



Research:

Below are some research notes with authors. This is not a definitive list.

- Play, particularly free, unstructured and outdoors is essential for Healthy brain and socioemotional development and in the early years of life is far more important than direct instruction (FROST, 1998; Szalavitz and Perry, 2010)
- Reduces stress. Green plants and vistas reduce stress among highly stressed children. Locations with greater number of plants, greener views, and access to natural play areas show more significant results (Wells and Evans, 2003).
- 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 played more cooperatively (Bell and Dymont, 2006). Play in nature is especially important for developing capacities for creativity, problem-solving, and intellectual development (Kellert, 2005).
- 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 out-of-doors (Burdette and Whitaker, 2005).
- 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)
- 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 center responsible for solving problems, making plans and regulating emotions. (journalofplay.com Pellis, Pellis and Himmler 2014)
- Nature Supports multiple development domains. Nature is important to children's development in every major way—intellectually, emotionally, socially, spiritually and physically (Kellert, 2005).
- Access to play improves classroom behaviour and academic performance (Pellegrini and Smith 1998) and enhances their readiness to learn, learning behaviours and ability to problem solve (Ginsburg, 2007)
- 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)
- 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)



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.

Links to other research:

https://naturalearning.org/wp-content/uploads/2017/09/Benefits-of-Connecting-Children-with-Nature_InfoSheet.pdf

<https://www.doc.govt.nz/Documents/getting-involved/students-and-teachers/benefits-of-connecting-children-with-nature.pdf>

<https://www.childrenandnature.org/wp-content/uploads/2015/04/CECCNNWorldwideResearch.pdf>