



Decoding Spatial Intelligence – Learning can be fun

Spatial intelligence is the ability to comprehend 3 dimensional images and shapes. This is a primary function of the right side of the brain and is used when solving puzzles, figuring out maps and taking part in any type of construction project. Apart from vision, it also incorporates abstract and analytical abilities that go beyond merely seeing images.

Spatial intelligence is also referred to as “visual thinking”. When you go for a hike, there is no physical path laid out but the hiker will use the tools to visualize a mental path using the maps and compass to derive the best route.

Spatial intelligence skills are essential in a game of chess where you have to use strategy and skill in not only planning your moves but anticipating what moves your opponent will make. Another good example of a game that tests and improves spatial intelligence is the famous Rubik's Cube puzzle where the brain organizes objects in the mind to form a solution.

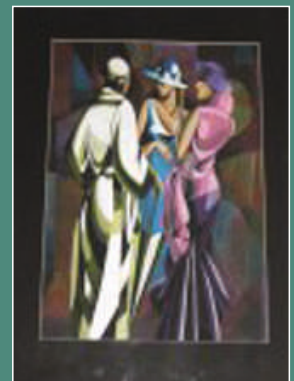
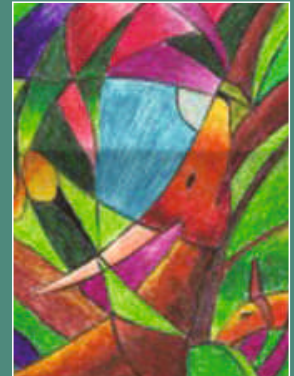
Children who excel in spatial intelligence love creating figures with shapes, patterns and objects. They are exploratory in nature and they always like to break down things just to see what is inside! Can we improve a child's spatial thinking skills? Yes. Here is a sample of some fun activities to train children on spatial thinking:

- Buy them plenty of books that contain images and pictures and let them weave a story around these.
- Make sure their room looks vibrant with rich colours. Keep different objects, patterns and forms by their bedside and they will start playing in their own way.
- Bring home mechanical building toys and see how they explore their minds.
- Teach them chess; this game is very helpful in teaching predictive powers as well as visualization.
- Take them to a park and ask them to paint whatever they see in their mind.

The Editors

MDA Merchandise

Greeting cards made by children of Ananya!



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Spatial Intelligence – an overview

Spatial Intelligence is an area in the theory of multiple intelligences that deals with spatial judgment and the ability to visualize with the mind's eye. It is defined by Howard Gardner as a human computational capacity that provides the ability or mental skill to solve spatial problems of navigation, visualization of objects from different angles and spaces, faces or scenes recognition or to notice fine details. Gardner further explains that Spatial Intelligence could be more effective to solve problems in areas related to realistic, thing-oriented, and investigative occupations. This capability is a brain skill that is also found in people with visual impairment. As researched by Gardner, a blind person can recognize shapes by a non-visual way. The spatial reasoning of the blind person allows them to translate tactile sensations into mental calculation of length and visualize form.

How we do it?

At Hydra, The Multiple Intelligence Foundation, we do several activities that trigger the spatial intelligence of a child. Some of them include, drawing, painting, jigsaw puzzles, Rubik's cube, 3D puzzles, tangrams, model-making and clay-modelling. While these activities are considered mainly spatial, there is always an interaction of the other intelligences as well. Most of these activities begin at the basic level, which is usually handled inhouse, by one of our facilitators. For example we choose a subject. Let's say clouds. We take the children out to observe the clouds, talk to them about how each cloud looks; show them an interpretation of clouds by different artists. The children then draw clouds the way they want to. Though this is a spatial activity, the other intelligences that are triggered are naturalistic - when they are outdoors looking at nature, interpersonal when they talk to and question their

peers, and of course bodily kinesthetic when they actually execute their painting. When one type of intelligence is activated we involve other intelligences too. Therefore, by strengthening one intelligence it also strengthens the others. This holds good for almost every activity.

