

### Background

Our school is in a village near Palampur in Himachal Pradesh. Many of the children who come to the school are from homes where farming is a daily part of their lives, and for most of us, the year is divided according to planting and harvesting cycles. The land we study on was once a forest, and more recently, a tea garden and borders both farmland and a pine forest. We are lucky to have a perennial stream running by, which empties into the river Aava at the bottom of the hill. In this setting, it feels natural to us that focus on the environment and ecology should be central to our practices in the school.

### Environmental exploration

All the children from the youngest (nursery, roughly age 3 years) to the oldest (class V, roughly age 10-11 years) participate in caring for the school's vegetable garden. They help with planting, maintenance and

harvesting, and sometimes, we even cook the produce together in the school. We have found that as the children watch the crops grow, they learn the whole process of growth – from sprouting and flowering to fruiting, and once again producing seeds – better than any book can teach them. In later years, as they enter classes IV and V and study EVS as a subject, this knowledge is already tangible in their minds, and the abstractions of the textbook make much more sense to them.

We are also lucky to be housed in a larger campus where experienced gardeners grow vegetables and tend to fruit and other trees and flowers around the year. We take several walks in and around these gardens, as well as in the pine forest and the areas by the water. On these walks, along with learning directly from the gardeners about the work they are doing, we learn a lot by observation. The children notice that they tend to see more of certain species of birds in the gardens, and different species by the water. They also notice that in the pine forest the undergrowth is very different from the growth around the stream, or in the gardens. Using these observations as starting points, we are able to have important and nuanced conversations about biodiversity, climate change, invasive species, and much more. As teachers, we are also always learning in this process, starting from the preparation and pre-work we do before going on these walks to the end of our explorations. In fact, we are forced to learn more after the walks to keep up with the questions the students ask – for most of which we do not have ready answers.

Along with the campus, we also make it a point to try and explore newer and wider experiences, such as visiting the nearby government nursery when they had an unprecedented blooming of tulips or going to the Science Centre to look at displays of butterflies and insects from all over the country or learning about sericulture. This shows the students a little bit of the world outside their immediate experience as well.



Figure 1. Children grow and harvest vegetables in the school garden.

### **Critical thinking and asking questions**

We have even taken the students to the dairy nearby to witness the birth of a calf, something that was a new and wonderful experience for some, but perfectly commonplace for others. This experience led us into meaningful discussions at all ages, from the youngest children who wondered at the fact that we drink the same milk as the baby calf does, to the older ones who asked out loud about human 'mating' and birth. We also see the scope for engaging in critical thinking and questioning at all ages triggered by these experiences, which pushes us to engage more deeply as well.

We have a Nature Table in the school, where any child or teacher can bring interesting things to share with the school from around their homes or places, they have visited. The entire school can access this table, and sometimes, classes are taken to curated collections in groups. Some of the students have challenged us there as well – 'You tell us to not pluck flowers, but you yourselves have picked these flowers to bring here'. This kind of critical questioning is very important in the teaching-learning process.

### **Adapting to young learners**

What we have seen is that the younger the children are, the more excited they are to learn. We sometimes miss out on this because we think that certain things are 'too complicated' for very young children to understand and so we do not engage in certain conversations. However, the children are ready for these; it is we, teachers, who need to find the right way to talk to them. Young children need practical, hands-on experiences. If we try to explain the parts of a flower using a diagram on a blackboard and insist on their memorising the terms, petals, sepals, anther and so on, it will definitely seem 'too complicated' to the children. But if we first look at different kinds of flowers and identify how many of them have similar aspects, and carefully observe the different parts, when we come to naming, whether later that day or a later year, it makes much more sense to the learner.

### **Knowledge consolidation**

It is important to consolidate this knowledge, and perhaps that is an area we need to work more on. At one level, we need these different kinds of knowledge in order to build up as the school grows, so that the learnings are not isolated or stagnated

– what they learn at age five, should still be relevant and built upon at age twelve. For that, we need planning and consistency across age groups and conversations that consolidate knowledge. As children grow, these experiences also need to be translated into textual, sometimes even abstract, expressions that the schooling system requires. Most of our students will be moving into mainstream government and private schools and will hope to move into colleges where they can take their studies further. For these processes, learning to give the responses expected in examinations is important, and we are in the lucky position of being able to start from experience and build, using conversations, towards a better understanding and mastery of their textbooks as well.

While the experiences and practices themselves are ingrained in our day-to-day functioning, we are not always able to have these consolidated conversations to give these experiences the closure they deserve. We do try using strategies, such as drawing our observations of a particular tree in different seasons, having classroom discussions and sometimes writing our thoughts after an experience. We also try to turn interesting 'distractions' into learning moments, such as when an unusual beetle enters the room and is trying to escape, or when a student absent-mindedly (or so it seems to us) is staring out of the window and exclaims loudly when a bird she has not seen before lands on a tree outside.

We try to always celebrate these kinds of observations, just as we do the asking of questions. We also encourage students to discover answers themselves, using the resources around them – the library, adults in their homes and, increasingly, mobile phones and other technologies. Sometimes, they share these learnings with the whole school in our Friday sharing assemblies, and those memories stay all the more with the student, the teacher and the other learners. We also connect our experiences with the local environment when engaging in activities, such as singing, clay modelling and other arts and crafts. But we still feel that we can do a lot more in this area. A better-planned progression of activities and experiences across age groups will also make the learnings more meaningful for all of us.

### **Our learnings**

Some of these activities and experiences feel over-simplified, or perhaps very obvious – people have questioned us if these can be categorised

as 'learning'. But over the years, we have found that these small experiences add up in invaluable ways to help students develop a sense of how the world works. There is also no better teacher than the environment when it comes to learning how to value things, and how to develop sensitivity for things and beings apart from ourselves. When the students grow older and have more academic or serious conversations about climate change, balance in the world and their lives, their own understandings of what their needs are and what is and is not exploitative, it will be these experiences that will form the foundation for those ideas.

All of this is not limited to the students, as we have mentioned before. As teachers, we learn daily as well, and we learn a lot from the students, both from their questions and from what they bring of their lives and observations. There have been many times when they have pointed out something we have not considered before – how a particular kind of mushroom favours a particular kind of wood or the behaviours of insects. A parent once conducted

a session on 'bamboo', covering its life cycle, many uses, and cultural value in different spaces. The session ended with her and the students eating a dish made from bamboo shoots that they had cooked together. One of the students raised questions about the morality of eating the 'baby trees' (tender bamboo shoots), something that had never occurred to any of us. Children point to minute things in the hedges and help us understand how even a small shrub can host an ecosystem.

When we ask about family members in their houses, almost every child includes their animals in the list they give us, their dogs, their cows, their goats – this is a sensitivity we ourselves do not have, making a distinction as we do between 'family' and 'pets'. When a snake is spotted on campus, children have no fear – only curiosity, often accompanied by concern for the snake. The fear and potential harm from the snake are almost invariably fostered by us. Our role as teachers is to find ways to make sure the children neither lose their curiosity nor develop our fears and inhibitions.



Figure 2. A student preparing a bed while learning about different soil types.



Figure 3. The Udaan School, Village Kandbari, Palampur, District Kangra, Himachal Pradesh.

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