Mumbai Science Program

In academic year 2014-15 science program was implemented in all the zones of Mumbai. Same like last year two personnel from Mumbai team worked as Master trainer to conduct and coordinate various activities.

Activities and reach:

Following are the activities which were decided to implement under Mumbai Science Programme,

1. **Science Fair –** It also known as **Bal Vigyan Mela**. This is 2 to 3 days activity in which 30-40 selected children from 5th to 9th standard receive training on 5 to 6 different concepts. After the training actual science fair was organized by the children who are trained. They present their experiments / models in front of other children, parents and teachers. These trained children are termed as Bal Vigyan Mitras(BVM). Science fair is the best example of peer coaching.

   In the year of 2014-15 total 9 science fairs were held in Mumbai. These science fair were mainly conducted by Anil Bhatt and Sheetal Jagdhani. Local TMs and teachers were helped to select school and for permission of principal and other arrangements regarding fair.

   Please see following table to know detailed reach through science fairs,

Table 1: Reach through Science Fairs

Sr.	Zone	No. of fairs	No. of BVMs	Visitors		
				Children	Parents and teachers	Pratham Staff
1.	A to G	4	182	1803	174	85
2.	HKPR	2	88	760	55	37
3.	LNST	3	124	2243	178	84
4.	M	1	44	400	28	10
Total		**9**	**438**	**5206**	**435**	**216**

Highlights:

1. Children explained the concept & how to make the model.
2. All School children & teachers liked the Science fair.
3. BMC education officer visited some of the fair in HKPR and AtoG zone.
4. Parents visited the fair and they were happy when they saw their children explaining models with confidence.
5. School wants such more programs with new models in future.

2. **Science camp** – This is a 3 to 4 days activity in which experiments and activities on one focused topic are conducted with the children. These camps organized in school or communities. In these camps, children get opportunity to do various scientific experiments and make models by their own.

   In last year science camps on two topics i.e. Human body and Nature exploration were conducted with children. Firstly training of these topics was given to TMs by Anil bhatt and Sheetal Jagdhani and then TMs conducted camps with children. In this year 93 science camps were conducted all over the Mumbai.

Pilot science camps -

Other than science camps by TMs, some pilot camps on other topics were also conducted in various zones. These camps were mainly conducted by Anil Bhatt, Sheetal Jagdhani and central science team members. Purpose behind conducting these camps was to see the children's response towards the activities. Depend on the response of children it was decided that weather that particular topic will be delivered to TMs or not. In this year we did pilot camps on the topics Magnet, Food chain, Nature Exploration, Human Body and Light. From above topics we decided two topics for Mumbai science camps i.e. Nature exploration and Human body. We held total 93 science camps in all over Mumbai. Out of 93 camps, 11 camps were the pilot camps.

Please see following table for more details about camps,

Table 2: Reach through Science Learning Camp

Camp Data							
Sr. no	**Zone**	**Camp**	**Total Children**	**In School**		**In community**	
				Camp	**Total Children**	**Camp**	**Total Children**
1	A to G	32	768	21	518	11	250
2	HKPR	33	549	22	378	11	171
3	LNST	19	595	18	575	1	20
4	M-zone	9	157	0	0	9	157
Total		**93**	**2069**	**61**	1471	32	598

Training : For above mentioned activities following training programs were done

Table 3: Training Programme Details

Sr.	Date	Venue	Activity	Topics	Trainer
1.	22,23 -July 2014	Science Office, Kurla	Science learning Camp	Nature Exploration	Anil Bhatt, Sheetal Jagdhani
2.	18 Dec 2014	Poibawdi Mun. School Parel	Science learning camp	Human body	Anil Bhatt, Jagdip NIkam.
3.	20 Dec 2014	HKPR zone office, Malad	Science Learning camp	Human body	Anil Bhatt, Sheetal Jagdani,
4.	22 Dec 2014	Jayantilal Mun. School Ghatkopar	Science Learning Camp	Human body	Anil Bhatt, Sheetal Jagdani,