After this basic activity, we take the children to an artist's studio where they get to interact with other artists, watch them work, and often try their hand at something new. This gives the child an idea of how things work in the professional artist's world. They also get to see the scale of things - large pots of paints and huge canvases. The artist also interacts with them and shares techniques. This is an exhilarating experience for the children.

Children are encouraged to express themselves spatially. After a field trip, they recall their experiences by making a clay model or by drawing. They are also encouraged to express their feelings through art, after a particularly emotionally draining session. In our experience we have seen that some children who take time to or have not opened up during a session, very beautifully express how they feel in the form of a painting.

Children with spatial intelligence learn best by exploring a subject area using diverse art media, manipulatives, puzzles, charts, and pictures.

**Swetha Krishna and
Yashodhara Narayanan
Hydra – A project of Multiple Intelligences
Foundation**

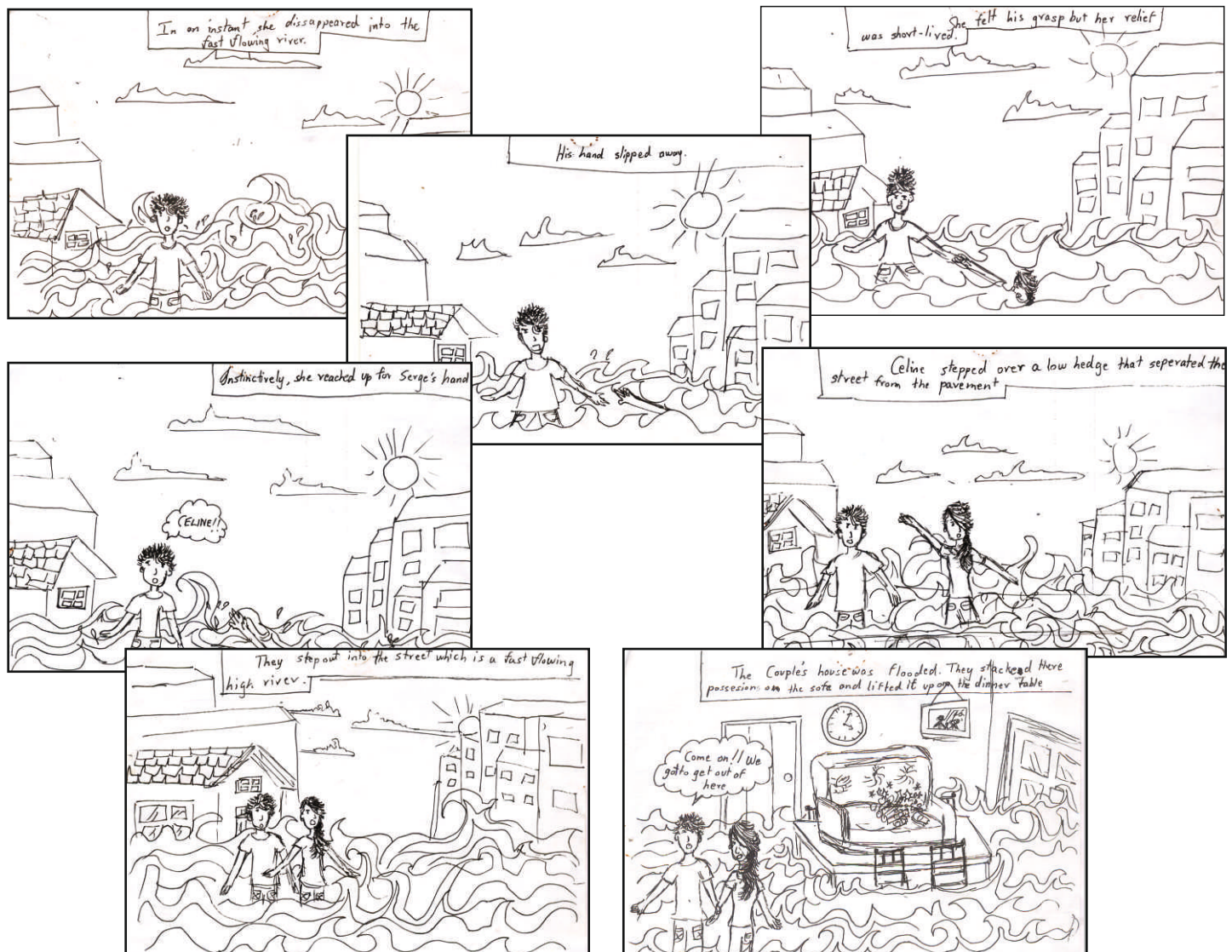
Spatial Intelligence as a tool in learning

Here are two instances of how learners in Ananya use Spatial Intelligence to understand and remember their lessons.

