

Annual Report 2015 – 2016

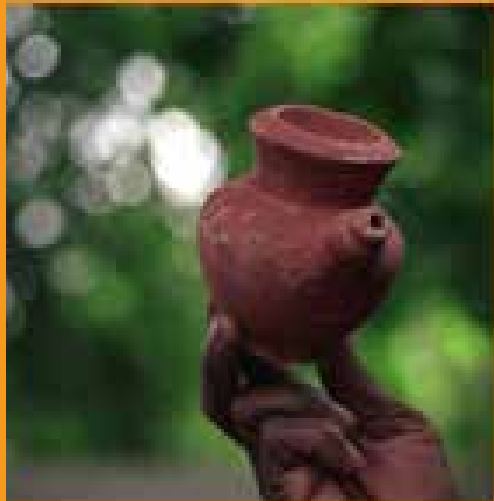
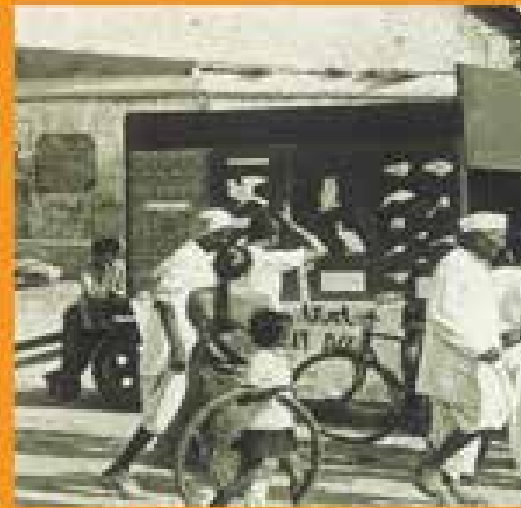


Manthan Educational Programme Society, India

C1, Sukruti, Manekbag, Ahmedabad - 380015. INDIA

Phone: 079- 26766571 Email: abhay.manthan@gmail.com

Website: www.mepsindia.org



About Manthan

Manthan Educational Programme Society, India is a not for profit organization focused to ameliorate and instill fresh methods in science communication and entrepreneurship development amongst students and craft artisans at large. Manthan strives to apply innovatively planned and designed strategies in its projects with professional trainings and hands on outreach material.

For more than a decade Manthan has been involved in Entrepreneurship Development across several districts of Gujarat. Manthan focuses on using Science and Technology as a medium for Entrepreneurship Development. Special training and learning modules are developed for several different areas of works in different regions.

Manthan has established a Community Science Centre in the Tribal District of Narmada, Gujarat. The motto of the science centre is to generate science awareness, thereby creating a better understanding of science, exploring hands-on approach towards science learning amongst children, youth and community. Manthan has been a Pioneer in developing the idea of Science Awareness amongst people through Folk Mediums like Puppet and Exhibits on Camel Carts and educating students with the help of interactive Science Toys.

Manthan developed Hands-on Activity kits on Subjects like Solar Eclipse, Earthquake, Modern Physics, Biodiversity, Understanding Miracles, Adolescence, Health, Astronomy, Energy, Space, etc. that reached the doorsteps of several millions of members across the country with the support of Governmental and Non Governmental agencies.

From the Director's Desk

It is my privilege & pleasure to present the Annual Report of Manthan for the year 2015-16. Annual Report will serve as a mirror reflecting various achievements, aspirations and new initiatives of the our organisation. Honest communication & practices that establish trust in the stakeholders have been the hallmark of Manthan. The Annual Report of this year has a new look and it presents information in accordance with the promise we made last year to focus more clearly on the priority areas.

We will be focussing on I-Stead programme for the future. Technology and Design for Sustainable Craft Sector program for artisans in Kutch and Saurashtra region of Gujarat will be helping in transforming the lives of artisans. Our main focus is design and craft which will change the outcome of work done by artisans. Special Emphasis will be given to Craft Entrepreneurship. The products made by the Craft Entrepreneurs will be sold and be launched in the market under a specific brand. Thus making the villagers identify the brand and the product.

This year we have the number of beneficiaries from our Manthan Lok Vigyan Centre has increased upto 56,000. The Number of children taking part in science quizzes, and science drama has improved drastically. I would specially like to thank the staff of Vigyan Ganga Manthan's mobile science van which has helped in clearing the concepts of science for the children in backward areas. The academic results of the children who are using this facility has seen tremendous improvement.

Science Communication and Education has remained a priority with Manthan. Next year we will be stressing on the need for innovation based science Education. Encouragement will be given to science innovations.

The Dissemination of Educational and Informative kits for women will be taking place this year in the backward areas of Rajasthan, Gujarat , Madhya Pradesh and Southern India.

