



STEM Land Newsletter

Volume-5, Oct '18-Jan '19

About STEM (Science Technology Engineering Mathematics) land

STEM Land is located in two outreach schools of Auroville (Isai Ambalam and Udavi school).

Children come to STEM Land for their Mathematics, EVS and Science classes. They learn Mathematics, Electronics, 3D-Printing, Programming, Mindstorms (Robotics) and learn to play strategic games that enhance logical thinking.

The children take responsibility of their learning and plan their goals. They work individually, in pairs or peer groups and ask for support from facilitators when they need it. This self-directed learning is based on Sri Aurobindo's first True principle of education (Aurobindo, 1910); "Nothing can be taught". With younger children we work on real life projects that impact their surroundings. We believe a nurturing environment can support a child's learning.



STEM land Birthday celebration

On 16th October 2018 we celebrated STEM land's 3rd birthday in Udavi school. Children were back from their first term holiday a week before that and worked on what they wanted to present during the celebration. Some children who attended the scratch course conducted during the first term holiday created projects on Scratch. Others put up puzzles and games.

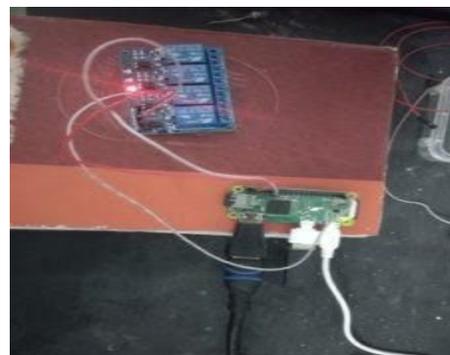


Scratch Projects

Children showcased their projects during STEM land birthday. They were explaining and sharing what they learnt through this project to others.

Raspberry pi Course

Matej Ukmar, a software engineer by profession and has been dabbling with the Raspberry Pi that he would like to share what he has learnt. We learnt how to download and install the Linux based OS Raspbian, basic usage of Linux shell and ssh, pin details of the raspberry board (input/output) controller, create remote controls via web service and collection of sensor data in the cloud.



Scratch Course in Thamarai learning center

In Thamarai Learning Centre(Evening School), STEM land team offered a basic scratch course in the evening for 5 days from 5.30 PM to 7 PM. The facilitator in that centre didn't know about scratch so they also joined the course. There were about 15 children and 4 facilitators. We introduced the different blocks and its function in scratch. Children started to explore and were excited in exploring the different options in Scratch. On each day children from Thamarai learnt and worked on different task. Most of the children loved and enjoyed building their own game. This created confidence in children that they can make many things using scratch.



MTA (Mathematical Teacher's Association) Conference @Mumbai (HBCSE)

Two of us presented at the MTA conference in Mumbai from 3rd-5th in Jan. There were about 100 people from different states.

Our research paper "Learning Mathematics concepts through Projects and EBD(Education by Design) methodology" was accepted as a poster presentation. The paper gave case studies on how children can learn

mathematics by building projects, using physical technology eg. building/construction and virtual technology such as programming. It also describes how children learn conceptual ideas by programming a computer, needing to break down their ideas into smaller bites for a computer to follow. At the conference we met many people who are working on the Mathematics education. People who were attending the conference were school teachers, college professors and also academic researchers.



Welcome Anupama

Anupama jagadeesh joined us in January this year (2019). She deeply cares about self-exploration and moved to Auroville from Seattle recently. She has 18 years of experience in web based applications for various corporates in the US. As a senior development lead she delivered products primarily on Java based platforms. She is very interested in alternative education and she trained herself in Montessori and has home schooled her two children.

She works with the STEM land team build the next version of the school database software in the afternoons after 2 p.m. It is really helpful for us to have a senior and experienced person to work with.

Discussion with Krishnan Maharaj from Ramakrishna mission

We met Krishnan maharaj from Ramakrishna mission in Chengalpattu in January. He was managing the polytechnic run by RK mission and works in building personality and leadership. We had a discussion about the situation of engineering graduates now a days and what are the causes for it. We also discussed about the deep desire to learn.



Development through drama course

Three of us went for this workshop. It held in January 2019 for 2 weeks. Tracy walked us through few new activities to develop various facets of the children including concentration, Through the workshop we learnt to introduce concepts through drama.



MES10 Conference

We went for the Mathematics Education and Society Conference end of January. It is an International Conference which happened for first time in Asia in Hyderabad university. There were 160 people in all with 90 odd people who had traveled from 20 different countries. It was a five day conference with a focus on dialogue and discussions on papers presented which made it a very interactive conference bringing many perspectives about each topic. We went to present a paper "Factors and Interventions Influencing Children's Attitude Towards Mathematics" and a poster "Deep Learning of Mathematical Concepts Through EBD and by Using Materials". In addition to the papers each day there was a plenary session that brought forward an area of research including two people who responded to the presenter followed by discussions.



EBD's (Education By Design)

In the 2nd term the following EBD's and project are done by children. Elephant, Birds, Photography, Making cake for Christmas and Republic day.

Our Team

We are a team of 12 engineers at STEM land. Our projects range from python programming and more recently to analog VLSI layout.



(Left to right) Sanjeev Ranganathan, Murali, Ranjith, Poovizhi, Sundar, Saranya, Pratap, Arun, Sandhiya, Naveen, Logeshwari, Abilash, Anupama (not in picture)

Support A Child Program II Phase

In partnership with Asha for Education we have set up a Support a child program for Isai Ambalam School the school we all volunteer in. The support will cover the needs of running high quality programs at the school including teachers salaries; nutrition; activities in sports, music, swimming and STEM land activities. The support for a child is Rs.11,000/year (\$168/year). We have successfully completed Support A child program Phase I covering children from 3rd grade(68 children) onward. We are still looking to support 12 younger children in the second phase. Please sign up to support a child.

Contributions can be directed towards

Auroville Unity Fund

(with a note for STEM land)

and mail to Dr. Sanjeev Ranganathan,
STEM land Udavi School, Auroville,
Edayanchavadi, Tamil Nadu - 605101

All donations are 100% tax deductible in India.

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