to find another country; the experience of pressing the spade and using their hands in the cold mud; the sensory experience being a positive feeling; the discovery of a worm or treasure; the discovery of different rocks, roots, soil particles, the softness, the wetness; exerting force, large movement of muscles; destroying and constructing; social and imaginative play opportunities...the list just goes on.

At a time when we rarely have time to stop, digging a hole in the ground, whether you are an adult, teenager, or young child, provides therapeutic benefits. We feel better after we have moved and used our bodies.



## THE POWER OF THE OUTDOORS

The outdoors provides a powerful and exciting learning environment. No surface feels the same. There is an abundance of different textures and temperatures, shapes and sizes, uneven ground to navigate. All these natural encounters continually stimulate our senses and our interior world. The polyvagal theory developed by Stephan Porges explains why meeting our sensory needs helps us to regulate our emotions and in turn put us in the best space to learn and have positive social relationships. Having space and time to explore is necessary to help our wellbeing across our lives.

As mud gets wetter, a child playing alongside these natural resources learns about the properties of water. Water flows downhill and the child can engineer a mud dam to slow the tide and make a lake! Ancient civilisations learned to create great water canals to provide drinking water and irrigate fields for food and farming. This mud play links directly to an embodied understanding of engineering and climate change.

The importance of the outdoors though goes much further than linking to the curriculum. We often talk about 'invisible' learning when we think about nature-based practice. Going for a walk or observing a child playing may appear to the unskilled eye as an every everyday experience. Yet walking is incredibly therapeutic. A colleague of mine recently commented that walking was polyrhythmic. How many of us feel so much better after some

time outdoors? The sound and feel of the beat of our footsteps, our breath and our heartbeat all together makes for positive restoration. This simple movement contributes to supporting a reduction in cortisol and a calming of our sympathetic nervous system.

## WHAT HAS CHANGED?

In the last 10 years, babies have lost 600 hours of tummy time over the first year of life and our 'roaming distance' for older children has decreased from 3 miles to 300 yards in a generation. Children's ability to test their physical competence and enjoy using their bodies to learn is compromised. Moving really is soothing. Engaging in calming, repetitive, rhythmic movements will have a beneficial effect on mood and behaviour. Moving can strengthen the hippocampus in the brain that has a role in learning and memory, and produce the neurotransmitter serotonin and 'feel-good' endorphins. This is across all ages!

Enjoy simple pleasures! Jump in a puddle. Take time to notice a flower. Watch the ever-moving flames of a fire, or clouds passing by. Give a smile or notice what you are grateful for. Build a structure with stones or sticks, cook a pancake, or count the blackberries. Have you seen a blackberry under a magnifying glass? Go on a leaf hunt or a teddy bear trail (hide a bear in a bush and leave crumbs of oatcakes). It is a good idea for all of us to try and rediscover our pleasure in the small things.



## NATURE BASED PRACTICE

Whether you want to take the children to the park once per week, or offer a longer Forest School programme, there are essentially three key elements to nature based practice:

**People** – who are the people you are working with and what are their needs? A forest kindergarten: local nature play training helps you to feel at ease outdoors, keep children safe and fully capture the great potential that local places offer.

**Place** – what is the season or site? How can close relationships with the natural world provide firm foundations for feelings of belonging in nature and planet earth as a whole? Emphasise locality and community (rather than going further afield). Provide spaces where children are free to engage, explore and play, and sufficiently malleable for children to be able to act upon them e.g. where children can move things, create, build, manipulate the environment or use it in an open-ended way.

**Pedagogy** – this values nature for children's wellbeing, holistic development, and citizenship. It considers children's rights (as stated by the UNCRC and IUCN) to play, participation, a healthy environment and access to nature. For the early years, outdoor play-based activities can be linked to all the curriculum areas.



**About the author:**  
**Marina Robb**

*Marina Robb (Bsc; PGCE; MA; Msc; Author) is Founder and Managing Director of Circle of Life Rediscovery Community Interest Company and The Outdoor Teacher Ltd, both leading organisations that aim to transform education and health through nature.*

*[www.theoutdoorteacher.com](http://www.theoutdoorteacher.com)*

*[www.circleofliferediscovery.com](http://www.circleofliferediscovery.com)*

*Twitter: @outdoorteacher*

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*LinkedIn: @circle-of-life-rediscovery*



## LOCAL NATURE PLAY INVOLVES:

- 1 Building routines e.g. games and activities to prepare children for being off-site can be practiced in advance. Boundary checks can be developed with the children.
- 2 Finding a suitable green space that you can use on a regular and frequent basis.
- 3 Not needing to anticipate everything – experience can provide the springboard to learning and creates meaning and often rituals arise that further develop children's connection to the place.
- 4 Checking you have appropriate insurance in place.
- 5 Figuring out how you are going to get to the greenspace.
- 6 Doing a risk benefit assessment of the area you are going to visit.
- 7 Gathering the evidence of research that points towards children and adults needing to spend time in nature, not just to survive but also to thrive.
- 8 Children needing to feel safe and secure during their nature-based sessions. This mostly happens through repeated visits which enable the children to acclimatize to being in their greenspace.

One of the best ways we can develop resilience is to do things that make us happy. We can co-create outdoor experiences with the children. Sometimes following their lead is a very direct way back to remembering the value of play and the present-centeredness it provides. Sometimes the advice we give to others can be best served on ourselves. Celebrate small victories often. Open up your mind and be braver than you believe.

*“Success is not the key to happiness; happiness is the key to success, if you love what you are doing you will be successful”*  
Albert Schweitzer



# The Great Outdoors

## For babies and toddlers

**Imagine a space that benefits all aspects of a child's development. A space that encourages a love for nature, and provides a first-hand sensory and movement experience where children can learn to understand their world and develop vital brain connections. This is exactly what the outdoor environment can bring to babies and toddlers.**

### EXPERIENCING THE RICHNESS OF THE OUTDOORS

Swaddling my baby of three months during our daily covid walk, I took my time to stop and talk about all we could see, smell and hear together. We often didn't get far from home, frequently pausing for feeding on the canal benches. Some days, her eyes would widen. I could feel she was absorbing the changing light as the clouds covered over blue skies. Other days she would remain asleep. The calmness of the outdoors and the gentle repetition of my steps rocked her into a cocoon of safety.

