



BENEFITS AND
RESEARCH:

NATURE: THE
OUTDOOR
CLASSROOM





What are the Benefits of Nature-Based Education?

Nature can not only heal our children it can build confidence, resilience and is beneficial for their overall mana atua (wellbeing). There are so many benefits that nature play can offer, including:

Physical activity

- When children have regular time in the outdoors, including forests, parks, and playgrounds, they have opportunities to release stress, play vigorously, and directly explore nature, which in turn provides physical and psychological benefits (Frost, 2010; Jacobi-Vessels, 2013; Louv, 2005).
- For children, greenspaces are an important environmental influence on physical activity and emotional wellbeing (Ward, Duncan, Jarden, Stewart, 2016).



Mental health and overall wellbeing

- Reduced stress. Green plants and vistas reduce stress among highly stressed children. Locations with a greater number of plants, greener views, and access to natural play areas show more significant results (Wells and Evans, 2003).
- Nature Supports multiple development domains. Nature is important to children's development in every major way—intellectually, emotionally, socially, spiritually and physically (Kellert, 2005).
- The natural environment is fundamentally important to both our physical and psychological wellbeing, so actions that promote and protect our natural environment help to increase our ability to flourish in life. In turn, people and communities that are flourishing, i.e. have high levels of wellbeing, tend to be environmentally responsible in their behaviour and can, therefore, contribute to environmental sustainability. (Auckland: Mental Health Foundation Publication, 2011)
- Evidence suggests that not only are people dependent on the natural environment for material needs such as food and water, but also that the natural environment is equally essential for fulfilling psychological, spiritual and emotional needs (Maller, Townsend, Pryor, Brown & St Leger, 2006). Therefore, it seems crucial that mental health promotion should acknowledge the importance of ensuring access to natural environments and protecting these areas for our wellbeing (Article 2, 2015.)
- There is a great advantage of germs for your child's developing immune system. Microbial exposure and increased microbial burden is beneficial for wellness. (Gilbert, J. Knight, R. 2017)



Social emotional skills

- Play, particularly free, unstructured and outdoors is essential for healthy brain and socio-emotional development and in the early years of life is far more important than direct instruction (Frost, 1998; Szalavitz and Perry, 2010).
- Improves social relations. Children will be smarter, better able to get along with others, healthier and happier when they have regular opportunities for free and unstructured play in the outdoors (Burdette and Whitaker, 2005).
- Having regular contact with natural outdoor environments plays a pivotal role in promoting children's health and wellbeing. (Armitage, 2009; Jacobi-Vessels, 2013; Kernan & Devine, 2010; Louv, 2005; Robinson & Wadsworth, 2010)



Creativity and problem solving

- Nature supports creativity and problem solving. Studies of children in schoolyards found that children engage in more creative forms of play in the green areas. They also play more cooperatively in the natural environment (Bell and Dymont, 2006). Play in nature is especially important for developing capacities for creativity, problem solving and intellectual development (Kellert, 2005).
- Play actually changes the structure of the developing brain in important ways, strengthening the connections of the neurons (nerve cells) in the prefrontal cortex, the area of the brain considered to be the executive control centre responsible for solving problems and making plans and regulating emotions. (Pellis, Pellis and Himmler 2014).

- “Schemas link directly to how the young brain develops and grows. They are a vitally important element in young children’s learning and development. Children need opportunities to practice repeatedly what they know and can do. So what is known becomes better known” (Louis, 2013).
- Loose parts facilitate communication and negotiation skills when added to an outdoor space (Maxwell, Mitchell and Evans, 2008). Benefits of playing with loose parts include increasing levels of creative and imaginative play, children play co-operatively and socialise more, and children are physically more active. (Hyndman, Benson, Ullah and Telford, 2014)
- Doing activities, like tree climbing, that are unpredictable and require us to consciously adapt our movements can boost our working memory to perform better in the classroom (Allway RG & Allway TP 2015)



Environment and culture

- Creating a play experience outside on a regular basis will not only educate our children about where their curiosity may take them, it also feeds a deeper connection to our natural environment. Instilling these connections in this new generation is of most importance to our kaitiakitanga and environmental sustainability (Ministry of Education, 2017).
- Wilson (2012) outlines how the early childhood years are fundamental in developing “environmental attitudes and a commitment to caring for the Earth” (p. 87). The natural world can give children instant responses to their curiosity through all their senses as they touch, taste, smell, see and hear what is going on around them. Such connections tend to foster an ethic of care for the natural environment and the life systems within it (Phenice and Griffore, 2003). Positive experiences in nature can support children to develop the understanding that humans are interconnected with the earth and its life supporting systems, and that all humans have a responsibility to ensure its survival for future generations (Chawla, 2007).
- Time in nature is not leisure time; it’s an essential investment in our children’s health. Today, kids are aware of the global threats to the environment, but their physical contact, their intimacy with nature, is fading (Louv, 2005).
- Research has shown that empathy with and love of nature grows out of children’s regular contact with the natural world. Hands-on, informal, self-initiated exploration and discovery in local, familiar environments are often described as the best ways to engage and inspire children and cultivate a sense of wonder. These frequent, unstructured experiences in nature are the most common influence on the development of lifelong conservation values. (DOC, 2011)



Improved academic performance including oral language, decision making and negotiation skills

- Access to play improves classroom behaviour and academic performance (Pellegrini and Smith, 1998) and enhances children’s readiness to learn, their learning behaviours and their ability to problem solve (Ginsburg, 2007).
- Loose parts play research has linked physical activity not only to physical health but also to mental well-being (Ahn & Fedewa, 2011) and academic achievement (Singh, 2012)



Risk management skills

- Nature provides children with age appropriate risky play opportunities which allows them to understand their own limitations, develop their problem-solving skills, and it teaches them to overcome fears and anxieties.
- The opportunity for risk taking improves children’s competencies in risk management and risk perception. In addition, social skills may be enhanced through opportunities for collaboration with older peers, as children collectively decide and learn how to manage risk. (Bundy et al., 2009)
- Risky play helps children to learn to manage their own safety and move around comfortably (Knight, 2009).





State of Play research carried out by AUT in partnership with Persil (Duncan and McPhee 2015)

- It is clear that most NZ parents recognise the potential development benefits of real play: climbing trees, using loose objects, riding bikes or scooters, rough-and-tumble, messy play, using adult tools, and (in older children) roaming the neighbourhood unsupervised by adults. While this is a positive finding, our other results showed that these parental beliefs do not necessarily translate into actual real play practices.
- The majority of children do not often participate in a wide range of real play activities; in fact, a reasonable proportion do not engage in real play at all. Clearly, translating generally positive parental perceptions about real play into action is the next challenge we face.
- One of the other findings said that during the school day a majority of children were getting more time to play than they were getting outside of school hours including the weekends.
- Nearly 70% of New Zealand children do not often use loose parts (e.g., sticks, tyres, timber) when they play outdoors. Encouraging children to do this helps them develop their creativity and exercise their imaginations.
- 53.8% of New Zealand children do not often ride bikes, scooters, or other non-motorised vehicles.
- Mothers were 1.6 times more likely to regularly allow their child to play outside in the rain than fathers.

For the future of our tamariki

- In other parts of the world, full-time nature education programmes are well established in ECE and gaining increased popularity in primary. These countries include Sweden, Holland, Germany, Switzerland, Italy, England, Scotland, Wales, America and Australia. They are often called forest kindergartens, forest schools or nature schools. The benefits are not just immediate but long term and with the early and primary years being a critical time for brain development, supported nature-based play is a must for New Zealand.



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Thank you!

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