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Report

National Science Fair for Young Children

SFYC

அறிவியல் விழா

Science Fair for Young Children

SFYC

அறிவியல் விழா

**National Science Fair for Young Children
2009 Report**

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Compiled by:
S. Usharani
M. Agilan
A. Jegathisan

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Pharmed Technologies	Mr. Mani
Mr. Elango	Mr. Suresh Kumar
Mr. Low You Hock	Mr. Sivaji
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Prof. Dr. Chantara Thevy Ratnam	Prof. Dr. Shamala Devi Sekaran
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1.0

Introduction

1.1 Background to SFYC

Science is the systematic study of nature and the knowledge gained thereby. While the scientific facts are important, facts alone—divorced from methods employed to discover or learn them—are incomplete, and could in fact hamper scientific progress.

Students learn science and its methods better if science is more hands-on or experimental, where students are led on a path of discovering scientific truths. They learn science as they seek to satisfy their curiosity.

Science Fairs are ideal in accomplishing just that, by giving students an opportunity to learn a scientific topic or concept in greater depth, while simultaneously allowing them to:

- Use scientific methods to develop an understanding of controls and variables;
- Take an open and creative approach to problem solving;
- Sharpen their writing skills, ability to work in a team, and ability to plan and execute tasks;
- Develop public speaking skills as they present projects to schoolmates and judges; and
- Compete and be recognized for academic achievement: the judging process also provides students with the invaluable experience of developing poise and thinking on their feet.

In 2007, Science Fair for Young Children (SFYC) was conducted in Dewan Tunku Canselor, University Malaya, as a pilot programme with schools from Selangor and Wilayah Persekutuan participating. The feedback gathered from the various stakeholders, including schools, visitors, participating students, etc. was very positive. Teachers had noticed a positive improvement in their students. The students were more confident in the classroom and more motivated to learn.

This year, the fair attracted a total of 207 teams from 190 schools, which was slightly higher than last year (see Table 1). Of these 207 teams, 60 winning teams were selected to the National Level Science Fair held at the Kelab Kilat (TNB Hall), Bangsar, Kuala Lumpur. The fair was a roaring success and it is getting more popular.

A total of Rm 217, 390.90 was raised for the National Science Fair 2009 and a total of Rm 214, 390.90 was expended. See Appendix A for details.

ZONE	STATE(S)	TOTAL SCHOOLS		TOTAL TEAMS	
		2008	2009	2008	2009
1	Kedah, Penang, Perlis	28	30	31	32
2	Perak	18	15	21	18
3	Selangor, W. Persekutuan	58	74	58	74
4	Malacca, Negeri Sembilan	4	3	4	3
5	Johor	57	54	64	63
6	Pahang, Kelantan	15	14	19	17
	TOTAL	180	190	197	207

Table 1: Participation Level of Schools in the Fair, 2008 and 2009

1.2 PURPOSE OF SFYC 2009

SFYC 2009 aimed to improve the concept, supporting structure and the implementation tools of SFYC 2008, and help organize science fairs, primarily in Tamil Schools nationwide, thereby creating a greater awareness about science and scientific methods. It also aimed to motivate the students to be driven in their quest for knowledge.

1.3 OBJECTIVES OF SFYC 2009

The objectives of the SFYC 2009 are:

- To review and improve resource materials in the teachers' training manual, sample projects and student's guidelines on science projects;
- To train science teachers in Tamil Schools on the aspects of good science projects;
- To help conduct the fairs at state level, divided into 6 or more zones as may be required; and
- To conduct a national level science fair amongst the winners of the respective zone levels.

1.4 ABOUT THE PROJECT

SFYC traces its origins to the Young Scientific Explorers (YSE) that was initiated in 2004 involving 360 students at 10 schools in Kuala Lumpur and Selangor. YSE sought to introduce science to young people in a fun way using

everyday items. It was conducted by visiting participating schools and exhibiting 8 simple experiments, followed by a visit to the National Science Centre. YSE proved to be a success, and in 2006 the programme benefited 2,094 students.

Having seen the benefits of 'hands-on' and 'fun' science, SFYC was initiated by the Malaysian Community and Education Foundation (MCEF) at a pilot level in 2007. It was implemented with the help of the Tamil Foundation and Selangor Tamil School Headmasters Council at Dewan Tunku Canceled, University of Malaya, where 49 teams from 44 schools across Wilayah and Selangor took part.

We were surprised to see the participating students bringing science to life as they tackled investigative questions through hands-on experiments—and developing and demonstrating their interests and strengths in science. We also noticed an increase in confidence among participating students.

Seeing the positive response of SFYC 2007, we expanded SFYC nationwide. And, SFYC 2008 was held as a series of 6 events at 6 zones across the country with 197 teams from 180 schools participating. The top 60 schools from these zones were then chosen to take part in the grand finale from 14th to 15th June 2008, which was held at the National Science Centre, Bukit Kiara. The Fair was a roaring success ... and the feeling in the fair was electrifying ... literally! It gave us the utmost satisfaction to see the children with so much of enthusiasm and exuberance, being fully committed to their science project. With that under our belt, we embarked on SFYC 2009.

1.5 METHODOLOGY

For SFYC 2009, we revised the handbook based on the feedback we had obtained from participants of SFYC 2008. We also increased the number of sample projects and chose more

innovative projects. The SFYC 2009 Handbook was compiled as a folder and was sent to all the states through the Headmasters' Council in each state. This year, we also encouraged school level science fairs by providing a small seed funding of RM500 to each school if requested.

1.6 SFYC 2009 MILESTONES

ITEM	TIME FRAME
Review & development of the resources	September – October 08
Quality Control	October 08
Identify Partners or NGO in each state	October – December 08
Final Folder copy	November 08
Send for printing	December 08
Meeting with the Headmaster council	October – November 08
Meeting with Ministry of Education	October – November 08
Training of partner organization at the state level	December 08 – January 09
Training for Teachers & Facilitator in each state	January – March 09
School visiting at each states	April 09
Science Fair State Level	May 09
Science Fair National Level	3rd week of June 09

1.7 ZONE LEVEL SCIENCE FAIRS

ZONE	VENUE	DATE
1	AIMST University, Sungai Petani, Kedah	16 May 2009
2	Methodist High School, Ipoh, Perak	24 May 2009
3	TNB Hall, Kuala Lumpur	25 April 2009
4	MIC Headquarters, Seremban, N. Sembilan	8 June 2009
5	University Tun Hussein Onn Malaysia, Johor	23 May 2009
6	SMK Hwa Lian, Mentakab, Pahang	17 May 2009

1.8 NATIONAL LEVEL SCIENCE FAIR

ACCOMMODATION	2nd and 12th Residential Colleges, University of Malaya
EVENT VENUE	TNB Hall, Bangsar, Kuala Lumpur
DATES	20 & 21 June 2009

2.0 Implementation

2.1 Participation



1	KEDAH, PENANG, PERLIS = 85 schools; Targeted = 40 Schools 30 Schools Participated – 32 Teams
2	PERAK = 137 schools; Targeted = 50 Schools 15 Schools Participated – 18 Teams
3	SELANGOR & WILAYAH PERSEKUTUAN = 112 schools; Targeted = 50 Schools 74 Schools Participated – 74 Teams
4	MELAKA NEGERI SEMBILAN = 82 schools; Targeted = 38 Schools 3 Schools Participated – 3 Teams
5	JOHOR = 70 schools; Targeted = 70 Schools 54 Schools Participated – 63 Teams
6	PAHANG, KELANTAN = 37 schools; Targeted = 17 Schools 14 Schools Participated – 17 Teams

2.2 IMPLEMENTATION OF ZONE LEVEL SCIENCE FAIRS

2.2.1 ZONE 1: KEDAH, PERLIS & PENANG

The event was successfully organized at AIMST University on 16th of May 2009, with the collaborative effort between Putera MIC Kedah, Putera MIC Penang, staff and students from AIMST University and students from University Utara Malaysia. The state level science fair was held in student centre, AIMST University. 32 teams from 28 schools participated in this event. (For details and accounts refer to Appendix A1.)

2.2.2 ZONE 2: PERAK

Perak Zone Science Fair for Young Children 2009 was held in Buntong, Methodist Tamil School, Ipoh on 24th May 2009. A total of 18 teams from 15 schools participated. Perak has got a very big number of schools compared with other zones or states, but the support from the schools and HM's council was very poor. Various efforts were taken to approach all the 137 schools in Perak, but only 15 schools responded positively. (For details and accounts refer to Appendix A2.)