Manthan is meeting intellectual people on international level and trying to create awareness about the programs conducted by Manthan along with sharing its methodology of Science communication at several national and international academic platforms.

I'll do that with a passionate team of smart, talented, dedicated staff and a growing corps of investors, advocates and volunteers. In the coming weeks, months and years, we will invest in areas that will amplify our impact- advocating for changes innovations and technology, sharing knowledge with partners who can then replicate our most successful programs to reach even more families and communities, and using our own platform to partner with social entrepreneurs and change agents to extend our reach. We want to continue investing wisely in innovation, building a movement to transform lives through Entrepreneurship and Science.

Abhay Kothari
Director
Manthan Educational Programme Society, India

Content

Science Outreach	04
Hands-on Kit	
'I am an Adolescent Girl'	05
• Hands-on Mathematics Activity Kit	08
•	
Entrepreneurship Development Projects	
Innovation – Science &	09
• Technology Entrepreneurship	
Development Programme	10
• Design with Science & Technology	
Interventions for Rural Development	16
• of Surendranagar District	19
Manthan Science Centre	
Manthan Narmada Lok-Vigyan Kendra	18
National Children Science Congress	24
Digital India Quiz	25
Baal Urja Rakshak Daal - GEDA	26
Vigyan Ganga (An Innovation based	
Science Outreach Van	27
Financial Highlights - Year 2015 - 2016	29
Conclusion	30



Science Outreach

Manthan aims at a continuous development for the betterment of the Nation by bringing about a change at the grass-root level and one of its ways is the generation of scientific temperament amongst masses of people across the country through several outreach programmes. Manthan's Science Outreach and Communication programmes are aimed at promoting public awareness in understanding of science and making informal contributions to science education using low-cost approaches. Manthan not only aims at the students but works on several projects related to community development as a whole.

In a country like India, outreach activities play an important role for the development purpose. India houses several thousands of villages and urban areas. Large amount of population of the country resides in interior regions, so it becomes difficult for them to reach to informal educational centers like Science Centres, Museums, Libraries, Science Playgrounds, etc. Thus, through the outreach activities, Manthan tries to educate people by reaching their doorsteps, carry out outreach activities in the form of hands-on activity kits, mobile exhibitions, hands-on exhibitions, offshoot material, awareness campaigns, posters etc.



'I am an Adolescent Girl'

Hands-on Science Kit for Adolescent Girls and Young Mothers
Supporting organisation: NCSTC, DST, Govt. of India

Science outreach programmes are programmes specifically designed to cater to the masses which in turn help in public awareness and understanding of science and making informal contribution to science education.

Manthan conducts a series of research on ground level and discussions with subject experts to decide the target audience. After a long detailed investigation and an in-depth analysis it was found out that the women in the rural areas in India are a neglected lot. Women are still following old practices very superstitious by nature. Women in rural areas because of lack of exposure have very less idea about their health and hygiene. It was decided to launch a programme by Manthan especially for women and adolescent girls in the year 2015-16. The name of the programme is "Hun Ek Kishori". This programme is supported by NCSTC. (National Council for Science and Technology Communication).

The central idea behind this programme is to make women aware about the changes their bodies go through from the teen age till they become a mother. In Rural areas women do not have the access to information and they do not have subject experts to talk and discuss their problems.

This kit has been made after a series of planning and discussions. The kit is basically a knowledge bank for all health related issues for women. It emphasizes on the role of a women in family and how important it is for her to take care of her health. The kit has been designed after discussion with subject experts, Doctors, Paediatricians, Nutrition experts, Science Communicators and Adolescence girls.



The kit is a hands-on activity kit in which Manthan has covered all the themes:

The introduction of the kit starts with a pinwheel in which it is described the different roles and duties of a woman towards the family and the society. The other topic is of BMI calculator. An ignorant girl can also move check the BMI (Body Metabolic Index). The BMI chart also has a description of the ill effects of the higher BMI. A small mirror is pasted on the chart. It helps in self diagnosis whether the girl is anaemic or not. The symptoms of anaemia have been described in a very simple manner. The ill effects of being anaemic and the remedy have also been mentioned in the chart.

Nutrition is also been explained in a very simple and lucid manner. The emphasis is on a balanced diet. different pictures of food have been given which can be easily cut and pasted. Various diagrams have been given in small charts written in a simple language explaining human body, parts of body and reproductive organs of a human body. Simple figures explaining the different changes in a female as well as a male body have been put up in a small chart which helps the person reading it to relate to the material.

The women and adolescence girls staying in rural areas are very ignorant of the changes in their body as well as about their personal hygiene. The kit has given specific emphasis on topics related to menstrual cycle, a chart with the help of which a woman can calculate her menstrual date, and importance of hygiene during menstrual cycle. It has also tried to clear all the myths associated to the menstrual cycle emphasising on the need of nutrition and hygiene during the menstrual cycle.