As the months passed and she grew older, the same walk catered to different aspects of her cognitive and physical

development. The changing seasons shifted from summer to autumn as she progressed, now she was crushing fallen leaves with a firm grasp. Listening to the brittle crunch, collecting the shiniest conkers, and once winter arrived she was negotiating how to wade through thick snow. With a plethora of learning opportunities, it was important she had the freedom to explore at her own pace, supporting her natural curiosity. If she was always in a pushchair, she would be passive, missing out on these moments.

My personal experience in searching for an appropriate outdoor environment for my daughter led me to understand that this is an area where some practitioners may struggle. After visiting multiple nurseries, many taking great effort to incorporate the outdoors with their three-year-olds, this was a sharp contrast to the level of outdoor provision for under three's. This led to my focus in the development of the *TTS Crawl Up Range*, a collection of outdoor pieces specifically designed with babies in mind. The pieces enable independent learning and the ability to experience a myriad of outdoor benefits.

## QUALITY INTERACTIONS

One of the most important resources both indoors and out is the quality of interactions. Ensuring that we are tuning into what is fascinating babies, their facial expressions, any babbles or sounds made and offering commentary about what is happening when appropriate.

The following points include a few suggestions for creating a rewarding outdoor experience, please think carefully about the risks of children interacting with nature, including appropriate clothing, and ensure you are working towards the safety guidance within your own setting.

- Set up a cosy corner with soft furnishing so children can lay down and sit comfortably. Position items close by during tummy time for babies to reach and roll towards, this aids their physical skills, particularly core strength. Ask them what they can see when looking up at the sky and what can they hear in the trees or grass around them. Support their communication through commentary.
- Mirrors are a powerful sensory experience offering many language and communication opportunities. Positioning plastic mirrors outside by hooking them onto low fences is ideal for children to engage with. Pull up bars positioned by the mirrors can support core physical skills as they pull themselves up to view their world through the mirror.
- Messy stations encourage exploration that targets a full sensory experience. Select an array of different utensils for children to use and ask yourself how is it supporting their development? These are opportunities to provide tools for children to begin reaching, grasping, pouring and filling with growing independence. Identify what different materials can be incorporated that are found in the natural environment, such as sand and water.
- Balls are a key resource that assists with hand-eye coordination, eye tracking, object permanence, and gross motor skills. Select a variety of ball sizes for your little ones to explore. Add a posting station to act as a pathway for them to work on specific schemas, offering opportunities to work out where the ball will go, and which ball can fit into different holes.
- A child may show a preferred schematic behaviour, such as posting, transporting, enveloping, trajectory, containing or rotating. Bring those preferred resources from the inside to the outdoors. Posting pots, sorting resources and construction for stacking are ideal for supporting key development.

Think about the activities you do inside and assess how these could be adapted safely and brought outdoors. Feeding bottles, story time, tummy time and baby sensory could be done outside when appropriate. There are so many benefits that outdoor play brings to our little ones.



**About the author:**  
**Kamilla Jawed-Rogers**

*Kamilla is an Early Years Innovation Manager working at TTS. She is an experienced practitioner, having worked in a variety of settings for ten years and has studied her Early Years degree. This has provided her with valuable insights that she underpins with theoretical knowledge. Kamilla has worked on a range of resources that are designed to support and enhance children's learning and development.*

## UNIQUE OPPORTUNITIES OF THE OUTDOORS

The **multi-sensory experience** of the outdoors makes it the perfect engaging and stimulating space to examine. Each season bringing unique opportunities to participate with the natural elements first-hand. The sea of blues and greens of summer offer an exciting contrast to the vibrant reds and oranges of autumn. Offering children opportunities to explore the same space in different ways as frost, snow and rain can alter this completely. The seasons present opportunities to discuss what children can see, smell, hear, and feel, a key way to support **language development**.

Providing an outdoor space, no matter how big or small, empowers children to move freely, to crawl and explore. As the whole body is engaged, children can focus on their **physical development**. Many babies find themselves moving from cot to highchair, pram to car seat, with few opportunities to refine their skills. We should try to give our little ones a reason to move and the desire to want to discover.

There is a natural human curiosity in finding something completely new to the mind. A curiosity that is encouraged can aid in the creation of a thriving child. Learning can be extended by collecting shells across a beach, finding the biggest stick, observing local wildlife, jumping in puddles, pointing at city lights, the game is never-ending to a young mind eager to absorb. To explore the outdoors through the lens of a child is a valuable reminder of the amazing and abundant world we live in.



The background of the page features a series of wavy, horizontal lines in various shades of teal and light blue, creating a sense of movement and depth. At the bottom of the page, there is a dark green field with a pattern of small, stylized grass blades.

# SUSTAINABILITY





# Early Childhood Education for Sustainability in the future

**Sustainability is a word you hear bandied about but very often it is not understood, but we need to understand what it means if we are to apply it within our Early Years Education and Care (EYEC). It is not a new word; a German forester Georg Ludwig Hartig (1764–1849) was one of the first people credited with using the term ‘sustainability’ in 1804 when he described it as utilising forests to the greatest possible extent, but still in a way that future generations have as much benefit as the living generation. However, sustainability is much more than just the environment and leaders in EYEC must grasp the concept and understand it because we need to know how to build the kind of world, we want our children and grandchildren to inherit.**

In 2015, the United Nations General Assembly designed the Sustainable Development Goals (SDGs). These emerged from previous work of the 1987 Brundtland Report ‘Our Common Future’ which had established the 3 ‘E’s of sustainability; Environmental regeneration and stewardship, Economic prosperity and Equitable societies. It agreed a definition of sustainability as:

*“...development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

As a EYEC leader, this can feel like another huge responsibility to consider unless it is built into the way of leading a setting. The 17 interlinked global SDGs are helpful because they provide a framework to help you think though how your setting can be re-shaped in terms of how it’s led and governed, how the pedagogy is framed and how the operational decisions are made. Like the UN, your setting will benefit from developing an action plan to follow and a set of trackers so colleagues can take a lead

on areas that matter to them. For example, is the chef thinking carefully about making the menu seasonal and sustainable? Do we need mangos on the menu in the middle of winter which have to be flown halfway across the world? Should we make sure we choose fish from sustainable sources even if it a little more expensive? How much meat should be on the menu? These are the kinds of questions to consider when making regular decisions about our daily operations, buying teaching resources and explaining to the children what sustainable means.

