

## Permaculture Merit Diploma in Children's Education

### Story of permaculture engagement

**I first heard the word "permaculture"** in Sydney in the late 1970s when Rowe Morrow said she had to go out as she had a PDC class that evening. I was visiting and rather than stay home alone I said, "Can I come?". I sat towards the back and listened to her talk about bees. Odd, I thought. Adult education in that era was mostly about cake icing, pottery pinch pots, macrame, maybe gardening and of course more, but bees?

**Over the years visiting** Rowe, I waited as she went off to run her classes. I think I started to absorb what she was on about and I began to develop some ideas about permaculture. She always returned with great stories about her students. As a primary school teacher I thought of my Grade 2 students in London. My recovery from cancer was still in progress and I noted that maybe I should change to adult education.

**Throughout the eighties**, I was absorbed in university subjects, and, renovating and planting native trees in my back yard.

**My focus changed** with the new decade and I was ready, after twenty years or more absorbing snippets of this new form of meeting food needs through conversations with Rowe, to make a permaculture garden. Sadly it was too late. There was not a sunny spot to be found. Front and back, my yard was a forest of ill-chosen vegetation; a costly enthusiasm for shade and native trees. I thought about my school and the vast opportunities for gardening there. I could get the kids involved I thought.

**In 1991**, I had been transferred to this school - a transfer that did not please me. The kids sensed my displeasure and became difficult to work with. I knew that I had to make changes in the coming year if I were to survive this school.

I decided to choose a theme. I chose 'forests' as there were good resources available. For weeks we worked on this theme and the children were interested in learning. In the corner of the classroom they made a forest of cardboard trees and animals. A tape of bird calls and running water completed the scene. They were only 10 but they had big ideas. They asked if they could make a real rainforest!

We could have made a rainforest or maybe a forest of native trees as other schools had done but I thought something on a lesser scale should be suggested. They were happy to start with a small vegetable garden. My plan was working.

First I took the idea to the principal whose reaction was neutral but he did advance me \$50. I took that as a 'yes.'

**The school yard was vast.** It was ringed by a line of eucalypts and stunted trees planted on Arbor Day and left to struggle. The ground was mostly a cover of compacted soil and weeds which

were mown regularly by the groundsman on his expensive ride-on-mower - the most costly purchase for the school. Choosing a site would be easy I thought.

The second action was to call Rowe to ask her for the name of a permaculturist in Brisbane. I thought this person would guide us through the setting-up process. Rowe bluntly replied, "Let the kids do it." As we were all beginners, I was not impressed with this suggestion. We needed assistance. Rowe was firm and on reflection, I knew she was right.

From this point, the making of the garden had to become part of the learning schedule, part of the curriculum, part of the indoor classroom. I could see the basic maths links immediately. The children could draw a plan of the plot, one metre by four. Measurement; length and area..... umm.