2.2.3 ZONE 3: SELANGOR & WILAYAH PERSEKUTUAN

The Selangor & Wilayah Science Fair was successfully organized at TNB Hall, Kuala Lumpur on 25th April 2009, with the collaborative effort between Tamil Foundation and EWRF. A total of 74 teams from 74 schools participated in this event. Most schools showed more interest this year and about 88 schools had registered initially but due to sports and other school events, they had to pull out. (For details and accounts refer to Appendix A3)

2.2.4 ZONE 4: MELAKA & NEGERI SEMBILAN

Melaka and Negeri Sembilan Zone SFYC was a failure in 2009. Although there are 82 Schools in this zone (Melaka & Negeri Sembilan), only 3 teams from 3 schools participated in SFYC 2009. 4 schools took part in last year's science fair in this zone. The event was held in MIC Headquarters on 8th June 2009. (The coordinator failed to submit the zone report)

2.2.5 ZONE 5: JOHOR

Johor State Science Fair came out with a strategy to divide the Johor State into 3 zones and to meet all the headmasters in these sub-divided zones. Most of the schools cooperated well compared to last year. The event was successfully organized in University Tun Hussein Onn Malaysia (UTHM) on 23th May 2009, with the collaborative effort between PUTRA MIC, IPTI, SMC, UTHM, and UTM. A total of 63 teams from 54 schools participated in this event. (For details and accounts refer to Appendix A4.)

2.2.6 ZONE 6: PAHANG & KELANTAN

The Pahang Science Fair was successfully organized at SMK Hwa Lian, Mentakab, Pahang on 17th May 2009. It was a collaborative effort between Tamil Foundation, EWRF Junior Club and Tamil Society, SMK Hwa Lian. 17 teams from 14 schools participated in this science fair. (For details and accounts refer to Appendix A5.)



3.0

Schools participating in State-level Science Fairs

3.1 ZONE 1: KEDAH, PERLIS & PENANG

NO	SCHOOL	QUALIFIED FOR NATIONAL FAIR
1	SJK(T) Ladang Sungai Puntar	—
2	SJK(T) Ladang Krian	YES
3	SJK(T) Barathy	YES
4	SJK(T) Sungai Tukang	YES
5	SJK(T) Ladang Sg. Batu	—
6	SJK(T) Bedong	—
7	SJK(T) Ladang Sungai Bongkok	—
8	SJK(T) Ladang Padang Meiha	—
9	SJK(T) Ladang Bukit Selarong	—
10	SJK(T) Palanisamy Kumaran	—
11	SJK(T) Ladang Lubok Segintah	YES
12	SJK(T) Saraswathy	—
13	SJK(T) Ladang Bukit Jenun	YES
14	SJK(T) Kalaivani	—
15	SJK(T) Kalaimagal	—
16	SJK(T) Ladang Malakoff	—
17	SJK(T) Ladang Wellesly	YES
18	SJK(T) Ladang Perbadanan	YES
19	SJK(T) Permatang Tinggi	YES
20	SJK(T) Paya Kamunting	—
21	SJK(T) Thiruvalluvar	—
22	SJK(T) Ladang Mayfield	—
23	SJK(T) Ladang Henrietta	—
24	SJK(T) Mak Mandin	YES
25	SJK(T) Sungai Tok Pawang	—
26	SJK(T) Ladang Jabi	—
27	SJK(T) Mahajothi	—
28	SJK(T) Ladang Prye	—
29	SJK(T) Nibong Tebal	—
30	SJK(T) Tun Sambanthan	—

3.2 ZONE 2: PERAK

NO	SCHOOL	QUALIFIED FOR NATIONAL FAIR
1	SJK(T) Tanjung Rambutan	—
2	SJK(T) Ladang Buluh Akar	—
3	SJK(T) Pangkor	—
4	SJK(T) Dovenby	—
5	SJK(T) Kampung Simee	—
6	SJK(T) Ringlet	YES
7	SJK(T) Maha Ganesa Vityasalai	YES
8	SJK(T) Ladang Kati	—
9	SJK(T) Tan Sri Dato' Seenivasagam	—
10	SJK(T) Mukim Pundut	YES
11	SJK(T) Menglembu	—
12	SJK(T) Mahathma Gandhi	YES
13	SJK(T) Kerajaan	—
14	SJK(T) Ayer Tawar	—
15	SJK(T) Ladang Sungai Samak	YES

3.3 ZONE 3: SELANGOR, WILAYAH PERSEKUTUAN KUALA LUMPUR

NO	SCHOOL	QUALIFIED FOR NATIONAL FAIR
1	SJK(T) Appar	—
2	SJK(T) Jalan Bangsar	—
3	SJK(T) Cheras	—
4	SJK(T) Fletcher	—
5	SJK(T) Kg Pandan	—
6	SJK(T) Jln San Peng	—
7	SJK(T) Sentul	—
8	SJK(T) Vivekananda,PJ	—
9	SJK(T) Ldg Bukit Jalil	—
10	SJK(T) Vageesar	YES
11	SJK(T) Segambut	—
12	SJK(T) Sg Besi	—
13	SJK(T) St Joseph	—
14	SJK(T) Edinburgh	YES
15	SJK(T) Batu Caves	—
16	SJK(T) Ldg Effingham	—
17	SJK(T) Vivekananda,KL	—
18	SJK(T) Watson	YES
19	SJK(T) Puchong Batu 14	—
20	SJK(T) Ldg Kinrara	—
21	SJK(T) Castlefield	YES
22	SJK(T) Ldg Emerald	—
23	SJK(T) Bandar Baru Salak Tinggi	YES
24	SJK(T) Ladang Midlands	YES
25	SJK(T) West Country Timur	YES
26	SJK(T) Jalan Meru	YES

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27	SJK(T) Bestari Jaya	YES
28	SJK(T) Simpang Lima	YES
29	SJK(T) Dengkil	YES
30	SJK(T) Bukit Rotan Baru	—
31	SJK(T) Permata	YES
32	SJK(T) Ldg Glenmarie	—
33	SJK(T) Sg Renggam	—
34	SJK(T) Batu Ampat	—
35	SJK(T) Sg Terap	—
36	SJK(T) Jenjarom	YES
37	SJK(T) Pusat Telok Datok	YES
38	SJK(T) Ldg Ampar Tenang	YES
39	SJK(T) Bangi	—
40	SJK(T) Nigel Gardener	—
41	SJK(T) Ldg Raja Musa	—
42	SJK(T) Tk Merbau	—
43	SJK(T) Taman Melawati	—
44	SJK(T) Ldg Glenmarie	—
45	SJK(T) Kajang	YES
46	SJK(T) Ldg Rinching	—
47	SJK(T) Ldg Semenyih	YES
48	SJK(T) Seaport	—
49	SJK(T) Bukit Beruntung	—
50	SJK(T) Ldg Hopeful	—
51	SJK(T) Gadong	—
52	SJK(T) Rawang	—
53	SJK(T) Ldg Sg Choh	YES
54	SJK(T) Saraswathy, KL	—
55	SJK(T) Batu Arang	YES
56	SJK(T) Saraswathy, Selangor	—
57	SJK(T) Ldg Kampung Baru	—
58	SJK(T) Ldg Changkat Asa	—
59	SJK(T) Ldg Riverside	—
60	SJK(T) Ampang	—
61	SJK(T) Jugra	—
62	SJK(T) Ldg Minyak	YES
63	SJK(T) Sepang	—
64	SJK(T) Ebor	—
65	SJK(T) Ldg Sabak Bernam	—
66	SJK(T) Kerling	—
67	SJK(T) North Hummock	—
68	SJK(T) Ldg Highlands	—
69	SJK(T) Bukit Ijok	—
70	SJK(T) Gandiji	—
71	SJK(T) Pulau Carey Barat	—
72	SJK(T) Thanboosamy	—
73	SJK(T) Tuan Mee	—
74	SJK(T) Ldg 15	—

3.4 ZONE 4: NEGERI SEMBILAN, MALACCA

NO	SCHOOL	QUALIFIED FOR NATIONAL FAIR
1	SJK(T) Ladang Lenggeng	–
2	SJK(T) Jawa Lane	YES
3	SJK(T) Cairo	–

