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National Science Fair for Young Children 2011 Report

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and, hundreds of other individuals, parents, headmasters and teachers who contributed their precious time, money and knowhow.

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The best way to learn science is by doing experiments and drawing an inference from the results, rather than just reading and remembering the contents. Students of science, especially the young, should be encouraged to learn science by doing science projects that bring 'to live' the underlying scientific concepts.

Recognising this need, a group of community based non-profit organisations and individuals developed the Science Fair for Young Children (SFYC), an annual event that has been helping primary school children to enjoy the benefits of science since 2007. SFYC is organised for Tamil Schools at state and national levels, with over 15,000 children participating in the event every year.

SFYC 2011 is a collaborative effort by the Malaysian Indian Science Intellectuals (MISI), Development of Human Recourses for Rural Areas (*DHRAA*) Malaysia, Putera MIC, Tamil Schools Headmasters' Council, and the Malaysian Tamil Educational Research and Development Foundation (Tamil Foundation). SFYC is funded by the Malaysian Prime Minister, Malaysian Community & Education Foundation (MCEF), ECM Libra Foundation and the Vijayaratnam Foundation. Astro Vaanavil was the official broadcaster for the event. Each of these organisations played a different but a key role to ensure its success.

This year the SFYC was divided into three levels, namely the schools, zones and national levels. A total of 274 schools nationwide took part which was staged at 9 zone levels. The national-level event was held from 24 June to 26 June, at the German-Malaysian University in Bangi.

Besides organising the zone and national level SFYC, this group of non-profit organisations and individuals also played important roles to empower the schools to organise their own School Level Science Fair (SLSF). Each school was given a seed fund to organise their own SLSF and training was provided on how to organise these fairs. The total expenses for organising the Schools, Zone and National level fairs amounted to RM440,565.

## 1.2 BACKGROUND

SFYC traces its origin to the Young Scientific Explorers (YSE) that was initiated in 2004 and saw the participation of 360 students from 10 schools in Kuala Lumpur and Selangor. YSE sought to introduce science to young people in a fun loving way using everyday items. It was conducted as the participating schools displayed 8 simple experiments, followed by a visit to the National Science Centre. YSE proved to be a success, and up to 2006 the programme benefited 2,094 students. With the success of the YSE it was decided that the new project be renamed the Science Fair for Young Children (SFYC).

The science fair was introduced with the help of MCEF, the Tamil Foundation and the Selangor Tamil School Headmasters Council at Dewan Tunku Cancelor, University of Malaya, where 49 teams from 44 schools from Federal Territory and Selangor took part.

Science Fairs are ideal for developing an interest in science by giving students an opportunity to learn a 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, besides developing an ability to work in a team, plan and execute tasks;
- Develop public speaking skills as they present projects to schoolmates and judges;
- Recognition for academic achievement: the judging process also provides students with the invaluable experience of developing poise and thinking on their feet.

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

Judging from the positive response of SFYC in 2007, we expanded SFYC nationwide the following year. In 2008, six events were held at 6 zones across the country with 197 teams from 180 schools taking part. The top 60 schools from these zones were then chosen to compete in the grand finals on June 14-15 which was held at the National Science Centre in Bukit Kiara, Kuala Lumpur. The following year, 207 teams from 188 schools participated and 60 top teams took part in the National Level Science Fair which was staged at the Kelab Kilat (TNB Hall) in Bangsar, Kuala Lumpur.

Last year, the fair was expanded from 6 zones to 9 zones at state level for the first time. This resulted in an increase of teams and a total of 285 teams from 263 schools, signed up for the event. As in previous years, 60 teams were picked for the National Level Science Fair which was held at the AIMST University, Kedah.

The fair was a roaring success and the feeling was electrifying literally! It gave us the utmost satisfaction to witness the children who showed much enthusiasm, exuberance and were fully committed to their science projects. With that success under our belt, we embarked on SFYC 2011.

## 1.3 OBJECTIVES OF SFYC 2011

- To review and improve the resource materials such as the 'SFYC Folder which was provided to students, teachers and coordinators of SFYC and also to add new science projects to the sample projects already available.
- To train science teachers from an estimated 300 schools on 'hands-on' science, science projects, and ultimately, organise their own school-level science fairs.
- To encourage more schools to organise School Level Science Fairs.
- To empower local coordinators to organise nine State Level Science Fairs.
- To organise a National Level Science Fair for the short listed 60 project teams.

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## 1.4 METHODOLOGY

A special task force was formed for the School Level Science Fairs. A detailed booklet was developed by a group of professionals especially for the SLSF. A special training session was conducted at school level for each zone for all the participating schools. The purpose was to encourage the schools to organise their own Science Fair.

#### **Milestones for SLSF 2011**

(September 2010 - March 2011)

Item	Time Frame
School Level Science Fair Meetings	Sept.2010
Booklets, Resource Materials and Presentation slide development	Oct.2010
Coordinators Meeting and Presentation of SLSF to coordinators	Oct. 2010
Letters to Schools	Nov. 2010
SLSF capsule Aired in ASTRO	Dec. 2010
Road Show (3rd and 4th week)	Jan. 2011
School Level Science Fairs	Feb 2011
End of School Level Science Fair	March. 2011

The task of conducting the zone and National Level Science Fairs was done by the working committee. For Zone level SFYC 2011, we revised the handbook based on the feedback we had received from participants the previous years. This year's handbook was compiled as a folder and also in a CD format and was sent to all the states through the respective coordinators. All the experiments for this year's SFYC were changed to non-guided experiments to enhance the innovative level of the students.

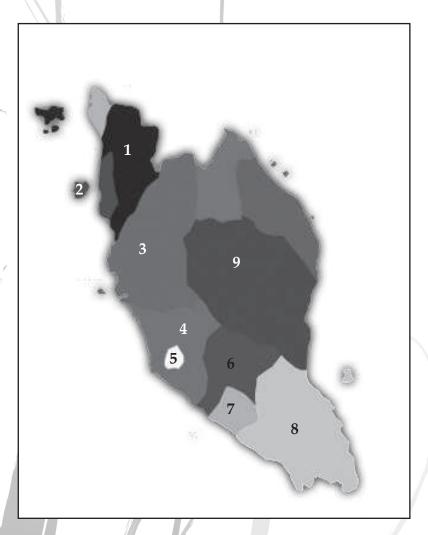
#### **Milestones SFYC 2011**

(October 2010 - October 2011)

Item	Time Frame
Review & upgrade of SFYC Folder	OctDec. 2010
Identify NGO partners and state coordinators	OctDec. 2010
Form SFYC 2011 Working Group	Dec. 2010
Develop a detailed implementation plan for SFYC 2011	Dec. 2010
Finalise SFYC 2011 Folder	Jan. 2011
Train local partners on conducting state-level fairs	Jan. 2011
Train school teachers & facilitators on SFYC	Mar. 2011
Visit schools to observe and guide teams as required	Apr. 2011
State-level SFYC 2011	May 2011
National SFYC 2011	June 2011
Post-mortem of SFYC 2011	July 2011
SFYC 2011 final report preparation	AugOct. 2011

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# 1.5 ZONE CATEGORISATION



ZONE	States	Total Tamil Schools
1	KEDAH & PERLIS	59
2	PULAU PINANG	28
3	PERAK	134
4	SELANGOR	97
5	WILAYAH PERSEKUTUAN	15
6	NEGERI SEMBILAN	61
7	MELAKA	21
8	JOHOR	70
9	PAHANG & KELANTAN	38
	TOTAL	<b>52</b> 3

Table 1.1: List of Zones and Total Number of Schools in Each Zone

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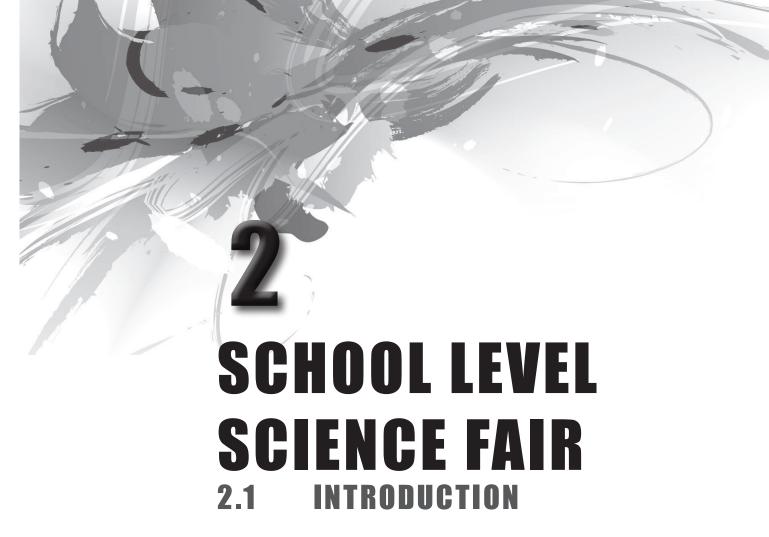
#### **ORGANISATIONS IN CONSORTIUM** 1.6

As in previous years, the SFYC 2011 was implemented as a multi-party collaboration involving national and regional non-profit organisations and individuals. The Malaysian Indian Science Intellectuals Association (MISI) was the secretariat for the programme. MISI is comprised of volunteers who have been involved in SFYC since its beginning in 2006. The key partner organisations of SFYC 2011 are Yayasan Penyelidikan dan Pembangunan Pendidikan Tamil Malaysia (Tamil Foundation), Putera MIC, Persatuan Guru Besar SJKT Malaysia, and the Development of Human Resources in Rural Areas (DHRRA) while ASTRO served as the official media partner. In addition, many other local organisations assisted in organising the school and state-level science fairs.

(Refer to Appendix A (i) for Organizational Structure and Appendix A (ii) for Responsibilities of Each Group.)



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The School Level Science fair (SLSF) was introduced in Tamil Schools in the year 2009 as a pilot project in Zone 8, Johor. The project was conducted in 70 schools and was a great success. Through that project, the working committee learnt that the SLSF had more impact towards the students and schools and as a result, the committee undertook the task of conducting and implementing it in every zone. It was felt that it is important to encourage SLSF since it will inculcate a student's interest in Science. Furthermore, the SLSF will benefit all the students rather than only selected students participating in the zone and national fairs. The first national project was conducted by a special Schools Level Science Fair committee chaired by the project founder and lead advisor Dr.Mohd Yunus Yasin.

A SLSF booklet related to the syllabus module was developed with the help of Dr.Subramanian and the Research & Development Department of SFYC. The modules contents were divided from Standard 1 to Standard 6. A CD was also prepared with sample proposals, reports and the modules.

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## 2.2 SEED FUND

The schools were given a seed fund with a maximum of RM400 or prizes for each school that confirmed its participation by sending their proposals to the Science Fair secretariat. The funding criteria was based on the number of students in the school as per the table below:

Table 2.1: Payment criteria for School level Science Fair

Students (Average Per School)	Payment (Allocation)
25 ≤	UP TO RM 200
50 ≤	UP TO RM 250
100≤	UP TO RM 300
200 ≤	UP TO RM 350
300 ≤	UP TO RM 400

The local coordinators disbursed the money to the schools. In some zones, the coordinators bought prizes for the schools instead of giving them cash. The timeline to organise the School Level Science Fair was from February until August 2011. This year, 256 schools out of 523 Tamil schools participated in the project. The details for the School Level Science Fair for Young Children in 9 zones are as follows:

Table 2.2: SLSF Fund Disbursements for Each Zone

	No.	Zone	State	No. of Schools	Amount
	1	Zone 1	Kedah	46	RM 13,950
	2	Zone 2	Pulau Pinang	0	Carried forwarded
	3	Zone 3	Perak	45	RM 21,000
	4	Zone 4 & 5	KL& Selangor	36	RM 14,400
Г	5	Zone 6	Negeri Sembilan	20	RM 7,300
	6	Zone 7	Melaka	21	RM 7,350
	7	Zone 8	Johor	70	RM 23,800
	8	Zone 9	Pahang	18	RM 5,550
			TOTAL	256	RM 93,350

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# 2.3 IMPLEMENTATION OF SCHOOL LEVEL SCIENCE FAIR

The training sessions were conducted via a road show in January and a total of 338 schools attended the training, which was held in each zone. The table below shows the date, venues and the number of schools which attended the road show training.