Testing of Science learning camp. Topic: Nature Exploration

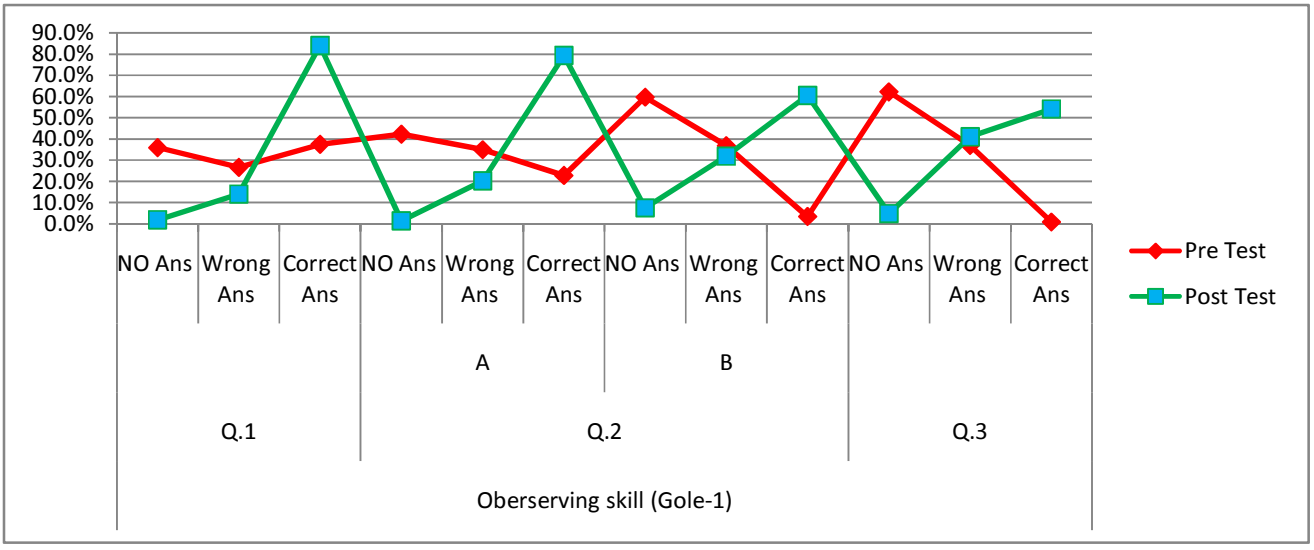
The activities placed in manual were helping children to understand parts of plants & their functions. We have done pre & post test of 82 science learning camps. According our goals we classified it into three types

Goal-1

Our first Goal is on child observation skill. We done pre & post test of 921 children through 39 camps

Table 3:

Observing skill (Goal -1)												
	Q.1			Q.2						Q.3		
				A			B					
	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.
Pre Test	35.9 %	26.6 %	37.5 %	42.2 %	35.0 %	22.8 %	59.7 %	36.8 %	3.5%	62.2 %	36.9 %	0.9 %
Post Test	1.9%	14.1 %	84.0 %	1.5 %	20.3 %	79.4 %	7.6%	31.9 %	60.5 %	4.8 %	41.0 %	54.1 %

