

“TREE TRUNKS” – AN URBAN FOREST EDUCATION KIT FOR SCHOOLS

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Introduction

Brisbane City Council and the Queensland Museum have created two ground-breaking series of Urban Forest Kits for primary and preschool audiences. With ten copies made of each kit, they are packed with hands-on activities and resources to inspire children's understanding of the urban forest, and to encourage and inspire them to care for it. This presentation will describe the kit, and explain why it is so successful.

History

In 1987, a Brisbane City Council officer visiting the USA was inspired by a set of notes prepared by the Jefferson National Expansion Memorial, in Missouri, on how to design and build Travelling Trunks. Designed as a museum outreach program, the trunks were mobile education kits full of stories, activities, tapes, and posters centred on a historical theme such as gold mining or frontier life. The trunks were circulated through freight companies to schools, scout troops, and clubs around the state, bringing their messages to children in distant regions who had no opportunity to visit the museum in person. Further investigation revealed the Travelling Trunks concept was also used in many other regions of the USA.

Brisbane City now has its own versions of these Travelling Trunks: the Brisbane Urban Forest Kits, which are successfully taking urban forestry messages to thousands of the region's children each year through a partnership with Queensland Museum Loans (QMLOANS), the museum's state-wide lending service.

Council staff from the Environment & Parks Branch approached QMLOANS in early 1999 with the idea of developing an Urban Forest Kit after learning that QMLOANS had thirteen years experience in operating a kit loan service to schools, libraries and other community groups. At that time, most of their kits were based on historical and fauna themes. It was discovered that despite huge demand from schools, QMLOANS had never developed a plant-based kit, and enthusiastically embraced the chance of a joint project with Brisbane City.

Council provided technical input and funding for the production of 10 copies of the first series of the Urban Forest Kit, based on Brisbane's flora and fauna and targeted at primary audiences. The QMLOANS designed, constructed and/or collated all resources and activities. All items were selected and designed for their effectiveness as interactive teaching tools. QMLOANS took responsibility for the ongoing distribution of kits to schools and community groups in South-east Queensland, and for the kit maintenance and insurance. Although QMLOANS have a State wide loans service, the Urban Forest Kits are usually distributed in SEQ only, as their ecological content is specific to that region.

In late 1999, the kits were launched at a Brisbane primary school and bookings commenced in the following school year.

Within a year of the kit's release however, it was discovered that early childhood organisations such as kindergartens and preschools were also booking the kit and competing for access with the original target audience of primary age students.

This situation was resolved by the subsequent creation of a second series of the Urban Forest Kit, a scaled down version specifically for this early childhood audience. Ten copies of this new kit, affectionately nicknamed the Sapling Kit, were completed in late 2001.

Description

The original primary school version of the kit comprises four, portable, steel workman's trunks and 500 items including:

- a 2.4 metre high artificial tree, made up of modular sections of trunk, branches, and twigs covered in a Velcro receptive surface.
- over 50 laminated plant and perspex-boxed animal specimens from the Brisbane area that can be attached to the tree with Velcro
- 60 activities for various age levels
- colourful photographic banners, puppets, CDs, games, posters, books, and videos.
- an urban forest management game consisting of a large 3m x 1m wooden model of a generic urban forest that children can walk around and "plant" up to 88 miniature trees
- teacher's guide with detailed curriculum – linked activities

The Sapling Kit's tree is shorter and the giant wooden game is omitted. There are also fewer specimens, and simpler activities appropriate to this younger age group.

The original kit aims to provide a comprehensive teaching resource that raises an awareness in children of the specific benefits and management needs of Brisbane's urban forest. They learn, for example, to recognise local tree species, and to understand what makes each species suitable or unsuitable for streets, parks, home gardens, industry, bushland or waterways. They also discover some of the more than 30 benefits that urban trees provide, and learn of the problems created for city trees by practices such as branch lopping and soil compaction. Most importantly, students are encouraged to devise their own personal "code of urban forest conduct" and to take direct action either as a class, as a family, or individually, by the simple means of planting a tree, or participating in a tree care activity that reinforces these messages.

For the early childhood audience, these kits achieve the same basic outcomes but the activities have been modified to suit the learning abilities of this younger audience.

Three and a half years after its release in February 2000, one hundred and sixty five (165) schools have borrowed the original kit, with approximately 25% of these being repeat borrowers. Borrowing levels since 2000 have been 82% of full capacity, which includes the usual seasonal drop in borrowing experienced annually in the first and final terms, when teacher priorities are focussed on planning and administration duties.

The QMLOANS reports that schools who have developed experience in exploiting the kit's potential for their audiences, now book the kit twelve months in advance.