### **The first primary school project**

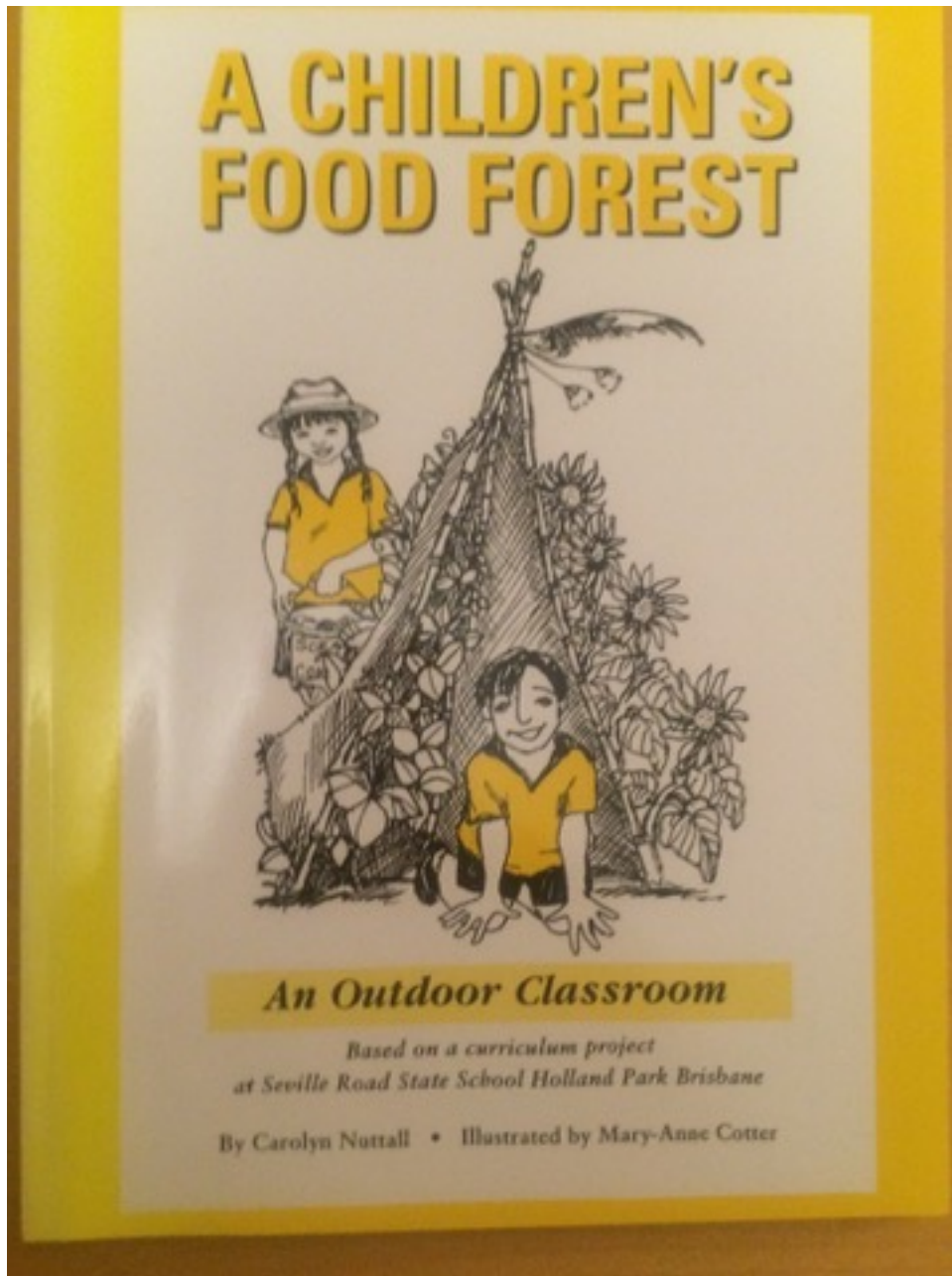
**We needed to chose a site.** I had bought the book, "Introduction to Permaculture" by Bill Mollison which gave me confidence, through the illustrations mostly to go forward. To make a good decision, the children needed to know what a good site was. Over the next few weeks we worked in the classroom skilling up on site and sector analysis. When it was time to go outside, they were ready. I was impressed with this group of kids in their earnest approach to the task particularly because it was in school time and they were in their play area. We returned to the classroom with our ideas. I had a firm idea as to where to place the garden.

The discussion began. It came down to three possibilities. Mine was not among them. I said "*what about the corner behind the mango tree?*" "*No Miss, the year 3 boys play soccer there.*" Okay, I breathed. What will they come up with?

The majority of the children wanted to choose an out-of-bounds area of the school ground. It was partially fenced and contained old frames from an earlier-style playground. The moving parts had been removed but the frames remained. One child said we aren't allowed to climb these but the plants won't mind. I said we may not get permission to make our garden there but I approached the principal and argued on the grounds that teachers have grown weary telling kids to get out of this area. He agreed and the children were up up and away!

A no-dig garden 4.0 x 1.0m was made. Tomato, strawberry and paw paw plants arrived. Timber from a replacement job on one of the verandahs was salvaged and a friend cut them to make three excellent composting bins. Our first month was exciting. The plants were growing and the groundsman mowed the weeds opening up new areas for development.

**The rest of the story for** what was to become **The Children's Food Forest**, is the story of a group of children, 10 and 11 years old, who took control of their own learning. Through their efforts and imagination the food forest grew to cover 1000 square metres of this out-of-bounds area. They had collectively re-made school life for themselves and me, their teacher. Our days were filled with purpose, happiness and reward. I came to school with a skip in my step to work with this group of learners.



We worked together on their projects, democratically deciding in their weekly meeting what to do next. It was my task to take these ideas and find a curriculum connection and skill the children on what they needed to know. They worked in the garden but more often in the classroom on lessons revealed by the needs of the garden. Ideas for lessons were abundant. The food forest raised access to all areas of the curriculum: language, maths, art, science, geography—there was a wealth of ideas for planning.

They planted fruit trees and vines, made compost, dug a pond, planted a bush tucker area and brought chickens into the forest. They won \$500 in an environmental competition. They made dinners from their produce and lunched in the classroom on tables

set with candles and flowers from the garden. They welcomed other children and taught them how to behave in a garden. They irrigated the area working as a team.