All the SDGs are structurally relevant to EYEC across the world. For example, we understand the negative impact of poverty on every child, and we commit to ensuring that no child goes hungry. SDG number 4 requires us to ensure inclusive and equitable quality education and the promotion of lifelong learning opportunities for all, strengthening the argument for serious investment in Early Childhood Education and Care, so that all children can access high-quality educational provision from the earliest days of their lives. Social leaders at the helm of organisations can address some of this unfairness by creating a sustainable business model, balancing economic profits, employee wellbeing and social and



ecological sustainability. I recommend starting by making sure staff have fair benefits such as a good pension, proper training and development opportunities no matter what type of contract they have. The SDG 5 sets out an ambition for gender equality which could be translated within EYEC as encouraging more men into childcare and supporting them to stay.

When it comes to daily operations, small changes can also be made too. For example, SDG 6 is all about water and sanitation but teaching children about water conservation begins in the nursery. In the UK, we take it for granted that we can turn on our taps and out will pour clean fresh water, but that is not the case for children in other parts of the world. According to the US charity, charity:water, 785 million people in the world live without clean water. That's nearly 1 in 10 people worldwide or ten times the population of the UK. The majority live in isolated rural areas and children spend hours every day walking to collect water for their family. Not only does walking for water keep children out of school or take up time that parents could be using to earn money, but the water often carries diseases that can make everyone sick. What we can do is to begin by teaching our youngest children that having clean tap water is a privilege and we need to take care not to waste it, whether by recycling rainwater in the garden, having taps that don't drip and loos

that use less water to flush (grey water). Better still, encouraging re-using rainwater as an irrigation system, planting drought loving plants and avoiding plastic bottled water. This also links to SDG 14, when we teach children about the ocean and how we keep it clean. It is a lovely segway into learning how to recycle, repurpose and reuse our resources.

Education is a powerful pathway to sustainability, but it requires sustainability to be integrated into every element of a setting's leadership, pedagogy and operational practice. Sustainability is not a subject or part of an environmental programme, it is not just locked into one of the seven learning outcomes - it is central to the child's whole experience and needs to be part of a broad and inclusive quality education. According to Fullan and Quinn (2014), the mark of an educated person is that of a thinking doer and a doer who thinks, and this sums up much of the Early Years sector. Addressing sustainability requires a mindset where we learn to do and do to learn. Our job is to empower staff to take informed and responsible actions for environmental integrity, economic viability and a just society for present and future generations.



**About the author:**  
**June O'Sullivan MBE**

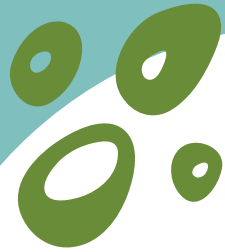
*June O'Sullivan MBE, is the CEO and creator of the UK's leading childcare social enterprise, LEYF's (London Early Years Foundation). June has developed the LEYF Pedagogy and champions community-based, multi-generational early years education as the basis for greater social and cultural capital. She continues to advise Governments as well as a range of organisations, academics as well as services at home and overseas about how best to implement a social enterprise vision for Early Years.*

**Links**

- [twitter.com/JuneOSullivan](https://twitter.com/JuneOSullivan)
- [www.leyf.org.uk/news-listing](http://www.leyf.org.uk/news-listing)
- <https://www.leyf.org.uk/news/leyf-launches-new-level-4-sustainability-qualification-for-early-childhood-education/>

**Two books on Amazon**

- Social leadership in Early Childhood Education and Care: An Introduction** by June O'Sullivan and Mona Sakr
- 50 Fantastic Ideas for Sustainability** by June O'Sullivan and Nick Corlett



*Discoveries, comparisons,  
communication and new  
questions are the basic  
elements of learning*





# Rugged Robot

## takes out the trash!

**This article provides an inspirational activity idea on the topic of sustainability whilst incorporating educational robots and the use of QR codes.**



Promoting and encouraging sustainable development is a primary goal at Andungen Kindergarten in Norway. During a period of focus on waste and recycling, our children visited a local factory that receives waste, they have been on litter picking adventures in the local area and even worked on art projects which involved repurposing our waste into their very own creations. Last but not least, it was Rugged Robot's turn to navigate our purpose-built outdoor programming track, 'HEI', to sort our rubbish into the correct bins.

HEI means Hello in Norwegian. Every day, children and adults say hello to each other. The track gained its name to reinforce the importance of being polite and nice to one another. In addition, we can use HEI to talk about letters. For example, I can ask the children: What begins with the letter H? Did you manage to program throughout the letter H? etc.

In preparation for this programming activity, I have taken pictures of various things from the kindergarten. Something they see every day, such as plasters or food items. We discussed where should they be thrown away after use. Each item has been pictured next to the correct rubbish bin.

When the children came to the rubbish, they could choose which item they wanted Rugged Robot to throw away. Once the choice had been made, they took a closer look at the picture and could see which rubbish bin was to be used.

I prepared each Rugged Robot with QR code flags in the correct colour according to the corresponding rubbish bin. The QR codes can be scanned to play an audio file that congratulates the child on programming Rugged Robot to the correct bin. To create the QR codes, I used a simple App called 'Cloud QR'.

Watch the film through the QR code provided!

Before taking the robot to the "HEI" track, they had to find the miniature garbage can on the programming track.

Now everything was ready to send Rugged Robot on his journey to take out the trash to the correct bin! The children were shown a set of directions to follow (an algorithm) which was displayed on the wall in front of the track. The sequence of directions would lead Rugged Robot to the correct bin, but only if they correctly programmed the number of steps and directions of the arrows on the robot.



