New Zealand Early Childhood Centre Outdoor Design for various ages and abilities

Creative Spaces that Maximise Learning through Engagement with the Natural Environment
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Tihei! Mauri Ora!
Overview

Intro – a play space design practitioner’s perspective

Context – the world, the presenter’s home environment at Dilworth School Rural Campus (Te Haerenga) in rural NZ for boys age 13-14

Why nature-rich play environments?
How can these environments empower and engage children of all abilities?

Case Study 1
• Joyce Fisher Centre – Deaf Education for ages 0-5

Case Study 2
• BLENNZ - Blind / Low Vision Centre for ages 0-18

Case Study 3
• Experience Trail, Waitakere Transfer Station
• for groups aged 3-10

Case Study 4:
• Vintage Kids E.C. Centre, Greenlane, Auckland
"We live in a beautiful world...yeah we do yeah we do"

Coldplay

We don’t have to go far in NZ to find wild places to explore...
The world is a great place for adventures!
“But it’s a cold and it’s a broken Hallelujah”

Leonard Cohen

Climate change is increasing the global burden of disease and in the year 2000 was responsible for > 150,000 deaths worldwide. Of this disease burden, 88% fell upon children.
More than 55 million people worldwide have been forcibly displaced

There are now more refugees in the world than at any time in recorded history. More than half of these refugees are children.
There are 21 Million people trapped in slavery today, more than ever before in history. 4.5 Million people are in forced sexual exploitation = the population of New Zealand. The vast majority are women and children.
The world is changing rapidly
...and it is as dangerous as it is wonderful.
How can we prepare our children for this real world?

How can the environments we provide help children to become ...
  Resilient?
  Creative problem-solvers?
  Wise decision-makers?

Key words

1. Connection       2. Empowerment
My home – Dilworth School Rural Campus/Te Haerenga, Mangatawhiri, North Island, New Zealand
Our daughter, Emily, and the Mangatawhiri River

100 boys from disadvantaged backgrounds are given a holistic education in the unique environment of the school, bordered by a river, surrounded by rolling countryside with the Regional Forest of the Hunua Ranges as a backdrop.
The school buildings were formerly the venue for a 4½ star hotel in the beautiful countryside of the north Waikato district
The gardens have been adapted to suit the learning environment of the school with hedges and mass plantings of low maintenance shrubs and groundcovers. The boys are involved in the stewardship of the grounds.
Each week the boys have outdoor adventures, learn survival skills and develop environmental awareness through learning experiences outside.
13 staff families also live at the school and use the outdoor environment as their playground.
Early Childhood Environments

Why *natural* play environments?
All children develop cognitively and physically through play – a growing body of research points to the important part that nature plays in that development.
“The environment is the curriculum” (Olds, 1982)

“The environment is the child’s third teacher” (Gandini, 1993)

1. Nature facilitates learning
2. Nature connects us to the world around us

“Nature offers a well from which many draw a creative sense of pattern and connection.”

Richard Louv
"Positive outdoor experiences can foster happier, healthier, smarter, and more well-adjusted children and can create future stewards of the earth"  

Sachs and Vincents; InformeDesign

3. Nature offers challenges that are open-ended, unpredictable and changing
3. Nature-rich spaces offer interesting environments that require careful negotiation and foster cooperation
“I am convinced that standardised playgrounds are dangerous, just in another way. When the distance between all the rungs in a climbing net or a ladder is exactly the same, the child has no need to concentrate on where he puts his feet. Not so with all the knobbly and asymmetrical forms with which one is confronted throughout life.”
5. Nature offers risky play opportunities

Risky play promotes

- physical activity,
- independence
- cognitive and social development
- risk perception and management skills
- gradual mastery of challenges by progressive thrill-seeking

Risky play reduces

- mental illness and learning difficulties
- potential antiphobic effects of risky play (eg overcoming fear of heights).

Environmental psychologists have linked contact with nature to restored attention, recovery from mental fatigue and enhanced mental focus

(Sachs and Vincents 2006)
Researchers conclude that children with ADD show greater ability to focus immediately after spending time in nature. The greener the environment for these and all children the better. (Faber, Taylor, 2004)

6. Nature calms
A well-ordered, nature-rich environment can better suit
• Children on the Autism spectrum
• Children who are visually impaired
• Children in wheel-chairs

Such an environment can be calming, attractive and multi-purpose and easy to negotiate
Children with ASD’s are often also photosensitive. Nature offers the best kind of shade and shelter.

7. Nature provides a comfortable environment
8. Nature is a healer
9. Natural settings are where life-long happy memories are made
Researcher Edith Cobb found that the inventiveness and imagination in all of the creative people she studied was rooted in their early experiences in nature.

“The Ecology of Imagination in Childhood”

10. Nature stimulates the imagination
Multi-sensory experiences in nature stimulate the imagination by supplying the child with the free space and materials for what Robin Moore calls “architecture and artifacts”.