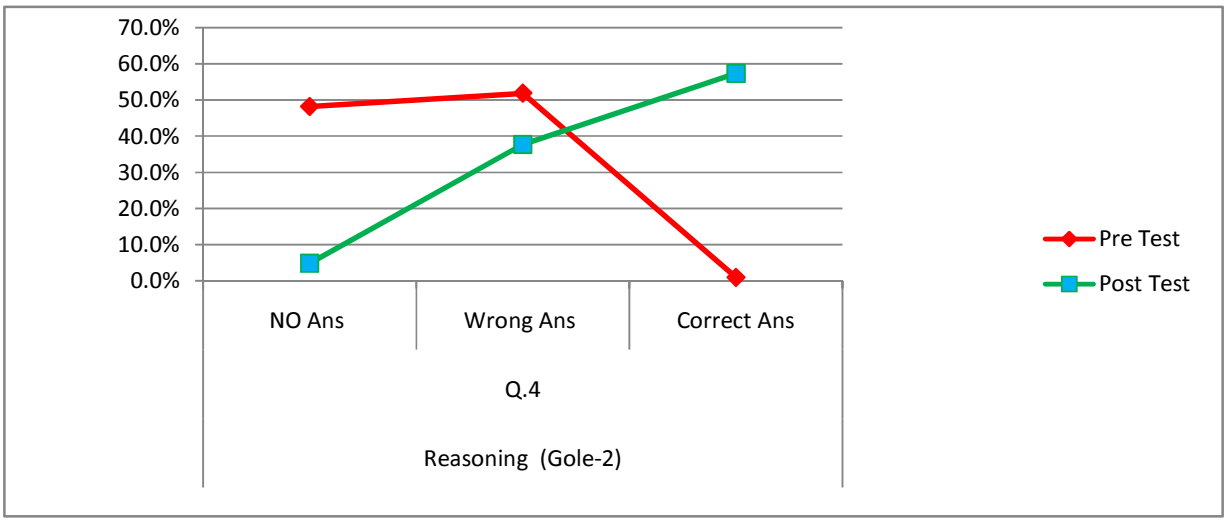


Goal-2

Our second Goal is on reasoning skill. We done pre & post test of 921 children through 39 camps

Table 3:

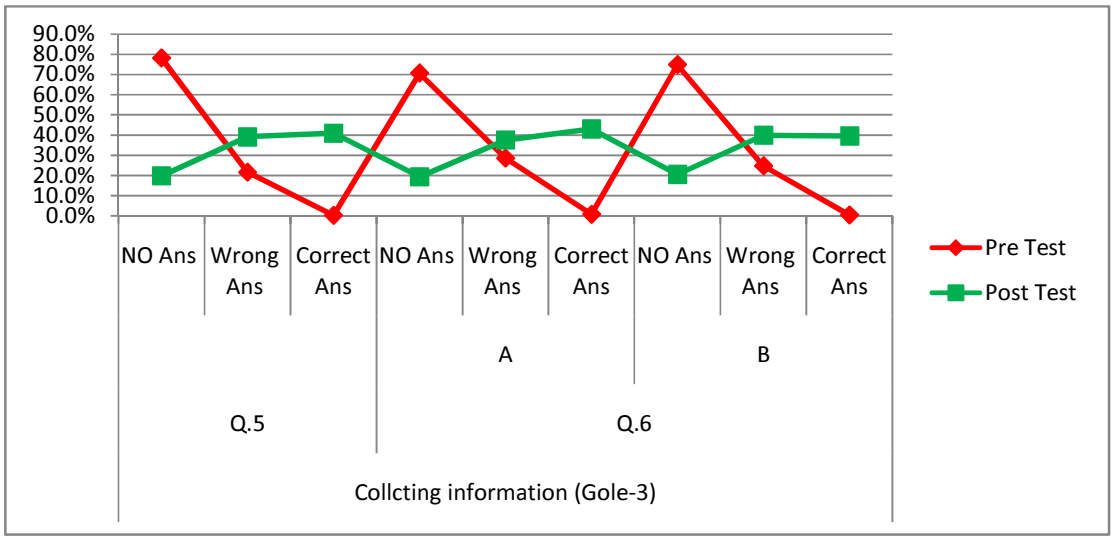
	Reasoning (Goal -2)		
	Q.4		
	No Ans.	Wrong Ans.	Correct Ans.
Pre Test	48.2%	51.9%	1.0%
Post Test	4.8%	37.8%	57.4%



Goal-3

Our third Goal is on collecting information skill. We done pre & post test of 921 children through 39 camps

	Collecting information (Goal -3)								
	Q.5			Q.6					
				A			B		
	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.
Pre Test	78.1%	21.6%	0.3%	70.7%	28.6%	0.8%	74.8%	24.8%	0.4%
Post Test	19.8%	39.1%	41.0%	19.4%	37.5%	43.1%	20.5%	39.9%	39.6%