Due to lack of ignorance the girls in adolescent age become innocent victims of sexual exploitation which is very common in backward areas of our country. The Kit made by Manthan also addresses to this sensitive issue. The kit has details about the hormonal changes taking place in the teenage girl and the effects of it



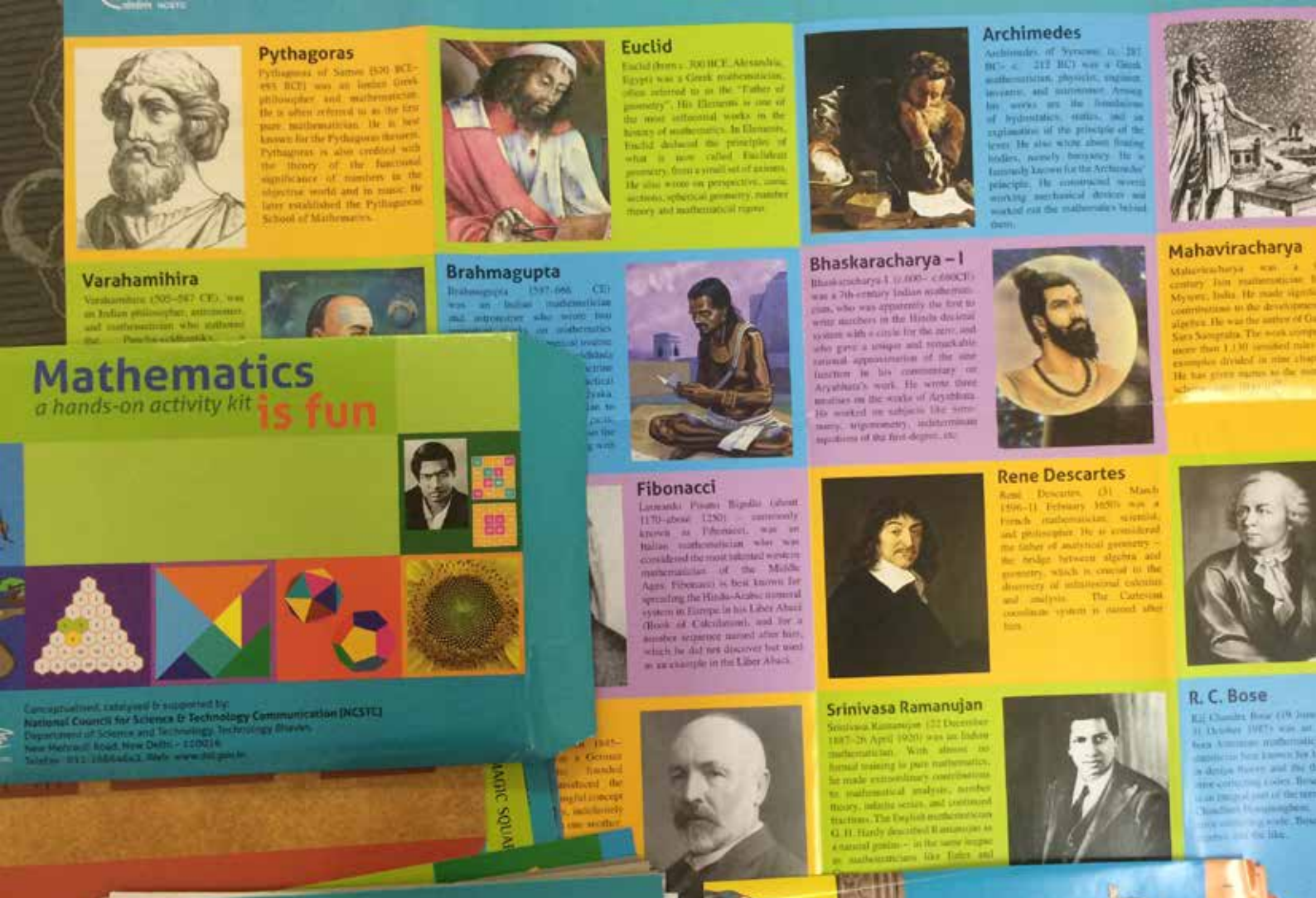
on the behaviour. It also has described how a girl gets pregnant and what is safe sex?

This kit will help millions of girls in understanding physical relations and its aftermath effects making them aware of legitimate relations and illegitimate relations. It has also described the need for contraceptives and the safe methods of conception. The Kit has used all the forms of communication which includes diagrams, questionnaire method, illustrations, charts, photographs and small models which an adolescence girl from a backward area can understand. This kit has also covered topics like are you ready for the pregnancy, how to know about pregnancy, symptoms of pregnancy, precautions to be taken during pregnancy, the month wise changes that occur in the body during pregnancy. All the precautions and dietary advice to be taken by a pregnant lady has been described with the help of photographs and diagrams. This will help millions of women in the backward areas to avoid pregnancy related health complications.

