"Let's Go to the Creek"

Ideas on environmental education

By Jeanie Clark

Let's go out to the creek,
To get to know what's there.
We'll see land and water,
Plants, animals and air.

Do you know where you are?
Visiting a frog's home?
Sounds, colours, shapes, textures-
Let's find them as we roam.

Start at the grey tree trunks.
Green leaves hide what we seek.
Listen! How the birds call!
The wind moves! Branches creak!

Walk flat, then go down slope.
All the way, plants are found,
With many insects and
Footprints on wetter ground.

Stop at the green reed fence,
A shelter for many
Water birds as they hunt.
Look for them- there's plenty!

At last, water is reached!
How its top shines with light!
Search for life! Still? Moving?
Hidden from touch or sight?

Above us, a blue sky,
It's white clouds giving shade.
Feel heat, then the cool.
Now this creek scene is made.

All parts link together
Like food webs of creatures.
When we come - we visit-
So care for the features!

How do you define the word 'environment'?
Please think about your answer now, then the other questions that follow. Maybe even note your thoughts, before continuing on to read mine.

My dictionary[1] says 'environment is "the aggregate of things, conditions or influences".
To me, this is roughly 'surroundings' with attitude!

Do you use such a broad meaning of environment?
Do you regard 'environment' as meaning 'natural' surroundings?
Would you consider the rural, the urban, the built and the social surroundings too?

How do you define environmental education (envt. ed.)?
Is it just about parts and how they interact?
Do you add environmental issues?
On top of that do you add, to live more sustainably?

(The United Nation's definition of envt. ed. is that it "focuses on humankind's relationship with the natural environment and on ways to conserve and preserve it and properly steward its resources"[2].)

Is it about appreciating beauty and wonder?
Complexities and fragilities?
Threats and changes if they exist?

How big is the 'aggregate' to you?
Does it grow as children grow?

How do you conduct environmental education?
Do you do it as naturally as teaching speech, reading or writing?
Do you follow what your child is noticing in his/her surroundings?
Do you look for guidance in curriculum statements?

Do you regard environmental knowledge as essential for your child's adult future?
Is it just a passing interest?

How much time do you ascribe it?
A once off event?
A regular event?
Whenever it arises?
As long as interest is apparent?

When searching for resources, do you look for specific environments?
Themes?
Organisations?

How far do you have to go to encounter an environment that your child could learn about?
Is 'environment' located outside your window, in your backyard?
In your neighbourhood, or holiday resort?
In your region? This country?
In far away places? Globally?

Do you include involvement in action as part of envt. ed.?
Is it something you suddenly get involved with?
Is it a part of your life anyway?
Is it part of caring for the Earth or each other?

Fitting home education with environmental education
Home educators have much freedom in choosing/creating curriculum to suit their children. I value that, especially from the viewpoint of environmental

education, which is my professional field.

Home education allows me to put my environmental beliefs into action:

- Firstly, I do believe that good environmental knowledge is critical for the future, with whatever changes may occur globally or locally, so that we can take care of our land, and this planet.
- Most environments are complex, but they can be understood if the parts and links are recognised, so that it is both a holistic and integrated study, which can be approached at different levels of complexity from the air, land, water, life and human impact aspects.
- A way to proceed: observe; observe big; observe tiny; record; discuss/understand; report/share and care/act.
- It is something best begun young as part of life, and built on repeatedly with growing maturity.
- It should begin with whatever is around the child. Build up an appreciation of what is in the local environment and how it operates, is changed and is cared for. Extend into especially things that take a child's interest. I started with the backyard, when my son was pre-school age. We moved to the local area (eg creek, playgrounds), and to places visited on holidays (eg mountains, desert) in lower to middle primary years. We went out to other places in the wider world (eg Antarctica, droughts) in the middle years (years 5-8).
- Engendering an appreciation of environments is important, especially for those under stress, such as in the Wimmera where we live. I look for the positives in any environment first. I do not want to teach hopelessness or fear of the future. When there are issues that could lead to this, I draw attention to what is still good, and what we can do to look after it.
- From the time I was teaching Geography in the 1980s, Envt . ed. has been developing. There are many useful ideas in national and state curriculum statements and avenues for participation.
- Globally, there are useful ideas and possibilities for participation, derived from the United Nations (UN) Decade of Education for Sustainable Development (2005-2014) and its International Years (IYs).

Home education also has many aspects that help me teach environmental education, for we are able to:

- Set our priorities for time spent on what is learnt
- Choose our resources
- Discuss and transmit our family's values
- Follow through and build on learning and experiences gradually and repeatedly through the years
- Get out and explore a great variety of 'surroundings' whenever the time suits us, especially observing something of interest, when it happens
- Holiday in school terms and visit places when there are not so many people around
- Care for things that we value in our surroundings
- Choose activities in the local, multi-aged community and work with people of different ages
- Pass on skills in observing, exploring, recording, discussing, planning and participation in action.