Topic: Human Body

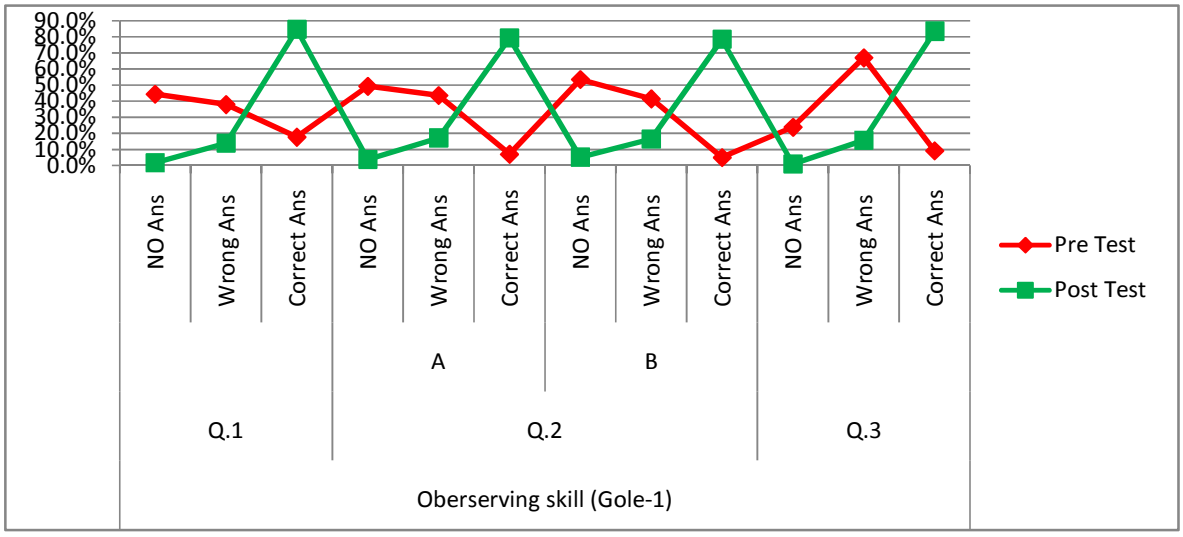
The activities placed in manual were helping children to understand parts of human internal organ & their functions. Children also made a human body with internal organ with the help of box (Putthe) We done pre & post test of 764 children through 39 camps

Goal-1

Our first Goal is on child observation skill.

Table 3:

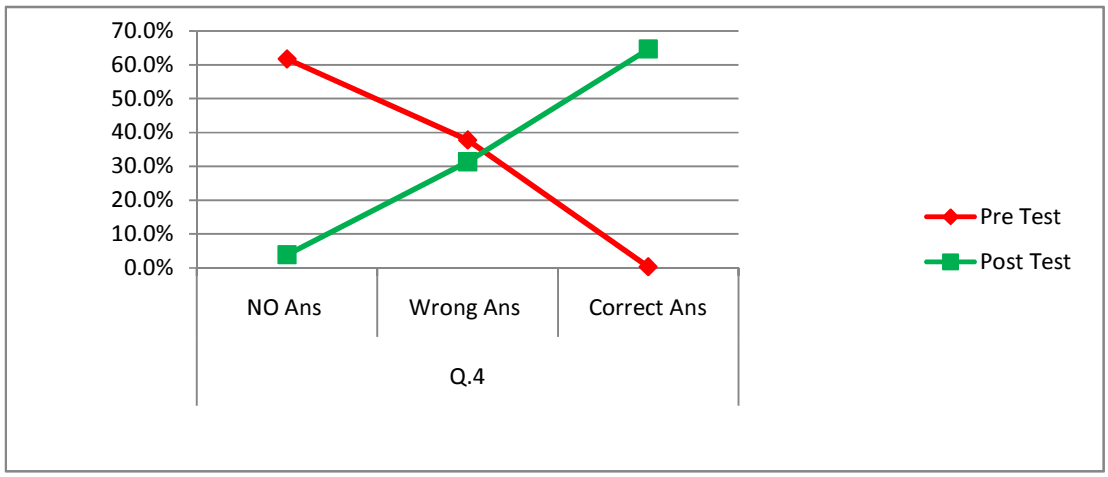
	Observing skill (Goal-1)											
	Q.1			Q.2						Q.3		
				A			B					
	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.
Pre Test	44.4 %	38.0 %	17.7 %	49.3 %	43.6 %	7.1 %	53.5 %	41.5 %	5.0 %	23.8 %	67.0 %	9.2 %
Post Test	1.6 %	13.8 %	84.6 %	3.7 %	17.1 %	79.2 %	5.1 %	16.4 %	78.4 %	0.9 %	15.6 %	83.4 %



Goal-2

Our second Goal is on reasoning skill. We done pre & post test of 764 children through 39 camps