A sample of Mamta card, month wise health check up card, health progress card of the child has been given in the kit. This makes the women aware of registering their pregnancy in the government health centre, and also helps in improving their knowledge about the facilities the government is giving to pregnant women through their health centres. It will reduce the death rate of pregnancy related complications in the future.

The kit has strongly emphasised on birth related facilities given by government. It has given images of a government health centre, how an operation theatre looks like, and certified midwives. The images will help women to avoid quack doctors in tribal areas and will help in reducing the rate of deaths taking place during delivery.

A pinwheel has been given in the kit describing how to take care of the newborn immediately after delivery. Special emphasis has been given on breast feeding and benefits of breast feeding and the importance of breastfeeding in the initial six months of new born infant. The Kits have been planned to be distributed to 5000 women in rural areas. The programme has been launched in this year on a pilot basis and has been planned to be disseminated to Gujarat, Rajasthan, Madhya Pradesh and Southern India in year 2016- 2017.



Hands-on Mathematics Activity Kit

Hands-on Outreach project

Supporting organisation: NCSTC, DST, Govt. of India

The Maths Kit have been designed in 2014-2015. The Maths Kit was made to improve the inclination of the children towards mathematics in the backward areas. It also covered lot of topics like Algebra, Polygons, Decimal numbers, Angles of shapes rectangle to square, platonic solids, tangram, Ramanujan's magic square, Golden Spiral Etc. All the topics were covered using diagrams and illustrations. The method of this kit was play way so that kids can learn maths and play with the kit too. The kit served a dual purpose. The kits were printed in three different languages English, Gujarati and Hindi. The dissemination of the maths kit was done in a very unique way. Different methods of Communication were used so that maximum students could be benefitted. Radio Stations were used to popularize the Maths kit. Children were encouraged to register their names on the radio station. Maths kit was sent to the children through Indian post. A special Radio Serial was transmitted from the Radio Station and Children heard the programme and could use the kit after listening to the details in the programme.

In order to make the dissemination of kits more successful Community Radios were also used. This helped in reaching of the kits to the most backward areas.

21 Science Centres also distributed kits in Gujarati language. Science clubs also helped in popularising Maths kits. Total 40,000 kits were distributed and it has benefitted approximately 1.5 lakh children in the state.



Entrepreneurship Development Projects

Science and Development are interwoven. In any entrepreneurial activity, some or the other kind of science or technology is used, may it be manual or automatic. Keeping this in mind Manthan has been involved in Entrepreneurship Development activities since more than 15 years.

Manthan has been involved in imparting Skill Trainings, Entrepreneurship Development Trainings, S&T based Entrepreneurship Development Programmes, Technology Up-gradation, Developing Training Modules, Publications, Training Films and Training Material on different subjects related to Entrepreneurship Development.

We, at Manthan, have a core team of professionals that help people transforming their lives by changing styles through innovation methodology in training, deriving desired results with sustenance that benefits the organization or community and the world at large. Manthan has an experienced team of trainers, experts in technology, designers, management and marketing faculties, who study and train the trainees as per their needs and requirements. Several experts from National and International organizations like World Bank, UNESCO, UNICEF, RTI, NID, NIFT, EDII, DIC, LEAD Banks, FWFB, CED and more have been voluntarily or professionally supporting us.



Innovation – Science & Technology Entrepreneurship Development Programme

Technology & Design for Sustainable Craft Sector of Kutch and Saurashtra regions of Gujarat State
Supporting organisation: NSTEDB, DST, Govt. of India

Technology and Design for Sustainable Craft Sector program for artisans
Despair and devastation stare India's artisan in their face, as resource crunch, modern civilization combine affect their industry. The small scale industries have been not able to keep up with the changing trends of the market. The artisans are struggling to make profits from their production and keep their skill alive. Manthan has decided to improve the quality of their production and also guide these artisans for the designing aspect of their product keeping in mind the new trends of the market.

Manthan with the support of NSTED (National Science Technology and Entrepreneurship Development) has launched Technology and Design for Sustainable Craft Sector program for artisans in Kutch and Saurashtra region of Gujarat.



This Program is a focused effort to bring about an inclusive socio-economic development by addressing the challenges associated with a specific region/industry/cluster by connecting interventions of Science and Technology and innovative solutions with entrepreneurial opportunities. Some of the innovative solutions/technologies identified and taken up under the program have resulted into economic gain and wealth creation. These enterprises should be able to generate good societal and market acceptability.