Please return to the Creek poem at the beginning.
Can you now recognise my values and priorities in it?

- Observe using the senses, not just sight.
- Use Geography's natural systems approach to identify and name features of the atmosphere (air), hydrosphere (water), lithosphere (land) and biosphere (living things) and the impact of man, a special biosphere feature.
- Identify links between features, impacts on them, and possibilities for our care.
- Communicate - share an emotional response.

How does this fit with Victoria's home education registration requirements? Basically, we are required to do what is at the foundation of all Australian education systems: to cover the national eight Key Learning Areas[3] (KLAs), shown in Table 1 below, and respect the principles of Australian democracy.

Table 1: Eight National Key Learning Areas for Young Australians[3]

English
Mathematics
Science
Humanities and Social Sciences
Arts
Languages
Health and Physical Education
Information and Communication Technology and Design and Technology

However, envt. ed. is not one of these eight KLAs!

So, what can we learn about teaching Environmental Education from national curriculum statements?
In the 2008 Melbourne Declaration on Educational Goals for Young Australians, one of the national education aims is for future citizens to "work for the common good, in particular sustaining and improving natural and social environments"[4]. Though it is not a KLA, envt. ed. has taken on a special cross-curricula place in the national curriculum – an integrated study, evolved into 'environmental sustainability'[5].
While environmental education is not a required KLA, it can be a part of each of the KLAs.

This didn't just happen. The 2000 National Action Plan – '*Environmental Education for a Sustainable Future'*[6] foreshadowed and supported the development of envt. ed.

Table 2: Environmental Education curriculum content found across Australia across all ages.		
Category	**Sub-category**	**Some examples**
Information about the environment	Ecosystems	Local to global scales, natural systems
	Ecological principles	Food webs, species diversity, photosynthesis, carrying capacity
	Energy and resources	Energy conservation, production and consumption, resource use
Studies of humans and the environment	Humans and Environment	Poverty, Agricultural sustainability, general human activities, tourism
	Political and economic issues	Ecological footprints, land-use planning, environmental policies
	Pollution	Noise pollution, stormwater, hazardous wasters,
	Issues	Climate change, recycling, bio-engineering, disasters
Skills, problem solving and competencies		Observing, mapping, experimental design, planning and organising,
Attitudes, values and viewpoints		Appreciating human dependence on finite resources, ethics, aesthetics
Action		Waterwatch, Clean up Australia Day, energy conservation in the home

into the realm of sustainability in our surroundings, thus becoming an integrated subject.

How broad does this make environmental education? Very! There will be lots of possibilities for its teaching. As an integrated subject, envt. ed. can be used to cover something in every one of the KLAs!

In 2003, a report on envt. ed. in Australia identified seven categories of envt. ed. from the curriculum of **all** subjects of all states/territories:

1. Information about the environment
2. Studies of humans and the environment
3. Skills to investigate the environment
4. Positive attitudes to the environment
5. Investigating and clarifying environmental viewpoints
6. Environmental problem solving
7. Taking environmental action[7].

Given the great variety in these curriculum statements identifying common content is difficult. Table 2 (above) shows ten sub-categories[8] and some examples of topics. If you're looking for content choices, there are about 150 cited in the full document[8]- that's a lot of options in environmental education! Not enough? You have your own ideas? Well, have faith in yourself and use them!

This 2003 document came before there was any national curriculum policy[7]. That came in 2005 in the National Environmental Education Statement '*Educating for a Sustainable Future'* [9]. 'Environment' became more defined and more complex - "including ecosystems and their constituent parts, natural and physical resources, the qualities and characteristics of locations, places and areas, the heritage values of places, and the social, economic and cultural aspects of these things" [10].

Linking 'envt. ed.' with 'sustainability' creates a very broad scope as can be seen in its goals - "conservation, social justice, cultural diversity, appropriate development and democracy … [integrated] into a vision and a mission of personal and social change" [11]. This needs a simple framework (also useful to home educators) where environmental experiences are organised as "about, in, and for the environment" [12], (see Table 3 at right). However its 'concepts and principles' [13] are now more complex as they cover both key terms:

- Interdependence
- Resource management
- Diversity
- Natural environment
- Cultural environment
- Values and lifestyle choices
- Social participation

Overwhelmed with the options? There are still more!

Consider the four key concepts and several themes for 'Environmental education for sustainability' [14] shown in Table 4 (on page 6). What is being expected of students? A lot more than just learning to name things and relationships! Students are to:

- use reflective and deep thinking,
- become connected to the subject,
- develop autonomy in their learning
- grow into ethical and responsible citizens[15].

I think this is what home education already provides. However for schools, a fully committed approach is suggested, with funding and resources toward this education, supported by the AuSSI (Australian Sustainable Schools Initiative) [16] program.