When Rugged Robot started his journey towards the rubbish bin, tensions ran high in anticipation to see if it was correctly programmed and the right rubbish bin selected. Included in the trip were two QR codes on a pole. If the programming was correct, the robot stops right in front of the iPad. Here it is scanned and a voice tells them whether it is the right trash can. If it's right, there will be great cheering from the speaker, and very happy children!

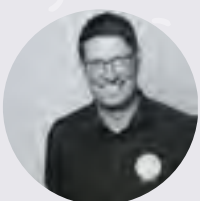
If the children had selected the brown bin for a plaster, I would have reversed the QR code. Then they would hear: "It was wrong, try again".

Rugged Robot is a super outdoor and indoor robot. With the appropriate activity, a child as young as three years old will enjoy playing and exploring with this robot. It is large, robust and easy to use.

When we were on a trip with the children the day before a three-year-old boy asked;

"Kjellis, can we play with Rugged Robot?"  
"Yes" I say, "we can, but wait until we get back to kindergarten" Then the boy smiles and says "good".

Teaching through robotics can truly be a cross curricular experience for children. Rugged Robot is an educational tool which on this occasion has helped to make children aware of what to throw away. A perfect supplement to reinforce our learning journey about the environment, whilst also practicing spatial awareness, mathematical concepts, extending our vocabulary and gaining exposure to new technologies whilst enjoying the great outdoors and the many learning opportunities that this presents!

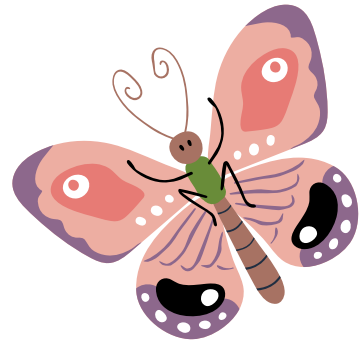


**About the author:**  
**Kjell Gunnar Ytre-Eide**

*Kjell is an Early Years Assistant from Andungen Kindergarten in Norway, he has been in the profession for almost 30 years. Kjell runs a company called IKT og Lek. Here he blogs about his work with digital tools in kindergarten. He holds inspirational courses for other kindergartens and schools.*

*Blog: [Iktoglek.com](http://Iktoglek.com)*

*Facebook and Instagram: [IKT og Lek](#)*



# Sustainable Pedagogy

**"It has like little hooks at the front!"** The children look closely at a caterpillar that has found its way into the preschool yard. The detail that a child just discovered seems to fascinate some of the children. One of them immediately stretches out his arms so that they stick up above his head and forms them like hooks, then bends forward and starts trying to get the "hooks" to stick onto various things; a friend's arm, a tree trunk, a fence. Another child shapes his arms in the same way and follows suit. Two children stay by the caterpillar and start a conversation about how it ended up in their preschool's yard. All this happens in the space of only three minutes. Three minutes that hold an entire curriculum. Discoveries, comparisons, communication and new questions are the basic elements of learning, and if we can provide opportunities for this for the children, we have come a long way in our educational work.

Most children are born with a curiosity about the world around them and the drive to want to explore, but without necessarily the tools and understanding of what is ok or not in each situation, and without a fully developed understanding of relationships yet. That's what drives their exploration – the quest to understand more of what's around them. For us educators it is therefore important that we provide tools for exploration.

## NATURE

Nature has always been an important place for the Swedish preschool. In Sweden, we have something called Allemansrätt, which makes forest and land available to everyone, provided that it is treated with care. Education should give children the opportunity to acquire an ecological and careful approach to their surrounding environment, both nature and society.

Questions we need to ask ourselves even before we meet the children in our care are around what we can do to support and stimulate children's exploration. This means that we need to provide the conditions for them to discover things that are important to discover, not to learn the 'right' things but to discover connections themselves, and also to formulate new questions that lead to continued curiosity.





## TODAY'S CHALLENGES

Today we all face challenges that unite us globally. Earth's ecosystem is failing and species which we have difficulty surviving without are threatened with extinction. In Sweden, more than 30 per cent of the food we produce is dependent on pollinators; i.e. insects that move pollen from plant to plant so that they can bear fruit. Being a pollinator means performing an ecosystem service. We all have such a service, but for too many years we have seen ourselves as superior people, with special rights. Today, we are more fascinated by whether an unusual species appears in the place where we live than we ask ourselves how we affected the existing animal life when we took that place. Therefore, one of the preschool's most important tasks today and in the future is to support and stimulate children to develop an awareness of the lives we have around us.

Regardless of whether it concerns people or animals, careful relationships are important. It leads to sustainability, which in turn leads to us all being able to continue living. We who have been adults until now have not succeeded in this so far and therefore not only need to change our way of life but also educate future

generations so that they can develop sustainable solutions. Pedagogically, I usually offer various tools that will help children and educators to stop, look closely and discover. Once this is done, we move on through aesthetic learning processes. For example, mud helps us investigate the shape of the invasive oyster. In the meantime, one might begin to think about what makes a species considered invasive and what makes species change biotopes; issues that are very much related to sustainability. A pen helps us follow the lines on the flower's pistil and look closely at how the pollen sticks to the bumblebee's hairs. Perhaps it raises thoughts about what we could do to make sure there are more bumblebees on earth.

Pedagogy can be both simple and world-important at the same time. Often it's a matter of not over thinking; look closely at what is close and the big questions open up. As an educator you first need to get hold of your own wonder of all the remarkable things that are around us, what we may think happens around us naturally is in fact very dependent on us exercising our caution with the natural world.



**About the author:**  
**Martina Lundström**

*Pedagogista, educational advisor, author*  
*@motesplatsforlarande*  
*@pedagogerian*





# LEARNING ENVIRONMENT

# Purposeful planned environments

## for young children

The role of the educator plays an integral part in preparing, supporting, and honouring diversity, inclusion, equity, and social justice. It is imperative to all societies. Much of the success of this role relies on sharing research, experiences, knowledge, and a clear understanding of resources and how to use them in a wide range of settings effectively.