The main objective of the program is to transform a Craft artisan into a Craft entrepreneur. It will lead to generation of Income as well as generation of Employment. This in turn will affect the overall quality of lives of the people associated with the craft sector. The program aims to help the rural artisans to improve their quality of product and reduce their production cost with the help of modern technology. The program has been implemented in Kutch and Saurashtra region of Gujarat State.

Several workshops were conducted by Manthan. One to one meetings and field visits took place. Enthusiastic artisans are mentored and then selected to evolve their craft knowledge into scaling up business or brand adding several components like technology, design, innovation, product diversification into their units. Some of the units were self financed, family financed, loans and subsidy schemes by several government departments. Specific innovative solutions were given to artisans of Textile craft sector, Earthen craft sector and Wooden Craft sector.

The main focus was on Innovation Technology.

Textile crafts: The emphasis has been on quality control and mass production technology in hand block printing like jigger machine, cloth boiling technology, iron filter system.





Earthen Crafts: Promotion of Energy efficient kiln for terracotta products and motorized tools like electric potter's wheel and pug mill for production and energy efficiency.

Wooden Crafts: promotion of digital fabrication technology like CNC Router and Laser cutting Technology and semi automatic machines for mass production and production standardization.

Capacity building trainings related to technology, product development and skill development have been conducted. For Textile crafts sector. (Dhamadka –Kutch)

- Increased quality by more than 50%.
- Increased daily production quantity by more than 10 times.

For Earthen Craft Sector. (Gundiyali –Kutch)

- Promoted 33 Energy Efficient Kilns for terracotta pot making at 100% subsidy.
- Promotion of Electric potter wheels and electric pug mills amongst 25 craft entrepreneurs at 50% subsidy.
- Developed market friendly products.
- Setting up an online store for marketing the products.

For Wooden Craft Sector. (Jasdan and Rajkot –Saurashtra)

- Promotion of Digital fabrication technology at 2 units.
- Product Diversification and emphasis on Corporate gifting articles and daily utility articles.
- Manthan has collaborated with MEPS, Kasturi Crafts, Design Deal and Gaatha Handicrafts pvt. Ltd for Textile Crafts Sector.
- For Earthen Crafts Sector it has joined hands with MEPS, Maatikaam Kalakaari and Rural Technology Institute (MKRTI), Design Innovation Craft Research Centre (CEPT).





The Achievement of this program:

Terracotta Craft

- 33 MOUs for Energy Efficient Kilns
- 80 MOUs for Electric Pottery Technology

Textile Crafts

- 3 MOUs for Energy Efficient Boilers for Textile
- 1 MOU for Jigger machine & 1 MOU for Iron Purification System

Wooden Craft

- 1MOU for CNC router.

Total beneficiaries: 160 entrepreneurs only for technology dissemination.
Technology worth Rs. 40,00,000 approx. has been disseminated

Manthan Educational Programme Society has partnered with Gaatha Handicrafts Pvt. Ltd to setup village based online stores. Manthan is also working with Gaatha to develop local infrastructure for running the online store and stock management.



Design with Science & Technology Interventions for Rural Development of Surendranagar District

Supporting organisation: SEED Division, DST,
Government of India

Manthan believes in bringing a change in the rural and backward section of the society through technological empowerment and training. The SEED project is with the support of Department of Science and Technology. The project aims upliftment of poor and disadvantaged sections of the society through appropriate use of technology and training. The title of the program is Design for Development. The project has been implemented in the Surendranagar District.

The motto of the project is to identify the local skill of the village, motivate the village folk to upgrade their skill and to create a brand for the particular craft or skill. It will help in making the villagers economically self sufficient .



In the year 2014-15 two skills were identified. Stitching and Dari weaving.

Stitching

Around 100 women were trained for the basic stitching training. The village selected for training were Patdi Village and Kothariya village. The main aspect of this training was that women were encouraged to use waste material into making patch work pieces, small purses and modern garments.

Dari Weaving

Dari weaving training sessions were provided in two villages named Kothariya and Digsar. The villagers were taught how to convert waste materials into modern market products. Products like Runner, running stoles, tapestry, Table mats and products suitable for corporate gifting were designed by the villagers. In the year 2015-16 Emphasis was given on cotton cloth weaving and paechedi weaving. Paechedi weaving is a dying craft in India. Manthan is trying its best to revive the art form and merge it with modern craft. For the training in Cotton cloth weaving the groups of stitching and Dari weaving were combined and were trained to make jackets, laptop bags and pouches.

In the year 2015-16 Manthan is concentrating on the art of making paper cups and leaf cups. The process of training women has already begun with the formation of groups.