**The year ended** with a field day to which parents were invited. The children ran the day offering tours of the forest, talks and refreshments.

**Outcomes: Rewards:** These accomplishments might seem beyond the ability of children to achieve. And, the truth of the matter is that they were beyond them, if the observer came expecting to see an adult-like lush garden of plants. It was a children's garden and there was evidence of their efforts and failures but the focus was not to grow better cabbages but to progress through a process: the learning, team work, the creative thinking, the initiatives, the harmony and the connection to nature. These were the rewards of the garden.

We all wanted the outcome to be gloriously obvious but it did not really matter if the things were a little less than perfect. The children were more than happy with their efforts and rightly so.

**When the new school year** began in 1993, I welcomed a class of year 5 children who arrived at school with a strong conviction that they would take over from the 1992 class and be the new food foresters.

**Succession** was a major factor in the success of this venture to take learning into the outdoors. I had given it little attention until I was confronted with a new class the following year. I organized a meeting of the 5/6 class who discussed the issues with good cheer. They asked if they could retain access to the food forest. I thought there should not be a problem if we go forward welcoming the new food foresters each year thereby increasing the numbers as we go. In a few years every child in the school would have had access to the joys of outdoor learning. We would have created a permaculture eco-school!

**The whole school**, with the exception of most of the teachers, loved the food forest. Playground duty was a buzz for me until I was told I had to move away and patrol a bigger area. This complaint came from a teacher and my argument that most of the children were in the food forest did not convince the authority to set a new rule or somehow allow this initiative to thrive.

**My mistake** was to not involve other teachers, though I did try. I was as lone an operator as one could be in 1992. Sadly, this is less possible today. But school gardens are thriving. Most schools have one, had one, or intend having one. Gardening is more likely to be a whole school initiative today.

**My class of food foresters** were keen to work on whole school initiatives. They wrote a play for Arbor Day and performed it for all classes. The children invited the Keep Australia Beautiful judges to look at their food forest and also the grounds which were litter-free. They bought, from their own funds, a weeping fig to provide shade for children on the play equipment.

At one stage, I suggested to the principal that we turn Seville Road State school into an eco-school. I said we could improve its reputation which suffered as another school in the same suburb took most of the high achievers. I was unable to convince him.

**The principal** did arrive at the food forest one day. He brought with him the local press whom I had invited. I always gave thanks to him though because he did not shut us down. He may have struggled to understand the benefits this learning style brought for the children I don't know, but the food forest was something every child in that school identified with. Even on my return to the school after a two year absence, children would acknowledge me as the food forest teacher. I remember that playground duty became like a recruitment drive. Little voices behind me. 'Can I be in your class next year?'

**There was to be no next year for me.**

My health failed suddenly rather unfortunately just when the crew from The Permaculture Institute arrived at school to film and encourage me to write the story of our permaculture garden.

Another ill-timed event occurred when I was in hospital. A phone call came from Gardening Australia ABC Television. They wanted to do a story on the food forest starring me and a few of the children. I said "I have no hair, a red face and a weak voice". "If you don't do it", they said, "there is no story". Wanting the children's efforts to be recognised, I agreed. It was not my best moment.

In 1994, Rowe came to Brisbane to teach a **PDC course**. There were three Brisbanites who had made inquiries about such in Brisbane, This included me because I knew that I should do a course as I was using the word 'permaculture' and maybe I was talking through my hat.

Three students was hardly enough for a course but nevertheless Rowe turned up at my house with a plan to fast track

*Carolyn's inner city courtyard garden*

our 72 hours, something she thought was possible due to the small number of participants. It was a tight schedule because she had to be elsewhere in a few weeks.

I lay on my bed as Rowe went through the introductions and the scope of the course. She was determined that we would not waste a hour in her quest to cover all the content of the course in the 72 hours. All was on track until I said that I had an appointment at the hospital for a lumber puncture. Rowe held her breath. 'We can't lose any time'. 'I'm sorry' I said. 'No', she said, 'we will go with you'!

When I arrived with three people, pens and paper in hand, the nurse looked at me. I said 'can we use the room?' Why? Who are these people? It was not easy to explain but Rowe took over and we were all allowed to occupy the room that was set aside for my treatment. Rowe did not miss a beat. The butcher's paper went up and the lesson on 'soils' began. A doctor came into the room as 'soils' was nicely covered but not entirely, He said 'what is going on here?' Rowe said with a sparkle in her voice, 'We're learning about soils.' He shook his head and proceeded to give me an injection.