3.5 ZONE 5: JOHOR

NO	SCHOOL	QUALIFIED FOR NATIONAL FAIR
1	SJK(T) Jalan Khalidi	YES
2	SJK(T) Ladang Tangkah	–
3	SJK(T) Ladang Sagil	–
4	SJK(T) Ladang Bukit Serampang	YES
5	SJK(T) Ladang Tanah Merah	–
6	SJK(T) Ladang Simpang Renggam	–
7	SJK(T) Jalan Sialang	–
8	SJK(T) Ladang Pasak	–
9	SJK(T) Labis	–
10	SJK(T) Ladang Voules	–
11	SJK(T) Bandar Segamat	–
12	SJK(T) Ladang Terbau	–
13	SJK(T) Batu Enam	–
14	SJK(T) Ladang Gomali	–
15	SJK(T) Canthuman Chaah	YES
16	SJK(T) Sri Gading	–
17	SJK(T) Seri Pelangi	–
18	SJK(T) Ladang Yong Peng	–
19	SJK(T) Mersing	–
20	SJK(T) Ladang Bukit Rengam	YES
21	SJK(T) Ladang Southern Malay	YES
22	SJK(T) Bekok	–
23	SJK(T) Ladang Elaeis	–
24	SJK(T) Jalan Haji Manan	–
25	SJK(T) Ladang Voules	–
26	SJK(T) Ladang Nordanal	–
27	SJK(T) Ladang Nagappa	–
28	SJK(T) Jalan Tajol	YES
29	SJK(T) Stesen Paloh	–
30	SJK(T) Ladang Yahya Awal	–
31	SJK(T) Ladang Mount Austin	YES
32	SJK(T) Ladang Sg Plentong	–
33	SJK(T) Kangkar Pulai	YES
34	SJK(T) Ladang Ulu Tiram	YES
35	SJK(T) Ladang Sedenak	–
36	SJK(T) Ladang kulai Oil Palm	–
37	SJK(T) Ladang Rini	–
38	SJK(T) Taman Tun Aminah	YES

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39	SJK(T) Jalan Parit Ibrahim	—
40	SJK(T) Ladang Rem	—
41	SJK(T) Ladang Pelepah	—
42	SJK(T) Ladang Nam Heng	—
43	SJK(T) Ladang Teluk Sengkat	—
44	SJK(T) Gelang Patah	YES
45	SJK(T) Pasir gudang	—
46	SJK(T) Desa Cemerlang	YES
47	SJK(T) Masai (2 teams)	YES
48	SJK(T) Permas Jaya	YES
49	SJK(T) Ladang Mados	—
50	SJK(T) Ladang Kelan	—
51	SJK(T) Ladang Fortose	—
52	SJK(T) Ladang Sungai Muar	—
53	SJK(T) Ladang Sungai Senarut	—
54	SJK(T) Ladang Pelepah	—
55	SJK(T) Ladang Kulai Besar	YES
56	SJK(T) Ladang Lanadron	YES

3.6 ZONE 6: PAHANG, KELANTAN

NO	SCHOOL	QUALIFIED FOR NATIONAL FAIR
1	SJK(T) Karak	—
2	SJK(T) Bentong	—
3	SJK(T) Raub	—
4	SJK(T) Ladang Cheroh	—
5	SJK(T) Ladang Sg. Tekal	—
6	SJK(T) Ladang Selborne	—
7	SJK(T) Bandar Mentakab	YES
8	SJK(T) Jerantut	—
9	SJK(T) Bandar Indra Mahkota	YES
10	SJK(T) Ladang Mentakab	—
11	SJK(T) Sg. Kawang	YES
12	SJK(T) Ladang YCL	YES
13	SJK(T) Ladang Lancang	—
14	SJK(T) Kuala Lipis	—

4.0

Research and Quality

The Science Fair Folder was a key tool for the organizers, teachers, students, parents, facilitators and judges to implement the project as accurately as possible. The Folder includes:

1. **Organizer's Manual:** Basically gives an explanation on how to organize a science fair, e.g. in schools, classrooms, organizations, etc.
2. **Teacher's Manual:** Explains roles and responsibilities of science teachers to guide the participants of the Fair.
3. **Student's Manual:** helps the students to develop their project and provides the format of writing a report.
4. **Parent's Guide:** Guides the participant's parents to motivate their child to perform well in SFYC.
5. **Facilitator's Manual:** Gives a guideline to the Facilitators on how to facilitate so that they can help teachers and students during school visits.
6. **Judge's Manual:** Gives proper guidelines on how to judge a science project effectively. This manual had been improvised considerably after last year's feedback on the judging criteria.
7. **Collection of Experiments:** There are 40 guided experiments and 30 non-guided experiments to provide a clear guideline of the various science projects listed in the manual.
8. **Evaluation:** Questions for evaluation have been included for each respective session for improvement in future.



4.1 SET OF EXPERIMENTS

The SFYC Research & Development Team prepared 37 non-guided experiment topics, from which 15 titles were selected and finalised by the SFYC judging team.

Once confirmed, the titles were then translated and finalised into Tamil and incorporated into a folder.

4.2 SCIENCE FAIR FOLDER

The Science Fair is a project that spans several months. The organizing committee had the responsibility of developing and upgrading last year's modules to help them conduct the fair effectively.

Modules were developed and compiled for:

- (1) Organizers
- (2) Students
- (3) Teachers
- (4) Parents
- (5) Facilitators
- (6) Judges.

Working Committee members helped in reviewing the manuals. The manuals were sent for printing and 350 folders were prepared for training purposes.

We hope that the modules would help future committee members to organize science fairs at school level, district level, state level and also national level. The manual should be upgraded from time to time to improve the quality of the Science Fair.

4.3 VCD PRODUCTION

We prepared the Students Guide, Teachers Guide and NSFYC '08 Event Day into VCD documentation.

4.4 NATIONAL SCIENCE FAIR EVENT DAY SURVEY

A survey was carried out by the R&D Team during the event day to obtain the following details:

- (1) Students, teachers and visitors opinions on organizing methods
- (2) Programme quality analysis
(For the survey report, please refer to Appendix B.)

4.5 RECOMMENDATIONS FOR FUTURE

The following recommendations were made:

- (1) To involve teachers in preparation of manuals and translation
- (2) Make sure all manuals are in dual languages (Tamil & English)
- (3) Experiments should be in simple language which can be understood by students
- (4) More graphics and pictures rather than notes so that students understand easily.



5.0 Training

5.1 Teachers and Facilitators Training

Training for teachers and facilitators were conducted parallel in each zone. Training sessions were arranged by the respective zone coordinators. The training sessions were conducted by National Science Fair Working Committee members.

The training sessions and materials were planned by National Science Fair Working Committee and training dates were given by the respective zone coordinators in advance so that the training team could make the prior arrangements. All the training sessions were conducted as stated below.

5.1.1 ZONE 1: KEDAH, PERLIS AND PENANG

Date : 14th March 2009
Venue : AIMST University,
Kedah
No. of Teachers : 37
No of Facilitators : 20

The training session was well organized and well conducted.

The teachers' training was organized on 15th March 2009 at Institute Info Jaya, Ipoh from 9.30am – 1.00pm. The facilitators' training was conducted on 28th March 2009 at Perak Indian Chamber of Commerce Service Centre, 46A, Medan Istana, Bandar Ipoh Raya, Ipoh but no facilitators turned up.

5.1.2 ZONE 2: PERAK

Date : 15th March 2009
(Teacher Training)
28th March 2009
(Facilitator Training)
Venue : INFOJAYA Tuition
Centre, Ipoh
No. of Teachers : 24
No of Facilitators : None

5.1.3 ZONE 3: SELANGOR & WILAYAH PERSEKUTUAN

Date : 21st February 2009
Venue : 2nd College, University
Malaya
No. of Teachers : 88
No of Facilitators : 24

The teachers' and facilitators' training were organized twice at two different locations and 88 schools registered to get involved in SFYC '09. Since the numbers of schools were big, the coordinator had recruited nearly 30 facilitators to assist the teachers and students. The training sessions were well organized.



5.1.4 ZONE 4: MELAKA & NEGERI SEMBILAN

Date : 22nd February 2009
 Venue : Negeri Sembilan MIC Building, Seremban

No. of Teachers : 19

No of Facilitators : None

The 3 schools that participated were from Negeri Sembilan. The facilitators' training was not arranged at all. 23 schools were actually supposed to register as SFYC '09 participants for the Negeri and Melaka Zone, but due to some unforeseen circumstances, the coordinator had decided to concentrate only on Negeri Sembilan schools for this year.

5.1.5 ZONE 5: JOHOR

Date : 14th March 2009
 Venue : University Tun Hussein Onn, Batu Pahat, Johor

No of Teachers : 70

No. of Facilitators : 41

All the 70 schools in Johor attended the training but only 60 schools have registered for SFYC '09. The training session was well organized.

5.1.6 ZONE 6: PAHANG, KELANTAN

Date : 28th February 2009
 Venue : SJK(T) Lurah Dilut, Bentong, Pahang

No. of Teachers : 16

No. of Facilitators : 1

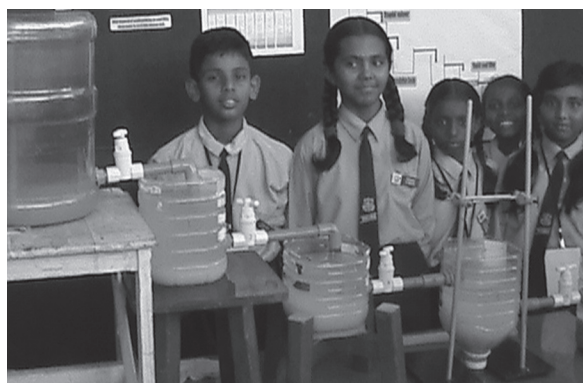
Zone 6 teacher's training was held at 2 places due to the distances of schools in Pahang. The venues and times were as below:

1. SJK(T) Lurah Bilut, Bentong
 9.00am – 12.00pm
 - Out of the 8 participating schools in that area, 6 schools sent their teachers for the training.
2. Mentakab, Tingkat 3 Bangunan MIC
 2.30pm – 5.30pm
 - All 9 schools participating in this area had send their teachers and 10 teachers attended this training.
 - 2 new schools were taking part in this year's SFYC 09 and have sent their representatives.