This article offers discussion points and ideas to expand and build upon ideas including;

- Learning environment insight
- Provocations and invitations
- What the child gains from thoughtful experiences

### THE 'THIRD TEACHER'

One of the critical components of early years education is how we lay out the environment through provocations or similar inspirations, with a clear understanding of how we can best use these in our settings. The term provocation is derived from the Reggio Emilia Approach. These learning opportunities are extensive and can be incorporated into a range or a suite of learning activities that are planned and thoughtfully prepared. They are open-ended, do not have prescribed outcomes, and are designed to build on ideas, expand thinking and stimulate imaginations. They can be explored by individual children or into a broader group and honour diversity, social justice, and inclusion.

Educators often consider learning environments as living spaces or places that invite, provoke, and assist in helping us respond to various learning opportunities. The learning environment in Reggio Emilia and the associated philosophy is referred to as the 'third



teacher'. Susan Fraser reminds us that; "we can understand why the educators, in Reggio Emilia, have termed environmental thinking and the third teacher because of the power environments such as these have to inform and shape the kind of learning that will happen in the room', (Fraser, 2000, p.53). The power of the "third teacher", the environment, is significant. Setting up and rethinking early years environments is a powerful influence on global learning and teaching.

### PROVOCATIONS AND INVITATIONS

Many educators have moved away from the traditional ways of working where environments are structured with what Kathryn Delany (Delany, 2001) calls the 'toy box' approach, a 'one hit wonder' or an entertainment approach, perhaps with several tabletop activities set for the session or the day. The challenge is ours to move towards a place where we now see settings provide rich learning centres, each stocked with well-organised

materials in baskets or on shelves where children make choices and often plan for their own learning.

We have continued over time to develop a culture of compliance and minimum standard management catering to the lowest common denominator, whereas creating a thoughtful and expansive learning environment builds on new thinking and provides innovation. These are environments where educators are engaged *with* and *in* children's learning.

If you search through [enspirement.co](https://www.enspirement.co) there are thousands of inspirations and provocations with supporting ideas, including learning resources purchased and collected. At Enspirement, we curate and thoughtfully consider ways to extend and build educators' understanding using various materials, resources, and mediums. We also provide ideas that allow adults and children to develop skills, including flexibility of thinking, creativity, inventiveness, and fun, as well as many ideas that support thinking, planning, responding, and reflection.

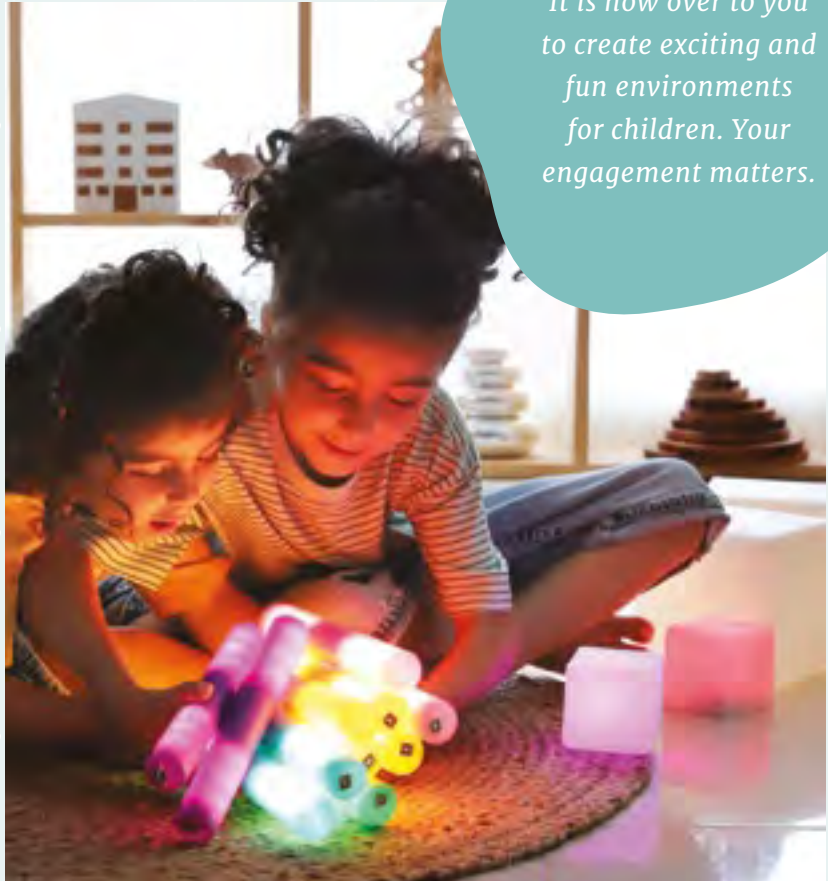
## THOUGHTFUL EXPERIENCES

There has been much discussion about the balance of teacher-led and child-led learning, and a balance is required. There are significant differences between provocations, inspirations, and outcome-based learning. Anna Golden (see <https://atelierista-anna.blogspot.com/p/anna-golden-cv.html>) compares and discusses provocations and “traditional” classroom setups – for example, explicit activities such as literacy activity centres or instruction-based learning (e.g., worksheets, letter forms for tracing, word study, small group instruction) versus open-ended style provocations and inspirations that provide materials (paper/envelopes/cards and mark-making implements) to “provoke thinking” without specifying a designated outcome, although they are always designed with “intention” by the educators.

When our children and families arrive in well-presented, beautifully organised environments daily, they feel our spirit and respect for them. For parents, this communicates that we appreciate them entrusting their children into our care. When parents walk into a setting and are greeted warmly, their child is well known and received, and the environment sings to their child, they will be parents who continue to return to our settings, and they will tell others what a fabulous place this is. Word of mouth from parents about our service is one of the most powerful ways to spread a positive image of our environment, ensuring that our settings remain consistently occupied.

