

‘Living in harmony with nature’

Beginning a new year of biodiversity articles in Otherways by Jeanie Clark

‘Living in harmony with nature’ – what an inspiring slogan! Could you use it for your home education, especially in environmental studies? I can’t lay claim to coming up with this, but I love the fact that this is a global vision. It comes from the United Nations International Decade of Biodiversity (UNDB) 2011 -2020. One UNDB goal is ‘to mainstream biodiversity at different levels’. I think home education is one level!

Values

What values do you set on nature and biodiversity? They might include aesthetics, environmental health, sustainability, medical potential, scientific knowledge, culture, religion, history, literature, other new ideas and so on. Do you communicate these values clearly?



Last year I was excited when I found a frog hiding in the garden. Photographing it made some observations of its colour and shape easier. It was a Mallee Spadefoot (photos left), and dressing a toy frog in its features focused on its warty back (sticky dots), creamy belly (white paper) and vertical eyes (drawn on with stickers). Food web and life cycle diagrams also helped explain why we hadn’t heard it croaking. Males leave their pond and seek out new ponds for breeding where they will then sing to attract females. The garden had insects to eat, but no pond or water plants. Should we put in a pond to keep



it here? But would that stop such frogs seeking better naturally vegetated places? Would a pond alter what other species do too? My values (aesthetics, science of life forms, linkages between living things and their habitat, sustainability) lead to my choices of learning activities, including sometimes just appreciating and learning about a visitor passing through as a way of ‘living in harmony with nature’.

The Aichi Targets

‘Living in harmony with nature’ has implicit values. These are evident in the 20 Aichi Targets of the UNDB, which are organised into five strategic goals see <<http://www.cbd.int/sp/targets>>. The first, ‘By 2020, at the latest, people [will be] aware of the values of biodiversity and the steps they can take to conserve and use it sustainably’, is a basic one towards which we could contribute in home education. Target 19 supports this with its focus on the sharing of the scientific base and technologies of biodiversity.

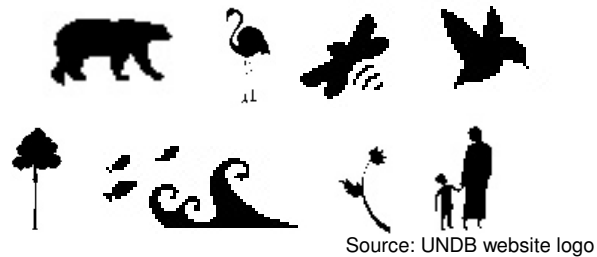
Biodiversity in art

The UNDB began in 2011 with the International Year of Forests (IYF). In *Otherways* issue 127 last year, I suggested using this logo with its dozen icons for visual communication. If you revisit this, you could discuss whether these icons show values or parts of the forest.



The UNDB logo (above) likewise contains eight icons, extended from that of the IY Biodiversity 2010. It too can be used for visual communication. How many icons do you see in the logo? The separate icons are shown below. Do you think they depict values or parts of biodiversity? What does each one represent? Do you think they fully cover biodiversity? If not, what do you think is missing? Could you design an icon for it and fit it into the logo?

Icons from the logo of the U.N. Decade of Biodiversity



As a first step towards achieving the first target, these activities could help review or introduce the meaning of biodiversity, with a dictionary for backup. Artwork can also be useful to check understanding of concepts and explore other cultures and places. One quick way to do this with biodiversity is by using children’s artwork found at <http://www.unep.org/tunza/children/int_comp.aspx>. At this website are galleries full of inspiring paintings by six- to 14-year-olds from all over the world for the International Children’s Painting Competition on the Environment, with a different environmental theme each year. As well as the interpretations of biodiversity, galleries like this can be used to gain ideas about artistic techniques which work well.

Aussie

With what Nature should we be living in harmony and conserving? Ours, Australian first, we have unique biodiversity here! I think it is important that children appreciate this and want to conserve it – keep it. (If you are not sure if something really is Australian, the easiest way to find out is to search its origin on the web). So they also need to know what these species need to live

– food, shelter and ecosystem linkages. Appreciating this will provide a base on which the conditions for living in harmony with our nature can be built... and on which things that create disharmony can be recognised.

So, does ‘living in harmony with nature’ imply only valuing and keeping our Australian biodiversity in our remaining natural/wild areas? I don’t think so. There are many places you can use, starting with your own backyard, for investigating native (and exotic, i.e. non-Australian) species. (Earlier biodiversity articles in 2010/11 *Otherways* have some suggestions). There are local parks and state ones. The Botanical Gardens at Cranbourne is a great place for learning about Australian native plants in their ecosystems.