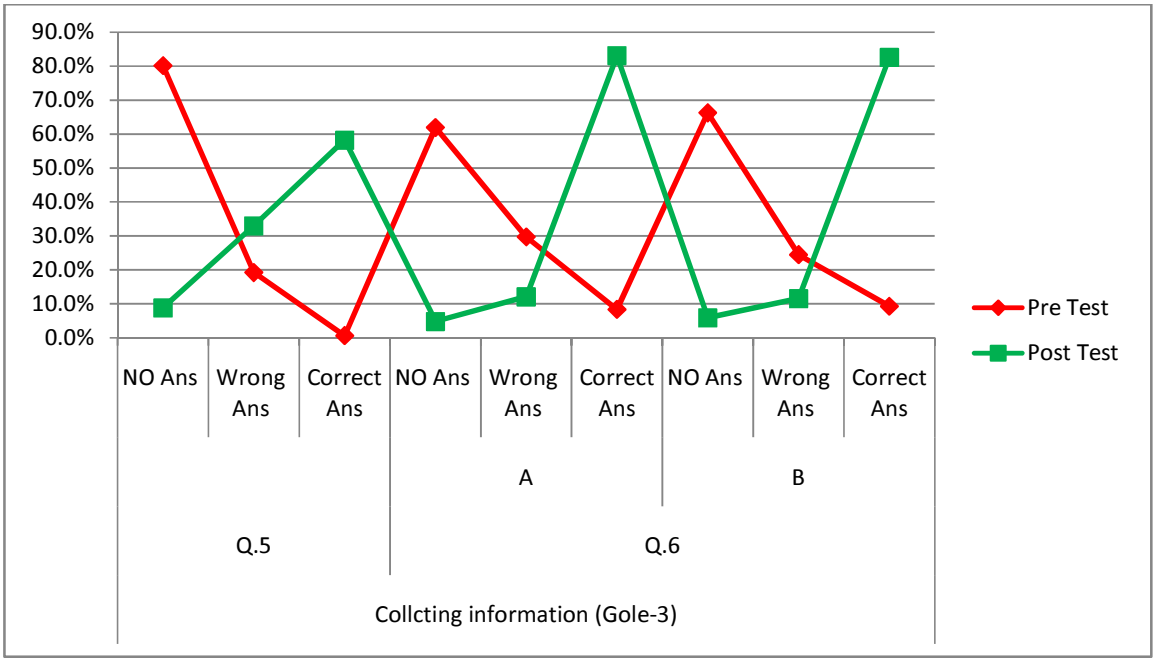
	Reasoning (Goal -2)		
	Q.4		
	No Ans.	Wrong Ans.	Correct Ans.
Pre Test	61.8%	37.8%	0.4%
Post Test	3.9%	31.4%	64.7%



Goal-3

Our third Goal is on collecting information skill. We done pre & post test of 764 children through 39

	Collecting information (Goal -3)								
	Q.5			Q.6					
				A			B		
	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.	No Ans.	Wrong Ans.	Correct Ans.
Pre Test	80.1%	19.2%	0.7%	61.9%	29.7%	8.4%	66.2%	24.5%	9.3%
Post Test	8.8%	33.0%	58.2%	4.9%	12.1%	83.0%	5.9%	11.6%	82.5%



Feedback from People :

The teacher's of school like learning method of camp. Some parents & teacher want more topic with this type of learning method.

Other events of the year :

- **G.E. Workshop: A** 2 days of workshop on light topic was organized with the help of General electric company in Veravali B.M.C. school. The content in this session was prepared by the employees of GE company.
- **Mars events:** We have organized awareness session about India's 'Mars orbiter mission' in 4 schools with Mumbai team.
- **D.F.C.:** Our children of Veravli School participate in competition of design for change. They have done lots of activity on girl safety topic. Design for Change is the largest global movement of Children driving change in their own communities by unleashing their 'I CAN' superpower. For more information visit - http://www.dfcworld.com/
- **Wall Magazine:** We have introduced wall Magazine in Mahim Mori Road BMC School. Children of this school completed 2 issue in our guideline.

Challenges :

- Science knowledge & writing skill is not good of children. It is very difficult to conduct science activities with children. As their basic concepts are not clear.
- Material transportation from one place to another is a big problem in Mumbai traffic.
- Planning of fair and camp dates is always changing, T.M.s have lots of other responsibilities so they are not able to give sufficient time for fairs and other science events.
- We need a small place to keep science material and models.

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