

Nature Education at Marudam Farm School

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Nature is the world all around for children. It is all-encompassing. It is everywhere. Small children love being outdoors. They need to be out and about. It orients them, grounds them, teaches them relationships, connections, and the scale of things; it gives them rich sensory feedback.

It is said that the first sense that humans develop is the sense of touch, in many ways, it is this sense which governs our nature experience – touching the soil, picking up rocks, playing in the sand, the feel of wind and sun on their faces, the wetness of water. Of course, the senses of smell and taste follow closely and are very strong, which explains the irresistible urge to put things in the mouth, an exploration in its own right. Children perceive nature from the ground up because the ground is that much closer to them – or they to the ground.

At the Marudam Farm School,ⁱ our circle-shaped kindergarten building creates an environment where children look around 360 degrees and feel, smell, hear and see what is happening outdoors and get a feeling of being outdoors even when they are indoors. Bees come through, wasps make nests on the walls, bats live in it, frogs, rodents are permanent residents, and snakes have made

themselves welcome more than once.

The kindergarten has a solid nature education programme with an hour-long nature walk every day through the same route in the school. Our experience has been that when children continuously interface with the same route, walking through the same trees and rocks, they internalise the different seasons. This internalisation is made evident in the children's play; for example, in summer, for creative, imaginary play, like building houses, making domes, dams and ponds, they use a lot of dry sticks, leaves and twigs; in the rainy season, they use mud, pebbles and water, while in winter, they collect butterfly wings, wild berries and fruits.

Summer times are rich with collections of flowers. For instance, Flame of the Forest or *Palash* (*Butea monosperma*) flowers that fall to the ground are collected to make a natural dye which they then use on cloth to tie and dye. This summer, they used this cloth to make hand-stitched pouches for their own use.



Figure 1. A sling bag naturally dyed and hand-printed by kindergarten children.

Additionally, nature provides a playground for children to practise and develop all their new moves, such as crawling, climbing and balancing. For instance, in our school, children are supported and encouraged to climb trees, balance on rocks, crouch and crawl into holes. While they do this, we have observed how children help each other in these new explorations. The sense of where one's body is in a space is, then, often at the centre of the child's perception of nature.



Figure 2. A group of children helping each other climb a banyan tree in the neighbourhood.

Stages of growth and awareness

At age 5 to 7 years, children begin to become more conscious of the difference between themselves as 'human beings' and other elements of nature. They move from a purely sensory mode of interaction to a curious, inquiring mode, which we can see in the way they begin to make and articulate detailed observations. It is at this age that it is critical for an educator (whether in school or at home) to hone that curiosity without stifling the spontaneity of the child. The capacity and ability to engage with new experiences and make meaning from them is phenomenal at this age, and nature offers unlimited opportunities to utilise this capacity. For example, when we go into the forest with the children, every aspect of the forest fascinates them. They have to deal with different textures, thorns, slush,

dry leaves etc. They have to understand different concepts, like camouflage, diversity, temperature and so on.

In Marudam, for this age group, we do project-based learning where we connect observations to an organic inquiry – like young scientists they carry bug boxes, measuring tapes, magnifying glasses and checked paper for drawing graphs. We once observed a 6-year-old engaged in studying ants. She noticed how they were moving homes and taking their larva from one point to another and guessed that this was because the rains were about to come. Another child studied the *praying mantis* and came back to class exclaiming how different it looked from the images she had seen. When presented with a 'formal' book with real diagrams (ostensibly meant for older children), she was satisfied. This example also reminds us that children do not need to be talked down to. When they are engaged in a study born of their own curiosity, they will learn to make meaning from whatever material is given to them – therefore, we need to be responsible and give them accurate, sensible explanations.

Children are naturally alert and so are able to observe things in detail. In their excitement and curiosity, they rush to explore more, such as reaching out to touch any plant or animal that excites them, plucking flowers, reaching out to birds' nests, going after a snake and so on. At the same time, children readily understand that they are sharing the space with other beings of the environment. This provides an opportunity for educators to explain the need for silent observation and for respecting all creatures and the spaces we share.

In Marudam, we often talk about respect and care for other beings coexisting around us. When we did a project called 'Voices of Children', many children expressed themselves as sunbirds and spotted doves, which build nests around their classrooms. Very soon, we found children making caution slips around the nesting area and its environs, warning others to be careful.

In the age group of 8 to 10 years, this engagement with nature develops further, aided by the greater understanding of the world that the children are starting to develop. They start to understand that they are part of a food chain, and their experience of nature is altered by this realisation. They start considering the concept of interdependence among species. They also start paying more attention to details, like the differences between the various

bird species and their habitat. In Marudam, children often get very motivated and excited on spotting the arrival of migratory birds, like the *Indian pitta* and the *Eurasian cuckoo*; they also get curious to know where they are arriving from. Many a time, during the morning class hours, one of the children spots a migratory bird which results in the entire class going out with the teachers and welcoming the arrival of these birds. As nature facilitators in Marudam, we have come to understand that nature learning cannot be restricted to specified, structured timings.



Figure 3. A 10-year-old's painting of the Crested Serpent Eagle that he observed during a nature camp.

In Marudam, we started a patch-monitoring programme over the last six months, half a day every week, at a specific time of the day. Students choose a particular patch, it could be a small shrub area, a plant, a path that attracts a lot of butterflies, a small garden patch or a scrubby path in the neighbourhood and observe the biodiversity. They record the names of the insects, birds, shrubs, and trees in a sequence. We have experienced some magical moments and learnings out of this continuous programme. For instance, when we were observing a castor plant next to a thorny shrub, we saw a spider hunting a butterfly (Common Castor) which lays its eggs on the castor plant. At the same moment, there was a *Bronzeback* tree snake trying to hunt a small frog; a drongo caught a dragonfly at the very moment. Such rich experiences bring immense opportunities for understanding the interdependencies in an ecosystem.

As with the young of any species in the wild, every moment is a moment in which our children are facing something new and trying to understand it.



Figure 4. A child's illustration and sequential summary of things observed during patch monitoring.

And just like all young creatures, they learn a lot by observing the behaviour of the adults around them. In Marudam, both the adults and the children are co-learners in their nature education journeys.

This process is continuous and requires support and encouragement from the children's parents or guardians. We have observed that this support takes many forms and, at its core, manifests itself as a sharing of the child's excitement; some parents even become participants in the journey and not just observers. We have provided a platform for interested parents to join our nature walks, planting drives, and gardening together with the staff and children. We also feel this experiential learning and foundation at the primary school level is key to the child's concrete understanding and appreciation of concepts like adaptation, reproduction, migrations, ecological niche and so on, which are developed in the middle school.

Keeping the natural fascination of the child alive is most important. It is a wonderful journey for every child to engage with nature, and when supported by the adults around them, it has the potential to result in some of the most meaningful relationships of their lives.

Endnotes

i <https://vikalpsangam.org/article/marudam-farm-school-becoming-while-it-is-being/>



Poornima Arun is a Founder-member and Head Teacher of the Marudam Farm School and is involved in all aspects of running the school – from curriculum development to teacher training and administration. She has also been involved in creating innovative approaches to science in her classrooms for the past 20 years. For the past eight years, Poornima has been organising an annual craft week at Marudam to showcase traditional arts and crafts from all over the country. She has also been an active member of the Alternative Education Network and was instrumental in starting the Tamil Nadu chapter three years back. She can be contacted at poornima.arun12@gmail.com