Manthan Narmada Lok-Vigyan Kendra Manthan Science Centre

Manthan Narmada Lok-Vigyan Kendra, Rajpipla

Supporting Organisation: GUJCOST, DST, Government of Gujarat

Manthan strongly believes in promoting science through communication and education. Education brings a socio economic change in the life of a person. Scientific Education helps in changing the mindset of the person as well as the entire family. Mr. Abhay Kothari feels that to bring out a change in the lives of tribal people it is necessary for them to be scientifically aware .

India is making rapid progress globally . And to connect the tribal and backward class of India with the mainstream it is very important that they are given world class facilities in Education as well as exposure. The Manthan Narmada Lok –Vigyan Kendra at Rajpipla in support with Gujarat Council on Science and Technology(GUJCOST) came in to existence in the year 2008 to build scientific temperament among the rural and tribal communities in Rajpipla.The Lok Vigyan Kendra is an effort to improve the scientific temperament of the communities of Rajpipla thereby enabling them to stand together with their urban counterparts in Gujarat. The Centre is a one stop solution for science learning and science awareness. The science centre not only communicates science but links science with day to day life in a play way manner.The main strength of the science centre is to develop its own hands-on resource material for the adaptability of the tribal and rural communities.



It conducts about 400 activities per year that emphasizes hands on approach for various activities such as astronomy, sky observation, science posters, and science workshops, featuring interactive exhibits in the science exhibitions that encourage children to learn and explore more. There are a number of programmes like 'vigyan safar', Sunday schools, tuitions, demonstrations, learning science while playing thorough which learning science is not only made easy but also interesting in a way to encourage more and more children. Around 40,000 children are benefited through this initiative. Their work has been recognized on a state as well as national level too.

Apart from such activities, the science centre also conduct awareness programmes regarding certain issues like gender equality, climatic changes, pollution control and the understanding of biodiversity, human evolution etc. With the objective to promote development, Manthan links science and technology to different community activities through this science centre to provide benefits to the rural people in the field to generate a large number of employments.

Also, Manthan develops the resource materials used in the science centre by itself which are region specific. The team members visit to all the 4 talukas of Narmada district to conduct different activities on a regular basis. All these activities are also promoted in the district's 75 registered schools. The idea behind linking science and technology to these various activities is that it benefits the community as a whole, from the students who can now enjoy learning science to the elders by generating employment.

The Lok Vigyan Kendra is a science centre which has students from more than 400 schools visiting the centre. Different types of diagram, models are available in the centre. Programmes at school level, college level and community level are held to promote science. Programmes for women, farmers and Gramsabha are also organised at the Kendra.





The number of beneficiaries for the above mentioned programmes has gone up to 56210. Last year 9 Science workshops were held on topics like model Rocketry, Earthquake, Biodiversity, chemistry, Physics kit activity, weather activity, science model development and Astronomy. The total number of students who benefitted from these workshops is 401.

Three Teacher Training Programmes were held. The topics were How to instil interest in Maths?, Discussion on National Science Congress for Children, A special programme for How a village can be converted into Smart Village by Lee Omar. The total number of teachers who attended these programmes are 137.

GUJCOST conducted 8 programmes last year. The topics were living and non living things, types of soil, Evaporation , Condensation, Parts of body, Importance of Balance Diet, Solar system, Universe, Milky way, Science Quiz. 520 students benefitted from this programme.

The theme of National Children Science Congress for the year 2015-16 was Understanding Weather and Climate . Different aspects related to this topic were covered. Children were given topics to conduct research in groups. The children made several science models to convey their findings in the research. The outcome of these researches was communicated to the society. Six programmes were conducted and 320 students of the age group of 10 – 17 years benefitted from the programmes. One student of tribal region reached to state level competition of National Children Science Congress.

Drama is an age old cultural form of our society, which has been used for entertainment, recreation and also as a medium of social interaction. For communicating Science the medium of Drama is found to be a very popular option. By understanding the effectiveness of this medium and also to involve more youngsters to participate in this creative medium an attempt is made to organize Science Dramas by the staff of Manthan Lok Vigyan Kendra.



The Staff invites school students to participate in the Science Dramas conducted by them. Students of different schools take part in the science dramas. 19 Science Dramas were presented in the year 2015-2016. The major Achievement in the year 2015-2016 was that A SCIENCE DRAMA TITLED SKYLIGHT OPERA was recorded and showed online to 30 countries by astrophysicists groups. The Science drama was performed by students of Rajpipla centre.

Lectures were conducted on popular topics like cleanliness and sanitation, environment issues, issues related to recycling of products. 9 programmes related to these issues were conducted and 2312 beneficiaries benefitted. In order to keep the current generation updated about the latest trends in Information Technology at Rajpipla. A programme named Digital India Quiz was conducted. 6 programmes related to this topic were conducted and 3210 students benefitted.

Special women lectures and programmes were conducted. The topics were women's health and hygiene, teen age, awareness about balanced diet. Special screening of solar eclipse was also organised for women so that they could shun the beliefs related to solar eclipse. 4 women only programmes were conducted and 183 women benefitted from this program.