Table 2.3: Participation of the schools in SLSF training

Zones	Date	Venues	No. of Schools Attended
1.Kedah	29 Jan 2011	AIMST University	35
2.Pulau Pinang	30 Jan 2011	SJK (T) Ramakrishna	23
3.Perak	29 Jan 2011 & 30 Jan 2011	SJK (T) Tapah & SJK (T) KG.Simee & SJK(T) Sin Wah	79
4.Selangor & Wilayah	29 Jan 2011	University Malaya	53
5.Negeri Sembilan	30 Jan 2011	SJK(T) Lobak	45
6.Melaka	29 Jan 2011	Melaka State MIC Office	21
7.Johor	22 Jan 2011	Johor	62
8.Pahang	23 Jan 2011	SJK (T) Raub & SJK (T) Mentakab	20
		TOTAL	338

The participation at Schools Level SFYC is increasing every year which shows the importance and support given by the schools to this programme. The details of their participation in the last two years are shown below:

Table 2.4: Participation of Schools in the School Level Fairs in 2010 and 2011

No. State(s)		Total	Schools
NO.	State(5)	2010	2011
1	Kedah	-	46
2	Pulau Pinang	-	-
3	Perak	-	45
4 &5	Selangor, W. Persekutuan	11	36
6	Negeri Sembilan	-	20
7	Melaka	-	21
8	Johor	70	70
9	Pahang	1	18
	Total	82	256

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# 2.4 SCHOOL LEVEL SCIENCE FAIR PARTICIPATION LIST

## 2.4.1 ZONE 1: KEDAH & PERLIS

NO.	SCHOOLS
1	SJK(T) Barathy
2	SJK(T) Thiruvalluvar
3	SJK(T) Ldg Tupah
4	SJK(T) Bedong
5	SJK(T) Kalaivani
6	SJK(T) Tun Sambanthan
7	SJK(T) Sungai Getah
8	SJK(T) Mahajothi
9	SJK(T) Ldg Patani Para
10	SJK(T) Sungai Tukang
11	SJK(T) Kulim
12	SJK(T) Wellesly
13	SJK(T) Ldg Henrietta
14	SJK(T) Ldg Bukit Selarong
15	SJK(T) Ldg Bukit Jenun
16	SJK(T) Ganesar
17	SJK(T) Binjol
18	SJK(T) Darul Aman
19	SJK(T) Ldg Paya Kamunting
20	SJK(T) Ldg Bukit Sidim
21	SJK (T) Ldg Dublin Bhg 7
22	SJK (T) Saraswathy
23	SJK (T) Ldg Jabi

NO.	SCHOOLS				
24	SJK (T) Ldg Buntar				
25	SJK (T) Changlun				
26	SJK (T) Ldg Sg Dingin				
27	SJK (T) Ldg Bukit Mertajam				
28	SJK (T) Ldg Victoria				
29	SJK (T) Ldg Harvard Bhg 1				
30	SJK (T) Ldg Bagan Sena				
31	SJK (T) Palanisamy Kumaran				
32	SJK (T) Ldg Dublin Bhg 5				
33	SJK (T) Ldg Kim Seng				
34	SJK (T) Ldg Badenoch				
35	SJK (T) Ldg Sg Batu				
36	SJK (T) Katumba				
37	SJK (T) Ldg Padang Meiha				
38	SJK (T) Kalaimagal				
39	SJK(T) Ldg Perbadanan				
40	SJK (T) Kangar				
41	SJK(T) Ldg. Batu Pekaka				
42	SJK(T) Sg. Raya,langkawi				
43	SJK(T) Sg Ular				
44	SJK(T) Ldg Pelam				
45	SJK(T) Ldg Harvard Bhg 3				
46	SJK (T) Ldg Bukit Sembilan				

## 2.4.2 **ZONE 3: PERAK**

NO.	SCHOOLS				
1	SJK(T) Tapah				
2	SJK(T) Khir Johari				
3	SJK(T) Tun Sambanthan				
4	SJK(T) Sungkai				
5	SJK(T) Slim River				
6	SJK(T) Slim Village				
7	SJK(T) Ldg. Tong Wah				
8	SJK(T) Ldg. Bidor Tahan				
9	SJK(T) Ldg. Bikam				
10	SJK(T) Ldg. Sungkai				
11	SJK(T) Ldg. Cluny				
12	SJK(T) Ldg. Banopdane				
13	SJK(T) Ldg. Behrang River				
14	SJK (T) Sithambaram Pillay				
15	SJK(T) Dato Sithammaram Pillay				
16	SJK(T) Ldg. Batak Rabit				
17	SJK(T) Ldg. Kuala Bernam				
18	SJK(T) Tun Sambanthan				
19	SJK(T) Ldg. Sussex				
20	SJK(T) Maha Ganesa Viddyasalai				
21	SJK(T) Simpang Lima				
22	SJK(T) Bagan Serai				
23	SJK(T) Saint Mary's				
24	SJK(T) Ldg. Soon Lee				
25	SJK(T) YMHA				
26	SJK(T) St Teresa's Convent				
27	SJK(T) Ulu Sepetang				
28	SJK(T) Ldg. Sin Wah				
29	SJK(T) Ldg. Getah Taiping				
30	SJK(T) Ldg. Stoughton				
31	SJK(T) Pangkor				

NO.	SCHOOLS				
32	SJK(T) Mukin Pundut				
33	SJK(T) Ayer Tawar				
34	SJK(T) Beruas				
35	SJK(T) Tanjong Rambutan				
36	SJK(T) Kerajaan				
37	SJK(T) Kg.Simee				
38	SJK(T) Gunong Rapat				
39	SJK(T) Menglembu				
40	SJK(T) Gopeng				
41	SJK(T) Ldg. Chemor				
42	SJK(T) Ldg. Strathisla				
43	SJK(T) Ldg. Kinta Valley				
44	SJK(T) Taman Desa Pinji				
45	SJK(T) Mahathma Gandhi Kalasalai				
46	SJK(T) Ldg. Sungai Biong				
47	SJK(T) Ldg. Kati				
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51	SJK(T) Kelapa Bali				
52	SJK(T) Katoyang				
53	SJK(T) Cashwood				
54	SJK(T) Ldg. Changkat Kinding				
55	SJK(T) Ldg. Jin Seng				
56	SJK(T) Ldg. New Coconut				
57	SJK(T) Kamunting				
58	SJK(T) Ldg. Allagar				
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# 2.4.3

## 2.4.4 ZONE 4: SELANGOR ZONE 5: KUALA LUMPUR

NO.	SOUDOI S			
NO.	SCHOOLS			
1.	SJK(T ) Jalan Meru			
2.	SJK(T ) Dengkil			
3.	SJK(T) Kinrara			
4.	SJK(T) Kajang			
5.	SJK(T) Ldg Semenyih			
6.	SJK(T) Seaport			
7.	SJK(T) Sungai Rengam			
8.	SJK(T) Vallambrosa			
9.	SJK(T) Bangi			
10.	SJK(T) Telok Datok			
11.	SJK(T) Bandar Baru Salak Tinggi			
12.	SJK(T) Ldg Bukit ljok			
13.	SJK(T) Vageesar			
14.	SJK(T) Puchong			
15.	SJK(T) Watson			
16.	SJK(T) Bukit Beruntung			
17.	SJK(T) R.R.I Sg Buluh			
18.	SJK(T) Ampang			
19.	SJK(T) Teluk Merbau			
20.	SJK(T) Ldg. Sungai Terap			
21.	SJK(T) Ldg Braunston			
22.	SJK(T) Gadong			
23.	SJK(T) Ldg Bukit Rajah			
24.	SJK(T) Sepang			
25.	SJK(T) Castlefield			
26.	SJK(T) West Country Timur			
27.	SJK(T) Taman Permata			
28.	SJK(T) Taman Melawati			

NO.	SCH00LS			
1.	SJK(T) Jalan Fletcher			
2.	SJK(T) Thamboosamy Pillai			
3.	SJK(T) St. Joseph			
4.	SJK(T) San Peng			
5.	SJK(T) Sg Besi			
6.	SJK(T) Segambut			
7.	SJK(T) Saraswathy			
8.	SJK(T) Jalan Cheras			

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2.4.5 2.4.6 ZONE 6: NEGERI SEMBILAN ZONE 7: MELAKA

NO.	SCH00LS			
1	SJK(T)Lobak			
2	SJK(T) Convent			
3	SJK(T) Lorong Jawa			
4	SJK(T) Desa Cempaka			
5	SJK(T) Rantau			
6	SJK(T) Ldg Lenggeng			
7	SJK(T) Ldg Seremban			
8	SJK(T) Ldg Bradwall			
9	SJK(T) Tun Sambanthan			
10	SJK(T)Ldg Cairo			
11	SJK(T)Bukit Pelanduk			
12	SJK(T)Ldg Sunggala			
13	SJK(T) Nilai			
14	SJK(T) Ldg Bahau			
15	SJK(T) Port Dickson			
16	SJK(T) Mukundan			
17	SJK(T) Bandar Spring Hill			
18	SJK(T) Kem Askar Melayu			
19	SJK(T) Ldg Tanah Merah			
20	SJK(T) Ldg Chembong			

NO.	SCHOOLS				
1	SJK (T) Ldg. Gadek				
2	SJK (T) Kemuning (H/D)				
3	SJK (T) Melaka (Kubu)				
4	SJK (T) Bukit Lintang				
5	SJK (T) Durian Tunggal				
6	SJK (T) Ldg Diamond Jubilee				
7	SJK (T) Rumbia				
8	SJK (T) Ldg Bukit Kajang				
9	SJK (T) Ldg Sg Baru (H/D)				
10	SJK (T) Ldg Serkam				
11	SJK (T) Merlimau				
12	SJK (T) Jasin				
13	SJK (T) Alor Gajah				
14	SJK (T) Pekan Tebong				
15	SJK (T) Paya Rumput				
16	SJK (T) Ldg Jasin Lalang				
17	SJK (T) Ldg Bukit Asahan				
18	SJK (T) Batang Melaka				
19	Sjk (T) Pulau Sebang				
20	SJK (T) Ldg Tebong				
21	SJK (T) Ldg Kemuning Kru				



## 2.4.7 **ZONE** 8: **JOHOR**

NO.	SCH00LS				
1	SJK(T) Sri Gading				
2	SJK(T) Seri Pelangi				
3	SJK (T) Ldg. Yong Peng				
4	SJK(T) Jalan Yahya Awal				
5	SJK(T) Ldg. Tebrau				
6	SJK(T) Ldg. Mount Austin				
7	SJK(T) Permas Jaya				
8	SJK(T) Ldg. Sg Plentong				
9	SJK(T) Masai				
10	SJK(T) Pasir Gudang				
11	SJK(T) Desa Cemerlang				
12	SJK(T) Ldg. Ulu Tiram				
13	SJK(T) Ldg. Mados				
14	SJK(T) Ldg. Rini				
15	SJK(T) Gelang Patah				
16	SJK(T) Ldg. Layang				
17	SJK(T) Ldg. Ulu Remis				
18	SJK(T) Ldg. Tun Dr Ismail				
19	SJK(T) Ldg. Sembrong.				
20	SJK(T) Jalan Bukit Rengam				
21	SJK(T) Ldg. Simpang Rengam				
22	SJK(T) Ldg. Southern Malay				
23	SJK(T) Ldg. Bukit Benut				
24	SJK(T) Ldg. Lambak				
25	SJK(T) Ldg. Elaeis				
26	SJK(T) Jalan Haji Manan				
27	SJK(T) Ldg. Mengkibol				
28	SJK(T) Ldg. Pamol				
29	SJK(T) Kahang Batu 24				
30	SJK(T) Ldg. Niyor				
31	SJK(T) Cep.Niyor,Kluang				
32	SJK(T) Jalan Setesyen Paloh				
33	SJK(T) Ldg. Rem				
34	SJK(T) Jalan Tajul				
35	SJK(T) Ldg. Pasak				

