



# ART AND ECOLOGY

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**Art is a powerful medium to teach students about the importance of nature as it stimulates them to think and feel. This article explores a few simple art based activities that can be used to sensitize children to their local ecology and environment.**

Our increasing disconnection with nature is an important cause of many of the negative impacts that humans have on their environment. Thus, it is now widely believed that in order to live more sustainably, we need to create educational experiences that help children develop greater sensitivity and appreciation for the natural world.

Most national and state education boards approach this objective by making environmental education a compulsory part of the school curriculum. For a variety of reasons, however, this seems to have little influence on the minds of young learners. The curriculum for environmental education focuses on topics like environmental pollution, global warming, ozone layer depletion etc, which young students cannot relate to easily. Many teachers, and students, feel overwhelmed by the burden of teaching (and learning) yet another subject in an already packed syllabus. Often this 'subject' is neglected or treated like any other subject that has to be studied and 'memorized' to get through exams. Quite naturally, the teaching methods used in environmental education seem to have little influence on the minds of young learners. In contrast, there is a need for students to not just learn scientific facts about our natural world, but also enhance their sensibility towards nature and understand the environmental issues

in their immediate surroundings. To do this, we need to explore and experiment with methods and mediums that can awaken and nourish the sensibility of children to the natural world.

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Throughout the history of humankind, art and education have been interrelated. Indeed, knowledge was often transmitted through art. Now, however, the two are completely dissociated in many educational systems of the world. Using art as a tool for teaching stimulates children to think, feel, and become more sensitive. Sensitivity towards nature can also be achieved through a variety of art-inspired activities, particularly when we work closely with nature. In fact, when it comes to learning about the natural world, art has an ability that conventional approaches lack.

To use art to teach children about nature, one need not be a trained artist or an expert in the subject. Individuals with a curious, exploratory and creative mind can experiment using the medium of art to come up with innovative art-based activities. School

teachers can easily teach ecology and environment through some simple art-based activities. These activities need not be too complicated or highly creative. Even simple experiments can make a difference to the quality of learning in children. In this article, we will explore a few such simple activities and experiments that have been used to sensitize children about their environment.

## Observing through art builds confidence!

One experiment on teaching children about the natural world through art was conducted with students living at the foothills of a Tiger Reserve. Before plunging into art-based activities, we used a questionnaire based survey to get an estimate of the average knowledge level of students about their local biodiversity. Surprisingly, the survey revealed that these students were unaware of the diversity of wildlife that existed right in their backyard. Although it would have been ideal to take students into the forest and give them some authentic experience of this wildlife, it was not possible to obtain permission to do so. Instead an attempt was made to teach students to learn to identify wildlife in a classroom session using art. Students were shown photographs of the most important mammals known to exist in the tiger reserve, and asked to differentiate between species belonging to the same family. They were divided into two groups – with one group assigned the task of just watching the photos, and the other group asked to sketch the key differences between the various species they were seeing. Since the forest had five species of primates, two species of big cats, and three species of ungulates, the children had to learn to remember the main characteristics of each of these species in order to differentiate between them. A post-workshop survey revealed that the level of knowledge was distinctly higher among the students who sketched the mammals as compared to students who only

observed their photographs. Sketching helped students remember features of even animals that were otherwise unfamiliar to them. Significantly, this increase in knowledge level was also evident among those female students who chose to draw. This demonstrates that art can be a useful tool for children with limited opportunities to spend time outdoors, especially in villages where girls are kept indoors after a certain age.

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**Fig. 1.** Sketching helped children remember the distinguishing features of unfamiliar animals.

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Similarly, children were tested to see if they could remember the characteristics of a tree better by just observing it, or by drawing it. Each class was divided into two groups. One group was asked to simply observe the different trees that grew in their school campus, while the other was asked to sketch different parts – like leaves, fruits and flowers – of each tree they observed. They were also encouraged to study the pattern of tree barks by taking an impression of the bark on a sheet of paper using crayons. Observations recorded by both groups in data sheets provided to them after this activity clearly showed that those who had sketched the trees

they'd observed, were able to remember differences like those in the shape of the leaves or their barks better and longer. They were also able to draw the leaves or fruits on the black board without referring to their sketches from the field. It was also noticed that when children were asked to select trees for this activity, the students who were asked to just observe trees chose species that they were already familiar with, like Tamarind, Papaya or Fig. These students were already unsure of being able to remember all that they saw and therefore choose trees that they already had some knowledge about. In contrast, students who were asked to sketch their observations often chose trees unfamiliar to them. Art helped increase their confidence to explore and learn the distinguishing characteristics of new trees, which in turn increased their knowledge levels.