The training sessions were well organized.

5.2 RECOMMENDATIONS FOR FUTURE

- The coordinators must confirm their commitment before assigning them. They must truly understand the nature of organizing a science fair.
- The training dates must be fixed during the training for organizers to avoid too many changes later.
- Separate training sessions to be conducted for larger zones.



6.0

Public Relations & Funding

Public Relations (PR) in the Science Fair is the flow of information between the Science Fair Secretariat and its publicity. Main activities include discussion sessions with the relevant media, etc.; an interview of last year's winning teams by ASTRO Vaanavil's 360 degrees crew during the official launching of the Science Fair on 20 Jan 2009 at the Shah's Village Hotel,



Petaling Jaya; an interview of the National Science Fair Working Group member on ASTRO Vizhutugal; promos on the National Science Fair (5th June – 19th June 2009); regular news in Info Zone THR Raga (5 June – 14 June 2008); working with the press - regular press news on State and National Level Science Fairs (February, March, April, May & June).

Pamphlets and invitations were sent to VIP's, guests and well-wishers to spread information and to garner public awareness for the National Science Fair.

This year, a new type of publicity method was approached by telecasting scientists' capsules. The capsule program was done mainly to highlight foreign and local popular scientists as an appreciation to their achievements in the world of science. The capsules created a big impact among the public and some had taken the initiative to call the secretariat to find out more about the science fair and its objectives. Most of the public thought that there will be a big fair about the scientists in this world and some of them were requesting for a book about these scientists as simple as we had telecasted on ASTRO Vaanavil.

This year, the funding was approached based on three different groups, which was in terms of cash, advertisement (for cash) and products. The targeted funders were approached through phone calls and emails via the key stakeholders. After receiving their positive feedback, the importance of the Science Fair was explained so that some funds could be obtained for the fair. There have been some difficulties in raising funds. Most of last year's funders were not able to donate this year due to the current economic crisis. There were many product funders such as Cadbury and Dutch Lady which were already approached by the secretariat (Tamil Foundation) during the Zone 3 SFYC and their other projects. These products funders were unable to sponsor for the national level, since they had already sponsored previously in the name of the same NGO.

7.0

Volunteers & Facilitators Management

TARGET GROUP

University students and Form 5 & 6 school leavers were the most selected facilitators who played important roles in NSFYC 2009.

OBJECTIVE

These groups used their school experience to implement the project. They too expressed an interest in science and in learning science.

FACILITATORS TRAINING - INTRODUCTION & PROJECT OVERVIEW

- Group introduction and discussion on SFYC.
- Learn personal objectives of every participant.
- Discuss general preparation for the SFYC.

GROUP DISCUSSION

- A group discussion on the elements that go into planning SFYC in schools.

FACILITATORS' ROLES IN SFYC

- Guide and help the participating children and their teachers.
- School visiting.
- Submit report to coordinator.
- Help out in state level Science Fairs – organizing the fair - conduct supplementary competitions e.g. Colouring, Drawing, Science Quizzes, Multimedia Quizzes, Campus Tours, etc.
- Support the National Science Fair.



The initial preparation of the Science Fair for Young Children 2009 started in October 2008 and ended on 21st June 2009. The process began with facilitator recruitments into the R&D Department.

At the initial stage of the program, they did a lot of internet research to collect various types of experiments for young children. Through this research and other sources such as science-related TV programmes and books, they were able to gather nearly 37 non-guided experiments. From these numbers of experiments, they selected 15 non-guided experiments based on attractiveness, difficulties, cost and time duration with the help of some judges. A new module, the 'Parents Guide' had been added to the organizer's manual to guide the participants/students parents to support their child to perform well in the Science Fair.

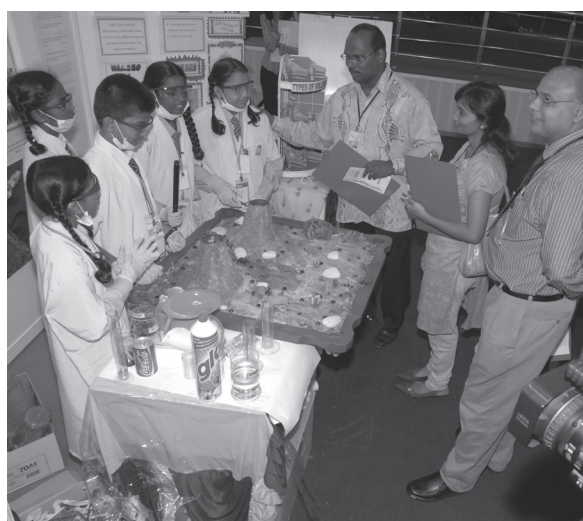
The finalized experiments & parents guide had been translated with the help of a private lecturer. The standardized Facilitators' Training Manual is to train the facilitators at all zones. Some minor changes had been done to this manual. As in last year, the facilitators were explained to about the project, about each and every experiment and about their roles and

responsibilities, as in the contents of this manual. The central committee of NSFYC 2009 managed to complete all trainings in 6 zones by the middle of May with the cooperation from the zone coordinators.

Similarly as last year, our facilitators were instructed to visit participating schools at least two times to guide the schools on developing their experiments and presentations during the State Level Science Fair. Facilitators also collected the report book and a copy of the logbook from the participating teams on their second visit. Later, these books were submitted to the judges to start the marking process.

Once the State Level Science Fairs ended in all 6 zones, the National Science Fair 2009 became the main focus for everyone. It was actually a 3- day event for facilitators, starting from the arrival of participants to University of Malaya, followed by the National Science Fair 2009 (judging day) and ending with the National Science Fair 2009 (public viewing).

The National Science Fair for Young Children 2009 became a successful event with the commitment and cooperation given by everyone involved directly or indirectly in this major programme.



8.0

NSFYC 2009 Conference Paper Presentation

In the National Science Fair, the top two winning teams from each zone submitted two pages of a short conference paper. The papers were reviewed by the NSFYC Committee and 11 best papers were presented in a special Conference Paper Presentation at the 2nd Residential College, University Malaya on 20th June 2009 from 7.00 pm to 11.30 pm.

OBJECTIVES

- 1.1 To cultivate the concept of research findings and sharing the academic approach with other participants of the fair in a formal way.
- 1.2 To provide an opportunity to write the research findings in an organized and systematic manner.
- 1.3 To provide an avenue for the young scientists to experience the atmosphere of a conference paper presentation.
- 1.4 To develop confidence, encourage and reveal their capability to speak in public and mould them to be a good presenter in future.
- 1.7 One person from each team is required to present the paper at the Conference Paper Presentation.
- 1.8 Students are required to present their paper using Microsoft PPT slides (only 8 pages are allowed). Presentation time is 15 mins and 5 mins for Q&A.
- 1.9 The Champion for the NSFYC 2009 conference paper presentation was SJK(T) Ringlet and the Runner-up was SJK(T) Masai - A Team.
- 1.10 (refer to appendix 7 & 8 for sample conference papers).

GUIDELINES

- 1.5 Two conference papers from the 1st and 2nd prize winners of each zone were submitted to the Conference Paper judges. Both teams presented their conference paper for NSFYC 09.
- 1.6 The conference paper was written based on the experiment conducted by his/her team for the National Level Competition.
- 1.11 Pay more consideration to the conference paper format and submission deadlines.
- 1.12 Go for a better hall which provides more convenience, expediency and pragmatism.
- 1.13 Early notification of PA system.
- 1.14 Better communication among departments involved before and during presentation (to avoid communication breakdown).

9.0

National Science Fair for Young Children 2009

National Science Fair for Young Children 2009 is a three-day event which starts on Friday evening and ends on Sunday evening. The details of the event are as follows:

Venue for Accommodation	: 2nd & 12th College of University Malaya
Date	: 19th, 20th & 21st June 2009
Venue for Science Fair	: TNB Hall, Jln Bangsar, Bangsar, Kuala Lumpur
Time	: 8.00am - 4pm

1ST DAY – 19TH JUNE 2009

Participants from each zone started arriving from 1pm onwards. They started to check into their rooms after registering upon arrival. Meanwhile, the log book and report book which had been collected earlier from the teams were judged by a group of judges in a study room at the 2nd College.