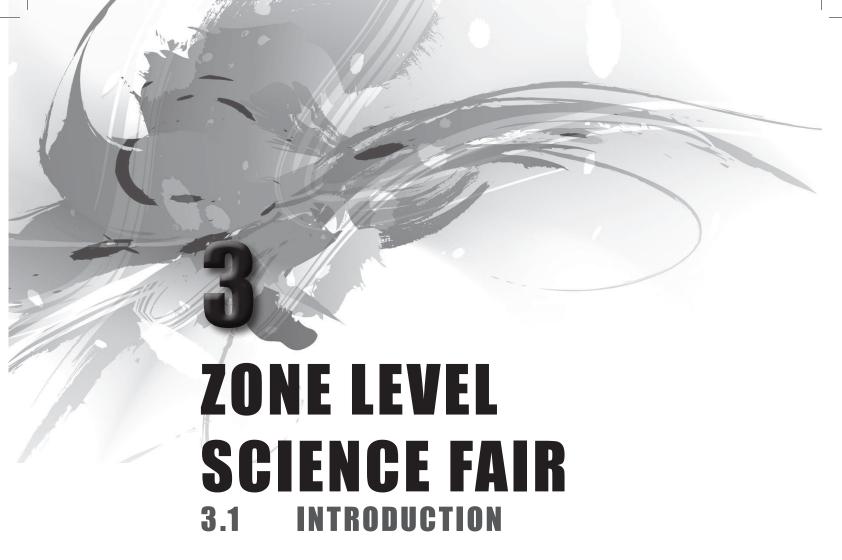
NO.	SCH00LS				
36	SJK(T) Ldg Pelepah				
37	SJK(T) Ldg. Nam heng				
38	SJK(T) Ldg Teluk Sengat				
39	SJK(T) Ldg Sungai Papan				
40	SJK(T) Mersing				
41	SJK(T) Ldg. Tangkah				
42	SJK(T) Ldg. Sagil				
43	SJK(T) Ldg. Bukit Serampang				
44	SJK(T) Ldg. Tanah Merah				
45	SJK(T) Jalan Sialang				
46	SJK(T) Ldg. Bekoh				
47	SJK(T) Jalan Khalidi				
48	SJK(T) Ldg. Lanadron				
49	SJK(T) Ldg. Nordanal				
50	SJK(T) Ldg. Ban Heng				
51	SJK(T) Ldg. Temiang Renchong				
52	SJK(T) Jalan Parit Ibrahim				
53	SJK(T) Bekok				
54	SJK(T) Labis				
55	SJK(T) Ldg. Voules				
56	SJK(T) Ldg. Segamat				
57	SJK(T) Bandar Segamat				
58	SJK(T) Ldg. Sg Muar				
59	SJK(T) Ldg Sg Senarut				
60	SJK(T) Batu Anam				
61	SJK(T) Ldg. Gomali				
62	SJK(T) Ldg. Fortrose				
63	SJK(T) Ldg. Nagappa				
64	SJK(T) Cantuman Chaah				
65	SJK(T) Taman Tun Aminah				
66	SJK(T) Kangkar Pulai				
67	SJK(T) Ldg. Kulai Besar				
68	SJK(T) Ldg. Kelan				
69	SJK(T) Ldg. Kulai Oil Palm				
70	SJK(T) Ldg. Sedenak				

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## 2.4.8 ZONE 9: PAHANG& KELANTAN

NO.	SCHOOLS
1	SJK(T) Mentakab
2	SJK(T) Ldg Bee Yong
3	SJK(T) Bentong
4	SJK(T) Ldg Menteri
5	SJK(T) Ldg Semantan
6	SJK(T) Ldg Karmen
7	SJK(T)Ldg Sungai Tekal
8	SJK(T) Ldg Edendor
9	SJK(T) Ldg Mentakab
10	SJK(T) Sungai Kawang
11	SJK(T) Ldg Lanchang
12	SJK(T) Ldg Renjok
13	SJK(T) Bandar Indera Makota
14	SJK(T) Raub
15	SJK(T) Lurah Bilut





The participation of the schools in the SFYC has been increasing over the years. The details of the participation in the last three years are shown below:

Table 3.1: Participation of Schools in 2008, 2009 and 2010

Zone	State(s)	Total Schools			Total Teams		
Zulle	State(5)	2008	2009	2010	2008	2009	2010
1	Kedah, P.Pinang, Perlis	28	28	33	31	32	36
2	Perak	18	15	50	21	18	53
3	Selangor, W. Persekutuan	58	74	68	58	74	68
4	Malacca, Negeri Sembilan	4	3	39	4	3	43
5	Johor	57	54	59	64	63	68
6	Pahang, Kelantan	15	14	14	19	17	17
Total		180	188	263	197	207	285

This year, the organising committee decided to retain the 9 zones as in previous years. This was to ensure that more schools are given the opportunity to participate in the state level science fairs. The zone categorisation for this year and compared to the previous years are as follows:

**Table 3.2: Comparison of Zone categories** 

ZONE	2008 & 2009	2010 & 2011
Zone 1	Kedah, Perlis & P.Pinang	Kedah & Perlis
Zone 2	Perak	Penang
Zone 3	Selangor & Kuala Lumpur	Perak
Zone 4	Negeri Sembilan & Melaka	Selangor
Zone 5	Johor	Kuala Lumpur
Zone 6	Pahang	Negeri Sembilan
Zone 7	-	Melaka
Zone 8	-	Johor
Zone 9	-	Pahang

The number of schools which participated at zone level in the SFYC 2011 are as follows:

Table 3.3: Participation Level of Schools in the 2011 SFYC

Zone	State(s)	Total Schools	Total Teams
1	Kedah & Perlis	41	41
2	Pulau Pinang	16	16
3	Perak	47	47
4	Selangor	56	56
5	W. Persekutuan	13	13
6	Negeri Sembilan	18	18
7	Melaka	21	21
8	Johor	45	45
9	Pahang, Kelantan	17	17
	Total	274	274

The Zone Level Science Fair was held in May, about a month before the National event which allowed the shortlisted schools to improve on their experiments for the National event. The details of the zone level fair are shown below:

Table 3. 4: Details of the Zone Level SFYC

Zone	Venue	Date
1	AIMST University, Sungai Petani, Kedah	6 & 7 May 2011
2	IPG Campus Pulau Pinang	22 May 2011
3	Masterskill, Perak	22 May 2011
4	TNB Hall, Kuala Lumpur	15 May 2011
5	TNB Hall, Kuala Lumpur	15 May 2011
6	SJK(T) Ldg. Seremban	21 May 2011
7	Planetarium Melaka, Melaka	15 May 2011
8	Universiti Tun Hussein Onn, Johor	21 May 2011
9	Dewan Hwa Lian,Mentakab	14 May 2011

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# 3.2 IMPLEMENTATION OF ZONE LEVEL SCIENCE FAIRS

#### 3.2.1 ZONE 1: KEDAH & PERLIS

Zone 1 was coordinated and organised by Dr.Jayaseelan and a group of students from University Malaysia Perlis (UNIMAP). The zone level science fair was conducted on 6 - 7 May at the AIMST University. This was the first zone which organised the fair for two days with 41 schools taking part. On 6 May a conference paper presentation was held for the participating schools. The support from the schools was very encouraging. The science fair exhibition was held the following day and from the 41 schools, 9 schools were selected to participate in the National Level Science Fair.

This was the first time where a conference paper was presented at the State Level. This Zone also showed the best improvement in terms of the participating schools.

(For details and accounts refer to Appendix B (i))

#### 3.2.2 ZONE 2: PULAU PINANG

Zone 2 was organised by Coordinator Dr.Balasubramaniam with the assistance of the Tamil Foundation. The Zone Level Science Fair was held on 22 May at the Institute Perguruan Pulau Pinang (IPPPG) with 16 schools participating. The top 3 schools was selected to participate at the National Level.

(For details and accounts refer to Appendix B(ii))

### 3.2.3 **ZONE 3: PERAK**

This year, Zone 3 was organised by our new partner – DHRRA Malaysia and was coordinated by Mr. K. Suresh. It was held on 22 May at Masterskill, Ipoh and a total of 47 schools took part and the event was officiated by YB Dato S Veerasingam, the former Deputy Minister of Domestic Trade and Consumer Affairs. The top 10 schools were selected to participate in the National Level Science Fair.

(For details and accounts refer to Appendix B(iii))

### 3.2.4 ZONE 4 & 5: SELANGOR & KUALA LUMPUR

The Tamil Foundation organised the fair which was held at Dewan Serbaguna Tenaga National Berhad, Bangsar, on 15 May with 69 schools bidding for top honours. The guest of honour was Y.B. Dr.Xavier Jeyakumar, the Selangor State Government Exco Member. The top 12 schools from Selangor and the top 3 schools from Kuala Lumpur qualified to participate in the National level Science Fair.

(For details and accounts refer to Appendix B(iv))

### 3.2.5 ZONE 6: NEGERI SEMBILAN

This fair was organised by Mr. Roslan from the State HM Council and was held at SJK (T) Seremban on 21 May, with 18 schools taking part. The top 4 schools were selected to participate in the National Level Science Fair.

(For details and accounts refer to Appendix B(v))

### 3.2.6 ZONE 7: MELAKA

Melaka Putera MIC and the Melaka Indian Culture Educational and Sports Society (MICESS) teamed up to stage the fair on 15 May at the Planetarium Melaka. The group was lead by Mr.Rama Sockalingam and for the second consecutive year, the fair achieved 100 percent participation from all the 21 Tamil Schools in Melaka. The closing ceremony was officiated by YB Datuk G.Palanivel, President of the Malaysian Indian Congress (MIC). The top 5 schools were picked to participate in the National Level Science fair.

(For details and accounts refer to Appendix B(vi))

### 3.2.7 ZONE 8: JOHOR

Mr.Saravanan organised this fair with the joint effort of Johor Putera MIC and UHTM students. Held on 21th May at UTHM Batu Pahat, 45 schools participated and the support from the students, teachers, headmasters and Parents was overhelming. The top 10 school were selected to participate at the National Level Science Fair.

(For details and accounts refer to Appendix B(vii))

## 3.2.8 ZONE 9: PAHANG & KELANTAN

This fair was organised by Mr.Selventhiran as the zone coordinator and his team with the support of the Tamil Foundation and was staged on 14 May at Dewan Hwa Lian, Mentakab with 18 schools participating. The top 4 schools were selected to participate in the National Level Science Fair.

(For details and accounts refer to Appendix B(viii))



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# 3.3 SCHOOLS PARTICIPATION AT THE ZONE LEVEL SCIENCE FAIR

## 3.3.1 ZONE 1: KEDAH & PERLIS

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Kulim	Water Purifying	
2	SJK(T) Ldg. Sg Batu	Degree of Corrosion	
3	SJK(T) Sg Tok Pawang	Potential Energy	YES
4	SJK(T) Barathy	Reflection & Refraction of Light	
5	SJK(T) Wellesley	Green House	YES
6	SJK(T) Ldg. Jabi	Vitamin C	
7	SJK(T) Tun Sambanthan	Wind Power	YES
8	SJK(T) Mahajothi	Food Calorie	YES
9	SJK(T) Sungai Ular	Cleaning Agents	
10	SJK(T) Binjol	String Strength	
11	SJK(T) Bukit Sidim	Water Purifying System	
12	SJK(T) Padang Meiha	Carbonated Drinks	
13	SJK(T) Harvard Bhgn 1	Gear	
14	SJK(T) Bedong	Plane Model	YES
15	SJK(T) Ldg. Bkt Mertajam	Electrolyte	
16	SJK(T) Ganesar	Water Purifying System	
17	SJK(T) Ldg. Batu Pekaka	Vitamin C	
18	SJK(T) Ldg. Victoria	Carbonated Drinks	YES
19	SJK(T) Saraswathy	Potential Energy	
20	SJK(T) Kalaimagal	Strength of Paper	
21	SJK(T) Thiruvalluvar	Cleaning Agents	
22	SJK(T) Ldg Perbadanan	Reflection & Refraction of light	YES
23	SJK(T) Palanisamy Kumaran	Water Purifying System	
24	SJK(T) Ldg. Sg. Puntar	Wind Power	
25	SJK(T) Ldg. Tupah	Food Calorie	
26	SJK(T) Sungai Getah	Breathing Process	
27	SJK(T) Sungai Tukang	Green House	YES
28	SJK(T) Ldg. Henrietta	Strength of Paper	
29	SJK(T) Ldg. Bukit Jenun	Green House	
30	SJK(T) Ldg Bkt Sembilan	Strength of Paper	
31	SJK(T) Changlun	Vitamin C	YES
32	SJK(T) Ldg. Katumba	Electrolyte	
33	SJK(T) Kangar	Pulley System	
34	SJK(T) Kalaivani	Plane Model	
35	SJK(T) Ldg. Paya Kamunting	Reflection & Refraction of light	
36	SJK(T) Sungai Raya	Gear	
37	SJK(T) Ldg. Harvard 3	Water Purifying System	
38	SJK(T) Bukit Selarong	Water Purifying System	
39	SJK(T) Ldg. Pelam	Reflection & Refraction of Light	
40	SJK(T) Darulaman	Cleaning Agents	
41	SJK(T) Patani Para	Water Purifying System	

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## 3.3.2 ZONE 2: PULAU PINANG

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Mak Mandin	Gear	
2	SJK(T) Sungai Ara	Water Battery	
3	SJK(T) Palaniandy	Corrosion of Metal	YES
4	SJK(T) Ldg. Juru	Load & Effort	
5	SJK(T) Ramakrishna	Water Purification	YES
6	SJK(T) Jalan Sungai	Detergent	
7	SJK(T) Permatang Tinggi	Windmill	
8	SJK(T) Nibong Tebal	Corrosion of Metal	YES
9	SJK(T) Ldg. Batu Kawan	Water Purification	
10	SJK(T) Ldg. Malakoff	Vitamin C	
11	SJK(T) Bukit Mertajam	Carbonated Drinks & CO2	
12	SJK(T) Ldg. Mayfield	Detergent	
13	SJK(T) Valdor	Strength of Strings	
14	SJK(T) Ldg. Changkat	Light Pattern	
15	SJK(T) Subramaniya Baratee	Breathing is Essential for Life	
16	SJK(T) Ldg. Prye	Energy Content of Food	