**Fig. 2.** The excitement of outdoor sketching.

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Similarly sketching can be used to learn to identify birds, insects, and other life forms. Though nature trails helps students look at life forms that they may have ignored before, sketching helps them keenly observe and retain what they learn from these observations. For example, when a group of village students were challenged to find

animal-homes and sketch them, students spent a long time observing the details of different animal homes, and the animals that made them (if present). To draw these, the students paid great attention to some of the minutest details of these homes; details that they may have missed if they had just briefly glanced at the homes while on a nature trail.

This activity can be conducted even within a school premises. Teachers can ask students to look for animal-homes.



**Fig. 3.** Drawing an ant nest, hidden under the blade of grass.

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Drawing their attention to how spider webs or wasp nests are also examples of these, may help ensure that children don't focus only on bird nests, which is something many of them tend to do. Teachers may also have to give students enough time to observe and sketch the different animal homes they discover. The sketches made during this activity can be displayed at the end of the session, and used to initiate a discussion to ensure that the entire group gets to learn about a variety of animals and their building skills. This group discussion could also be used to bring out the uniqueness of these animals, requirements for their homes, and the threats these homes must protect them against, etc.

## Encouraging nature-inspired art

During my experience as a nature educator, I have faced many situations where students have shied away from sketching. The pressure from teachers and parents to create beautiful looking art work; judging the art work based on how closely it resembles the object being drawn; and other such factors discourage several children from engaging with art and exploring their creativity. Nature-inspired art helps

students break such mental barriers as they are allowed to work with natural material, without any expectation of seeing any specific or defined form as an end product. What matters is the experience that the child goes through while engaging with art, and not how the art work looks after completion.

In schools where children are never exposed to drawing, students have expressed fear of drawing or painting. In such cases, given limitations of time, I have preferred to work with natural materials to create art. In this way,



**Fig. 4.** Nature-inspired art by a group of middle school students of a tribal school.

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students are not limited to using pencils, papers and colors. Instead, they learn to explore the various colours and textures of the natural world. When students are asked to collect material from their natural surroundings to create an art work, it opens them to all that nature can offer – from mud and stones, to leaves, seeds, fruits and broken pieces of wood, dried grass, dead insects and what not! They suddenly discover new things in nature that they had never bothered to look at before. They also get an opportunity to feel these objects with their hands. Allowing students to create an art work without any theme helps them to feel free to explore their own creativity. They learn to play with color, texture and design without any inhibitions, and create some extraordinary art work in the process! Since these works of art are ephemeral by nature, they are recycled into the earth without causing any detrimental effects, and the children take back the experience with them, learning to look at nature in a new way. This is just one enjoyable way of encouraging children to

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develop or improve their relationship with the natural world.

### Environmental awareness

Art can also be used as a medium to share environmental messages and to create awareness about critical ecological issues specific to their villages/towns/cities.

Art-based activities can also be used to make students more aware of their own role in shaping local ecology. For

example, I asked students from a village, who were in the habit of pulling down bird nests, to build nests of their own. To do this, the students were first asked to collect materials like grass and leaves that they had observed birds using to make nests. Then, they were to use these materials in any way they chose to construct nests that could hold eggs. After working on this task for several hours, some of the children managed to come up with nests that were strong enough to meet these criteria. However, many others had nests which were flaccid. This simple activity helped students realize that while they could destroy nests in no time at all, it takes birds a lot of time and effort to build them. When the students were told that the nests they had built so painstakingly would be discarded after the activity, they were horrified, voluntarily promising to never destroy a bird nest again!

Waste management is another important issue that children need to be exposed to as early as possible in life. Art was used differently in this context. A typical session, for example, would start with discussions about waste management, reducing and recycling waste, and preparing compost pits; gradually leading up to the up-cycling of discarded waste using art. Then, children were asked to bring discarded stuff from their homes and turn these



Fig. 5. Bird nests created by students in Relli Village, Kalimpong.

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Fig. 6. Discarded carton boxes being upcycled at Relli Village, Kalimpong.

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things into utilitarian products. The transformation of waste into a beautiful product is always an eye opener for students, getting them to think more carefully before discarding anything!

### Conclusion

Many other art forms – ranging from literature, poetry and music, to dance, sculpture and theatre are embedded in Indian culture, and can be used as a means to help children develop awareness and a sense of connection to 'nature'. For example, even the performing arts can be a great form of teaching, with students encouraged to take on the role of raising awareness about the necessity of nature conservation to other, children and adult, audiences. Art allows us to reach out to even some of the most underprivileged and marginalized communities, when all other forms of communication with them fail.

Using art to teach ecology, however, requires us, as teachers, to develop a certain sensitivity, playfulness and creativity. This article only explores 'some' ways in which art can make the



**Fig. 7.** Holders made out of discarded water and shampoo bottles. These were decorated with sketches of animals that people are often scared of or think of as bad omens.

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process of teaching and learning about nature more enjoyable. I hope that it

encourages you to use art more often and more creatively in your classrooms!



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