The Sapling kit has been borrowed one hundred and forty seven times (147) by preschools, kindergartens and child care centres since its release in February 2002, with borrowing levels at 89% of full capacity.

Why is the kit successful?

In reviewing what has made the kits a success, the QMLOANS staff suggest six major contributing factors:

1. Hands-on

Teachers agree unanimously that the best feature of the kits are their 'touchability'. Students relate to being able to hold and look closely at real specimens from local plant species: leaves, flowers, fruit, bark, and seeds. These are in clear perspex cylinders, as are the several preserved specimens of native Brisbane animals, such as bats, glider possums, birds and butterflies.

All class activities are highly interactive. Students build their own tree twig by twig, branch by branch and clothe it with hand-sized plant specimens and then insert the animals among the foliage.

This interactivity engenders a strong sense of personal stewardship and caring for their tree, which is reflected in the frequent occurrence of children bringing their parents in to the classroom to see "their" tree. This provides an intergenerational benefit.

Teachers also report that the tree is often a focus of daily manipulation as teachers and students explore various themes of life in an urban forest. They get to sit beneath it and listen to stories and to attach their written compositions to the tree's large, laminated, leaves.

The culminating hands on activity in the higher grades is the urban forest management game, where children compete in teams to correctly place the right plants in their appropriate place in the urban forest.

2. Curriculum linked

To assist teachers with the demands of the educational syllabus, all activities are designed and presented in accordance with the requirements of the Education Queensland curriculum for Studies of Society & the Environment (SOSE), Art, Science, and Numeracy.

Teachers report they enjoy the graphic linkages used in the Teacher's guide, directly linking syllabus outcomes with urban forest activities.

3. Durable and portable

From seventeen years experience of maintaining a museum loans service, QMLOANS staff appreciate the need to use kid-resistant, durable materials, and materials. It was also necessary to make the kits portable enough to be able to be carried by two people. The artificial tree, for example, is made of plastic plumbing pipe because of its lightweight nature, and has been painstakingly glued and hand stitched with a Velcro receptive covering by teams of Museum volunteers.

4. Comprehensive

The variety of activities and resource materials in each kit enables busy teachers to use the kit across a spectrum of educational purposes. The teachers declared that a bonus is the kit's comprehensiveness because they do not have to spend time doing further research or provide additional materials. However, this comprehensiveness is also overwhelming for some first-time users who reported feeling daunted by the wealth of material before them. It seems that teachers become better able to exploit the kit after the second or third loan, when they have a better feel for how to use it.

The multifaceted nature of the kits have spawned their adaptation for usage in unexpected ways. For example, a careers consultant in a local high school used the kit to draw a parallel between the biodiversity of Brisbane and the multi-cultural nature of the 45 different nationalities at their high school. Also, one school set up a local botanic gardens in their grounds, naming the trees in their school from the information in the kit. Another school progressed from leaf and bark rubbing activities to create an art exhibition on this activity for their annual art show.

5. Direct action and “Urban Forest Code of Conduct”

Teachers also reported the success of the inclusion of a direct action component for the children. Approximately one-third of the teachers declared that tree-planting projects have occurred at their school as a result of using the kit. One school has used the kit to direct a contractor in selecting the plant species for landscaping their school grounds. Others have contacted their local ‘greening’ groups to work together on a project with the children.

Another popular learning feature of the kits is the evolution of an environmentally sensitive Urban Forest Code of Conduct. This feature is an integral part of the kit and the Code is developed with each step of their month long study of the Kits.

6. Mutually beneficial

From a project management perspective, part of the kit's success lies in the complementary nature of the contributions of Brisbane City Council and QMLOANS. Neither partner could have created the kit alone, and this generated a strong incentive to work together as an effective team with a common goal.

The outcomes for each were also complementary. The Brisbane City Council is achieving a continuing urban forest education presence in Brisbane schools without further financial outlay, while the Museum Loans Service is meeting borrowers' demands for quality educational kits with ecological themes.

Conclusion

Three and a half years on from the first release of the kits, the Council and QMLOANS staff find the kits are providing a valuable, cost effective educational resource that meets the needs of the target audience, as well as the partner organisations.

Their value has been formally recognised through the awarding in 2001 of a National Trust Heritage Award for “Excellence in Heritage Conservation Works or Action”.

A further formal evaluation will be undertaken by December 2003, which will continue to assess the performance of the kits, and especially any patterns of change in teacher’s use of the kits over time.

The kits will continue to be updated with the inclusion of new materials and removal of any outdated information as necessary, to ensure they remain a dynamic and relevant urban forestry educational tool.