## 3.3.3 **ZONE 3: PERAK**

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Ldg. Sungai Biong	Electrolyte	YES
2	SJK(T) Tapah	Simple Sketch And Models	YES
3	SJK(T) Saint Mary's	Detergent	YES
4	SJK(T) Kampung Simee	Stem Size And Transpiration Rate	YES
5	SJK(T) Ldg. Serapoh	Detergent	YES
6	SJK(T) Tanjong Rambutan	Vitamin c	
7	SJK(T) Maha Ganesa Viddyasalai	Investigating Various Kinds Of Nuts	YES
8	SJK(T) Ayer Tawar	Investigating Various Kinds Of Nuts	
9	SJK(T) Ldg. Bikam	Carbonated Drinks	YES
10	SJK(T) Ldg. Kamatchy	Vitamin C	YES
11	SJK(T) Beruas	Device To Measure Soft Drinks Ph	YES
12	SJK(T) Sungkai	Stem Size And Transpiration Rate	YES
13	SJK(T) Dato' Sithambaram Pillay	Device To Measure Soft Drinks Ph	
14	SJK(T) Gerik	Electrolyte	
15	SJK(T) Mahathama Gandhi Kalasalai	Water Purifying System	
16	SJK(T) Pangkor	Investigating Various Kinds Of Nuts	
17	SJK(T) Sithambaram Pillay	Water Purifying System	
18	SJK(T) Ldg. Sin Wah	Reflection & Refraction Of Light	
19	SJK(T) Kerajaan	Carrying School Bag	
20	SJK(T) Ldg. Tong Wah	Stem Size And Transpiration Rate	
21	SJK(T) St.Theresa's Convent	Wind Power	
22	SJK(T) Kampung Jebong Lama	Solar System Provides Energy	
23	SJK(T) Ldg. Stoughton	Reflection & Refraction Of Light	

No.	Schools	Topics	Qualified to National Fair
24	SJK(T) Bagan Serai	Carrying School Bag	
25	SJK(T) Kamunting	Detergent	
26	SJK(T) Ulu Sepetang	Device To Measure Soft Drinks Ph	
27	SJK(T) Simpang Lima	Reflection & Refraction Of Light	
28	SJK(T) Mukin Pundut	Device To Measure Soft Drinks pH	
29	SJK(T) Ldg. Lauderdale	Water Purifying System	
30	SJK(T) Ldg. Kati	Carbonated Drinks	
31	SJK(T) Menglembu	Water Purifying System	
32	SJK(T) YMHA Spiderman	Is a Comic Super Hero	
33	SJK(T) Ldg. Soon Lee	Carbonated Drinks	
34	SJK(T) Gopeng	Breathing System In Living Things	
35	SJK(T) Gunung Rapat	Carbonated Drinks	
36	SJK(T) Slim River	Vitamin C	
37	SJK(T) Ldg. Jin Seng	Detergent	
38	SJK(T) Ldg. Cluny	Stem Size And Transpiration Rate	
39	SJK(T) ldg. Kuala bernam & SJK(T) Tun Sambathan	Build A Water Purification System Model	
40	SJK(T) Ldg. Behrang	River Electrolyte	
41	SJK(T) Ldg. Allagar	Design Different Shapes To Demonstrate	
42	SJK(T) Tun Sambanthan	Spiderman Is a Comic Super Hero	
43	SJK(T) Ldg. Kinta Valley	Electrolyte	
44	SJK(T) Slim Vellage	Investigating Various Kinds of Nuts	
45	SJK(T) Kg Baru Batu Matang	Reflection & Refraction of Light	
46	SJK(T) Banopdane	Wind Power	

## 3.3.4 ZONE 4: SELANGOR

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Ampang	Corrosion of Metal	
2	SJK(T) Bandar Baru Salak Tinggi	Detergent	YES
3	SJK(T) Bangi	Velocity & Potential Energy	
4	SJK(T) Batu Ampat	Vitamin C	YES
5	SJK(T) Batu Arang	Breathing is Essential to Life	
6	SJK(T) Batu Caves	Gear	
7	SJK(T) Bestari Jaya	Corrosion of Metal	
8	SJK(T) Bukit Beruntung	Detergent	
9	SJK(T) Bukit Rajah	Vitamin C	
10	SJK(T) Castlefield	Photosynthesis	
11	SJK(T) Dengkil	Shape of the Ship	YES
12	SJK(T) Effingham	Water Purification	
13	SJK(T) FES Serdang	Gear	
14	SJK(T) Gadong	Xylem and Transpiration Rate	
15	SJK(T) Jalan Meru	Water Purification	YES
16	SJK(T) Kajang	Gear	
17	SJK(T) Kinrara	Water Battery	

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No.	Schools	Topics	Qualified to National Fair
18	SJK(T) Kuala Kubu Baru	Stability	
19	SJK(T) Ldg. Ampar Tenang	Water Purification	
20	SJK(T) Ldg. Bukit ljok	Stability	
21	SJK(T) Ldg. Coalfield	Light Pattern	
22	SJK(T) Ldg. Emerald	Light Pattern	
23	SJK(T) Ldg. Highlands	Water Battery	
24	SJK(T) Ldg. Hopeful	Vitamin C	
25	SJK(T) Ldg. Kampung Baru	Water Purification	
26	SJK(T) Ldg. Mary	Water Purification	
27	SJK(T) Ldg. Midlands	Water Battery	YES
28	SJK(T) Ldg. Raja Musa	Water Purification	
29	SJK(T) Ldg. Rinching	Carbonated Drinks & CO2	
30	SJK(T) Ldg. Riverside	Detergent	
31	SJK(T) Ldg. Sabak Bernam	Green House Effect	
32	SJK(T) Ldg. Semenyih	Velocity & Potential Energy	YES
33	SJK(T) Ldg. Sungai Bernam	Green House Effect	
34	SJK(T) Ldg. Sungai Tinggi	Shape of the Ship	
35	SJK(T) Ldg. Vallambrosa	Detergent	
36	SJK(T) Methodist, Kapar	Windmill	YES
37	SJK(T) Nigel Gardner	Carbonated Drinks & CO2	
38	SJK(T) Persiaran Raja Muda Musa	Load and Effort	
39	SJK(T) Pulau Carey (Barat)	Water Purification	
40	SJK(T) Rawang	Windmill	
41	SJK(T) RRI Sungai Buloh	Corrosion of Metal	YES
42	SJK(T) Saraswathy, Sg. Buloh	Windmill	YES
43	SJK(T) Sepang	Water Battery	
44	SJK(T) Simpang Lima	Velocity & Potential Energy	YES
45	SJK(T) Sungai Choh	Shape of the Ship	
46	SJK(T) Sungai Rambai	Vitamin C	
47	SJK(T) Sungai Renggam	Make Your Own Plane	
48	SJK(T) Taman Melawati	Detergent	
49	SJK(T) Taman Permata	Load and Effort	YES
50	SJK(T) Telok Datok	Detergent	
51	SJK(T) Teluk Merbau	Shape of the Ship	
52	SJK(T) Tuan Mee	Vitamin C	
53	SJK(T) Vageesar	Green House Effect	
54	SJK(T) Vivekananda, PJ	Water Purification	
55	SJK(T) West Country (Barat)	Water Purification	
56	SJK(T) West Country (Timur)	Make Your Own Plane	YES

## 3.3.5 ZONE 5: KUALA LUMPUR

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Appar, KL	Detergent	
2	SJK(T) Jalan Bangsar, KL	Water Purification	
3	SJK(T) Jalan Cheras, KL	Carbonated Drinks & CO2	YES
4	SJK(T) Jalan Fletcher, KL	Water Purification	
5	SJK(T) Jalan San Peng, KL	Water Battery	YES
6	SJK(T) Kg.Pandan, KL	Water Purification	
7	SJK(T) Saraswathy, KL	Carbonated Drinks & CO2	
8	SJK(T) Segambut, KL	Windmill	YES
9	SJK(T) Sentul, KL	Corrosion of Metal	
10	SJK(T) St.Joseph, KL	Corrosion of Metal	
11	SJK(T) Sungai Besi, KL	Velocity & Potential Energy	
12	SJK(T) Thamboosamy Pillai, KL	Corrosion of Metal	
13	SJK(T) Vivekananda, KL	Water Purification	

## 3.3.6 ZONE 6: NEGERI SEMBILAN

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Ldg. Chembong	Detergents	
2	SJK(T) Mukundan Bukit Pelandok	Gears	YES
3	SJK(T) Nilai	Aircraft	YES
4	SJK(T) Ldg. Batang Benar	Light up Bulbs	
5	SJK(T) Ldg. Senawang	Vitamin C	
6	SJK(T) Lobak Seremban	Velocity of the Object	
7	SJK(T) Desa Cempaka	Ships	
8	SJK(T) Ldg. Lenggeng	Water Purification	
9	SJK(T) Rantau	'Poker cards'	
10	SJK(T) Ldg. Tanah Merah	Water Purification	
11	SJK(T) Ldg. Bahau	Light travels transparent materials	
12	SJK(T) Port Dickson	Water Purification	
13	SJK(T) Java Lane	Detergents	
14	SJK(T) Tampin	Vitamin C	YES
15	SJK(T) Batu Hampar	Coca cola	
16	SJK(T) Ldg. Seremban	Weights	
17	SJK(T) Ldg. Cairo	'Poker cards'	
18	SJK(T) Convent	Generate Electricity	YES

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## 3.3.7 ZONE 7: MELAKA

No.	Schools	Topics	Qualified to National Fair
1	1 SJK(T) Ldg. Gadek	Colour Changing Flower	
2	2 SJK(T) Kemuning (H/D)	Rate of Breathing	
3	3 SJK(T) Kubu Melaka	Effectiveness of Plants Towards Controlling the Global Warming	
4	SJK(T) Bukit Lintang	Vitamin C	
5	SJK(T) Durian Tunggal	Inclined Plane	
6	SJK(T) Ldg. Diamond Jubilee	Liquid Electricity	YES
7	SJK(T) Rumbia	Boats and Shapes	
8	SJK(T) Ldg. Bukit Kajang	Does Plant Need Sun Light to Stay Alive?	
9	SJK(T) Ldg. Sungai Baru	Strength of Different Types of Strings	
10	SJK(T) Ldg. Serkam	Pulley	
11	SJK(T) Merlimau	Comparisons of Release of CO2	
12	SJK(T) Jasin	Gears and Functions	YES
13	SJK(T) Alor Gajah	Energy in Nuts	YES
14	SJK(T) Pekan Tebong	Base Area	
15	SJK(T) Paya Rumput	Detergents	
16	SJK(T) Ldg. Jasin Lalang	Water Purification	YES
17	SJK(T) Ldg. Bukit Asahan	Wind as a Source of Renewable Energy	
18	SJK(T) Batang Melaka	Light Travels	
19	SJK(T) Pulau Sebang	Rubber Band Powered Airplane	YES
20	SJK(T) Ldg. Tebong	Does Soft Drink Corrode Metals?	
21	SJK(T) Ldg. Kemuning Kru	My Detergent	

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## 3.3.8 **ZONE 8: JOHOR**

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## 3.3.9 ZONE 9: PAHANG & KELANTAN

No.	Schools	Topics	Qualified to National Fair
1	SJK(T) Karak	Make Your Own Plane	
2	SJK(T) Ldg. Mentakab	Velocity & Potential Energy	
3	SJK(T) Sungai Kawang	Velocity & Potential Energy	YES
4	SJK(T) Raub	Stability	
5	SJK(T) Ldg. Menteri	Light Pattern	YES
6	SJK(T) Ldg Kuala Reman	Water Purification	
7	SJK(T) Ldg. Edensor	Energy content of food	
8	SJK(T) Jerantut	Corrosion of Metal	
9	SJK(T) Ldg. Semantan	Corrosion of Metal	
10	SJK(T) Mentakab	Detergents	YES
11	SJK(T) Ldg. Cheroh	Detergents	
12	SJK(T) Bentong	Water Battery	
13	SJK(T) Bdr Indera Mahkota	Water Battery	
14	SJK(T) Ldg. Lanchang	Carbonated drinks & CO2	YES
15	SJK(T) Ldg. Sg.Tekal	Vitamin C	
16	SJK(T) Kuala Lipis	Vitamin C	
17	SJK(T) Ldg. Karmen	Breathing is essential of life	





The SFYC 2011 consisted of two phases of training, – the SLSF training and the Zone Level training. The SLSF training was conducted for teachers while the Zone Level training was held in each zone for teachers and facilitators. These training sessions were arranged by the respective zone coordinators and conducted by the National Science Fair working group committee members together with the invited professional trainers.