11. Nature provides endless resources for play
So how can “natural” environments be designed to empower and engage children of all abilities?
Original playground to be replaced alongside new purpose-built Early Childhood Centre building
Learning objectives:
• Exploration...of the natural environment
• Exposure to sensory experiences...variety, imagination
• Relating to others...listening, sharing, social skills
• Welcoming and friendly environment...belonging
• Using language...communicating

Cornwall Park, Auckland
Staff observed that the children, when playing in the natural environment of Cornwall Park were
• curious
• engaging in creative play
• less dependent on adult interaction
• problem solving
• collaborating
• verbalising their experiences, thoughts and feelings
• communicating socially with their peers
• having “conversations” with those around them
Kaye Annabelle, Head Teacher

Cornwall Park, Auckland
Concept Design for new play garden, by Get Outside
The site

...working with what is unique and with raw materials that are readily available, such as rocks, identified boggy areas, existing trees
Artistically arranged and interlinked spaces invite exploration
Interesting natural materials placed to inspire conversation and creative play
Spaces organised to offer challenges, a variety of experiences including sand, mud and water play, with loose parts available and opportunities to explore.
Natural materials provide a language-rich environment
A simple element like a well positioned log can provide ample physical challenge, allowing children to test and expand their capabilities... ...and also stimulates their imaginations
The result – a much loved and cared for environment where teachers have noticed a high level of engagement, growing self-confidence and improved language development among the children.
Case Study 2: Outdoor Learning Environment for BLENNZ
Homai Campus - the national hub of Blind and Low Vision Education Network, for ages 0-21
Mission: To provide quality education for the blind, deaf-blind or low vision children that they might reach their potential for growth, independence, participation and success.
Existing play spaces

Older children

Early childhood
Paths with locational ques

- Texture changes
- Colour contrast
- Sequence of space
- Straight lines and corners
- Uncluttered paths
- Tactile markers
Destination spaces to pause and interact

- Places for sensory stimulation e.g. egg sound shell, compass
- Places for participation e.g. raised vege gardens, spinning egg shell
Story telling through the landscape

- Land art to referencing local stories e.g. terraced mound
- Places to pause and listen e.g. amphitheatre
- Remembrance garden
Provision for physical development and fitness

- Accessible equipment
- Yellow colour for low vision children to see
- Space for wheel chair access and support
- Even spacing
- Future braille signage
Provision for play, physical challenge and social learning

Colour contrast to negotiate space
Equipment for balance, vestibular development, fun!
Variety of real world experiences and challenges
Early Childhood Area
- a mini-version of the main play area to scaffold learning
- real world experiences
- greater independence
- participation and contribution
- belonging
- exploration
“Students are using and enjoying every little bit of the space”
Case Study 3: Waste Minimisation Learning Centre and Experience Trail - for visiting groups of Early Childhood and School age children

Before – original learning centre for children
The Brief – getting the message across

• sustainably sourced materials demonstrating rubbish as a resource, not waste

- an interactive, engaging area to explore
- demonstration of sustainable waste practices including zones - reduce, reuse, recycle, rot/compost, grow and zero waste.
- links to the water and surrounding biodiversity
- interpretative signage, pathways, plants and outdoor furniture.

Initial concept design and flow plan
Bug Hotel, worm farms and composting for environmental awareness

Concept ideas

Waste Minimisation Learning Centre Learning Trail
For Auckland Council Waste Minimisation Centre, The Concourse, Henderson

Gabion basket benches and timber pellet seats for social interaction
Experience Trail Developed Design by Get Outside

Waste Minimisation Centre Learning Trail
Auckland Council Waste Minimisation Learning Centre, The Concourse, Henderson
Key Design Considerations

Resources were sourced from the “dump” by this man, Adam!

- Functionality
- Flow
- Context
- Materiality
- Aesthetic appeal
- Fun!
Entry Appeal and Cultural Connection

- Entry “arch” made from trampoline frame and tent pole
- Tree sculptures using telegraph poles, CD’s, tennis balls
- Artwork by children from local schools
Areas for rest and social interaction

- “Gabion basket” benches with found objects
- Repurposed office chairs
- Timber pellet seats
Areas for developing for environmental awareness

- Bug Hotel
- Worm farms
- Composting
Water feature for fun!

- Exercycle for pedal power
- Repurposed gas bottle, muffler, watering can, soup bowl....
Interpretation

- minimal signage
- interactive and quirky
“Make Space”

• Tools, space and resources for children to get creative with...
The project was a creative collaboration between designer, contractor and Auckland Council project manager, and evolved as materials were “found” and incorporated into the garden.
Embraced in this garden is the concept that materials, both organic and inorganic, are part of the cycle of life - they are formed from the earth's resources, they perform one task, they change over time, can be reused to perform a different task, and eventually they break down back into the earth from which they were formed.
Over 5000 children use this space each year as a learning environment and take creative ideas and enthusiasm about repurposing and reducing waste back to their communities.
Case Study 4: Vintage Kids E. C. Centre, Greenlane, Auckland

Landscape Concept Plan by Get Outside
The Neighbourhood Context
The design incorporates a variety of natural spaces for different activities

- Slide and mound for active play,
- Lawn area for free play
- Raised gardens, log and sleeper edges for gardening activities
Water play area and boulders
• hugely popular and stimulating for the children
• excellent for cooperative play
Different surfaces and textures, for interest and different speeds of movement

- central concrete path,
- brick paved area with stones and water play
- log paving
Sand area

- log / block edges for sitting on and as balancing challenges
Even in small spaces it is important to offer physical challenge and opportunities to develop upper body strength – natural materials can be used.

- Rope bridge
- Pull up rope
- Log tower and platform
Creatively designed natural play environments empower and engage children of all abilities.
Haere rā!

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