Serge and Celine's house is flooded. They stepped out into the street, which was a fast flowing river. Celine stepped over a low hedge that separated the street from the pavement. In an instant, she disappeared below the water. Celine felt Serge's grasp but soon lost it. He thought she was dead. Celine was being swept underwater. She knew she was 10 meters from the manhole she had plunged into. The current made it impossible for her to swim back. She managed to grasp a pipe. She thought she would never be able to see her 12-year-old-daughter Amandine or her husband Serge.

The firemen tried to help her but they missed her. Buffeted by the force of water, she suddenly realized she was out in the open in a flooded ditch. There were houses on one side and fields on the other. She was pulled out by Jack Poderoso a 45-year-old man. He calls her husband and her husband's brother. The fire brigade also arrives. She had fought the floods for over 5 hours and was exhausted.

Sarayu
Class 10

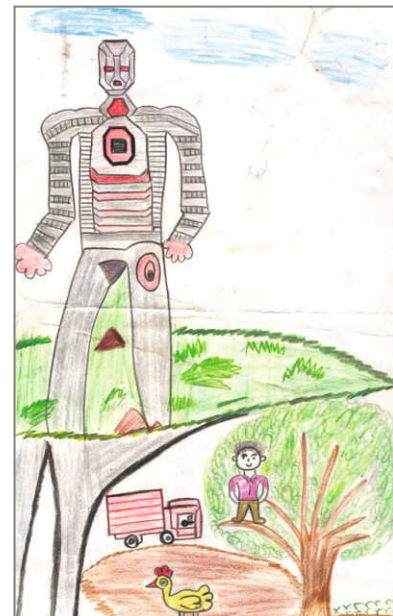
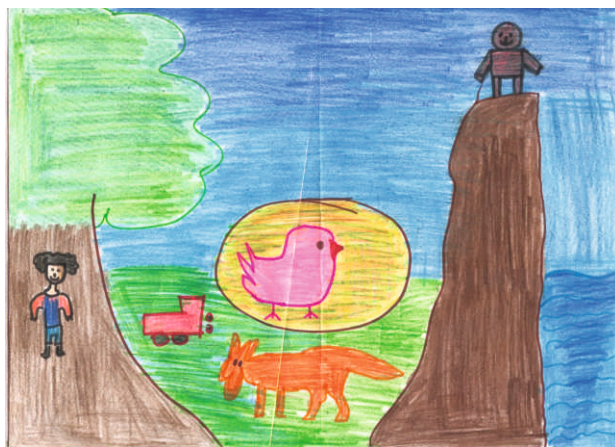


Iron Man

Nobody in the village knew where the Iron Man came from. He was very huge and made of metal. He also ate metal. He troubled the people of the village. They could not call the army or the police as no one would believe them. They decided to deal with him on their own. They dug a huge hole in the field and kept a huge red lorry as bait. They thought he would fall into the pit and they could crush him with bulldozers. But their plan failed. The Iron Man

did not come. After many days they thought of filling the hole as someone may fall into it. The hole was beautiful and they had spent a lot of time and energy on it. So, they just put a sign saying "Danger! Keep off!"

Dhawal
Class 7



Congratulations!

We are proud that our students of Class X State Board who appeared for the April – 2015 exams have secured 100% results with good marks. Congratulations to all the students.