Education with intention is linked to the invitations and provocations educators provide or respond to within the learning environment to capture children’s interest, provoke joy and a love of learning, helping to support the testing of theories of how the world works. Educators create environments where learning is supported; imagination is provoked and encouraged. The intention is very evident. In turn, learner intention is supported.

**The author:**  
**Michelle Pratt**



*It is now over to you to create exciting and fun environments for children. Your engagement matters.*



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# Snoezelen

## Educational innovation for your multisensory classroom

**In this article, Maria explores the Snoezelen methodology; providing context, benefits and elements to consider from the design of your environment to the types of sessions that can be facilitated.**

### MULTISENSORY EXPERIENCES

Feel fully; see with greater visual acuity; experience different smells and evoke places; truly know oneself; listen to melodies and silences; communicate with multiple languages; touch and be nurtured affectively; take part in holistic learning... Guided multisensory stimulation offers a universe of possibilities from an inclusive environment.

More and more centres are beginning to include a multisensory classroom with specific equipment to develop the seven senses. It has its origin in the Snoezelen methodology. This therapy, for children with neurodiversity and developmental support for those who are neurotypical, was developed in the mid-seventies by Ad Verheul and Jan Hulsegge, in the Netherlands.

### MULTISENSORY CLASSROOMS

Nowadays there are thousands and thousands of rooms in countries around the world. The great endorsement of medical and scientific research made this methodology spread in various fields, including education. The stage from zero to six years is known as that of sensorimotor development. During these early years the opportunity for developing brain plasticity is vital, which can be supported by offering enriching experiences to establish neural maps. This is where multisensory classrooms come in as they encourage these experiences and opportunities for development.

Snoezelen has become a magic word; a dream space for children. In the session scheduled by the trained professional, curricular objectives are worked on, with an overarching aim of increasing the quality of life. It is a pleasant and relaxing experience for adults and children. A room to consciously “feel ourselves feeling”, and establish affective and communicative links like in no other environment.

Professor Krista Mertens, first president of the International Association Snoezelen, summarizes the concept: “Snoezelen is the production of a sense of wellbeing through controlled multisensory stimuli in a specially designed environment” (2008, Mertens K.)

### REAL DIVERSITY IN SCHOOLS

Multisensory rooms are beneficial for all students, regardless of age or stage of development. Snoezelen opens the door to real diversity in schools. It allows each user to regulate their emotional and physical wellbeing. I would say they are a must have for children with autism or other specific needs.

Multisensory rooms can also be seen as equally a gift for the adults too! A gift of being able to offer quality time in sessions; really building relationships with children and having a dedicated space for rich interactions. The specific methodology and documentation used by adults is an accompaniment based on the sensory profile of each individual child. A multisensory room is an investment in being able to know students at a deeper level and therefore be able to offer educational interventions of the highest quality.

## DESIGN AND MATERIALS

The design of the space is extremely important. In the apparatus as well as in the way of intervening, not everything goes. Good quality training is necessary to understand the background of Snoezelen. I see it as a philosophy of life today and the future of educational centres.

Unfortunately there can be dangers due to ignorance of these prepared environments. For example, providing ineffective interventions, or worse, over stimulation. For this reason, experts warn that it makes no sense to have a multisensory classroom without being trained in Snoezelen.

The materials of the Snoezelen rooms include diverse options of luminous objects and audio-visual technological resources. STEAM (science, technology, engineering, art and maths) resources are great for sensory rooms as they can offer the possibility of investigating cause and effect, creating individually and collaboratively, experimenting and testing ideas.

There are also natural tactile, olfactory and gustatory elements and specific devices for vestibular and proprioceptive stimulation, such as water beds or ball pools in a neutral colour. The therapist working with the children must also know how to do deep pressure massage or other similar techniques, supporting children to be aware of their bodies as they feel pressure and focus on where they are feeling this.

Each material is developed to achieve specific educational and therapeutic effects, stimulating specific responses and producing a call to action. This provokes invitations for exploration and wonder.

Sometimes light tables are included in multisensory classrooms. Light tables are more of a tool of the Reggio Emilia approach, rather than of Snoezelen. However, there are values that connect both educational perspectives which can coexist in harmony. You simply need to know the characteristics of each approach and ways of adapting practice. Once again, training is very important here, with the focus of knowing how to stimulate

and provoke children's thinking, curiosity, awe and wonder.

A typical multisensory provision is designed to be a neutral space in terms of walls and furniture (white walls) with bubble columns, fibreoptics, projectors and other features and resources. This space is called a white room. It is combined with another room called the dark room, where ultraviolet light is used as a visual and attention activating element. Sometimes due to space limitations the two live together in the same room. Even if you don't have much space, you can start by creating a refuge in a cabin or a cart with multi-sensory objects.

## SESSIONS

Inside the multisensory rooms there are different types of sessions. We can prepare thematic sessions on topics of interest to individual children or groups. This usually begins with topics such as the sea world or the universe. Although the possibilities are endless due to the children's own interests. A big focus with the themes will be to stimulate children's sight with projections, as well as the use of other materials for the other senses. The aim is for the children to have multisensory immersive experiences.

There are also chromatic sessions or sessions designed to work on specific objectives of the sensory profile. For

example, from this pleasant state, hypersensitivity tolerance thresholds can be worked on. Also, in the Snoezelen room, motivation is often seen to increase and we can invite children to take part in activities which support the development of fine motor skills, reading, writing or mathematical logic.

At a methodological level, the monitoring of the sessions and the evolution of the users, with the use of the official documentation that is delivered in the training, provides proof of the value of the intervention. Pedagogical reflection allows us to improve our role as educators or health professionals.

With multisensory sessions we are also training children in vital skills for the 21st century, such as self-determination, emotional management and creativity. If we work on sensory development as a whole children have a better understanding of themselves and the environment.

Above all, Snoezelen is a space to connect and learn to communicate effectively, with or without verbal language. Everything is prepared to give children a voice and let them feel their own multisensory world.

