Journeys in Nature | Centre for Learning School

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This quotation that has inspired us at the Centre for Learning School, located on a 25-acre campus outside Bangalore is: 'If a child is to keep alive his inborn sense of wonder … he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement, and mystery of the world we live in' (Rachel Carson).

For some years, we focussed on getting to know our rich space through 'nature journey' activities and projects with junior school children. In fact, it was a 7-year-old who coined the term one morning, 'Aunty, why don't we call this *nature journey*?' This included campus walks, land work, sensorial activities and games to draw the children's attention to our natural environment. As teachers of these 6-9-year-olds, we tracked paths along with them, we wrote nature journals, and planned what we would introduce and how, and then recorded what actually transpired. Our main aim was to develop skills, such as quiet observation and listening. Aspects of poetry, mathematics, craft, artwork, sketching and research processes also came into their classes.

Planning nature walks

Topics: Trees, plants, flowers, fruits, seeds and growing cycles; insect and animal behaviour and life cycles; birds and features, the campus and its features, and trails

Activities: Games/hunts, observation and sketching, art and craft, poems and journal writing, detailed descriptions, gardening, measuring

Habits of the mind: Observing but not interfering, curious and questioning not just identifying and knowing names, appreciating and not being judgmental

The children were divided into three groups based on their ages: *Fireflies, Butterflies,* and *Dragonflies*. Here is an explanation of how the campus walks played out, in the form of a nature diary kept by a teacher, at the end of a season.

Evening walks - June to September

On these walks, we explored campus trails and got to know our own rich natural landscape. The children observed wildlife, used maps of the campus to trace our walks and noticed changes over time and through seasons. Occasionally, children would take turns leading a walk.

Figure 1. A walking path through the grass.

June 15: Children noticed a decaying centipede being carried away by ants, cow dung on the path, a very colourful leaf growing close to the ground, and how the sun felt when we came out of a thicket. When we sat silently for a few minutes, they noticed a big butterfly come closer; they heard more birds and rustling sounds. They ended with the question: how did the centipede die? (For a few weeks after this walk, they wanted to check on the decaying centipede and noticed how its rings were disappearing).

June 22: On the evening walk, as we went past the vegetable garden, we all saw a green bird with an orange beak feasting on a very large agave flower which was shooting out of the agave plant. It was a parakeet and we all noticed how messily it was eating the flower. We continued on our walk and after half an hour as we retraced our steps and came back by the agave flower, the parakeet was still there!

On the same walk, we saw that the centipede on the steps had decayed more. We also found an exoskeleton of a beetle and some children wanted to dig a 'grave' for it and bury it. Towards the end of the walk, we stopped at a pomegranate tree near the vegetable garden and looked at all the stages: buds, flowers, and fruits. A little later, one child wanted to know what the lantana fruits looked like, so we saw the berries and tasted them.

June 29: When we went for our evening walk, we checked on the cocoon that was brought to our attention by the Dragonfly group. It was hanging from a slim branch near a hut entrance. Children observed how shiny and delicate it looked. As we proceeded on the same trail through the vegetable garden, memories of what we had seen earlier on the same path, came back to the children. Centipede…parakeet…one child started to notice very small things, like nibbles on leaves and was also curious about how the lantana berry came from the flower. This was a follow-through from our investigation of fruits emerging from flowers. We began to refer to a campus map and identified where we were on the map. Some children could do that using the buildings on the map as landmarks. We realised we were on the nature trail heading north.

As we came to the sanctuary, which is wooded and shady, we talked about how it felt to be in a different space. The children said: sleepy, tired, and cool and that it made them think of the hostel! We looped back to the guesthouse, following the nature trail throughout and went to the guesthouse balcony. From there, we saw many dragonflies resting on the brick sides of the balcony. I noticed that I had an urge to constantly pose the question to the children: why is something happening in the way that we notice it? Immediately, there are attempts at some right answer. I would like to slow down my own instincts so as not to influence the children or guide them toward answers but see what came to them from their own observations. Pausing is so important!

I also started feeling the pressure to be the one to alert them to something I had seen or heard, but I found over time that there was plenty coming from them, and it was not a bad thing to drift through the spaces and trails without fixed agendas. We also want the children to develop feelings towards this place, have experiences that they treasure and remember and not only look at it in a scientific way. One change I started to see at this stage was a greater awareness to not pluck and take things to possess them. Why do we want to possess something we find beautiful in nature? The little ones still struggled with this, though.

July 7: On the walk, it rained very heavily and despite having raincoats, the children got soaked. Some of them were scared but others were excited and energised by the adventure. We had to take shelter under a tree for quite some time. Children spotted a white and orange mushroom. I saw a hare on the path. It disappeared very quickly as our campus dog chased it.

