

The Importance of Nature **in Education**

By Karen Ford

'The Importance of Nature in Education' - written by Karen Ford for the 3rd year project in Edinburgh Steiner School's Teacher Training Course.

Looking at why and how to integrate nature within the Steiner Waldorf the curriculum.

Childhood for me was watching new born calves trying to find their feet in spring. Standing in a river catching minnows marked summer. In autumn, I could be found thundering across golden stubble fields and winter was bran pink, whiskery kisses from my horse which smelt... of warm oats.

Nature was my favourite teacher in every subject including biology, physics, maths, geography and English. I believe all children need nature to learn from and that this can be accessed regardless of where they live.

What has changed – why does it need to be addressed now?

In 2002 Richard Louv coined the term “Nature Deficit Disorder” in his book *Last Child in the Woods*. He spent ten years researching what differs in the experience of nature between parent and child. After interviewing hundreds of people in both urban and rural environments he concluded that no one had used the phrase “Nature Deficit Disorder” before, as it had not existed.

Louv places huge emphasis on the link between increases in childhood obesity, diabetes, depression and ADHD with a steady distancing from nature. It is not only the physical aspects but mental and spiritual health which Louv goes on to discuss. To give you an idea of how health has changed in recent times, I have picked a few numbers that have stuck with me.

ADHD diagnosis has risen by 33% from 1997 to 2002. And, 2000 to 2003 the amount of money spent on ADHD drugs for children under five rose by 369%! *The Harvard Mental Health Letter* stated that, of the children diagnosed with ADHD, 50% are given stimulant medications and the majority of these receive no further guidance or assistance in coping with their ADHD.

One hundred years ago, 90% of Northern Americans lived in rural areas. Today that has flipped. Only 10% of the population live in rural areas and a staggering 90% are in urban centres. Given the history of the planet, one hundred years is an incredibly short time for 80% of the population to not only move to cities but also to adapt humanity’s physical, mental and spiritual needs to this new habitat. What a shock to the evolutionary system. Is it any wonder our children struggle to adjust? I don’t think so, even the Curriculum of Excellence re-established Outdoor Education with their 2010 publication.

With my 3rd year project I have chosen to investigate what we are missing in our modern urban lives, how we can practically overcome this and integrate it with our curriculum. After all weren’t our academic subjects born from the earth?

What can nature teach us?

I'm sure most of us can remember our grandparents recounting their sufferings as children. My Granny's favourite tale is of the long barefoot walk to and from school each day and on the hottest days she'd come across adders sunning themselves in the road. The fact that she was barefoot completely by choice - and still is to this day when she can get away with it - was completely beside the point.

Just as clear as these anecdotes are such grumbles as: "In my days we'd never have behaved like that, we had respect for our elders/town/family", or whatever the day's grievance may be. Is it such a leap to connect the physical exercise and immersion in nature to a feeling of respect and responsibility for other living things?

A life on the farm brings a practical understanding of where our food comes from not just a theoretical one. I am not suggesting that we all start becoming hunter-gatherers and butcher our own meat, but that we can make educated decisions about our diet if we take responsibility for what we eat.

Watching creatures and plants grow, multiply and die taught me more about the sciences, social studies, maths and English than any teacher. The biology classroom can be found watching plants and vegetables grow. Preparing lime to paint the barn can be the beginnings of learning about the periodic table. The aerodynamics of a migrating wedge of swans is physics in motion. Looking at the geography of the land does more than just hint at the history of the people who dwelt there. The simple counting of eggs to the building of field shelters shows maths in its true form and can forestall classroom mumblings of "when will I ever use this in real life?"

Looking back at the 80% of Americans who moved from rural to urban settings, how successfully has this nature void been filled? How can we teach not just subjects but also respect and wellbeing too? It seems to me that education has been separate from nature, respect and health for too long, and that we suffer from this lack mentally, physically and spiritually. But how can we realistically get this balance back? We can't all live on farms.

In the class

Waldorf schools have a wonderful tradition of the nature table. This is a table, mantelpiece, shelf or piano top with items and colours reflecting the season. A well-maintained nature table that grows throughout the season, with the pupils' finds from home or in the school gardens (and, of course, from the teacher's contributions) can be the initial introduction to nature within a child's life.

I was fortunate enough to observe class three at the very beginning of spring for two weeks. Their nature table grew only a little, but a bird feeder was attached to the window and the children would pause to watch a song bird eat. On one occasion a pupil, who is quick to finish his work but not as neatly as he is capable of, threw back the curtain to show his classmates his find. Unsurprisingly the bird was gone before the curtain was fully open. The teacher gently said: "Our little visitor got a fright, you were so fast." The pupil replied: "If I was slower I'd have seen him." For weeks Teacher had been saying "slowly and beautifully" before every piece of written work and this child was still racing away - and yet one encounter with a songbird and he realised himself how to see it next time.

From the classroom table with plants quietly showing the passing of time to the children's voices singing the songs of the seasons, it's clear that even in the most urban areas a sense of nature can be found.