### Reference

*Mertens, K. 2008: Snoezelen in Action*



### About the author:

**Maria Moreno Fernandez**

*International Snoezelen ISNA therapist trainer and Reggio Emilia Approach educational consultant*







*Children can experiment, explore, and discover with the light effects, which enriches engagement.*



# Learning in motion:

## why movement in early childhood learning spaces is so important

Whoever coined the phrase 'sit still and concentrate' probably never had the pleasure of teaching a group of fidgety four-year-olds. And in this case, it's the children who have the right idea. Movement within learning spaces has a multitude of positive benefits, from improving concentration and behaviour, to creating a healthier and more inclusive learning environment that delivers a better learning experience for all.

To quote Learniture's good friend, Professor Stephen Heppell: 'Where we build movement into learning, outcomes improve.'

Here's a brief look at why.

### IMPROVED CONCENTRATION

Movement increases the flow of oxygenated blood, which is fuel for the brain, improving concentration, reducing fatigue and improving cognitive performance. If you compare the brain activity scans of children taking an exam, where one group took a 20-minute walk beforehand and one group sat quietly, the difference is night and day. The first group's scans are brightly lit, showing vastly more cognitive activity than those who sat still. Hillman et al. (2009). *Neuroscience*, 159, 1044-1054. *Fig 1*

Learners who can move around different zones within learning spaces maintain their energy levels throughout the day; the

post-lunch slump doesn't happen. It goes without saying that children who are less tired are better able to concentrate, and this is particularly true for children in their early childhood.

### HEALTHIER FOR GROWING BODIES

Children instinctively know what's good for their bodies, which is why they don't stay still for long. Fidgeting, stretching, leaning back in their chairs are all attempts to find a healthier and more comfortable position. Children can spend up to 15,000 hours at school over the years when their soft bones are most vulnerable to deformation from being forced into unnatural sitting positions for long periods of time. Ergonomic seating is important and movement is crucial. Quite apart from the health risks associated with lack of movement or poor-quality seating at school, it's also about comfort. Comfort is not a luxury, it's crucial to educational outcomes and it's achievable by offering a variety of seating options and a choice in how and where to work.

### CHOICE, AGENCY AND INCLUSIVITY

If we want children to develop a broad range of skills, from self-directed learning to collaboration, critical thinking and problem solving, you have to offer them choice and agency. Creating clear zones for different types of activities means children learn to choose the best place for their task. Clearly defined zones also help anchor learning in the long-term memory (I remember doing x in the 'explore corner') and prime behaviour appropriate to the space (fingers on lips –



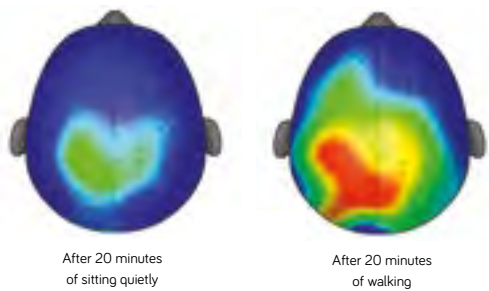


Fig 1

no loud talking in the 'quiet area'). Different children will choose different spaces, and offering the ability to move and make a choice creates an inclusive learning space where every child can meet their needs and find their place. This has a particularly positive impact on neurodiverse children and those with additional needs.

## HOW TO BUILD MOVEMENT INTO YOUR LEARNING SPACE

If you want to build movement into your learning space, you need to make some room. Too often early childhood learning spaces are crammed full of furniture, resources and displays. If this sounds familiar, you might need to start with a declutter!

One of the most common problems is cramming a classroom with a table and a chair for each child, which inhibits movement and limits choice. As a first step, take out some tables, so you can think what else you can introduce and how you can create clearly defined zones which children can move between. Individual tables can be moved around so you're more likely to switch things up and vary your layouts. If you can change the layout frequently, rather than it being the same every day, it helps switch on the brain's learning systems because children have to think about where to go and what to do rather than doing the same thing every day. A flexible layout also helps break down social cliques by encouraging greater mixing.

So, embrace and enable the fidgeting! Create a learning space where movement is positively, joyously encouraged. Let them stand up, sit down, move around, choose where and how they want to work. Let them sprawl on the floor, stand at a high table, sit at a 'normal' table, huddle up on tiered seating. Create clearly defined zones, including some quiet spaces, and watch the learning and behaviour improve. It's not rocket science, but it is neuroscience and having seen it in action I can tell you – it really works.



**About the author:**  
**James Clarke**

*With over thirty years' experience in the furniture industry, James has extensive knowledge of and experience in the design and furnishing of learning spaces.*

*Working on a wide range of global projects including whole-school fit-outs, his work draws on the latest neurological research in how great spaces ensure great learning outcomes.*



## Introducing the Immersive Projector

*An awe inspiring, illuminated, safe, rechargeable dome that transforms walls and ceilings into a canvas for magical light and shadows.*

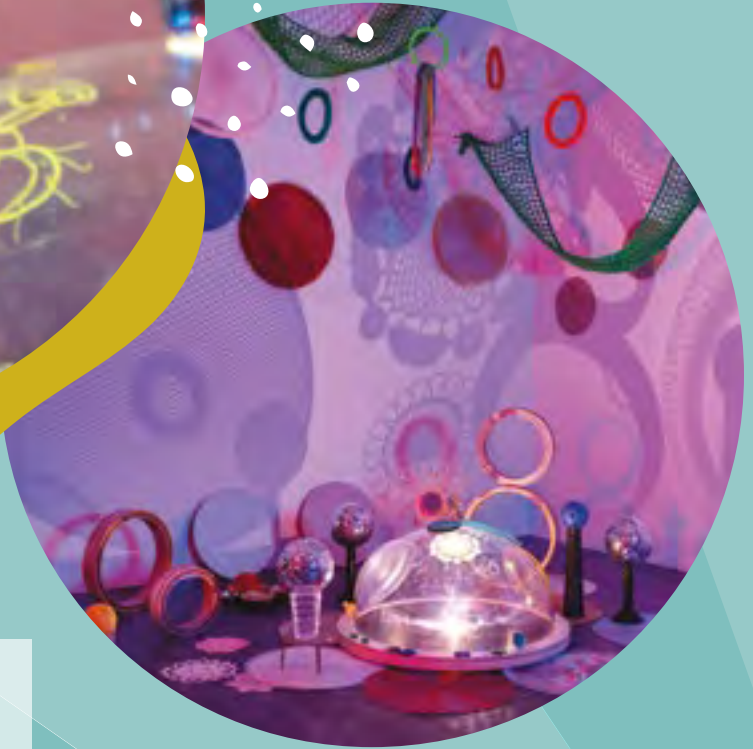
The Immersive Projector is a safe, robust device that with a simple switch creates an atmospheric and immersive light effect. Simply place a rich variety of materials on and around the strong polycarbonate dome and see the shimmering shades and shadows emerge. Children can

experiment, explore, and discover with the light effects, which enriches engagement. It is truly a versatile resource offering so many learning possibilities.