Manthan believes in inspiring the entire generation towards the environment. Community programmes were conducted to promote greenery and sensitise the people towards health and environment. Free distribution of saplings and plants took place last year. And the society at large was sensitised at large for the green environment. Large kiosks related to health awareness were also displayed. Last year 10 community programmes were conducted involving 1878 people.



National Science Day, World Environment Day, Earth Day, Ocean Day were celebrated At Manthan Lok Vigyan Centre. Different activities like drawing competitions, poster making competitions, slogan competitions, model making were conducted. Field trips like nature walk, identification of flora and fauna were also organised These activities sensitise the younger generation towards the environment. 8 programmes were conducted last year and 2072 children participated in these programmes.

In previous year Manthan Lok Vigyan Centre conducted a series of science demonstrations and experiments to give an insight in to practical science to the students. 38 Experiments were conducted in physics and Chemistry which benefitted 2714 students.

Large kiosks were prepared and educational material related to common health issues and environmental issues were printed and exhibited for the common public. This helped in raising the awareness level of the public at large and 6810 people visited the exhibitions.

In order to keep the children busy Manthan Science Centre introduced Vacation programmes this year in which 22 students attended the programme. 19 Science films were screened to children of topics like Solar Eclipse, Milky Way, Universe, Solar System were screened. 1108 children came to view the Science Films. Special Science School Programmes are conducted for children who are free on Saturday. 9 programmes were organised and 279 school children benefitted from these programmes.

Two Science Rallies were organised to make the community aware about Energy saving measures. Kids were taught how to conserve energy through use of different alternative sources of energy.

Vigyan Safar is a unique initiative by Manthan . In this programme the team of Manthan travels with their scientific kit to schools. The Educators of Manthan conduct several programmes in the schools with the equipment available in the school . They upgrade the teachers and make them aware with the latest trends in science and digital technology. This helps in empowering the teachers with the current technology and scientific knowledge which is then transferred to the students.

This is a very successful programme by Manthan Science Centre . Star gazing, use of telescope and identification of objects in the sky is also covered in this initiative. Last year 14 programmes have been conducted by Manthan and 1627 school children have benefitted.



National Children Science Congress

National Children Science Congress: National Children's Science Congress (NCSC) is a nationwide Science Communication programme which is supported by Department of Science and Technology, New Delhi. It is a forum children of the age group of 10-17 years, both from formal school system as well as from out of school, to exhibit their creativity and innovativeness and more particularly their ability to solve a societal problem experienced locally using by method of science. This involves close and keen observation, raising pertinent questions, building models, predicting solutions on the basis of the model, trying out various possible alternatives and arriving at an optimum solution using experimentation, field work, research and innovative ideas. The Children's Science Congress encourages discovery. It emboldens the participants to question many aspects of our progress and development and express their findings in vernacular.

In the year 2015-16, children who regularly visit Manthan Science Centre took part in the NSCSC programme. The children formed a team and presented a Project on A study on impact of weather and climate changes on Tribal Culture. The project was the brainchild of five tribal children who used to regularly visit Manthan Science Centre. The project was selected for State level NCSC programme. The project was appreciated at state level by the coordinators and the tribal children presented the project At National level NCSC programme.



Digital India Quiz

Digital India Quiz was introduced by the government of India under the Digital India Scheme. A similar programme was introduced by Department of Science and Technology, Gujarat. The main aim of this quiz was to check the general knowledge of the children. The main features of this quiz were that the children can register themselves online and no charges would be taken from the student. The children could participate online in the quiz and could participate in the quiz from anyplace in India.

The children studying from standard 9th to standard 12th could take part in this quiz. The children who were coming to Manthan Science Centre were invited to take part in this quiz. The children who registered themselves online took an active part in the quiz and scored very well. In this quiz 50,000 students from Gujarat took part out of which 3500 students were from Narmada district Manthan Science Centre



Baal Urja Rakshak Daal - GEDA

Gujarat Energy Development Agency has implemented a state wide School Energy Education Programme for 1800 Secondary and 1800 primary Schools in Gujarat. BURD (Bal Urja Rakshak Dal) as it is popularly known, the programme is an participatory energy conservation awareness initiative. The basic motto of the program is to conserve energy and educate the masses.

The BURD programme is designed as a mass outreach that starts young. It draws on children's potential as persuasive and powerful agents of change in their immediate community, and builds on the fact that energy values and habits that promote a sustainable future need to be inculcated in the young through experiential learning. The programme is facilitated by the local partnership with Community Science Centres and NGOs including Manthan in a particular area being Narmada district of the Gujarat state.