Dinner was served on time but there was apparently not enough food since there were also more than 40 judges joining in the dinner and their numbers were not included while catering the food.

After dinner, the participants were briefed on the itinerary for the three days by Mr Kuhan, Head of Security Department, on the rules and regulations of the premises - both on lodging and the TNB Hall where the fair would be held.

2ND DAY – 20TH JUNE 2009

There was a closed-door judging on the first day of the fair starting from 8.30am until 5.30pm. Invited VIP's especially the capsule's local scientists and partner organization members visited the fair during this time. Meanwhile, a special discussion slot was held at the TNB cafeteria between the teachers and Dr Subbiah our special guest who hosts "Kandupudi – Kandupudi" on Makkal TV in Chennai, India.

On the second day, the participants were only able to enjoy their dinner around 8.30pm even though the dinner was scheduled at 7.30pm due to the delay of the caterers.

The conference paper presentation was held at the 2nd College of University Malaya at 8pm. The top two teams from each zone presented their research and findings from their experiments. A total of 11 teams participated in this section. 1 team could not participate due to unavoidable circumstances.

3RD DAY – 21ST JUNE 2009

The second day of the Science Fair was opened to the public from 9.30 am to 3.00 pm. Entrance was free.

During the fair, there were other extra activities such as science quest, games, competitions and hands-on experiments by Dr Subbiah Pandi. He conducted these experiments for the teachers and the public.

The closing ceremony started at 2.30pm and ended by 4.00pm.



10.0

Judging

The Judging Department worked based on the time-line stated below:

(I) NOVEMBER - DECEMBER 2008:

Finalizing Judging Criteria based on Experiments/Projects (Guided and Non-Guided) by working together with the Research and Development Team.

(II) DECEMBER - JANUARY 2008:

Formation of Core Judging Panel and conducting a Brainstorming Session within the Judging Panel:

- (a) To discuss the methodology and training materials required for training of state/zone level judges.
- (b) To set the criteria to select the state/zone level judges.

(III) JANUARY - MARCH 2009:

Task 1: Prepare Training Materials (slides/handouts) to train the judges.

Task 2: A Complete Briefing on guided and non-guided experiments to the Judging Panel (like a Workshop session to make sure the Core-Judging Panel were well equipped with the “experimental” and “theoretical” knowledge of all the experiments). The briefing and workshop session needed help from the R&D Department.

The Judges liaised with the state coordinators to conduct regional training and a schedule was put in place.

(IV) APRIL - JUNE 2009:

To identify new members to join the judging team as the Core Judging Panel.

Gear the Core Judging Panel to have regular meetings with the core judges.

Core Judges to visit the state level Science Fairs if necessary to obtain better feedback from those Science Fairs.

National Science Fair – closed-door judging by the selected judging group from each zone.

11.0

Best Coordinators

APPRECIATION FOR COORDINATORS

Two coordinators were chosen to set the benchmark as good Science Fair Coordinators. We look forward for their continuous support and help to make future Science Fairs a success.

Other zone coordinators also did their best, especially the Selangor & Kedah zones. The Perak & Negeri Sembilan zone could perhaps have done better.

Mr. Saravanan and Team – Coordinator – Johor Zone.

1. Capable to gather more schools than targeted.
2. Excellent and active planner.
3. Always calls back and updates if can't reach him.
4. Supportive person.
5. He cares about the students as well as their success and achievement and is able and willing to communicate this concern.
6. Caring, communicative, competent and confident.

Mr. Varatharajan and Team – Coordinator – Pahang & Kelantan Zone

1. Really committed.
2. Always updating, gives accurate information, well versed with the project's aims and objectives.
3. An excellent communicator with the Project Officers and other Facilitators.
4. A supportive person.
5. Really helpful at the National Level Science Fair.
6. Caring, communicative, competent and confident.

12.0

Teachers Dialogue Session

A teachers' dialogue session was conducted by Dr Subramaniam to emphasize that the National Science Fair for Young Children was not a competition. Dr Subramaniam had explained very well the marking schemes for the national level to all teachers involved. Teachers gave their opinions and shared their feelings with the speakers.

Most of the teachers had winning the competition in mind. They spent their money, time and effort only to win the competition.

This session was mainly a two-way conversation. The speaker reached out to the teachers on the real objectives of participating in the fair. Finally, most of the teachers understood the objectives of the fair.

13.0

Project Achievements

Having conducted the Science Fair for the last 3 years:

2007	Selangor & Wilayah only	44 Schools	49 Teams
2008	National Level (6 zones)	180 Schools	197 Teams
2009	National Level (6 zones)	190 Schools	207 Teams

This year again, we conducted the state level Science Fairs in 6 zones, involving the participation of 188 Tamil schools, while the National Level Fair involved the participation of 60 schools. This year, we invited the Education, Welfare and Research Foundation (EWRF) to be one of our partner organizations for SFYC 09. The National Level Science Fair 2009 was held at the TNB Hall, Bangsar on 20th & 21st June 2009. This year, we have encouraged the schools to conduct school level science fairs. Some schools have conducted the school level science fair with the support of the state coordinators. The schools that had organized school level Science fairs and participated in the State Level Science Fair performed much better than all other schools during National Level Science Fair. This can be proven by the top 5 winning teams.

We were surprised to see the participating students from each zone having improved their presentation and communication skills with the public. The students brought science to life as they tackled investigative questions through hands-on experiments, helping them develop and demonstrate their interests and strengths in science.

We noted many improvements in the thinking process at varying levels, in the schools taking part, among them were:

- Students approached a problem using scientific methods.
- Students asked questions, formed hypotheses and created experiments to test their hypotheses.
- Students observed, recorded, organized data and drew conclusions from them.
- Students communicated their scientific research articulately & confidently to others.
- Students work cooperatively in a team of 3-5 persons.
- Students budgeted their time, organized their work into manageable chunks, kept to a schedule and delegated work diligently.
- Students used reading, writing, research and computer skills.
- Students were able to answer questions from different angles.
- Students were confident during presentation.

14.0

Problems Faced

There were some critical and sensitive problems faced by the NSFYC 09 Organizing/WGC committee during the organizing process. This needs to be looked into very seriously so that we can improve in organizing a better Science Fair in the coming years. The problems which were faced since the beginning of the project till the end are listed below with a brief explanation.

14.1 ORGANIZERS MANUAL

- The editing was not well organized (example: Year, Title & etc.)
- The cover page was not so clear. To make it better for the following years, it should be sent for digital printing.

14.2 STATE LEVEL SCIENCE FAIR

Zone 4 – Melaka & Negeri Sembilan

- The organizing method of this zone was not good.
- Conflict among internal groups.
- Communication breakdown with organizers.

14.3 NATIONAL LEVEL EVENT DAY

- Insufficient number of volunteers.
- Accommodation provided was not comfortable.
- Food providers/ caterers were not very interactive with volunteers.
- Transport problem for local schools - from the accommodation to the hall.
- Volunteer management was not well organized.
- Floor plan was not accurate for seat arrangement.
- Stage was not well organized (no backdrop, MC's need to be auditioned – Tamil Emcee was not good, personalized certificate printing not advisable – caused chaos on stage and no runner during the Prize Giving Ceremony – too many people were getting up on stage).
- Unable to release the cash prize money after the prize giving ceremony due to some formalities.

15.0

Recommendations for the Future

15.1 WORKING GROUP COMMITTEE

- WGC members should not be paid; only claims are allowable.
- Every important suggestion/decision must be raised in the WGC meeting to get approval before being implemented, even though it is informed to important persons such as the Project Director. (The Project Director has the veto power to decide on certain urgent issues if necessary, and he could then update the WGC later.)
- Internal meetings should be conducted by Project Director/Project Advisor with the Project Officer and staff.

15.2 PARTNER ORGANIZATIONS

- Better to have different funders and sponsors for National and State level SFYC.
- All partner organizations should contribute some funds (minimum RM5,000) for National Level event if possible.
- Publicity from this event should be made equally for all the partners without considering the level of their contribution.
- Try to promote the value and importance of SFYC more towards community and participant empowerment (children) and not solely on winning.
- Each partner should take responsibility on one of the following components; Training, Event Committee, Secretariat, Publicity or State/Zone Level SFYC, etc.

15.3 ORGANIZER'S MANUAL

- Facilitator's roles, responsibilities and Science fair organizing methods should be developed and improvised in the Organizers Manual.
- The facilitators should be briefed on the Organizers Manual for proper implementation.
- National level event committee are also advised to follow the organizing methods from the Organizer's Manual and try to avoid changing the track of organizing to avoid unnecessary problems.