We went back on the nature trail through the vegetable garden and again children remembered the parakeet's place even though we were going the other way. That evening, there was a feeling of accomplishment in the children, as they felt they had weathered a heavy rain and storm.

July 26: We decided to explore another part of the nature trail and began near the games field, up through our steep rock and on behind the Library and Assembly Hall. We suddenly saw many butterflies in the shady areas along this trail and even saw a wing stuck in a web. The children spotted many grasshoppers in the grass behind the Assembly Hall and a beautiful rock pool with green plants carpeting its surface. As we looked closely, we noticed little insects walking on the carpet. Again, some children had to earnestly remind the others not to poke sticks through the pond, throw

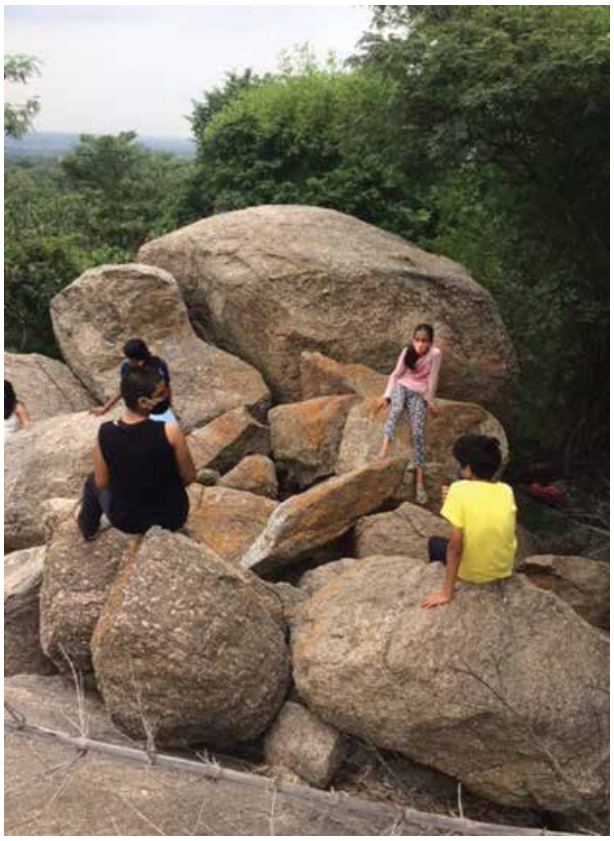

Figure 2. Exploring boulders.

little pebbles into it and disturb its life. This is such a strong instinct and urge in the little ones. We ended up at the dining area and looked at the campus map, retracing our walk.

August 3: Near the Art Room, there was a tall, leafless tree and we saw two jungle crows on that tree. We watched them for a while and then proceeded past the Assembly Hall. The butterfly wing was still caught in the web. When we came to the games field area, we saw a yellow flowering tree and took a few flowers back so we could identify them later.

August 10: We began this walk by talking about caring and not caring for things and how Basava, cared for the insects in the story, *Basava and the Dots of Fire* by Radhika Chadha. I showed them those pages. As we walked again past the Stage Rock and the Library, we noticed both damp and dry areas, grasshoppers, webs on leaves, a caterpillar suspended on a thin string, many butterflies in one particular area and little white mushrooms (fungi, the children said). When we passed the Assembly Hall, the children became aware that we were walking by the school fence. One child noticed a creeper with tendrils and little roots sticking out and thought of our bean plants and their tendrils. In the Rock Pond, we saw bugs bobbing in and out. We sat on a rock, and I showed them photos of birds we see on campus. We ended our walk near a hostel by a *camel-foot* tree (*bauhinia purpurea*). One child brought the pink flower to me and that is how we stopped to find the flowering tree. In the end, a child held up a rock with moss on it and a tiny stem sticking out above the moss. We decided to show it to the teacher, who explained that it was the sporophyte, the stage before the gametophyte stage, which then produces the male and female parts and the leafy moss as well.

There were some walks where the children's energy was very high, and they noticed a lot and other walks where their moods were low, and they passed spaces but were in their own worlds.

Figure 3. Children identifying animal tracks.

Other findings

Land work

We followed the cycle of preparing beds, composting and mulching them, sowing vegetable and flower seeds, watering and caring for the growing plants, harvesting, cooking, and saving seeds for the next sowing. On harvesting, we estimated the number or weight of vegetables and then checked our estimates. We visited a nearby farm from which the school buys some fruit and all marvelled at the diversity and number of trees being cultivated in a space smaller than two acres.

Activities and games

A range of games and activities related to the immediate environment (for example, *Tree Tag*, *Feel a Tree*, *Bat and Moth*, *Scavenger Hunt*, *Un-nature Trail*) and later, the bigger picture (for example, *Web of Life*, *Pyramid of Life*, *Recipe for a Forest*) were a part of the programme.