The training sessions and materials were planned by the National Science Fair working group 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.

## 4.1 ZONE 1 : KEDAH & PERLIS

The road show for SLSF teachers' training was conducted on 29th January at the AIMST University and 35 schools participated with Mr.Kugeneswaran and his team conducting the session.

After the completion of the SLSF, the State Level Science Fair training was held on 19th February at the AIMST University. 31 schools took part in this training, and most of them were newcomers who had never participated in the SFYC. The training was conducted by Dr.Mohd Yunus Yasin (Project Advisor) and Mej. Dr. Vikneswaran (Project Director).

## 4.2 ZONE 2 : PULAU PINANG

The SLSF training was staged on 30th January at SJK (T) Ramakrishna and 15 schools participated in this training which was conducted by Mr.Kugeneswaran and his team.

The teacher's training for zone level was done conducted on 12th March at SJK (T) Ramakrishana and 20 schools took part with Dr.Mohd Yunus Yasin and Mr.Vijendran

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### 4.3 ZONE 3 : PERAK

The SLSF training was held on 29th January at 3 different locations - Ipoh, Taiping and Tapah. The class was conducted by Mr.Puvan and his team and 81 schools attended.

Meanwhile the teachers training for zone level was conducted on 26th –27th March at 3 different locations, similar to the SLSF training. 62 schools participated and it was conducted by Mej.Dr.Vikneswaran.

### 4.4 ZONE 4&5 : SELANGOR & KUALA LUMPUR

In The Federal capital, the SLSF and zone level teachers training were held on the same day. The training was held on 29th January at Dewan Perdana Siswa, University Malaya with 53 schools attending and it was conducted by Dr.Subramaniam

Another teachers training was conducted for 27 schools on 26th February at Dewan Perdana Siswa. The teachers training conducted by Mr.Elantamil was held twice to motivate the new schools and encourage them to participate in the Science Fair.

### 4.5 ZONE 6 : NEGERI SEMBILAN

The SLSF was conducted on 30th Jan at SJK (T) Lobak Seremban and 31 out of the 61 schools signed up. Only 20 schools attended the training which was conducted by Dr. Subramanian.

The teacher's training was staged by Mr Tamilmany, Mr. Kugeneswaran and his team and was held on 12th March at SJK (T) Seremban with 23 schools participating.

### 4.6 ZONE 7: MELAKA

On 29th January, the SLSF training was held at the Melaka MIC office. It was conducted by Dr.Subramaniam and all 21 schools took part.

The teacher's training for this zone was conducted on first April at the same venue and 15 schools took part with Mr. Saminatha Kumaran and his team overseeing the training.

### 4.7 ZONE 8 : JOHOR

The SLSF training was held on 22th January at UTHM Batu Pahat where 51 schools attended and it was conducted by Dr. Subramaniam.

The teacher's training for this zone was organised on 5 March at Batu Pahat with Dr. Subramaniam in charge.

### 4.8 ZONE 9: PAHANG & KELANTAN

The SLSF training was conducted on 23th January in 2 different schools namely SJK (T) Raub and SJK (T) Mentakab. 20 schools participated in this training with Dr. Yunus Yasin, Mej.Dr. Vikneswaran and team taking charge.

The teacher's training was held on 5th March at 2 different places, similar to the SLSF training. 12 schools took part and Mr.Vijendran conducted.

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The National Science Fair for Young Children 2011 was a two day, two night event which started on a Friday evening and ended on Sunday evening. The details of the event are as follows:

Venue : German-Malaysian Institute (GMI), Bangi

Date : 24th – 26th June 2011 Accommodation : Hostel, GMI Bangi

### Day One - 24 June

Participants from each zone started arriving from 2pm onwards. They checked into their rooms after registering upon arrival. All the students were given goody bags with NSFYC T-Shirts. Meanwhile, the log books and report books which were collected from the respective teams during registration were judged.

After dinner, the teachers were briefed on the itinerary for the 2 day event by Mejar Dr Vikneswaran and his team, while the students were involved in activities such as looking at planet Saturn via the telescope. This programme was conducted by an astronomer.

### Day Two - 25 June

On Saturday, the programme started at 8am with the students and teachers preparing their Science Fair booths which took 90 minutes. At 9.30 am, the students were given a 30 minute written test, followed by the judging evaluation. This evaluation took nearly 4 hours as the judging team visited every booth. Lunch was served from 12.00 noon to 1.00pm. In the afternoon, the opening ceremony was held and it was officiated by Mr Paskaran, Senior Organiser, School Management Department, Ministry of Education.

The participants were given refreshments from 4pm until 5pm followed by dinner at 7.00pm. After dinner, the conference paper presentation was held at a lecture hall at GMI in 4 parallel sessions. The top three teams from each zone presented their research and findings from their experiments. A total of 27 teams participated in this section and the top 2 teams from each of these 4 groups were selected to a VIVA session which was held on the following day.

### Day Three - 26 June

The day started at 7am with breakfast, followed by preparation for the public viewing session at 10am. At the same time the VIVA session for the 8 top teams was held at a lecture Hall at GMI. When a team was doing their presentation, the other teams were quarantined in a separate hall. After attending the VIVA session, the teams were allowed to return to the exhibition hall. In between, there was dialogue regarding the judging team for the teachers in a separate venue which was conducted by Dr.Subramaniam, the Judging team advisor. After the dialogue, the teachers from each school were given medals, T-shirts, certificates and RM500 worth of laboratory apparatus.

The public viewing was held from 11.00am to 3.00pm. During the public session, few booths were set up at the entrance. Among them were MISI (Malaysian Indian Science Intellectuals) which promoted their educational magazine for kids named Thumbi, DHRRA Malaysia, Arivan Fan Club, Grolier Books, Tamil Foundation and the Vijayaratnam Foundation. A few types of games and quiz were held for the public to liven up the environment. At 3.20pm, the closing ceremony began and ended at 5.00pm. All the participants of SFYC 2011 were given Medals, Science Books, Bags, Certificates, and a Thumbi magazine. The top 3 winners of the Conference Paper Presentation received Certificates and prize money of RM500, RM400, and RM300 respectively. Whereas the top 5 winners of the exhibition received a trophy, certificates, medals and prize money of RM2500, RM2000, RM1500, RM1000 and RM750 respectively. The top 5 winners and the conference paper winner will visit Petrosains at KLCC.

Among the top 5 schools, the champion will be visiting the Indian Space Research Organisation (ISRO) in Bangalore, India. The guest of honour for the day was Datuk Dr.Jeyendren, the Chairman of MYNADI.

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The Research and Development (R&D) Department is one of the key departments in SFYC. It prepares science and maths related questions for young students, and the SFYC. This R&D unit consists of a few committed individuals from the various fields of education. The role of the R&D is to gathering facts, and conduct a systematic study on the topics, develop the modules, investigate possible ways to help the teachers, students and facilitators on their delivering abilities, following up the progress of a Science project and analyse the effectiveness of the project to the related individuals for correction and further development. Apart from these, the R&D also works closely with other bodies which conduct science and maths related events or programmes to gather more knowledge and experience. Furthermore, we also work with some international educational event organisers to expand our scope. The R&D department is led by Ms.Siva Sangary.

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### 6.1 SET OF EXPERIMENTS

This year, a total of 20 non-guided experiments were included in the SFYC folder with the effort of the R&D and judging teams. Initially, 18 experimental titles were developed and this process took three months from September to December 2010. All the experiments were then analysed for its relevancy, cost, applicability, difficulties, material availability and safety.

At this stage, we removed 3 out of the 18 experiments which brought down the total to 20 science projects which were presented to the schools to choose. Depending on the zone, no more than 2 or 3 schools were allowed to pick the same project. The criteria for giving the project was on a first come first serve basis. All these experiments were discussed with the main judges and finalised for the SFYC.

Due to the lack of experiments, 30 experimental titles from 2008 and 2009 were also discussed and added into the current list. A total of 20 experiment titles were developed for the National Science Fair for Young Children 2011. All the experiments were translated into the Tamil language and were ready to be submitted to the SFYC by February 2011. Parallel with the experiments developing task, in October 2010, quizzes, crossword puzzles, and origami were developed for the Schools Level Science Fair. At the same time, all the guided experiments were removed from the experiments list to standardise the level of experiments and to encourage the students to be creative, knowledgeable and independent.

(For full list of experiments refer to Appendix C (i))

### 6.2 SCIENCE FAIR FOLDER

The SFYC is a project which spans several months. The working group has the responsibility of developing and upgrading last year's modules to help them conduct the fair effectively. The Science fair folder is a key tool for the organisers, teachers, students, parents, facilitators and judges to implement the project as efficiently as possible. Working Committee members and a group of professionals from Johor led by Dr.Subramaniam (Johor Chief Judge) helped in reviewing the manuals, which were then distributed in the form of CDs to all the participating schools. Some new schools were given hard copies as well. The folder included:

- 1. Organisers Manual: Basically gives an explanation on how to organise a science fair. Example in schools, class rooms, organisations, etc.
- 2. Teachers Manual: Explains roles and responsibilities of the Science Teachers to guide the participants of the fair.
- 3. Students Manual: Helps the students to develop their projects and provides the format of writing a report.
- 4. Parents Guide: Guide for the participant's parents to motivate their child to perform well in the SFYC.
- 5. Facilitators Manual: Guidelines to the Facilitators on how to facilitate, so that they can help teachers and students during school visits.
- 6. Judges Manual: Proper guidelines on how to judge a science project effectively. This manual has been improved considerably after last year's feedback on the Judging criteria.
- 7. Collection of Experiments: There are 20 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 the future.

We hope that the modules would help future committee members to organise science fairs at schools, districts, and state levels and also at national level. The manual should be upgraded from time to time to improve the quality of the SFYC.

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### 6.3 VCD PRODUCTION

This year's SFYC materials were given out in the form of CDs, VCDs and DVDs. We prepared the students guide, teachers guide, parents guide, experiments guide and the VCD documentation. The NSFYC '08, NSFYC'09 and NSFYC'10 events were prepared together in a simple experiment and demonstration in a DVD format. All the materials in the SFYC folder were given out in hard copy in previous years, but this year CDs were sent to all the participating schools and a hard copy to all the schools making their debut.

### 6.4 EVENT SURVEYS

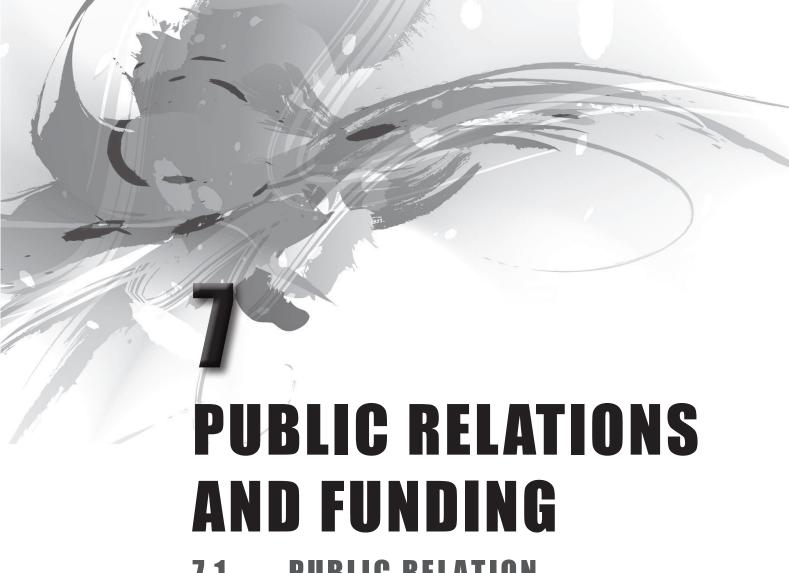
The SFYC's R&D team also focused on gathering the opinion of the community about our events at the zone as well as the national levels. The data from this task was reviewed to correct and upgrade future events. The zone level SFYC was also surveyed and the data had been compiled and analysed into reports within 2 weeks after each zone science fair.

(For a detailed survey report, please refer to Appendix C(ii).)



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### 7.1 **PUBLIC RELATION**

The Public Relations (PR) department was chaired by Mr.Kugeneswaran. PR is a vital part of the Science Fair for Young Children 2011 programme, to engage in promoting information for individuals, groups, or organisations by writing or selecting favorable publicity material and releasing it through the various communications media. The flow of the information between internal and external viewers was reached through various levels such as the Schools Level Science Fair, Zone Level Science Fair and the National Science Fair for Young Children.

Pamphlets and invitations were sent to VIP Guests and all well-wishers to provide information about the SFYC. A special invitation known as "the invitation to watch" enticed the public to this year's national SFYC. ASTRO Vaanavil as the media partner provided good publicity for this year's programme.