He left the room and came back with bigger needles. He could have used the line, Now this is a needle but he didn't. Rowe and her students retreated quickly to the outdoors where I believe the talk on soils was completed.

I did eventually get my PDC certificate and I also did write the story of the children's food forest. It was self-published in 1996 as "**A Children's Food Forest: an outdoor classroom**". I was disappointed that the Institute and Tagari Publications did not have the funds to publish my book

but it was three years since their offer and I understood that they had other obligations,



It is a small book and I like to reread it at times to remind me of my final years in the classroom. It was embellished with playful illustrations drawn by my artist friend Mary-Anne Cotter. I think the book is lovely, if a book can be, and I am very proud of it. It sold well through the permaculture and school networks and went to a reprint. It was translated into Portuguese and Japanese which was a thrill.

Mary- Anne and I launched into another project a few years later. We had at this stage worked on the small book and on the Kid's Page "**Food Foresters**" in the Permaculture International Journal which we did for five years up to the closing of the Journal in 2000.

Our new project was to compile a collection of fact sheets for teachers interested in permaculture school gardens. We had noticed that a Melbourne based company would handle the publishing

and marketing of the book. Their efforts failed and we reclaimed our work and are currently putting this resource on our website for downloading.

I left the Seville Road State School in September 1993 without a chance to make a plan for succession. I knew the children would carry on and I was keen to return in December to wish the kids a happy holiday and organise the closing down of the garden. I was thrilled that a man on staff had built a proper hen house for our chickens in the meantime.

A teacher new to the school had been given my class and she would have had no history of the garden and the way the children worked in my class. I expect no one briefed her. She said they were an odd bunch. 'They don't put their hand up to answer my questions but I have got them out of that bad habit', she said with a sense of achievement. 'Oh' I said, 'I was never worried about hands up. The kids knew they could speak as long as someone else wasn't.' I always thought it was a waste of a question if only one child answered it and anyhow I encouraged them to ask the questions.

My visits to the school continued over the years. The food forest was going along fairly well. The principal applied for money from the gambling group to complete the fencing around the food forest. I knew he wanted to lock it and reinstate the out of bounds rule. Over time I was called back to speak to visitors or help with a working bee. One visitor was a principal who had travelled from Victoria to meet me.



The news was not always good. The principal allowed heavy machinery on site in the food forest to remove the galvanized steel frames that sat there harmlessly for 50 years or more. They destroyed the bush tucker area in doing so.

He also could not be forgiven for giving permission to a parent who wanted to grow corn because the soil was good there. I came to school to see a man sitting on a tree stump with a machete in his hand surrounded by corn smiling at me with his shiny gold tooth and panama hat. He spoke no English and neither did his daughter who I dragged out of class. This man had cut down not all but most of the trees to prepare the soil for these plants. I went to the principal. He said the school was to get some of his crop and he did not know he would cut down the existing trees.

In 2006, I met Janet Millington at the Adelaide, [Learning in the Garden Conference](#). Janet was to become my co-writer in the production and the publication of "Outdoor Classrooms: a handbook for school gardens", published in 2008. Interest in school gardens was rising and resources were in short supply. Both Janet and I saw the need and decided to co-write a comprehensive text for teachers.

**At this conference** I was a guest speaker on stage with Stephanie Alexander, a leader in promoting school gardens. Janet ran a workshop in which I saw her talent for communication and her breadth of knowledge about permaculture and teaching. We were good collaborators and our team work was tested in what was to come.

We packaged and posted 2000 books over the next few years and reprinted in 2010. In 2012 we gave the British publishers, Permanent Publications the rights to publish and sell in Europe and the USA.

**The consequence of this move** was to make the book affordable overseas. The unexpected consequence was to receive an invitation in 2015 to run workshops in Britain and Europe for a group called Children in Permaculture(CIP).

CIP is a European cohort of teachers and enthusiasts interested in teaching permaculture to children. To date, members include delegates from Britain, Italy, Finland, Czech Republic and Italy.

They are a newly formed group that was successful in their application to the EU for funding to train trainers to teach permaculture. The workshops we were invited to run were part of an Erasmus funded CIP project.

**Janet and I travelled to London** In May 2016. We hoped that we had the where-with-all to be effective presenters in Europe. We knew our Australian audiences but would our techniques and style sit well with the Europeans.

**Our brief** was to train the trainer - a teaching speciality that required an understanding of adult education practices as well as the content. Janet had the qualifications here but I was less experienced though I do recall conversations with Rowe on the needs of the adult learner. Our connection to school gardens and permaculture was established and documented in our book, Outdoor Classrooms, and with Janet being an experienced teacher of adults having taught the PDC course for many years, I believed we were qualified.