High scorers are:

Mahatheswaran - 457/500 99 Science, 96 Maths, 99 Social Science

Nithya Ramaya - 436/500 99 Science, 96 Social Science

Student's Name	Language	English	Maths	Science	Social science	Total
1. Sarayu	72	82	95	97	76	373
2. Sudharsan Rathnam	—	58	41	82	54	235
3. Hassim	56	75	61	97	84	373
4. Mahatheeswaran	74	89	96	99	99	457
5. Ramaya	82	79	80	99	96	436
6. Rajpurush	—	72	65	86	55	278
7. Amarnath	—	62	47	74	35	218
8. Sri Mukudhan	66	77	59	92	63	357

Solving the Rubik's Cube in under 2 minutes

Nawines Pravin is 15-years-old. He likes spatial activities and is good at them. He is good with logical puzzles. One of his teachers had given him a few tips to solve the Rubik's cube, which motivated him to develop his own strategies. Today he is able to solve the Rubik's cube in under 2 minutes.

You can watch him here: <https://www.youtube.com/watch?v=QScN2BJcCMo>



Success at Vana Vani School

During the process of setting up the resource room in Vana Vani, it was found there were many students in the primary, and in the middle school who showed features of having difficulties with learning. Their numbers were not manageable by the two special educators in the fulltime resource room. The principal was also concerned about few children in the 8th who were going into the 9th without the basic skills of reading and language. The solution was for all teachers in the primary and few teachers in the middle school get training to help those children who have mild difficulties within the classroom and send only children with severe difficulties to the resource room. We also suggested one period a week be allocated for Language Development, thereby benefitting all ESL students. This kind of training is the first of its kind to be done by MDA in the school premises for all their teachers. The numbers were restricted to 35 teachers. It was a five-day training programme. This is what V Indumathi, the special educator at Vana Vani had to say:

It gives me great pleasure to thank MDA for coming up with a tailor-made workshop for the mainstream teachers of Vana Vani. I could see the immense hardwork done by team MDA in putting together the content in a good and well-structured way. The trainers were very successful in reaching out to the audience by their interactive sessions.

I would like to make a special mention about the handbook, which is a useful guide to the teachers. It gives sample difficulties and the strategies to handle them in the classroom. The whole program was lively and interactive and most participants responded that this training was very useful for the classroom approach. They committed to apply the knowledge, skills, and experiences they learned from this course into their teaching.

The small story

A little girl was holding two apples with both hands. Her mother came in and softly asked her with a smile: could you give your mum one of your two apples? The girl looked up at her mom for some seconds, then she suddenly took a quick bite of one apple, and then quickly of the other. The smile froze on her mother's face. She tried hard not to reveal her disappointment. Then the little girl handed one of her bitten apples to her mum, and said: mummy, here you are. This is the sweeter one.

No matter who you are, how experienced you are, and how knowledgeable you think you are, always delay judgment. Give others the privilege to explain themselves. What you see may not be the reality. Never conclude for others.

Revathy Sankaran

Well-known Tamil film actor/TV anchor, story-teller



Alumni Column

I am Harindran and this is my story.

The mainstream school I was studying in recommended I go to Ananya since I was not able to compete with other students in my class, and frankly speaking the syllabus was too voluminous and I was under too much pressure. I was asked to leave because I was "very poor in English and bad at Maths."

When I came to Ananya it took me some time to understand what the teachers were trying to do to help me. Ananya taught me the "art of studying" - to make subjects simpler and learn them in an easier way.

I had loads of time and my own space to decide about my career. I was also able to excel in other activities other than my studies. When I wrote the 10th board exam my primary objective was to get a good score in the subject in which I was weak. For this I sincerely thank Kalyanaraman Sir who taught me Maths and I scored 94% in my board exams.

I completed my higher secondary schooling in KRMM School and B.com from Vivekanda College. After that I graduated with a BL from the School of Excellence in Law. Apart from practising Law I also take up building contracts and have successfully completed construction and handed over 6 villas to date. I am doing more building projects on ECR. Finally I want to say that when students join Ananya, they are like wet clay, and by the time they leave, they have been beautifully shaped into people who can compete confidently in this competitive world. I realized this long after I left Ananya.