The publicity slots arranged by ASTRO Vanavil are as follows:

- 13 series of science capsules aired nationally.
- 2) 4 interview slots in Vizhuthugal aired nationally.
- Promotion 2 weeks before National SFYC aired nationally.

This year, a special 13 series animated science capsule was telecast over ASTRO Vanavil for a duration of 2 minutes. These capsules consisted of catchy experiments which related to our daily activities. The capsules featured school students as the actors. We also introduced the "Arivan" animation which is the symbol of the Arivan Science Club. These capsules created a the much need promotion among the school students and the public.

The national broadcasting radio channel (RTM) provided us an exclusive interview session in the Vasantham programme. Vanakkam Malaysia provided a special slot in Parvai at the State Level and NSFYC. This year, the new media education WEB TV also provided coverage for NSFYC' 11. The events featured will be broadcasted to all the primary schools.

The project also received wide coverage in Tamil News Papers such as the Tamil Nesan, Malaysia Nanban and Makkal Osai. (For training, launching, events, and after events)

(For detailes, please refer to Appendix E)

### 7.2 FUNDING

The SFYC's main funder is MCEF-CCI. This programme was also funded by our Prime Minister Datuk Seri Haji Mohd Najib bin Tun Haji Abdul Razak (Prime Minister of Malaysia), ECM Libra Foundation and the Vijayaratnam Foundation. These funding organisations are the backbone of SFYC. Besides them other individuals from various professional backgrounds also provide sponsorship. The funds granted by our major sponsors are as below:

Table 7.1: Launching and Fund Raising Dinner of SFYC 2011

NO.	SPONSOR	AMOUNT (RM)
1	Ministry of Finance, Malaysia	250,000
2	MCEF	210,000
3	ECM Libra Foundation	82,156
4	Vijayaratnam Foundation	30,000
	GRAND TOTAL (RM)	572,156

This year, a different type of fund raising method was used to raise the funds. The working group decided to organise a Launching & Fund raising dinner which was chaired by Mr. Saravanan S. Sinapan and the event was held at Dewan Puspanita, Kuala Lumpur on 24 February. Dinner tables were sold for RM1000 each.

Besides donating through the dinner tables, a few kind-hearted individuals pledged donations on stage. The funds raised through this event are as follows:

**Table 7.2: Fund Raising Collections** 

NO.	SPONSOR	AMOUNT (RM)		
1	YB Datuk Seri S Subramaniam (Human Resources Ministry)	15,000		
2	Datuk Marimuthu (FOMCA)	10,000		
3	Mr.Tharma (Hay Group)	10,000		
4	Dato Randir Singh	5,000		
5	Dato' Seri Kalimullah (ECM Libra)	3,000		
6	Mr. Ayub	3,000		
7	Ms.Quek Sook Yan (Hong Leong Bank)	2,000		
8	Mr. S.T Rubareshyaran	501		
9	Mr.Sivakumaraan	200		
10	Dinner Table Collection	14,300		
	Total 63,001			

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Besides the Launching & Fund Raising Dinner, SFYC 2011 also had external funding from donations and the sale of advertisement space in our souvenir book. The targeted funders were approached through phone calls and emails by the key stakeholders. After receiving their positive feedback, they were told the importance of the SFYC and the funds needed for the fair.

The details of external funding are as below:

**Table 7.3: List of External Funders** 

NO	SPONSOR	AMOUNT (RM)
1	NLFCS	5,000
2	Ms. Wan Khatina	2,000
3	AK Pharmacy	200
4	Event Day Collection	210
	GRAND TOTAL (RM)	7,410

Many other corporate companies were also approached to sponsor products for our programme. The response was very encouraging. We were able to get products sponsored by:

**Table 7.4: List of Products Sponsors** 

	No	Donor	Item	Quantity
	1	McDonalds Malaysia	Free Coupons	300
	2	Sinar Scientific	Microscope	1
4	3	Dutch Lady	150ml Drinks	144
	4	Tupperware Brands Malaysia	Tumbler	20
	5	Permanis Sdn Bhd	200ml Twister Blackcurrant	2000
	6	Glaxo Smith Kline Sdn Bhd	Ribena	5000

Their contribution is highly appreciated by the SFYC's working group. We look forward to more companies coming forward to sponsor us in the future. The products that they had sponsored were delivered to our participants during the event day. Their contributions also served as good publicity and a good marketing strategy for their products to our participants who were aged between 10 - 11 years old, teachers, parents and the public who visited our fair. As an appreciation to all our main sponsors we included the company's logo in our promotional materials such as banners, buntings and advertisement space in our programme book. We also prepared a special bunting for our sponsors and displayed it at the venue in recognition of their sponsorship.

The summary of funds collection for the National Science Fair 2011 is as listed below:

No.	SPONSOR	AMOUNT (RM)
1	Major funders	572,156
2	Fund raising Dinner	63,001
3	External Funding	7410
	GRAND TOTAL (RM)	642,567

**Table 7.5: Summary of Fund Collection for SFYC 2011** 



### **Target Group**

The volunteers and facilitators form the backbone of SFYC. The volunteers visited schools during the development of the science projects in school and also helped organise the fairs. Form 6 leavers, college and university students were recruited to facilitate schools with Science Fair experiments because they have a better knowledge and skills to help the participating students.

### **Objectives**

To involve the college and university students to participate and volunteer in education based activities and to encourage the participating students to do better besides getting knowledge and ideas from the volunteers.

### **Facilitators Recruitment**

The SFYC requires more human resource to run the event at state and national levels. The recruitment of facilitators at zone level was done by the respective coordinators while at the national level, the working committee was in charge and Mr.Vijendran was appointed to help in this matter.

### **Facilitators training**

The facilitators were trained based on the information below:

- i. Introductions, Project Overview
  - A group introduction and discussion on SFYC.
  - · Learn personal objectives of every participant.
  - Discuss general preparation for the volunteers.
- ii. Facilitators' roles in SFYC
  - · Guide and help the participating children and their teachers.
  - School visits
  - Submit report to coordinators.
  - Help out in state level Science Fairs organising the fair
  - Manage ompetitions such as colouring, drawing, science quizzes, and multimedia quizzes.
  - Support the National Science Fair.

The Facilitator management began with the recruitment of facilitators at a few universities and colleges by the Volunteer and Facilitator Management Department. Facilitators, who signed up to be volunteers were included in the database and the name list was given to the coordinator of the particular state for them to follow up and coordinate. All facilitators were given a facilitators manual each as a guide for them to perform their tasks.

Based on the feedback, certain schools complained that the facilitators did not help the students much compared to previous years. More intense training for facilitators should be carried out and a few zones needed more facilitators to help the teachers and students. Thus, more facilitator recruitment must be carried out to ease the problem in schools and among coordinators.



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### NSFYC 2011 STUDENT'S CONFERENCE

The top 3 teams in the Zones Level Science Fair were eligible to participate in the conference paper competition held at the National Fair. These teams were asked to submit a 2 page conference paper. These papers were reviewed by the NSFYC Committee and were presented at a special conference paper presentation at the German-Malaysian Institute lecture Hall on 25 June from 7.30pm to 10pm. The conference paper presentation was done in powerpoint. The presentation was conducted in 4 parallel sessions in four lecture halls. The objectives and guidelines are as follows:

The objectives of the Conference paper presentation:

- To cultivate the concept of research findings and sharing the academic approach with the other participants of the fair in a formal way.
- To provide an opportunity to write the research findings in an organised and systematic manner.
- To provide an avenue for the young scientists to experience the atmosphere of a conference paper presentation.
- To develop confidence, encouragement and expose them to speak in public and mould them to be good presenters in future.

### The guidelines were:

- The first 3 prize winners of each zone each submitted their paper to the Conference Paper judges. All the teams presented their conference paper for NSFYC 2011 in front of their peers.
- The conference paper was written based on the experiments conducted by the teams for National Level Competition.
- At least one person from each team was required to present the paper at the Conference Paper Presentation.
- Students were required to present their paper using Microsoft powerpoint slides (only up to 8 slides were allowed). The presentation time was 10 minutes and 5 minutes for Q & A.





The judging department was set up to judge the Science Fairs across the country. The judges were selected based on their knowledge in science and most of them were science graduates. The Judging department worked based on the time line stated below:

- (i) Nov-Dec 2010: Finalising Judging criteria based on experiments/projects (Non-Guided), working together with the research and development team.
- (ii) Dec-Jan 2011: Formation of a Core Judging Panel and conducting a brainstorming session within the Judging Panel:
- (a) To discuss the methods and training materials required for the training of zone level judges.
- (b) To set the criteria to select the zone level judges.
- (iii) Jan-March 2011:

### Task One

Prepare Training materials (Slides/handouts, etc) to train the judges.

### Task Two

A Complete briefing on guided and non-guided experiments to the Judging Panel (like a workshop session, to make sure the Core Judging Panels were well equipped with the "experimental" and "theoretical" knowledge of all the experiments presented by students).

The briefing and workshop session shared some information with the R & D Department and the judges liaised with the state coordinators to conduct a regional judges training session and a schedule was put in place.

The judging teams also tried to identify new members to join the Core Judging Panel. They visited the state level science fairs when needed to obtain better feedback from these fairs. The National Science Fair – closed door judging by the selected judging group from each zone.

(refer to Appendix D(i) for Judging Progress Report)



The progress of the Science Fair over the last 4 years:

44 Schools	49 Teams	
180 Schools	197 Teams	
188 Schools	207 Teams	
263 Schools	285 Teams	72 SLSF
274 Schools	274 Teams	264 SLSF
	180 Schools 188 Schools 263 Schools	180 Schools197 Teams188 Schools207 Teams263 Schools285 Teams

This year, the state level SFYC was conducted in 9 zones, with 274 Tamil schools taking part and 60 schools were shortlisted to take part in the NSFYC 2011. We have encouraged the schools to hold school level science fairs and some schools have done so with the support of the state coordinators. The schools which organised school level science fairs and participated in the State Level SFYC, performed much better than all the other schools at the national level science fair.

We were surprised to see that the participating students from each zone had improved their presentation and public communication skills when they participated at the National Level. The students brought SFYC to life as they tackled investigative questions through hands-on experiments which help them to develop and demonstrate their interests and knowledge in science.

Over the years we noted many improvements in the thinking process of Tamil school students and among them were:

- Approached problems using scientific methods.
- They asked questions, formed hypotheses and created experiments to test their hypotheses.
- The students observed and recorded data and drew conclusions from them in a systematic manner.
- Communicated their scientific research articulately & confidently to others.
- They worked as a team of 3-5 persons.
- Budgeted their time, organised their work into manageable chunks, kept to a schedule and delegated work diligently.
- The Students used reading, writing, research and computer skills.
- They were able to answer the questions from different angles.
- Confident during the presentation.



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### ACCOUNT STATEMENT OF SFYC 2011 STATEMENT OF INCOME AND EXPENDITURE ACCOUNTFOR THE YEAR ENDED 31ST AUGUST 2011

INCOME	2011 (RM)	2010 (RM)
Income - Science Fair	557,070.00	287,875.00
TOTAL INCOME	557,070.00	287, 875.00
LESS : EXPENDITURE		
Accomodation	12,276.00	4,680.00
Annual Project Report Book	_	1,480.00
Audio & Visual	6,290.00	8,550.00
Design	8,350.00	-
Website	4,295.00	-
Audit Fee	1,200.00	1,200.00
Professional Fee	1,825.00	_,
Bank Charges	67.50	117.00
Booth Set Up	-	16,000.00
Coordinator Allowances	8,000.00	8,000.00
Depreciation	2,706.40	1,151.50
EPF & SOCSO	3,634.70	1,655.10
Insurance	3,004.70	1,175.00
Launching Ceremony	8,700.00	3,200.00
Meals	5,737.25	23,531.36
Medical fee	236.25	40.00
Miscellaneous	230.23	370.05
Postage, Courier & Stamping	544.19	325.87
Printing & Stationery	29,098.04	18,649.52
Prizes & Souveniers	72,443.60	25,840.80
Rental	9,720.00	3,550.00
Research & Development	4,275.98	3,848.12
Training	1,124.60	3,040.12
Salary & Allowances	64,728.45	37,560.93
School Allocation		
School Level	14,600.00	23,100.00
Stamp Duty	84,091.40	30.00
Penalty	30.00	30.00
Telephone	123.70	0 565 60
Travelling & Transpotation	5,104.70	2,565.62
Volunteer Recruitment	16,128.05	37,165.75 948.70
Zone Allocation - Johore	10 275 00	
Zone Allocation - Sonore Zone Allocation - Kedah	12,375.00	14,750.00
Zone Allocation - Malacca	29,120.80 5,775.00	4,550.00 5,250.00
Zone Allocation - Malacca Zone Allocation - Negeri Sembilan		4,500.00
Zone Allocation - Pahang	4,950.00	,
Zone Allocation - Panang  Zone Allocation - Penang	4,675.00	3,500.00
Zone Allocation - Perak	4,400.00	3,750.00
Zone Allocation - Perak Zone Allocation - Wilayah & Selangor	12,925.00	12,500.00
TOTAL EXPENDITURE	18,975.00 <b>458,526.61</b>	14,900.00
EXCESS OF INCOME / (EXPENDITURE)	98,543.39	288,435.32
INCOME AND EXPENDITURE ACCOUNT	30,343.33	(560.32)
Total Income	557,070.00	287,875.00
Total Expenditure	458,526.61	288,435.32
Surplus / (Deficit)	98,543.39	(560.32)

The annexed notes from an integral part on the Accounts.