In the school garden

We are very fortunate at the Edinburgh Steiner School to have a garden in the middle of the city where the children can expand their knowledge and understanding of nature. In March Class Eight were kind enough to let me join them in building a new school pizza oven, as the old one was deteriorating. I had built one on our Teacher Training Course Residential last year, and was excited to see how the project would go with students.

They arrived eagerly and several of them came to help me move clay, and it struck me how difficult they found the task, but their sense of pride and determination got the clay to where it needed to be. The next part was measuring the percentage of clay to sand and it was figured out quickly along with the height of the dome in comparison to the door. Maths!

Then came the teamwork of mixing or puddling the clay and sand together barefoot. This had mixed reactions; some children dived straight in and others required some cajoling, but as they mixed, we discussed the willow they had cut to weave the basket for the centre of the oven, and they asked where the clay was sourced. Geography and Geology, and Science! The work then was to strengthen what would be the clay shell and again, once it was built, to fire the oven.

This was all before the Home Economics of actually making pizzas begins and opens another world of sourcing all their ingredients or - even better - growing them.

We have already seen how to bring academic subjects to life, help with inter-personal skills and to get some activity in the children's lives, and we still haven't left the school grounds!

On School Trips

An expedition beyond the school gates poses no end of red tape to be navigated but it's well worth the work, as it offers the possibility of larger projects and even residential projects. I could list thousands of possibilities for field trips; I have been to the sea, a ram sale, an outward-bound centre and the French Battle Fields where the words of Siegfried Sassoon came off the page as I stood next to the bullet ridden trees.

At this school, Garvald Home Farm is a favourite venue. In fact the Teacher Training Course is heading there next weekend for pottery workshops. We'll learn the source of clays and their characteristics as well as the histories of how to fire it using different methods, and what the outcomes of it are. This is on top of the obvious art skills.

I'm joining Class Three on their first Garvald trip on Monday for their farming main lesson block, giving them a real-life concept of everything they have been learning since Easter. This will enable them to envisage Narnia - the cow being milked as they eat their cereal. When they are teenagers, reproductive biology may become a wondrous miracle after seeing a lamb come into the world rather than the giggly embarrassment it can be. When they are older they may remember the endless daffodils when they study Wordsworth.

Daffodils by William Wordsworth

*I wander'd lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host of golden daffodils,
Beside the lake, beneath the trees
Fluttering and dancing in the breeze.*

These excursions make subject content alive, even if the content doesn't come into the classroom for years. Children with these experiences and memories to draw on are much more respectful and susceptible students, and the teacher's work, capturing interest for their subject, is reduced considerably.

With Community Projects - Stable Life

In researching my project I was invited to a community project near Selkirk called “Stable Life” where they find children with difficult backgrounds, this can range from abuse to being a school bully, and try to help them develop the tools they need to be successful in their lives.

As the name suggests the project centres around horses. The children muck out, fill water buckets, groom ponies etc. each to their own ability, and only carry out tasks that they are capable of, though not necessarily within their comfort zones. This is not a facility purely for free riding lessons; all of these tasks are broken down by the skills they develop and tied in with the Curriculum of Excellence.

Horses, more than any other animal in my opinion, can teach us by being an emotional mirror and therapist. I know this first hand as my horses got me through family changes, university, health problems and this project!

At Stable Life one of the most beneficial exercises they can do is “loose schooling.” This when a horse is freed into a round arena with the child standing in the centre, using his body language to change the horse’s speed, direction or even shadow the child.

If the child isn’t confident and clear in their commands, the horse will do just as it pleases, or mirror the child if they are too aggressive or lazy. I haven’t forgotten the horse’s own personality. On one occasion, in the dead of winter, a pony was selected because of its usual susceptibility to this training and to make the first session relatively straightforward, given that this child was used to getting her own way. The pony however just paced back and forwards in front of the exit. The volunteer, who is extremely experienced with horses, tried to get the pony to circle but again he didn’t respond.

Cleverly the volunteer asked the child “What is this pony’s favourite thing to eat?”

“Grass!”

“Can you see a lot of grass?”

“No, it’s winter. Poor pony is having to eat hay. No wonder he doesn’t want to play with me.”

For a child who had no empathy, to the point he was a bully, this was a massive breakthrough and with this empathy he realised the importance of a healthy diet and how much it can affect the will.

Stable Life allowed me to read through some case studies, child responses and their 2014 Annual Report. These showed the huge success rates achieved: over 70% of the guardians for these children reported a marked improvement in the child's confidence and self-esteem as well as making positive relationships. Over half improved their coping strategies and resilience – this includes repeat offending and anti-social behaviour.

Conclusion

Nature Deficit Disorder is indisputably a real issue in today's society but it **need not mark our era**. There are many ways to marry education with nature experiences; they should no longer be seen as just team-building exercises but as valuable - if not more so - than textbook learning. There is no barrier to nature. Yes, location and finance can limit the immersion, but nature is as free and accessible as the air we breathe. We can bring it into the classroom, school garden, field trips or even include community projects to improve exam results, health and respect for our living world.

The next time you get a rose look for the star formation of the petals, then think of Michelangelo's *Vitruvian Man* whilst stargazing, and reflect on your school maths and science lessons. What lives with you more? I'm certain you'll agree nature is imperative to education!

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