15.4 STATE LEVEL SCIENCE FAIR

- Arrange new coordinator/NGO for Zone 2 (Perak) & Zone 4 (Negeri Sembilan).
- Do not promise the bus vendors (transportation) of the different zones a budget allocation from funders during the National Level Science Fair, when the budget does not support it or if there is no such allocation.
- Coordinator's payments must be released as scheduled.
- Zone SFYC reports must be sent two weeks after their zone SFYC.
- Coordinators need to avoid getting funding once the accounts have been closed and sent to the central committee.
- All the excess funds which have been gathered this year need to be carried forward to next year and must be included in next year's accounts.
- Prize giving categories should be minimized to top 5 to 10 prizes only. This might help reduce confusion among teachers on the judging methods.

15.5 PROJECT OFFICER / ADDITIONAL STAFF

- Project officer must be independent from the entire partner NGO's.
- Project officer and additional staff should be allowed to give their opinions during the WGC meeting.
- Project officer should not be involved too much in the State SFYC as it may create some misunderstanding among the organizers and participants.

15.6 NATIONAL LEVEL EVENT DAY

- Make sure all States do not get the same vendors as National Level.
- Select the right person to be the head of departments.
- To impose a deposit payment for booths from schools (to account for damaged booth partitions).
- Accommodation should be localized at one spot or if there were more than one venue, then the venues should be located near each other. The full payment should be done after a survey is conducted based on the services provided by the accommodation vendor after the Fair.
- Avoid paying full payments to the vendors; payments should be made in 2 minimum payments.
- Clear definition on rules – key responsibilities to all persons – deliverable, measurable format.
- Website needs to be updated frequently and must be attractive to be surfed.
- Better to conduct the conference paper presentation parallel in two venues or in a single venue with a bigger hall to accommodate the total number of people.
- The venue for the conference paper should be a lecture hall or an auditorium.
- Better to release the cash prize money to all respective winning schools after the event to avoid unnecessary problems.
- Event day post-mortem and appreciation lunch/dinner must be conducted separately.

16.0

Conclusion

The emphasis is currently on revising and improvising the resource materials based on the experience gained and to add in new modules in the manual, e.g. Parents Guide. This phase envisioned the expansion of the programme to all Tamil Schools nationwide with the view of conducting numerous state level science fairs in the 6 zones nationwide in May-June 2009 and national science fair on 20 & 21 June 2009. This year, we also encouraged school level science fairs so that we reach out to more Tamil school students throughout the country.

The Science Fair was a great success to us, and we hope that it can be further improved with more schools participating next year.



Appendix A

NATIONAL SCIENCE FAIR FOR YOUNG CHILDREN 2009

STATEMENT OF INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2009

INCOME	RM	EXPENDITURE	RM
ECM Libra Foundation	63,890.00	Accommodation	14,490.00
EWRF	5,000.00	Audio and visual	2,900.00
MCEF-CCI	121,400.00	Audit Fee	1,000.00
Donation (various)	26,800.00	Exhibition Booths	16,940.00
		Facilitators and volunteer	4,380.00
		Folder prepareration	2,650.00
		Insurance	1,585.00
		Judging Expences	2,320.00
		Meals	17,000.00
		Miscellaneous	1,896.40
		PA system	1,500.00
		Price and souvenirs	22,390.00
		Printing and stationery	19,713.00
		Rental-venue	9,100.00
		Refreshment and postmortem	3,850.00
		Research and developement	11,344.10
		Salary and allowances	16,482.00
		Soft launching	3,100.00
		Travelling and transportation	16,370.00
		Zone allocation	45,380.00
TOTAL	217,090.00	TOTAL	214,390.90

BALANCE SHEET AS AT 31 DECEMBER 2009

Current Asset	RM
Cash and bank balances	3,699.10
Current Liability	
Other payables	1,000.00
Net Current Assets	2,699.10
	<u>2,699.10</u>
Financed by:	
Accumulated fund	<u>2,699.10</u>

**CASH FLOW STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2009**

	RM
Cash Flows From Operating Activities	
Surplus for the year	2,699.10
Working capital changes:-	
Other Payables	1,000.00
Net cash generated from operating activities	<u>3,699.10</u>
Net increase in cash and bank balance	3,699.10
Cash and bank balance at beginning of the year	<u>-</u>
Cash and bank balance at end of year	<u><u>3,699.10</u></u>

NOTES TO THE FINANCIAL STATEMENT - 31 DECEMBER 2009**1. PRINCIPLE ACTIVITY**

The principle activity is organising science computation for primary Tamil school students in Malaysia. The partner organising committee are from Malaysian Community and Education Foundation (MCEF), EWRF, MISI, Tamil Foundation, Putramic, Astro and Tamil School HM Council. The Organising Committee appointed Tamil Foundation as secretariat for the year.

2. SIGNIFICANT ACCOUNTING POLICIES**(a) Basis of Preparation Financial Statements**

The financial statements have been prepared under the historical cost convention and comply with applicable Approved Accounting Standards in Malaysia.

(b) Income Recognition

Income is recognised based on the partners contribution and donations from corporate bodies, companies and public.

(c) Expenditure Recognition

All the expenditure are accounted for on an accrual and cash basis.

(d) Other payables

Payables are stated at cost which is the fair value of the consideration to be paid in the future for goods and services received.

(e) Cash and Cash Equivalents

For the purposes of the cash flow statements, cash and cash equivalents include cash on hand and at bank which have an insignificant risk of changes in value.

3. SUBSEQUENT EVENT

Subsequent to the balance sheet date, the Organising committee has appointed MISI as secretariat for the National Science Fair For Young Children 2010.

Appendix A1

STATEMENT OF INCOME AND EXPENDITURE SCIENCE FAIR FOR YOUNG CHILDREN 2009

ZONE 1: KEDAH, PENANG & PERLIS

INCOME	RM	EXPENDITURE	RM
Central Committee	7,400.00	Telephone	248.90
Donation (various)	414.15	Postage	26.70
		Facilitators and teachers' training	465.00
		Judges' training	93.00
		School visits	498.70
		Prizes and souvenirs	1,210.00
		Banners	275.00
		Invitation cards	40.00
		Pamphlets	48.00
		Corsage	35.00
		Partition	3,000.00
		Food (Event Day)	1,265.00
		Photocopies	93.70
		Decorations	273.65
		Tags (Participants)	97.50
		Tags (Volunteers)	144.00
TOTAL	7,814.15	TOTAL	7,814.15

Appendix A2

STATEMENT OF INCOME AND EXPENDITURE SCIENCE FAIR FOR YOUNG CHILDREN 2009

ZONE 2: PERAK

INCOME	RM	EXPENDITURE	RM
Participation fees	900.00	Operational Cost	
Central Committee	3,360.00	Administration Staff	500.00
Tamil Foundation	500.00	Utilities	300.00
Donation (various)	101.00	Delivery of Students Manual to Schools & Facilitators Visits	
		Food	670.00
		Transport	830.00
		Teachers & Facilitators Training	381.00
		Science Fair Event	
		Hall	200.00
		Partition	220.00
		Meals	500.00
		Printing	80.00
		PA System and technician	120.00
		Souvenir (VIP)	30.00
		Video shooting (live) photography	100.00
		Cash prize	600.00
		Trophies and medals	440.00
TOTAL	4,861.00	TOTAL	4,861.00

Appendix A3

STATEMENT OF INCOME AND EXPENDITURE SCIENCE FAIR FOR YOUNG CHILDREN 2009

ZONE 3: SELANGOR & WILAYAH PERSEKUTUAN

INCOME	RM	EXPENDITURE	RM
Central Committee	16,000.00	Judges/Teachers/Volunteers training	
NLFCS	20,000.00	Hall	600.00
		Food	2,590.00
		Miscellaneous	100.00
Selangor		Food for volunteers	2,307.05
State Government	22,500.00	Printing	
		Invitation	900.00
		Banner	720.00
Donation		Programme Book	2,500.00
(various)	8,550.45	Back drop	980.00
		Stationery	5,137.25
		Prizes	9,879.60
		ON THE DAY EXPENSE	
		Science Fair Event (80 Teams)	
		Hall	5,000.00
		Partition	11,900.00
		Security - Rela	320.00
		Games	254.40
		Quiz Multimedia	500.00
		Photo	750.00
		P.A. System	500.00
		Video	1,000.00
		Miscellaneous	500.00
		Others	
		Transport	1,874.15
		Medical	35.00
		Salary	2,550.00
		Phone	900.00
		Coordinator Allowance	1,000.00
		Petty Cash	3,600.05
		1st & 2nd Visit (Transport, Phone, Food)	10,652.50
TOTAL	67,050.45	TOTAL	67,050.45

