WILDLIFE IN YOUR BACKYARD — THE IMPORTANCE OF ENVIRONMENTAL EDUCATION IN THE INFANT SCHOOL

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A number of precepts based on practical experience are suggested for environmental education at the pre-school level. The importance of the child's immediate environment is considered and a variety of possible activities are outlined.

My first field trip with an infant group so impressed me that it formed three fundamental precepts that I have applied to all subsequent 'encounters' with this age group. Wanting my little wards (the mothers hadn't caught up yet) to appreciate the fact that the soil was covered by a protective mantle of green vegetation, I asked them, if they looked around them, what they could see. I was delighted when one little hand shot quivering into the air, but on giving the go-ahead, I got not the expected answer "green", but an involved story about a grandmother and a cat. PRECEPT 1: *Start with the child, or something he/she can relate to.* It is for this very reason that the backyard is so vital in the child's learning about wildlife.

As we continued with our walk, I carefully formulated my next question, designed to allow them to express their feelings about the environment. The eager answer on this occasion informed me that what the child felt like was "a wee". PRECEPT 2: *Careful guidance along a specific learning path is important.* The primary role of the facilitator is to seize the teachable moment and channel all random responses into a real learning experience.

My next mistake was to take them near a stream without first issuing appropriate instructions and before I could rescue the error of my negligence they were all busy and wet, satisfying their curiosity. I watched in despair as they waded, splashed and, before long, began to discover various 'goggos' in the stream. They were in fact doing exactly what I had ultimately planned. PRECEPT 3: *Environmental discovery should be a natural and personal process which is both exciting and enjoyable.*

Two important points need to be made at this juncture. Firstly, pre-primary and junior primary teachers are all practising environmental educationists by virtue of the fact that they encourage their pupils, in a suitably informed yet structured and holistic manner, to explore the environment in its totality by means of an essentially experiential and experimental approach. They have, for years, been doing what the rest of us are striving towards.

Secondly, 'wildlife', as used in the title of this article, does not refer to lions and elephants, or any other species for that matter, in isolation. Sparrows, caterpillars and ladybirds are 'wildlife' and so are all the factors that effect them. At the earliest possible stage - at the infant level - we must ensure that children are encouraged to know (I avoid the word 'taught' deliberately) that a spider itself is not as important as the totality of its web, its prey etc. In order to illustrate that what might appear to be a casual encounter with wildlife in the backyard is in fact a valuable environmental education process, let's view a child's observation of a caterpillar being directed, perhaps not consciously, by a teacher. Using Neil Arnold's objectives for children learning science, the scenario may be explained as follows:

First, the child just watches the movements, colour and shape of the caterpillar - this is the first step in the development of interests, attitudes and aesthetic awareness. The child might then shake the branch to see whether the caterpillar falls off - here he or she is ordering observations. The legs seem to wrap around the branch - let's just make quite sure. This sort of hypothesis-testing also develops basic concepts and logical thinking.

"Miss, why has the caterpillar got those like hairs on?" Children must learn to pose questions accurately and, in this case, unless you answer promptly the child will devise an experiment to answer the question and you'll have tears to cope with. Of course if the child does touch the caterpillar he will have acquired knowledge and realised that learning skills other than the simple 'touch and see' approach need to be used e.g. 'ask the teacher first.'

Thus far, the teacher's participation has been minimal, and before the child gets bored and stomps on the caterpillar, the teacher might point out that the hairs are for protection, that it discourages predators like birds, that just as the caterpillar eats leaves, so it is eaten by other animals and so on, showing simple relationships in nature. All this encourages an enquiring mind and a scientific approach to problems, and it's happening every day in the junior primary school!

There are those who argue strongly against the use of anthropomorphism in the teaching of natural sciences but we must remember that much of the wildlife that children encounter, even in their backyards, is so weird and often frightening, that any means that allows the child to relate to rather than avoid this wildlife, is justified. Indeed, so many of our more interesting examples of wildlife lend themselves to at least a degree of anthropomorphism. Take termites as an example.