The e5 model

The ‘e5 instructional model’ may help conceptually to develop knowledge and values of biodiversity, by the way it covers a topic through a series of ‘e’-based words: Engage, Elaborate, Explore, Explain, and Evaluate. While this is a model developed for schools, it is a useful concept for any themed study. Consider a kookaburra out the window (photo right). You might:

- * Engage your children initially by noting its presence.
- * Elaborate with observations (perhaps by taking a photo/video before it flies away!) of colour, size, shape, feathers, beak, feet and any song it makes its common and scientific names, and how these relate to what is seen/heard.
- * Explore where it originates, exotic or indigenous, what it eats and how it obtains that, what eats or kills it, its ‘home’ and materials for that.
- * Explain the connections between what surrounds it, and its food, shelter, life cycle, and dangers (e.g. cats, as kookaburras only nest in horizontal hollow limbs).
- * Evaluate its impact by discussing feelings on hearing/seeing it, what it adds to these surroundings and what would be missed if it was no longer present, or gone forever. Evaluate what you can/should do to live in harmony with it.
- Act if you can do anything, e.g. keeping kookaburras safe from cats by using cat runs.



had any impact. Many threats, like cats, are ‘naturalised’, getting along very well now in our environments, and we may have become oblivious to the destruction they cause(d) to the harmony that was in our nature. Some, like rabbits, cause clear destruction to our nature, which is a history I think all children in Australia should know. The steps to destruction are these:

- Introduce a new species. (When? How? Why?)
- Local environment has food suitable for new species...
- And poor or no predators for new species.
- New species thrives. (Speed and extent of ‘invasion’)
- So local species loses food supply to new species.
- New species’ ‘homes’ damage environment (Erosion).
- Disharmony (Lost local species, damaged land).

You could explore this list with many invaders, e.g. revisit the cane toads in *Otherways* no. 126, p20.

Protection

To live in harmony with nature in Australia, to conserve it, implies to me that we should protect our Australian species. While well-established pests like feral cats and rabbits still need to be fought against, new threats need our attention to prevent the well-known ‘rabbit’ history being repeated. A huge threat looms over living in harmony with nature because the world is increasingly mobile with overseas travel, global markets and internet purchasing. How can we help children to understand the need for quarantines and prohibitions of overseas plant materials and creatures? I think learning how seeds are dispersed is a valuable base for understanding the process by which exotic plants, like Hawkweed, become a threat. The Landlearn website has an excellent simulation for all ages: ‘the Peter Pan theory of Seed Dispersal’ <<http://www.landlearn.net.au/newsletter/2006term2/page2.htm>>.

Exotic fungi create a similar threat. Bushwalkers have already spread a mould into parks which attacks the slow-growing Grass-trees. Caroline Edwards’s ‘Good Hygiene Practices for Bushwalkers’ discusses this in ‘VicWalk News’ Sept 2007 on page 6 <<http://www.bushwalkingvictoria.org.au/forms/VWN0709.pdf>>.

At the local, family scale, we can help conserve biodiversity by not spreading pests. On foot, bike or 4WD, staying on tracks reduces these forms of travel as agents for seed or spore dispersal. So does thorough cleaning of boots, cuffed pant bottoms, tents, pegs and tyres before going to a natural place, including beaches, and before returning from overseas. The New South Wales Department of Primary Industries ‘No space 4 weeds’ website has simple messages to prevent the spread of weeds at ‘home, work and play’. Arty posters could display messages that apply to your family.

Learning to recognise specific threats, especially the noxious/pest/prohibited ones, is valuable too. It could mean that at an unexpected time in the future a new attack on our biodiversity is prevented. Brochures and websites from the Departments of Primary Industries, National Parks, State Parks, ‘Weedspotters’ and local government provide information about these threats.

In this UNDB, home educators will contribute to the first target for ‘living in harmony with nature’ when they investigate values of and ways to protect biodiversity.

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Threats

What threats are there to the harmony in our nature? Each exotic species introduced to a local ecosystem is capable of changing and even destroying the harmony that exists between the native species. Some of these exotics are capable of such damage to our biodiversity that they are given labels such as ‘pests’, ‘noxious’ and ‘prohibited’. Some, like Hawkweeds (photo left) in our alpine parks, already have a foothold where changes to the harmony can be easily recognised, and work is being done to arrest this. Some are waiting on our doorstep, like fire blight, but have not yet