So have your images of what environmental education is and what issues may be covered just blown up like a big balloon inflated with helium?
Victorian home educators do not have to implement this policy, but if you are thinking about environmental education, these developments give a lot of food for thought. I hope it helps you refine your definition of envt. ed. and soar with new ideas to implement it!

What can we learn about teaching envt. ed. from the Victorian state curriculum statements?
The technical bit first: The VELS (Victorian Essential Learning Standards) take the national KLAs and structures them into domains (subject areas) and strands (sub-areas) and learning outcomes (sub-goals) listed by six monthly progression points (developments).

If you are looking for ideas for what to cover in envt. ed., or want to use activities on the web that are VELS based, then curriculum statements can be useful. The domains of Geography and some strands of the Science Curriculum are the most relevant. You could also use this to help focus a search for materials in libraries, bookshops and on the web. But recall from the above that you should also include

Table 3: A framework for environmental education[11]	
Location	**Experiences**
About the environment	Understand facts, concepts and theories
In the environment	Directly experience an environment to develop awareness and concern for it
For the environment	Adopt attitudes and abilities for lifestyles that wisely use resources

Table 4 : Key Sustainability Concepts and Themes in Environmental Education for Sustainability [14]				
Concept	**Ecology**	**social**	**Economy**	**Politics**
Key themes	Biodiversity	Basic human needs	Cost-benefit analysis	Citizenship
	Habitat	Cultural diversity	Eco-efficiency	Democracy
	Carrying capacity	Cultural heritage	Life-cycle analysis	Decision making
	Ecological footprint	Human rights	Natural capital	Tolerance
	Ecology	Intergenerational equity	Natural resource	Power
	Ecospace	Participation	Accounting	Respect
	Ecosystems	Peace	Steady-state economy	Conflict resolution
	Interspecies equity	Risk management	Sustainable consumption	
	Natural cycles and systems	Social justice	Sustainable production	
			Triple bottom line	

'sustainability education' in your search.

Consider the VELS outcomes for level 5 Geography: "describe differences in culture, living conditions and outlook, including attitudes to environmental issues, in these regions … [and] demonstrate understanding of environmental issues based on inquiry and propose ways of ensuring the sustainability of resources"[17]. Can you use this to create your own study? Or, if looking for a text book or other resources, use this to anticipate what the resource will cover at that level? Some examples follow:

Text book: eg *Humanities Alive Geography 1*[18] (for VELS level 5, ie years 7 and 8) contains many common environmental issues (eg threatened species, Antarctica) ready for use, with website links and support.

Websites: eg LandLearn is a Victorian farm-based education program from the Department of Primary Industries. (It can also be obtained in hard copy). At the start of an activity, the VELS domains and levels it covers are listed. One example for VELS level 6, (ie years 9 and 10) that covered aspects of Geography, Civics and Citizenship and Thinking Processes, was titled "*Futures Thinking: planning for a drier climate*"[19] .

Kit projects: eg *The Home Energy Project*[20] , from Origin Energy, is suited to middle school years 7-9, ie VELS levels 5 and 6, with basic understandings, research and action components. It also has competitions to support spreading student messages about energy.

Competitions: eg Science Talent Search[21], an annual suite of competitions, is a wonderful opportunity for students to research the environment (or other science topics) and report in a variety of ways. It has supporting statements for how to enter and how the projects relate to VELS Science. Could an experiment in the environment be conducted and reported? If students observe an environment and understand it, can they report via photography, video, or poster? Could environmental knowledge and issues be used to create games, either on computer or board? The essay topic is linked to the UN International Year (IY), a literary way to explore and respond to an issue – this year being the IY Biodiversity.

Going global

There is so much more on the web under environment or sustainability, often with similar goals to the above eg:

- Volvo Adventure[22]- a global environmental competition to research locally, effect some change, and report
- Royal Commonwealth Society[23] - global essay and photographic competitions covering all levels.

Back to the Creek

For many years, as an environmental educator with Waterwatch, I met primary classes at the boundary of the bitumen and dirt tracks for guided walks to our Creek. From my questions and viewpoints earlier, can you guess how my activity would unfold?

- The children use their ears, skin, nose, and eyes.
- They notice sunlight and shade, wind and shadow, sounds of the Creek and the town further away, slopes, water places (with or without water), footprints, greens and browns, barks and reeds, shapes and textures, birds, frogs, lizards, and the tiny water creatures.
- Then as we find links, we discuss them.
- Where there is an observable problem, we discuss what it affects and what can be done about it.
- We respond to the environment, consolidating what we have observed and felt, and sharing it with others by talking, writing, drawing, taking photos.
- I leave a version of my Creek poem with the teacher to remind the children of what they learned on their visit.

My approach works for home or school education, but as home ed with my son, we discover more — we are quieter.

What is your environmental education approach?

So now you know there is heaps of information about envt. ed. and what it can include. Work out what matters to you. Then, be confident and have fun implementing it with your children! Appreciate what you can do for envt. ed. as a home educator, and do it!

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Photos: Jeanie Clark

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