Spark their curiosity and learn through a multitude of investigations. Manipulate objects and see what surprising effects can be created. Enrich vocabularies, create catalysts for STEAM based learning and inspire imaginations to soar. It is not just about creating pretty patterns and effects, but the power of light and shadows to

support, enrich and enable learning in a powerful and unique way.

This is such an open ended and versatile resource and can be used independently by the children or for collaborative tasks. It is all about play and child led learning, where they are the architect. It is about experiential, hands-on STEAM learning. Imagine a starry constellation, under the sea or other amazing locations reflected on the walls. Perhaps you will wander amidst dinosaurs!



*Remember it is not just about creating pretty patterns and effects but the power of light and shadows to support, enrich and enable learning in a powerful and unique way.*

It stimulates high levels of engagement.

We are leading in this and providing safe accessible resources to enable this myriad of learning.

So many areas of learning can be catered for or can be provoked.

We focus on the learning that emerges and powerful possibilities. It is not just about lighting up!

It is all about as Malaguzzi says giving children a hundred voices to learn with.

It is about child led learning, where they are the architect. It is about experiential, hands-on STEAM learning.

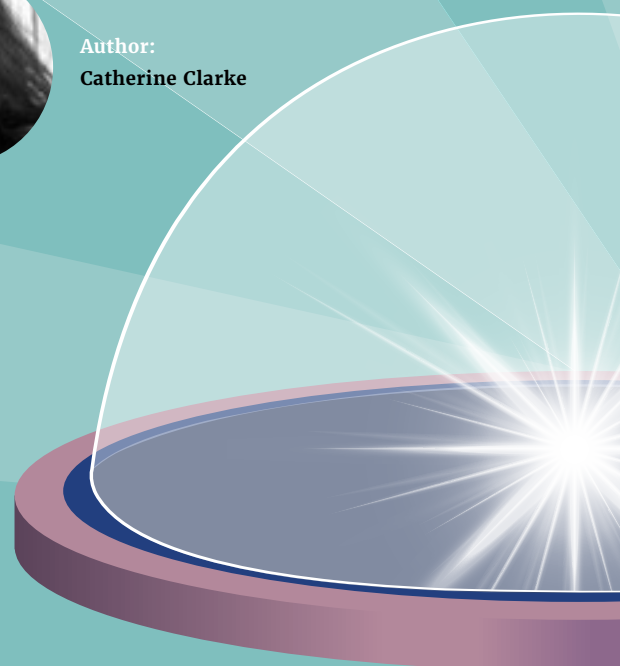
IT IS ALL ABOUT PLAY!



Author:  
Catherine Clarke

*“Play is the work  
of the child”*

*Maria Montessori*



# Social Snapshot

Educators around the world have been busy creating the most magical environments for their little ones. Here's a selection of our favourites!



@babyplay123



@handsonsciences



@cosycottagechildcare



facebook.com/kinderoo.ocala



@claireh\_eyfs\_sensoryideas



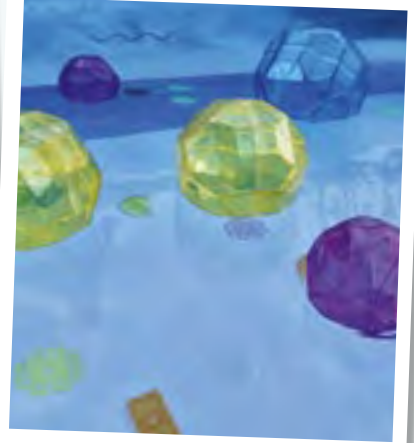
@creakiids



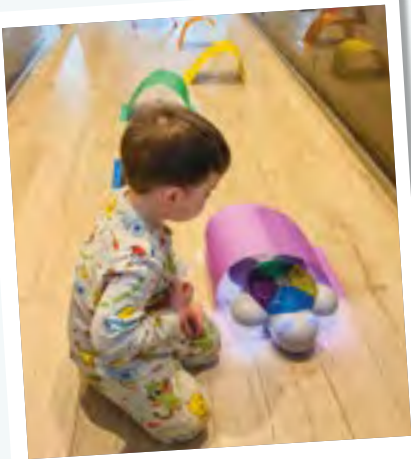
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For more inspiring content or for a chance to feature in our next edition of *The Learning Atlas*, check out our instagram page and send us a DM! @\_ttsinternational



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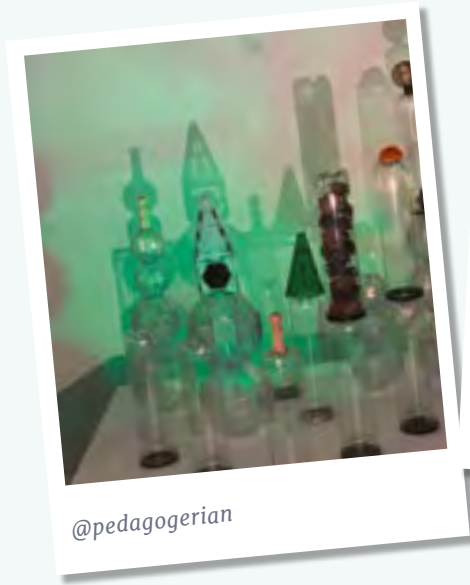
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