Appendix A4

STATEMENT OF INCOME AND EXPENDITURE SCIENCE FAIR FOR YOUNG CHILDREN 2009

ZONE 5: JOHOR

INCOME	RM	EXPENDITURE	RM
Universiti Tun Hussien onn Malaysia	12,500.00	Prizes	13,200.00
Central Commitee	12,000.00	Halls	12,500.00
Mr Nila Raja	6,000.00	Booth	10,000.00
Dato Dr S.Subramaniam	5,500.00	Food and Drink	9,026.00
Mr Steven	4,500.00	T-Shirt	4,500.00
Mr Thenarasoo	4,000.00	Transport	2,783.70
Mr Elan Ko	3,000.00	Photocopy, Banner, Bunting & Poster	1,647.40
Mr Gopi	2,875.00	Stationeries	1,312.00
School Participation Fee	2,650.00	Phone Calls	520.00
Mr Ganesh Kumar Bangah	2,000.00	VIP Receiving	17.70
Mr Elango (Great Eastern)	500.00		
Mr Mani (Head of Compliant Alliance Bank)	500.00		
Mr Suresh Kumar (Nugrahan Sdn Bhd)	500.00		
Mr Low You Hock	200.00	Balance c/f	1,418.20
Mr Sivaji	200.00		
TOTAL	56,925.00	TOTAL	56,925.00

Appendix A5

STATEMENT OF INCOME AND EXPENDITURE SCIENCE FAIR FOR YOUNG CHILDREN 2009

ZONE 6: PAHANG & KELANTAN

EXPENDITURE	Actual (RM)	EXPENDITURE	Actual (RM)
Central Committee	3,400.00	Operational Cost	
Donation (various)	3,679.65	Coordinator Transport allowance	500.00
		Administrative Cost	86.75
		Postage	111.00
		Stationery	83.40
		Refreshments for Committee Meeting	26.40
		Teacher's & Facilitators Training	
		Refreshments	101.50
		Facilitator's Visits	
		Transport Allowance	760.00
		Science Fair Event	
		Hall	500.00
		Publicity	64.00
		Name tags	122.00
		Invitation pamphlets	850.00
		Partitions and chairs	260.00
		Food & Beverage	75.00
		Prizes and Souvenirs	3,406.20
		Bookmarks	
		Technicians	30.00
		Miscellaneous	103.40
TOTAL	7,079.65	TOTAL	7,079.65

Appendix B

NSFYC 2009: EVENT SURVEY REPORT

STUDENTS

The students were very satisfied with the project. They improved their communications with their parents throughout this project. Good team work and cooperation were practiced among the groups by carrying out the projects given. Besides that, the hands-on approach on conducting a science project and presentation skills were obtained by students in the process. Many found that the judging system was fair, positive, constructive and encouraging. According to the majority, the venue and environment of the event was comfortable and effective. Although not many were satisfied with the accommodation, the variety of food brought delight.

TEACHERS

While the variety of food needs to be improved, accommodation should be revised. Comfort and hygiene need to be given importance. However, majority of them felt that they were comfortable and had fun throughout the event which was very effective. Many of the teachers too were satisfied and praised the judging method. The teachers also claimed that their communication skills have improved.

VISITORS

Overall the public felt that this event benefited not only the students but everyone. Through the display of scientific abilities of the students, general science knowledge was successfully conveyed to the public. They were willing to give more support to carry on with such a noble project as they realized its importance. Although only a few realized and watched the capsules, they found it very interesting and informative. This event can be further improved if the area of facilities and advertising were given more focus by the organizing committee.

Appendix C1

CONFERENCE PAPER: SJKT RINGLET, CAMERON

WATER PURIFICATION

1.0 INTRODUCTION

Humans may live for a month or more without food, but only a few days without water; only oxygen is more important. Each day, the body loses up to three quarts of water. A loss of only 10-20% of the body's water content could be fatal. When we take untreated water from a river or reservoir, the water often contains natural wastes and pollutants. Such water is not good for human consumption. So an experiment was conducted to create a water purification model by using basic material. There were 10 types of filtration materials tested during the experiment. Finally, only six filtering materials were chosen to conduct the experiments. The cleanliness of the filtrated water is recorded. To be fair, these measurements were taken to get an average reading. The result shows that decreasing the size of the gap will increase the cleanliness of the water. The result also shows that the hypothesis is true and is accepted.

2.0 PROBLEM DESCRIPTION AND SOLUTION DESIGN

The aim of this experiment is to investigate the relationship between basic materials and the cleanliness of water. The hypothesis is that the fewer the gaps between the filtering particle, the more cleanly the water is filtrated. Many scientific theories have been used in the experiment.

2.1 Problem Description

Can the basic materials be used to purify the water? The problem was created based on the aim of the experiment, and it was solved at the end of the experiment.

2.2 Solution Design

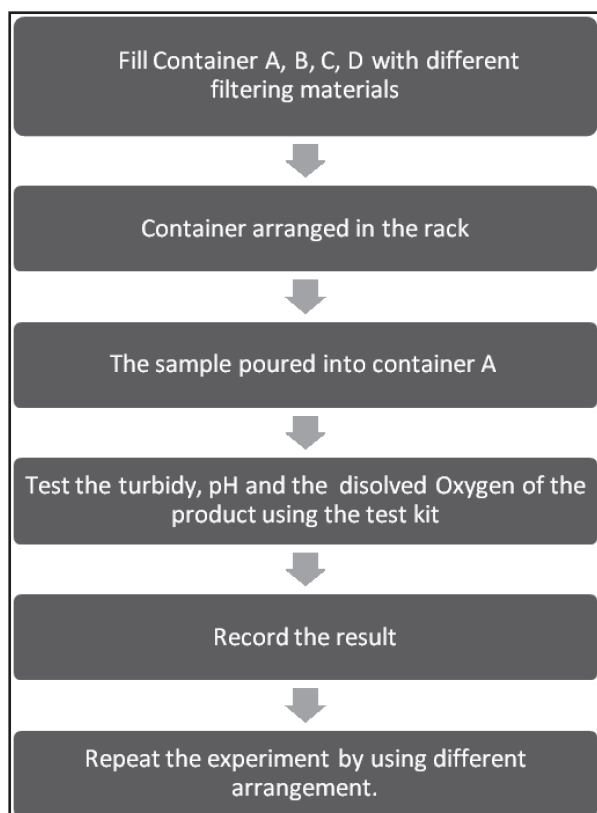


Figure 1: Process Flow of the Experiment

2.3 Implementation

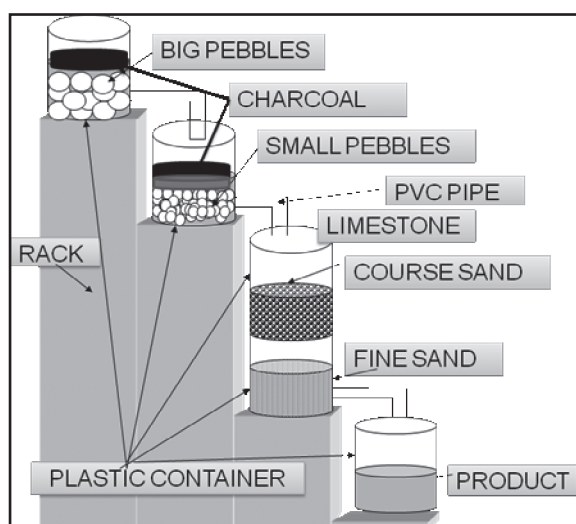


Figure 2: Illustration of general method of equipment setup

3.0 RESULTS AND DISCUSSION

CONTAINER	DISOLVED OXYGEN (DO)/PPM	PH	TURBIDITY (NTU)
A	4	8	80
B	4	7	65
C	4	8	50
D	4	7	20
A+B+C+D	4	7	0

Figure 3: Data from the experiment

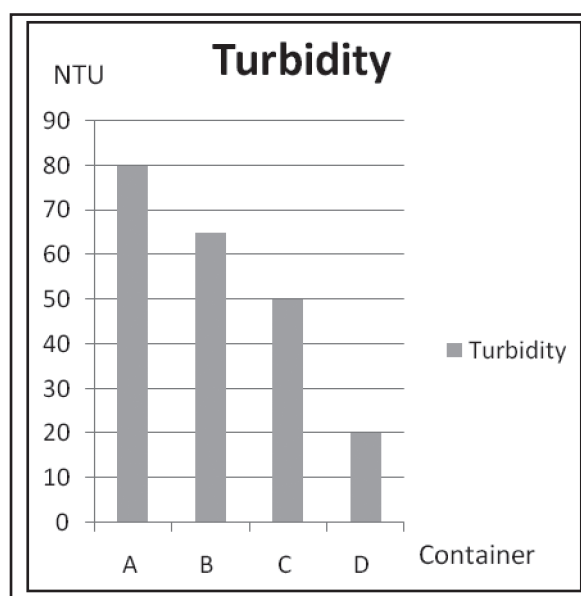


Figure 4: The turbidity of the filtrated water by using different material

When we pour the sample into Container A, water will flow out to Container B. In Container A, the dirt particles in the dirty water which are bigger in size than the gap between the big pebbles will get trapped in Container A. The dirt which is smaller than the gap will be suspended to the next container. The same process will happen in Containers C and D. The system can trap unwanted particles which are more than 0.1mm. Charcoal is used to eliminate active minerals like chlorine and the smell of the water.

