

Trees are special

“Trees are special,” said Jeparit Primary School year 3 student Bryce Day. This was his response as the most important thing he had learnt from the ‘*pH, salinity and trees of the Lower Wimmera*’ project in 2011.

“This project is unique in its linking of schools, National Weeks and International Years,” said environmental educator Jeanie Clark, from Warracknabeal, who organized and provided the project. About 80 children were involved in the program, coming from six small lower Wimmera (government and private) Primary Schools and a home education group. The primary schools were in Beulah, Jeparit, Hopetoun, Warracknabeal, Dimboola and Yaapeet.

The ‘*pH, salinity and trees of the Lower Wimmera*’ project began in August with National Science Week (NSW) and went through to October with National Water Week (NWW), with activities that also supported the two 2011 International Years – Forests (IYF) and Chemistry (IYC). Each group began with local field work research for NSW project and linked them all for NWW. Several organizations contributed to the funding for this to happen: the Science Teachers Association of Victoria grants to five schools for NSW; a Hindmarsh Shire Council Events grant to support displays at three shows in their Shire; and Wimmera Catchment Management Authority (WCMA) funding to support five schools for NWW; the schools, especially Yaapeet through its environmental science program; and ‘enviroed4all’.



Maddison Price, Jeparit P.S., holds some gum bark.

The first activity for each group in this project was a visit to the nearest local water place to investigate the trees and test water quality in August for NSW. Tree photos and their value statements were made there. These became part of an IYF global photo album on the web and were also made into a regional display. This was taken to five local shows to share the project with their communities. In October (NWW), all the NSW data was collated in schools for analysis and developing a catchment perspective under the NWW theme of ‘*Healthy catchments, healthy communities: raising awareness of the importance of taking care of our catchments*’. It covered barks, trees, values, our Wimmera Catchment, its water courses, pH, salinity, health ratings, care suggestions, and reflections on learnings.”

What bark type is it? The children learnt to recognize trees and the major bark types at their site for NSW. For NWW they identified three common tree barks from the nine sites: gum (long, thin strips); box (rough, thick chunks); and paperbark (‘cardboardy’ sheets).



Using the ‘Trees on the lower Wimmera River system’ photo display, Jeparit P.S.

What trees are found along the water courses of the Lower Wimmera River and the Yarriambiack Creek? From the photos taken at each site for NSW, a display of nine photos set in a system plan revealed a pattern: River Red Gums were closest to water, as they like more flooding; and Black Boxes, further away, where it floods less frequently. Together, they form a linear forest along our water courses. Recognizing them, especially bigger (older, naturally-growing) trees, indicates where to expect flooding some times. This display was used for the NWW sessions and exhibited to the community at local shows (Warracknabeal, Hopetoun, Rainbow, Dimboola and Jeparit) and in a Horsham office in October.

How do we value trees? For NSW, the Perth Zoo IYF Global Forests Photo Album website was used to introduce children to some values of trees from across the world - my favourite being ‘protection from black rhinos’! Each child wrote a tree value statement for the trees at their site. These were collated into group values and accompanied their school’s tree photo as their entry to this website— where you can now find a collection of Wimmera trees!



Comparing value statements, Beulah P.S.

For NWW, the children compared all the Wimmera statements, and discovered common values, such as climbing, cubbies, oxygen, shade and animal homes, as well as differences. Some values were recognized by only one school group: learning place (Beulah PS y 3-6); wealth (Jeparit PS y 3-6); surviving drought (St Joseph’s PS, Hopetoun y3-6); listening (St Mary’s PS, Warracknabeal y 5-6); medicine (St Peter’s LS, Dimboola y 3-6); and story telling (Yaapeet PS y 1-6). As a comparison, Mrs Clark had also arranged a couple of entries from adults, giving a different view by age, eg including carbon storage.

“We were also fortunate to have an indigenous perspective from Uncle Ray Marks, a traditional owner and elder of the Wotjobaluk nation and of the Barengi – Gadjin Land Council. His photo showed the Be-als (River Red Gums) at Horsham. The children were fascinated to learn this name and the traditional culture’s tree values which covered dream-times, foods, fuels, medicine, shelter, tools and transport,” Mrs Clark commented.



Discovering our Wimmera catchment with the big map, St Mary's P.S.

Where does the water come from? For NWW, the big catchment map from the WCMA was a great aid to find: the location of the other towns; where the water from our river system began; how tributaries ran into the main stream; left it (especially in floods) in distributaries; and travelled to terminal lakes. They also discovered how the towns were linked by water as part of this catchment system, and unlike other water cycles by not ending in the sea.

What is the water at these places like? The flood had brought them all the same water, with no salt, but it had changed since then. As a NSW activity for the IYC and its Global Water Experiment (a water monitoring activity on the web), the children tested their water for pH and salinity and learnt what the readings meant. For NWW, they placed colour coded cards showing the readings for each town onto the catchment map to create a visual overview.



Comparing regional water quality with cards *in situ*, St Joseph's PS.

The salinity readings from across the lower Wimmera in August were mostly of moderate salinity levels. The lowest salinity was rainwater quality from Yaapect's Turkey Bottom Ponds wetland where runoff came a short distance in from the nearby hills. Next lowest was at Lake Lascelles which had been fed by the flood water. Mrs Clark brought water readings from the same sites in October for comparison - they were very similar, except at Jeparit, which had doubled, as water flow there had almost ceased running again. The pH readings in August were mostly neutral in the south and alkaline in the north, where soil is also more alkaline, and there was little change for the October readings.

How healthy are these places? With *'awareness raised'*, the children rated the health of the local place that they had surveyed and of the lower catchment in general. It was delightful to see that the most common opinion across classes and schools was that the health of their local trees, pH, salinity, and water places was 'good'. The exception was Yaapect where weeds and water drying up were noticeable. Most classes thought the lower catchment as a whole was also 'good', the exception being the St Mary's class which rated it as 'ok'.



Observing tree photos for local and regional tree health, St Peters' L.S.

What can you as an individual do to 'care for' these trees and their water places? What can groups do? It was great to see each child come up with at least one suggestion for this NWW based question. Many responses could apply to both individuals and groups:

- keep water places clean or clean them up, including weeding. (This was the most common group of responses.)
- look after trees by leaving them to grow naturally, by getting water to them (a responsibility of the WCMA) or by not harming them;
- look after the wildlife that lives in the trees, (e.g. putting up bird-boxes, removing carp);
- raise awareness by sharing their knowledge by talking, photography or drawing (eg such as through this project and its displays);
- monitor the trees and/or water quality (such as in this project);
- and plant appropriately (eg 'Yarrilinks' Landcare plantings).



Reflecting reflect on the health of their local wetland, Yaapect P. S.

"What a good basis these suggestions form for the children to develop future actions to care for our environments!" Mrs Clark said. "It has been exciting to lead this project and see these children develop their local and regional knowledge of trees, their values and water quality and to make statements like this one by Hope Kennedy of St Mary's P. S. **"Work with others to care for all our trees and the creek as you would like to be cared about"**. What a lovely comment to end this International Year of Forests!"

Website links

Perth Zoo > What's on > 2011 International Year of Forests > Photo Album to look for individual photos and statements or go directly to <http://www.facebook.com/media/set/?set=a.492134196714.271444.207556431714&l=2e20e1faaf>
 enviroed4all at two websites > pH, salinity and the trees > to browse the photos and some project data or go directly to <http://enviroed4all.wimmerawebsites.com> or http://skymesh.net.au/~enviroed4all/index_enviroed4allnsw.htm

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