As a professional gesture, CIP gifted a copy of our book to every workshop participant.

The schedule for the work was arranged by CIP. We were to work in three countries; UK, Finland and Slovenia .The venues in these countries were: London( Tottenham), Gatehouse of Fleet in



# The Food Forest Resource Sheets

Multiple Learning Outcomes in School Gardens



Written by Carolyn Nuttall  
Illustrated by Mary-Anne Cotter



FeFL Books

Scotland, Helsinki, Ljutomer and Ljubljana.

Participants came from partner organisations in Europe; Italy, Romania, Holland, Cyprus, Croatia, The Czech Republic and Latvia

We asked a boat load of questions before we started to plan. We needed to know who we would be training; were they English speakers, did we need to work with translators, had they done a PDC, who was a teacher and at which level, who had worked in the outdoors with children, what is the growing time for a vegetable garden in Finland?

**The participants** were young and enthusiastic- mostly women, mostly fluent in English and mostly well read in the ideas of permaculture. At times I thought what have we to offer? More correctly what had I to

offer? Janet is confident in any setting, She has great enthusiasm for what she does and uses every skill in her kit box to motivate the learner. Being a bit of an introvert, I saw the advantage in getting the students to do the talking. Our techniques sat well together and we ran our workshops harmoniously.

Harmony was a critical factor and we were tested; twenty-two teaching days, airport and train station decisions, hundreds of steps to climb, tiredness, forgetfulness and sore feet. Our stamina was tested. The following travel plan was one day in our program.

A day worth telling:

- Breakfast in Helsinki,
- Flight to Stanstead Airport UK,
- Train to Euston Station London, train to Carlisle in northern England,
- Change trains for train to Dumfries in Scotland,
- Bus to Gatehouse of Fleet,

- Bicycle one mile to accommodation.  
We chose the option of a car for the final leg.

**The experience** of The Workshops Europe May/June 2016 can be added to the list of worthwhile things I have done. I can't but think of my friend, Rowe Morrow, who travels to foreign countries many times a year enduring difficult conditions and going back year after year to help someone who asked. Her list must be long.

## **Learning take-aways for teachers**

For schools choosing a permaculture approach to the curriculum for the whole school there is by design, more from the natural world than a school food garden. For example, 'energy and shelter and other material and non-material needs'. (Bill Mollison). There is enough material for every year level to explore a topic eg shelter, energy, animals, worms, construction, recycling, plants, weather, elements. Teachers could choose a theme and go from there or follow a prepared curriculum. The 'how' of pedagogy may not be a matter of choice.

There were other issues that needed to be resolved before the school year began. I asked the question of myself. Is there value in using a gardening activity as a focus for teaching the curriculum? Did my approach achieve more effective learning? Did we cover all aspects of the curriculum? Yes, yes and I think so. This is hardly tangible research but today I am encouraged by the work of teachers in the field who are asking questions like how can nature educate the children? The authors of the new publication, "Children in Permaculture Manual" Luci Alderslowe et al have many positive answers.

Details of my observation and the scope of experiences are largely covered in a mind map included in this application. It outlines ideas for the subjects of the curriculum.

If I were asked how to make the school garden concept sustainable, I would say there are two things that are indispensable. Ownership and an outdoor classroom built close to the food garden. It should be beautiful and open to all children.

My work in schools was brought to an early end when my good health failed in 1993. After receiving treatment for two years, I was in remission and well enough to follow the emerging interest in school gardens. I was thrilled and hoped that the small book I had written to encourage teachers to explore the teaching and learning value of a school garden was ready. A Children's Food Forest : an outdoor classroom was published in 1996. It sold well and was reprinted a years later. It is now out of print. In the meantime, other resources have become available including Outdoor Classrooms published in 2008 by Janet Millington and myself.

Twenty- nine years have passed since the children of Seville Road State School made their food forest. A longitudinal study of these children as adults would be useful now. Perhaps a reunion of class 5/6 1992 and class 6,1993 could be organised.

But city teachers tend to lose contact and news of their past students whereas news flows freely in a county town and we could see how the children grew and flourished. (Carolyn Nuttall)

It is the aim of teachers to prepare children with the skills and consciousness appropriate for their futures. We believe the three ethics of permaculture of Earth Care, People Care and Fair Share are the design tools we can use to achieve a sustainable future for our planet' I believe children and young people who have had experience in outdoor learning will continue on this path making ready to be part of the solution.

And if I had not heard this voice saying, " Let the kids do it", I may not have stepped outside my box and become a better teacher and written the books and been invited to Europe. Thanks Rowe

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