Other hands-on activities included: bark and leaf rubbings, collection of seeds, flower pressing, dissection of flowers to see the ovary, etc. Before researching something, like the cycle of bud to flower to fruit, we would do 'hypotheses drawings' (one's own explanations) of the life cycle. Drama/skits also played a role in this year's nature activities to help to better understand the processes.

Furthering natural curiosity

On display in the junior school, was a nature table with items the children had picked up through the year and felt like displaying, topic-related books, and a large poster saying, 'Curious Naturalists Ask', under which were many questions from them. Here are excerpts from teacher journals relating to the activities we did.

June 29: We wrote acrostic (words starting with each letter of a word) poems looking at leaves. Here the word was LEAF. Then we weighed the leaves and compared the weights of dry leaves and fresh leaves, there was no difference, or it was very little. We also dropped the dry and fresh leaves from the balcony in the junior school and talked about what we observed about leaves falling to the ground in different ways.

July 13: In this nature journey session, we began with a look at the *Usborne Book of Trees*. What is a flower? We talked about the fruits that we had eaten recently and what their seeds looked like. When the children mentioned eating guavas, we decided to go to the Guest House where there are many guava trees. There we were able to see the buds, the flowers and the guavas and we sketched them. That day the morning snack was guava.

July 15: Some weeks ago, as we stood looking at our vegetable plots and talked about seeds and growing plants, Anand had asked the question: What were the first plants on earth? So, in this day's session, we had arranged for a teacher to come and show us some ancient plants on the campus: mosses, ferns and liverworts. As she showed us these plants near the Biology Lab, other questions came up: how did the earth begin? When did man first become alive?

We looked at mosses through magnifying glasses and some children noticed how they looked like little plants with leaves. Ever since that session, children have noticed mosses and ferns in many other places on campus and at many other times in the day, not just in nature sessions.

July 29: As we have been noticing cycles in nature, we did some craft from Arvind Gupta's *Cycle of Life*. It showed a pod with seeds, someone planting the seed, the roots and shoots, the leaves and flowers and then the new pods and seeds completing the life cycle.

Moving to the second term, here are excerpts from a plan made by the three teachers who were facilitating the *Nature Journey* classes.

Term 2 (September-November)

Date	Activities	Actual and Suggestions
14/9	Plant *avarekai* seeds in a grid, in the vegetable plots. Scarecrow brainstorm	We pulled out amaranth that had not grown too well and sowed *avarekai* seeds in a grid format. We talked about scarecrows in the fields near the school and what materials had been used to make those. Each child then drew a picture of a scarecrow and labelled the materials used. We discussed cheap and easily available materials.

Date	Activities	Actual and Suggestions
28/9	Graphing: bar graphs of vegetables grown in the plots	Shared a book on graphs and how they show the information differently. Talked about making our own bar graphs. Children preferred to show favourite colours, fruits, shapes etc.
12/10	Continue graphs. Collect things from nature that weigh 1 kg and display them	
14/10	Play a group game about webbing predators and prey with string and seeing the connections	Talked about predators and prey and campus links and then played the game creating a web of string among the children. In the end, we showed how the web gets affected by disappearing prey or not enough predators.
2/11	Complete display of 1 kg items. Complete group bar graph.	In pairs, children went to find items like stones, dry leaves and *Gulmohar* seed pods, that would weigh 1 kg. We displayed them in bags in the junior school and asked, on a poster, 'All these items weigh the same. Can you guess what each bag contains, without looking inside?'

Term 3 (January to March)

Date	Planned Activity	Actual
18/1	Recipe for a forest	We discussed what forests have and what creatures live in them. Then, on a large sheet of brown paper, we created a forest scene with trees, plants, creatures, and water features. The children used paper, thread, origami animals, real sticks and leaves from outside, and sketching to fill their forest.
8/2	Continued sketching birds, on pages for the book	The birds we wrote and sketched about were ones from our chart of bird observations on campus: Red-wattled Lapwing, Red-whiskered Bulbul, Purple-rumped sunbird, Cattle Egret, Black-shouldered kite, drongo, Red-vented bulbul, Large-billed crow, White-headed kite

We think what we have absorbed through the nature walks experience is the realisation that there is a vastness beyond ourselves and our consciousness. We hope that has touched the children too. In the words of Ruskin Bond: 'These little miracles don't happen especially for us. Sunlight will filter through leaves, dew will settle on a web, birds will sing and a mountain stream bubble and chatter even when there is no one around to see or hear. All that is in our power is to be there. To be there, wherever we are.'

Acknowledgement

The author would like to acknowledge the inputs shared by Rupa Suresh and Nagini Prasad, colleagues through these nature modules.

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