### **BALANCE SHEET AS AT 31ST AUGUST 2011**

INCOME	2011 (RM)	2010 (RM)
Assets		
Non- current assets Property, Plant and Equipment	9,674.20	4,605.60
Current Assets		
Other Receivables	6,118.00	12,688.85
Deposits & Prepayments	829.40	275.00
Cash and Bank Balance	97,044.02	1,157.60
	103,991.42	14,121.45
Total Assets	113,665.62	18,727.05
Represented by:		
Accumulated Funds		
Accumulated Funds b/f	2,138.85	2,699.17
Surplus / (Deficit) For the Year	98,543.39	(560.32)
Accumulated Funds c/f	100,682.24	2,138.85
Current liabilities		
Other Payables	12,983.38	16,588.20
Total liabilities	12,983.38	16,588.20
iotai liabilities	12,903.30	10,366.20
Total Funds and Liabilities	113,665.62	18,727.05

The annexed notes from an integral part on the Accounts.

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The following recommendation is a post-mortem held on the SFYC as a whole and the functioning of the working group.

### 13.1 WORKING GROUP

- All important suggestions or decisions must be raised at the WGC meeting to get approval before implementing it even though it was communicated to important persons such as the Project Director/Advisor.
- All WGC members should make decisions for the success of the project without any bias.

### 13.2 PARTNER ORGANISATION

- Identify new potential funders and sponsors for the Science Fair for Young Children.
- All partner organisations should be able to raise or contribute funds (minimum of RM5,000) for the project.
- Publicity from this event should be shared equally for all the partners.
- Each member of the WGC should take responsibility for at least one of the departments in SFYC such as Training, Event Committee, Secretariat, Publicity or Zone Level SFYC and etc.

### 13.3 SCHOOL LEVEL SCIENCE FAIR

- Encourage more schools to organise the SLSF as this is to be the new core agenda of the SFYC.
- Involvement and support from parents should be increased by appropriate means.

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### 13.4 ZONE LEVEL SCIENCE FAIR

- Coordinator's payment must be made as per scheduled.
- Coordinators and partners must be responsible and accountable for the zone SFYC interim progress reports.
- Coordinators should submit the final report after their zone SFYC within two weeks of their Science Fair event.
- Coordinators must avoid getting funding once the accounts have been closed, and sent to the Central committee for approval.
- All the surplus funds which were raised this year must be stated in the accounts and must be carried forward to next year's accounts.
- Cash prizes should be minimised at zone level and avoid category prizes.
- Coordinators must send the copy of the minutes of their zone meetings to the working group committee.
- Coordinators are obliged to follow the set of rules from WGC.
- Persuade the schools to participate in the SFYC even if they think that their experiment is a "failure".

### 13.5 PROJECT OFFICERS

- Even though the secretariat takes charge of any zone level project coordination, a new project officer must be hired to coordinate the zone arrangement.
- The National level project officer must only focus on national level arrangement to avoid too many pending iobs.
- A project officer should be hired for new projects such as the SLSF and the Arivan club.

### 13.6 TRAININGS

- Compulsory training on experiments to volunteers should be conducted for them to understand the experiments clearly before visiting the schools.
- The training dates must be fixed during the meeting with the organisers to avoid too many changes later.
- Separate and more training sessions for larger zones.

### 13.7 NATIONAL LEVEL SCIENCE FAIR

- The head of departments should be briefed with sufficient information to deliver their tasks efficiently.
- Clear definition on rules and regulations Responsibilities to all personnel on deliverable, management and operation of the SFYC should be spelled out.
- Website must be updated frequently and should be interactive.
- Create a new set of experiment questions which are related to the school syllabus.
- Experiments to be more "hands on" and develop the quality of innovation in the students.

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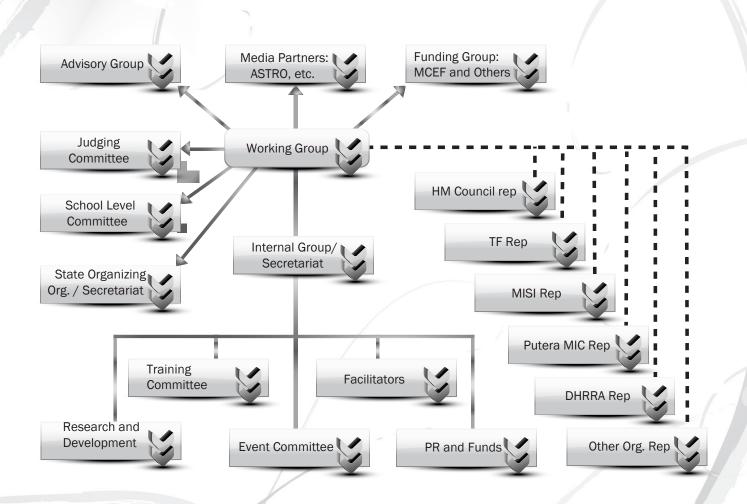
The SFYC is an excellent programme for the students to improve their science education and show their thinking ability. The fair has improved thousands of students in their understanding of science. This could help the National agenda to create more scientists in Malaysia. The SFYC 2011 also helped to create more science teachers whom can do science projects in schools and classrooms. It also helped the schools involved in the SFYC to organise School Level Science Fairs which benefit more than 50,000 students. This is a new phase for the students be involved and also show their interest in science related projects not only in the classroom but anywhere.

The SFYC 2011 also saw the involvement of a new NGO partner -- DHRRA Malaysia -- and new coordinators in Perak and Kedah to help organise the SFYC at State Level. These are opportunities to the young leaders with a Science background to get involved in science related projects.

The National Level SFYC 2011 was a tremendous success as the committee managed to increase the number of participating schools from 263 to 274 schools. Some schools have participated in other science projects across the country. For example, SJKT Mentakab, Pahang won the first placing in a project across the country.

We have encouraged the school level science fairs so that we can reach out to more Tamil school students throughout the country. The Science Fair was a success and we hope that it can be further improved next year with more schools participating.

### APPENDIX A I. ORGANISATIONAL STRUCTURE



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# APPENDIX A II. RESPONSIBILITIES OF EACH GROUP

il. n	E2LAN2IRITII	E2 OF FACH GROUP
Groups	Members	Job Function
Working Group	Partner organisations representatives, Project Director will be the chairman.	<ul> <li>Policy making</li> <li>Decision making</li> <li>Financial approval</li> <li>Delegate and monitor the project</li> <li>Guide the Internal Group</li> <li>Meet every fortnight</li> </ul>
Internal Group	Project Director, Representatives from selected organisations depending of job functions and SFYC staff.	<ul> <li>Plan and implement SFYC 2011</li> <li>Prepare bi-weekly progress reports by</li> <li>department for the Working Group's</li> <li>consideration</li> <li>Meet every week</li> </ul>
Judges Group	Volunteers selected to serve in the national SFYC	<ul> <li>Review the judging manual and upgrade the judging instruments</li> <li>Work with state coordinators to identify suitable judges for the state-level fairs</li> <li>Meet state-level judges, as needed, and provide training and guidance</li> </ul>
School Level Science Fair Committee	Volunteers and Chaired By Project Advisor	<ul> <li>Provide materials for the running of school level science Fairs</li> <li>Conduct road shows and training in the respective states</li> <li>Work with the State Coordinators to make the programme a success</li> </ul>
Facilitators Group Implementation Committees	Teachers and Volunteers (University students)	<ul> <li>Serve as supporting members in the internal roup's departments</li> <li>Review the SFYC Folder, and upgrade its contents, in particular, the sample projects, Student Guide, Parent Guide, and Facilitator Guide</li> <li>Visit schools and assist participating teams and teachers understand better the concept of science fair, science projects and scientific methods.</li> </ul>
SFYC Secretariat	Staff members	<ul> <li>Provide administrative support for SFYC.</li> <li>Organise working group and internal group meetings and prepare minutes and reports.</li> <li>Coordinate with the facilitators group and judging group and provide assistance as needed.</li> <li>Provide information on the progress to the relevant groups.</li> <li>Report to the Project Director</li> <li>Core coordinator in the implementation of the project</li> </ul>

# APPENDIXA REPORT SUMMARY OF ZONE 1 KEDAH AND PERLIS IMPLEMENTATION

### **Training**

There were two training sessions for Zone 1 Tamil School teachers. At the beginning of the year, letters were sent out to all 59 schools in Kedah and Perlis to inform and invite the school teachers for School Level Science Fair training. The road show teacher's training for SLSF was conducted on 29 January at the AIMST University. There were 35 out from the 59 schools present at this training which was conducted by Mr.Kugen and his team. Teachers were briefed on how to stage science fairs at schools. They were also provided with relevant materials for school level science fairs.

The State Level Science Fair teachers' training was held on 19 February at the AIMST University. 31 schools took part in this training, but most of them were new schools. The training was conducted by Dr.Mohd Yunus Yasin and Mej.Dr.Vikneswaran (Project Director). The schools were given 2 weeks to submit their titles, and another training for facilitators was held at the same time as the State level science fair teachers training. A total of 30 facilitators attended the training with Mr.Vijendran in charge.

A total of 30 Judges attended a training session on 9 April which was was conducted by Dr.Jayaseelan who was the head of judges in the National Science Fair last year. The judges were briefed on the judging process, criteria and methods.

### **School Level Science Fair**

The Zone 1 coordinator agreed with the central committee's policy that the SLSF will give more impact to a student's interest in Science. Furthermore, the SLSF will benefit all the students of particular schools rather than only selected students participating in the zone and national fairs. Therefore we decided to promote SLSF in Zone 1 actively. 46 schools from Zone 1 staged the science fair in their schools. All the interested schools were required to send their proposals to the organising committee and a small amount of seed fund was given to all the school. We target to cater for more schools next year.

### **School Visiting**

There were two school visits by the facilitators whose role was to assist and guide the students on their experiments. The Zone 1 facilitators were selected from higher education institutes around Kedah and Perlis such as AIMST, UUM, UNIMAP, and IPISA. The first school visit was held from 20 March till 27 March and the second visit was done from 9 April till 15 April. During the second visit, the report books and a copy of the logbook from each school were collected by the facilitators.

### **Event-day**

This year, the Zone 1 SFYC wa staged as a two day event which took place on 6 -- 7 May. A total of 41 schools from Kedah and Perlis registered to participate and prior to the event day, a committee comprising 15 departments and 90 volunteers were formed. All the preparations for the event day was done two weeks earlier by each department's volunteers and the respective heads.

### 6 May 2010

The registration counter was opened at 12.00pm and the schools started to check into their rooms after registering upon arrival. All the students were given goody bags which contained the guidebook, AIMST brochures and Ribena. Meanwhile, the log books and the report books which were collected from the teams during registration were judged.

After dinner, the teachers and students were briefed on the itinerary for the 2 day event by Dr Jayaseelan. The schools were then divided to participate in the conference paper presentation at the respective lecture halls which ended at about 10.30pm and the students returned to their rooms.

### 7 May 2011

On Saturday, the event started at 8am with the students and teachers preparing their science fair booths. At 9.00am, the judging started and it took 3 hours. During the judging, there was a special talk by Mr.Saravanan, President of DHRRA Malaysia which was arranged for the teachers at a separate venue. The teachers responded well and after the talk a dialogue (forum) between the "in charge of Science fair" teachers from each school and the organising team was held.

During this dialog session, the teachers shared their experience and opinion of Zone 1 SFYC. All their points and thoughts were noted for better improvement at next year's science fair. Lunch was served from 12.00 noon to 1.00pm. The public viewing session started at 12 noon and a few booths were set up at the entrance. Among them were the Medical Booth by the Medical Faculty of AIMST, Biotech Faculty of AIMST, and the AIMST Human resources. Games and quizzes were held for the public to liven up the environment. At 3.00pm, the closing ceremony started and ended two hours later. All the participants of Zone 1 SFYC 2011 were given medals, science books, certificates and the Elantalir and Sembaruthi magazines.