Besides that, limestone is used to change the pH of the water. When we check the dissolved oxygen it shows the result as recorded in the Table. The results show that the system does not reduce the dissolved oxygen but maintains the dissolved oxygen level.

The clarity in the clarity chart shows that the clarity of the water increases when the gap between the water reduces.

The system can clean the water effectively. Besides that, the system is economical. All the materials used are natural and recycled materials. The model is simple to create.

This same concept has been applied on a larger scale. Although the model cannot purify water more effectively, it can filter large-sized rubbish which contaminates the rivers. The model was created at Sungai Pauh, Cameron Highlands. The application gives a positive result.

4.0 CONCLUSION

In conclusion, the results show that when the gap of filtering material reduces, the cleanliness of water increases. Therefore the acceptable hypothesis is, where there are fewer gaps between the filtering particles, the more cleanly the water is filtered.

Appendix C2

CONFERENCE PAPER: SJKT MASAI, JOHOR

ADVISOR: Mr. K. Vijay Raj

PUPILS: C. Krishnenthiran, S. Yuganeithaa, B. Guhaan, S.Mridhula, S. Hariharan

AIRBORNE VEHICLE

1.0 INTRODUCTION

We wondered how people first tried to fly, or how a heavy airplane can stay in the air. People made wings of feathers and tried to fly like birds. They attached man-made wings to their arms and jumped from high places. Their attempts usually end up with serious injuries or death. The Wright brothers were the first to successfully invent a safe airplane.

Our involvement in this Science Project has given us the opportunity to explore Mother Nature scientifically and this perhaps may lead us to new discoveries. It has also given us the opportunity to meet and learn from fellow young scientists and professionals from various fields.

2.0 PROBLEM

How the volume of air affects the distance moved by our airborne vehicle.

2.1.1 Aim

To investigate the relationship between the volume of air and the distance travelled by our airborne vehicle.

2.1.2 Objective

To identify the air volume needed to move our airborne vehicle up to 1 meter.

2.1.3 Hypothesis

When the volume of air increases, the distance travelled by the airborne vehicle also increases.

2.1.4 Variables

- a) Manipulated variable: Volume of air.
- b) Responding variable: Distance travelled by the airborne vehicle.
- c) Controlled variable: Buoyancy force, mass of vehicle, types of gas.

2.2. Method/Materials

2.2.1 Materials

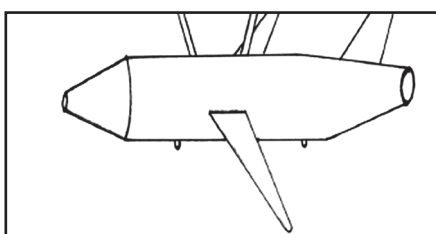
- Aluminium cans
- Cylindrical balloons
- Spherical balloon
- Manila card
- Steel stand
- Super glue
- Nylon thread

Substances

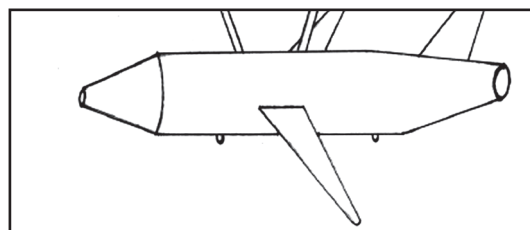
- Helium gas
- Atmosphere air

2.2.2 Preliminary Operation

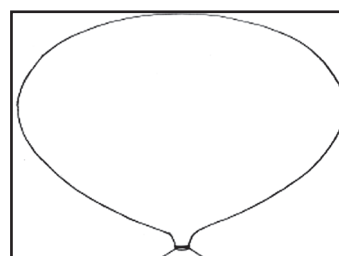
i. BUILD THE AIR PLANE



ii. BUILD THE AIR CHAMBER



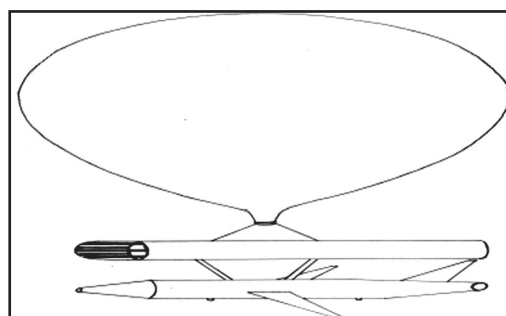
iii. FILL THE HELIUM GAS



2.2.3 The Procedure

Step 1: Setting up the airborne vehicle

Connect the airborne vehicle using nylon thread to support and hold the airborne vehicle in the air.



Step 2: Fill the cylindrical balloons with atmosphere air.

Hold the balloon carefully and insert the end of the balloon into the air chamber without the mouth tied. Hold the mouth of the balloon for the next step.



Step 3: Hit the Target

Hold the balloon gently, release the air and observe the movement.



Step 4: Testing with different sized balloons

Use different sized balloons and repeat Step 2 and Step 3.

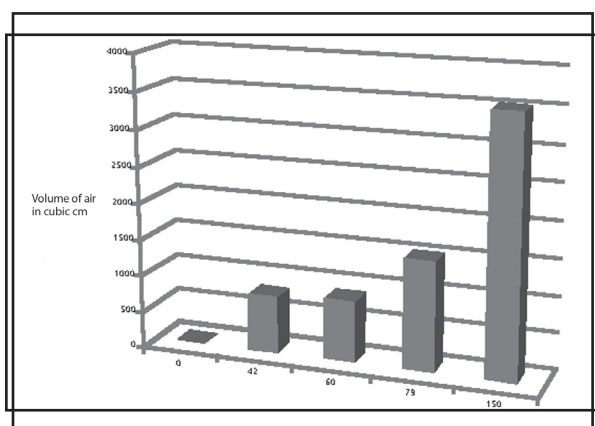
Step 5: Record the findings

Record the dimension of various size balloons and the distance travelled by the airborne vehicle.

3.0 DATA COLLECTION

BALLOON DIAMETER (cm)	BALLOON LENGTH (cm)	VOLUME (cm ³)	DISTANCE TRAVELLED (cm)
0	0	0	0
6	28	792	42
4	68	854	60
8	30	1507	79
8	70	3516	150

4.0 RESULTS



5.0 DISCUSSION

The helium gas filled in the balloon has helped to lift the vehicle up. The buoyancy force is created due to density differences between helium and air.

The distance travelled by the airborne vehicle is dependent upon the amount of air released from the balloons. Momentum is created when air is released. This momentum has caused a forward thrust which moves the vehicle horizontally. The results obtained do not reflect directly to the proportional relationship. This is due to interference from the external wind and friction of the nylon thread.

6.0 CONCLUSION

The bigger the volume of air released, the further the distance travelled by our airborne vehicle.

7.0 ACKNOWLEDGEMENTS

We sincerely express our gratitude to

- Our parents who have been our pillars of strength and motivation
- Our teacher Mr K. Vijay Raj who has advised and guided us throughout the project
- Our headmaster Mr Sridharan for being the initiator of the project and for being supportive of all action plans in the project
- The organizers who have conceptualized and executed this wonderful idea of having a science fair
- All our other teachers and school administrators
- And everyone who had helped us directly or indirectly in ensuring the success of this project

8.0 REFERENCES

1. Hubin, W.N, *the science of flight*
2. Von Mises, R. *Theory of flight*
3. *Internet web site on helium balloons and buoyancy forces*

Appendix D

R & D POST-MORTEM REPORT

SWOT ANALYSIS

STRENGTH

- The interaction of each and every member of the department.
- Solidarity.
- Understanding and the sharing attitude among the members.
- Working within a deadline.
- Knowledge and experience in the field of science and science fair.
- Overcoming tribulations.
- Travelling to other states.
- Materials used during trainings (PowerPoint slides).

CHALLENGES

- Communication with Working Group members, zone coordinators, facilitators/ volunteers, teachers and judges.
- Presentation skills and methodologies during facilitators and teachers training.
- Well-committed team development.
- Facilitators manual and SFYC folder content.

WEAKNESS

- Preparing reports.
- Punctuality in attending meetings.
- Submission of claims.
- Official recognition by other zones and working group members.

THREATS

- Not systematic.
- Overall job distribution not even.
- Job scope specification and authorization required.
- Discipline factor of other team members who are part of the science fair.