Manthan started a community centre which is called as Manthan Lok vigyan Kendra. The basic vision of Manthan is to promote science and to develop scientific temper. In order to teach the children about energy conservation Manthan has carried out various activities in this regard by registering about 75 different schools in the BURD programme in Narmada district. Many activities have been initiated in the year 2015-16 which are as follows:

Several activities that Manthan initiated and engaged in the year 2015-16 were continued even in this year, which included some of the following:

- Celebrating the day as the energy conservation day by taking out rally which involved 75 secondary and primary schools with their teachers. This rally helped in creating mass awareness about Energy Conservation.
- Organized a Painting competition for the theme "save energy". The drawing competition had a tremendous response and children demonstrated creative ways to conserve energy.
- Public lecture was organised on inaugural day before the rally started and prizes were distributed to the painting competition winners.



Supporting Organisation: District Administration Office, Narmada, Government of Gujarat

The expert science communicator conducts curriculum based activities for students from Std 5th till Std 8th. Activities like science shows, building science models with students, performing experiments, dissemination of science kits and science innovations with their own ideas. The science communicator would guide the students to develop a vision towards science as a catalyst of change.

This Van helps in cultivating the academic interest of the children in tribal areas. As the topics are curriculum based it also has helped in improving the learning ability of the children. It is chapter based learning transformed into activity based learning.

It also helps them to think scientifically, rationally as well as helps these kids in shunning the age old superstitions and practices. The van covers 2 schools daily. The main target audience for the van are the students are those studying in std 5 to Std 8. It moves from one place to another from Monday to Friday. this helps in increasing the number of beneficiaries for the science programmes. One subject expert and 2 science communicators travel with the van. In the year 2014-15 the total number of beneficiaries has increased till 30,000.

The main objective of this Vigyan Ganga Van is to spread science related awareness among the remotest areas and try to improve the quality of science education in Dediapada area.

The project 'Vigyan Ganga' has helped in improving the academic performances of the students of 25 schools. The overall performance of the students has improved up to 40%. The total number of beneficiaries of the 'Vigyan Ganga Van' is approximately 25,000 students.

The Van is not only used for the purpose of school outreach. It will also bring the concept of 'Science for All' for the benefit of the rural and tribal community of Dediapada Taluka. The activity of the Science Van would address issues like Agriculture, Herbal medicines, Science in the World, Cleanliness and Science.

Financial Highlights - Year 2015 - 2016

Abridged Balance Sheet

(Rupees in Lakh)

Funds & Liabilities	2015-2015	Assets	2015-2016
Reserves & Surplus	49	Fix Assets	2
Sundry Creditors	12	Investment	28
Total	61	Cash & Bank A/c	14
		Income Receivable	11
		Deposit	2
		Loans & Advance	4
		Total	61

Abridged Income & Expenditure Account

(Rupees in Lakh)

Income	2015-2016	Expenditure	2015-2016
Project Income	90	Project Expenditure	83
Interest & Other Income	4	Deprecation	2
Total Income	94	Establishment & Administration	5
		Total Expenditure	90
		Reserve & Surplus	4
		Sub Total	94



Conclusion:

For Manthan Educational Programme Society, India, year 2015 – 2016 was an exiting year full of new ideas and new challenges. This has brought new horizons in the activities of Manthan.

In the year 2016- 2017, Manthan has planned several new activities related to science communication and entrepreneurship development along with the ongoing projects.

Manthan will continue working on the i-STED project and the SEED projects in the wings of Entrepreneurship development. While in the wing of science communication, we would continue the activities of Manthan Science Centre along with evolving new concepts and new projects under it. Manthan has always been a pioneer in promoting Science Education and will continue to do so in the future.

On the entrepreneurship wing, Manthan plans to initiate a new common facility centre and also village level Fablabs for the benefit of Rural artisans in upgrading their knowledge about design and technology. The Rural Artisans will have access to Co-creation Labs. Co-Creation labs are labs in which designers from the city will come together with the rural artisans and the rural artisans will be making innovative products with the help of the Designers. This will help in creating a designer product which will be made by the Rural Artisan. Along with that we are also planning to promoting Recycle material products, Eco friendly products and upsize products. Manthan has planned to spread its wing into Social Enterprise partnership through which it will be publishing its own publications and hands-on educational kits. The publishing house will be publishing educational material. The material will be conceptualised, developed and researched by Manthan team. This material will be helpful to NGOs, Government agencies, Schools, etc.

Manthan will be emphasising on transforming the lives of rural artisans through use of innovative ideas and technology touching new horizons through Education and technology for the benefit of rural and tribal areas across the country.



Manthan Educational Programme Society, India
C1, Sukruti, Manekbag, Ahmedabad - 380015. INDIA

Phone: 079- 26766571 Email:manthan@satyam.net.in

Website: www.mepsindia.org