Surely there's an element of magic in the combination of environmental conditions that sparks off the flight of the winged alates or 'flying ants'. Is there a single child who has not been fascinated by this phenomenon? By answering the inevitable questions "why are there so many of them?" we are immediately dealing, admittedly in a very elementary way, with trophic levels, food chains, even natural selection and adaptations. If we point out that the pairs of alates, having lost their wings and running frenziedly along the ground in tandem are potential kings and queens, surely the children will be intrigued to find out more about the castle in which such kings and queens live. This is a perfect 'wildlife in your back garden' situation. Let's take the children to a termitary or 'antheap' and,

by breaking open a small section, show them how the workers scuttle for shelter and soldiers rush to defend their threatened castle. A close examination of the defensive mechanism of the soldiers provides an ideal platform for a simple lesson on adaptations in other animals.

What happens right down in the depths of the castle with its winding passages and secret chambers? Imagine the king and queen, imprisoned in their royal quarters, all their needs served by a retinue of workers, who feed and groom them, keep them informed of the state of the nation and carefully handle the almost constant supply of eggs produced by the queen. Other workers are specialist builders and will rush to repair the section you have broken once they have been reassured that danger is past. Others are farmers patiently tending to and reaping their fungus gardens. Yet others devote their time to fetching water from the depths of the earth. The termitary is a fascinating ecosystem that lends itself to a wide variety of purposeful learning situations across the curriculum, yet teachers and pupils often feel cheated if they haven't travelled miles to a game reserve to observe wildlife.

A visit to a game reserve is indeed something well worth aiming at, but it is the ultimate field excursion - the cherry on the top. There is so much that one can do to facilitate a study of 'wildlife in your back garden' and I intend to mention just a few of these to remind you of the potential of your immediate environment for studying wildlife. For convenience sake, let's divide these study opportunities into *watching*, *keeping* and *collecting*.

WATCHING

So much has been said and written about attracting and watching birds that I don't intend to deal with this. I'd like, rather, to touch on two less common areas of study, both based on the ecosystem approach rather than looking at specimens in isolation.

The first of these is a tree study. Choose an individual tree in your school grounds and build up an information chart showing the results of these investigations:

1. Search the branches and trunks for small mammals and reptiles and their homes. Watch their breeding behaviour.
2. What kind of flowers does your tree have and what insects visit them? When does it flower and what sort of fruit does it have?
3. Take a close look at the bark and note its texture, colour and pattern. Make a bark rubbing to add to your chart. Look for small animals on or under the bark. Why do they live there? What do they eat? Who are their enemies?
4. Look underneath the tree. Compare how many different plants grow close to the trunk with what happens further away, and beyond the shade.
5. Note how many different birds use your tree. Which part of the tree do they feed in? Which birds are nesting in the tree?
6. What moths and butterflies visit your tree? Can you see where they lay their eggs?
7. Who's living in holes in the trunk?

These simple investigations can easily be carried out by junior primary pupils.

A second area that lends itself to a similar study with the emphasis on techniques of analysis, is the compost heap (including important concepts of decomposition and recycling). A follow-up to an examination of what lives in a compost heap leads us to: 'keeping'.

KEEPING

A worm farm makes an intriguing and simple classroom interest centre. Use worms caught in compost, a jar, brown paper, moist soil, grass and leaves. Other items that can easily be kept in the classroom are insects. 200 crickets - make terrific circus animals; chameleons - feeding is a treat; a butterfly garden; a formicarium or even a snail city!

COLLECTING

We rarely capitalize on childrens' natural collecting instincts. They are natural hoarders and by encouraging them simply to be systematic about their collecting, we open up a whole new realm for learning. A simple labelling system 'where, when, what' for example can be started even at junior primary level. A class nature diary is also a means of getting the children to look in their own backyards at home. This can be an extension of the nature table.

CONCLUSION

In conclusion I'd like to quote Lord Chesterfield who, in a letter to his son away at school wrote:

> "The knowledge of the world can only be acquired in the world, and not in a closet. Books alone will never teach you, but they will suggest many things to your observation."

An effective teacher is one who utilises all the resources at her disposal - including the 'wildlife' in one's own backyard.

REFERENCE

ARNOLD Neil 1976: *Wildlife Conservation by Young People: A practical guide for teachers and parents*. Ward Lock Educational. London.

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