Harindran Devakumar



Remediating Tamil

Dr Mullai Ramaiah is a retired Professor of Language and Linguistics from the University of Malaya. After her retirement, she became interested in teaching children with dyslexia after she had undergone a special training programme on “Orton-Gillingham” methodology for teaching dyslexic children. Her interest to develop something similar to teach Tamil language started about 4 years ago when she came across children struggling to read Tamil.



Dr Mullai has developed an eclectic remedial methodology “ஒலி வழி எல்லோரும் வாசிக்கலாம்” with inputs from various sources along with a kit. She has been using this methodology in schools in Malaysia where Tamil is a medium of instruction and has found success through her innovative methods. She shared her methodology and kit the first time outside Malaysia with the resource persons of Madras Dyslexia Association. Eighteen resource persons from MDA attended the four-day workshop in June.

Dr Mullai presented her methodology in a very systematic way taking us through her complete work. The kit is very well conceived with clear instructions to teachers. The activities used multi-sensory methodology



The workbook for students is also designed with exercises that are sequential and covered all the aspects of remedial teaching. She has developed a strategy called ASAI an equivalent of syllabication that would help children to synthesize and blend sounds with ease. This would promote fluency in reading. Her systematic introduction of sounds followed a progression from easy to difficult. This methodology is now being tried at Ananya in the Junior section.

She also made a two-hour presentation for nearly 60 teachers from mainstream schools and remedial teachers. The response from the participants was positive. This has certainly kindled interest in teaching Tamil differently and we hope there would be developments as follow-up to this programme. Starting Tamil remediation for dyslexic children is a possibility that MDA resource persons are probing. Dr Mullai will be glad to conduct workshops in Chennai and other cities like Coimbatore, Madurai, Salem and Trichy to take this methodology to the Tamil speaking population. The kit is also available for sale on request. Those interested can contact:

Geetha Raghavan, MDA, 044 28156680

Snippets

Junior children of Ananya, went on a field trip in March to Nizhal, a tree park in Kotturpuram. A garbage dump 5 years ago, it was converted into a tree park. The park has around 100 varieties of rare species of trees. Lead by Prema Veeraraghavan, it was an eye-opener for the children.

Trees were explained by their names: Naaval (Syzgium Cumini), Thekku (Tectonia grandis), Pungam (Milletia pinnata), Neer marundu (Terminalia arjuna), Panai maram (Borassus flabellifer). Children were thrilled to know that a few common trees had unusual scientific names. They also learned about methods of irrigation and how leaves shed by trees become manure for them.

Lata Vasanth
Special Educator

The 8-week intensive training ended in March with all the 22 trainees completing their internship at Ananya. Two of them are joining the resource rooms set up by MDA in two mainstream schools. Three are opting to do an extended internship at Ananya.

Mainstream teacher training that happened in the last week of April had the highest number of participants till date. Nearly 70% were from down South. Accommodation was provided at Saradha hostel, Ramakrishna Mission. With more practical tips and less theory the three-day workshop was tailored for non-English speaking participants.

Geetha Raghavan
Special Educator

People For Cattle India showed a film on Prevention of Animal Cruelty, followed by a talk on how children should not tease animals, show sensitivity and care in treating animals kindly by keeping a bowl of water for thirsty animals and so on.

Advocating the use of products "NOT TESTED ON ANIMALS" was also discussed.

**Ananya Learning Centre,
Seniors**

An awareness program was held on 29th March jointly by the MDA and the Indian Association of Pediatricians at Radisson Blue. The workshop was attended by pediatricians across the city and the focus was to provide them with information to identify and aid children with dyslexia, as pediatricians are the first certified caretakers most children come in contact with. Harini Mohan gave an introduction to dyslexia. Dr Suchitra Ramkumar spoke about the neurodevelopmental aspects of dyslexia.

Harini Mohan
Special Educator

Madras Dyslexia Association

94, Park View, G.N. Chetty Road, T. Nagar, Chennai 600 017
Tel: 2815 6697, 2815 7908
Email: ananyamdachennai@gmail.com
Website: www.mdachennai.com

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Editorial Team - Ram S, Kalyani Balakrishnan,
Mrudula Govindaraju