The top 3 winners of the conference paper presentation received certificates and prize money of RM300, RM200, and RM100 respectively. Whereas the top 5 winners of the exhibition received a trophy, certificates, medals and prize money of RM1000, RM2000, RM750, RM500 and RM200 respectively. The Champion walked away with the Challenge Trophy.

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### FINANCIAL REPORT OF ZONE 1 - KEDAH & PERLIS

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
MYNADI Foundation	16,117.00	TRAININGS & VISITING:	
Central Committee	11,275.00	Teacher and Volunteer	525.00
(Seed Fund)		Training	
Central Committee	9,000.00		
(Donation)		FACILITATOR VISITING	
DHRRA Malaysia	1,500.00	Fuel	540.00
AIMST University	3,350.00	Car Rental	50.00
Registration Fee	2,050.00	Visiting Allowance	10.00
JOE CLINIC	1,000.00		
BRM TRADING	550.00	STATE LEVEL SCIENCE	
M.A. Veerappan	500.00	FAIR:	
Mr.Shan	500.00	Exhibition Booths	10,800.00
Asnuhani	500.00	Prizes & Souvenirs	10,382.00
Mr.Thulasiraman	500.00	Printing / Promotion	9,110.80
Ms.Chandrika	340.00	(souvenir book / banner /	
Staarmaxx Trad	300.00	bunting)	
Mr.BALA	200.00	Meals	5,735.00
GEETHANJARAM	200.00	(Students Teachers,	
Mr.Anand (etika)	200.00	Judges, volunteers & VIP)	
Mr.Selvam	100.00	Stationeries	1,215.10
Ms.Uma Chandran &	100.00	Transport Rental	2,300.00
Ms.Rasamal			
Mr.Kartik	100.00	ADMIN & OTHER	
		EXPENSES:	005.00
Mr.Bathmanathan	50.00	Fuel	905.00
Dr. Varatharaju	100.00	Mineral Water	177.00
Mr.Kalidasan Aahadevan	100.00	travel Expenses(Tickets)	172.50
Dyanamart	100.00	Stationary	165.30
SYLESTER (ALEX)	100.00	postage	150.90
Mr.Nithyarajan	100.00	Phone	450.00
Jewelery Shop	100.00	Toll	37.80
Pesatuan Wanita India	100.00	Fotostat	4.20
Malaysia Naidu	400.00		
Mr.Gunalan Naidu	100.00		
Restoran Nasikandar	100.00		
SK RAAJ ENT	50.00		
TOTAL(RM)	49,382.00	TOTAL(RM)	42,730.60

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# REPORT SUMMARY OF ZONE 2 PULAU PINANG IMPLEMENTATION

### **Training**

At the beginning of the year, letters were sent out to all 28 schools in Penang to inform them about the Science Fair 2011 and to invite the teachers to the teachers training which was held in January at SJKT Ramakrishna, Jalan Scotland, Georgetown. 22 teachers from 19 schools attended the half-day training which was conducted by the Research and Development (R&D) team and MISI. The schools were given 2 weeks to submit their titles and they started their experiments after getting approval from the secretariat. Meanwhile, trainings were held separately for the facilitators and judges. Mr.Kaneswaran from the Tamil Foundation was in charge of training for the 10 judges and Mr.Chinna Kannan briefed 25 facilitators and volunteers.

### **School Level Science Fair**

This year, the National Science Fair secretariat initiated science fairs at schools level. The main objectives of holding school level science fairs was to encourage more students to participate in science related activities and to instil an interest in Science among them. Teachers were briefed on how to conduct science fairs at schools. They were also provided with relevant materials for the schools level science fairs. The National secretariat liaised directly with the schools as a follow up.

### **School Visiting**

Trained facilitators visited all the participating schools. The main task of the facilitators was to assist and guide the students on their experiments. The schools were first visited by March end and the second visit was during the fourth week of April. The report books and a copy of the logbooks were collected during the second visit. Based on the facilitators report, we found that the schools are very much encouraged to participate and the students were interested in exploring science knowledge further.

### **Event-day – State level Science Fair**

This year, a total of 20 schools from Penang registered to participate in the State level science fair. However, only 16 teams turned up on the event day. SJKT Jawi, SJKT Ladang Prye, SJKT Juru and SJKT Tasek Permai withdrew from the competition at last minute, as they were disappointed with the outcome of their experiments.

On the event day, the registration counter was opened at 7.30am. The school teams had breakfast after they had registered and the participating teams were given 1 hour for booth set-up. Judging started at 9.00am with 9 judges divided into 3 groups. Experiment presentation and the knowledge of our Tamil school students surprised the judges. They had a tough time to choose the best schools and judging was over at 12.00pm. The fair was then opened to the public.

State Coordinator Dr. S. Balasubramaniam, in his opening speech, thanked the entire support group and our Tamil schools well-wishers who made our dreams come true. Deputy President of Tamil Foundation Malaysia, Mr. C.M.Thiraviam gave an inspiring speech and thanked the organising committee and others for supporting this project. Our guest of honour, Datuk Pulindran who is the PIBG chairman of SJKT Permatang Tinggi, officiated the Penang state level Science Fair for Young Children 2010. In his opening speech, he said that this programme was beneficial to the students and should be held yearly.

All the participants were awarded prizes in honour of the 5 Tamil scientists namely APJ Abdul Kalaam, Sir C.V. Raman, Subramanian Chandrasekar, Venkatraman and Prof. Dr.Selvanathan.

SJKT Ramakrishna emerged the champions for the Penang zone. The top three winners at state level qualified for the National Level Science Fair which was held at the German-Malaysian Institute (GMI) in Bangi, Selangor.

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### FINANCIAL REPORT OF ZONE 2 - PULAU PINANG

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Committee	4400.00	Stationery	387.35
Allowance	1000.00	Food & beverage	330.15
Various Donations	7737.00	Transport	60.45
		Phone & Prepaid	500.00
		Part Time Staffs Salary	1000.00
		School Visiting Allowance	600.00
		Event-day Expenses	
		Venue	1,000.00
		Booth Partition	2,400.00
		Prizes	4,110.00
		Printing	388.00
		- Banner, Backdrop, Certificate, etc	
		PA System	200.00
		Meal	2,025.00
		- Breakfast & Lunch	
		Others	
		Misc Expenses	137.20
TOTAL(RM)	13,137.00	TOTAL(RM)	13,137.00



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# REPORT SUMMARY OF ZONE 3 PERAK IMPLEMENTATION

### **Training**

The task started on 16 January with DHRRA MALAYSIA sending out invitation letters to the 134 schools informing them about the science fair and inviting the schools for the training program. The briefing sessions were held in the Tamil schools in three zones namely Tapah, Ipoh and Taiping. 102 teachers from 81 schools took part in the briefing session about the school level science fair and 53 schools did not send a representative for the briefing.

There were also separate training programmes for the facilitators and judges. The training for facilitators was held on 23 April and a total of 10 facilitators were trained for the Perak State Science Fair. These facilitators were required to gauge the level of preparation of the participating schools by checking the log books, experiments, reports etc. The training for the 20 judges took place on 15 May 2011 at the Lotus restaurant in Ipoh.

### **School Level Science Fair**

The School Level Science Fair For Young Children 2011 was held from March till August. A total of 62 schools took part in the School Level Science Fair this year. All the schools were provided with a guide book and a CD to help them conduct the School Level Science Fair. All the selected and trained facilitators visited the schools to assist them.

### **Event-day - State Level Science Fair**

The Perak State Level Science Fair was a joint effort effort between the Development of Human Resources for Rural Areas, Malaysia (DHRRA) and the Perak State Government. A total of 47 schools and 46 teams participated at the state level science fair which took place on 22 May at the Ipoh Masterskill Campus. About 5 schools arrived a day before the event due to the distance and these schools were provided with accommodation at the Masterskill Campus. A day before, all the judges gathered with the chief judge and went through all the report books and logbooks.

The event day, started at 7am with the schools arriving for registration and breakfast was provided. All the participating schools were allowed into their booths at 8.00am and they were given an hour to set up their booths. It was amazing to see the team effort of the students, teachers and parents. The judges went around the booths to judge the booths while the parents and teachers were gathered in a hall. Distinguished speaker Mr. Paandithurai was invited to provide an awareness talk on 'Tamil Kanda Ariviyal' to the parents and teachers. The talk started at 10am and lasted 2 hours while the judging which went smoothly ended at 12 noon.

After the judging, the science fair was opened for public viewing. Lunch was served and the students took their turns to have their meals. It was really nice to see how dedicated and passionate our children are towards the science fair.

It was very exciting for the students as the invited VIP's arrived early and visited all the booths. It was fun to see the students explaining their experiments to the VIP's and having photo session with them.

The Perak State Science Fair was launched by Yang Berbahagia Dato' S. Veerasingam who represented Yang Amat Berhormat DATO' SERI Diraja Dr ZAMBRY ABDUL KADIR. The other Guest of Honours were Mej. Dr. Vikneswaran, Director of NSFYC, Dato' R. Ganesan (Perak State Assembly Speaker), Mr. Haw, CEO of Masterskill Ipoh Campus, Mr. Mahendran, Trustee of Vijayaratnam Foundation and Madam Sujitra, Head of the Vijayaratnam Foundation.

The event started with an opening speech by State Level Project Director, Mr.Saravanan M Sinapan. He thanked all the teachers and parents for their overwhelming support, without which the fair would not be a thumping success.

He also emphasized that being a champion is a secondary thing but the most important thing was their participation in the science fair to made everyone a winner.

The organiser arranged gifts for all the students and teachers who participated in the fair. Next on stage was the National Science Fair for Young Children, Director, Mej. Dr. Vickneswaran who explained how the SFYC started and its objectives.

Chief Judge Dr. Muniandy shared the difficulty that the judges experienced as all the participants did well. He also gave tips on how to perform better in future Science fairs and for those who will be qualifying for the National Level Science Fair 2011.

Dato' S. Veerasinggam mentioned in his speech that he was very happy and impressed with performance of the students. He added that more of these events should be held as it will benefit them.

### FINANCIAL REPORT OF ZONE 3 - PERAK

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Committee	37,500.00	Prizes	41,115.00
DHRRA Malaysia	32,231.85	Food and Drinks	13,728.90
Perak State Government	15,000.00	Booths	16,000.00
YB Kohilan Pillai	2,000.00	Facilitator' Claims	1,500.00
Yayasan Perak	1,000.00	Phone Calls	500.00
Perak Cooperation	300.00	Souvenirs	3,000.00
Deputy Health Minister	2,000.00	VIPs Receiving	700.00
		Photocopy, Banner &	4,135.00
		Bunting	
		Stationeries	1,752.95
		Medical Expenses	100.00
		Others	7,500.00
TOTAL(RM)	90,031.85	TOTAL(RM)	90,031.85



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# REPORT SUMMARY OF ZONE 4 & 5 SELANGOR AND KUALA LUMPUR IMPLEMENTATION

### **Training**

At the beginning of the year, letters were sent out to all the 112 schools in Selangor and Kuala Lumpur to inform about the Science Fair 2011 and to invite the teachers to the teachers training. The first session was held on 29 January at the Dewan Perdana Siswa, Universiti Malaya. 84 teachers from 53 schools attended the training while 35 teachers from 27 schools attended the second training session on 26 February. The schools were given 2 weeks to submit their titles and they started their experiments after getting approval from the secretariat. Meanwhile, trainings were held separately for the 30 facilitators and 40 judges.

### **School Level Science Fair**

This year, the National Science Fair secretariat initiated science fairs at schools level. The main objective of conducting the schools level science fairs was to encourage more students to participate in science related activities and instil an interest among them. Teachers were given a briefing on how to conduct science fairs at schools and were also provided with relevant materials for the school level science fair. 28 schools in Selangor and 8 schools Kuala Lumpur staged the Science Fair in their schools. We hope to target and cater for more schools next year.

### **School Visiting**

Trained facilitators visited to all the participating schools. The main task of the facilitators was to assist and guide the students on their experiments. The first school visit was held by March end and the second school visit was during the third week of April. Report books and a copy of the logbooks were collected during the second visit.

### **Event-day - State level Science Fair**

This year, a total of 71 schools from Selangor and Kuala Lumpur registered to participate in the State level science fair. However, only 69 teams turned up on the event day. SJKT Ghandiji and SJKT Braunston withdrew from the competition at eleventh hour, as they were disappointed with the negative outcome of their experiments.

On the event day, the registration counter was opened at 7.30am with the school teams registering and having breakfast. Participating teams were given 1 hour to set up their booths. Judging started at 9.00am with the 45 judges being divided into 15 groups. Experiment presentation and knowledge of our Tamil school students amazed the judges. They had a tough time choosing the best teams and with the judging was over at 12.00noon, the fair was opened for public viewing.

State Coordinator Mr.C.M.Elanttamil in his opening speech thanked the school management and the Tamil schools well-wishers who made the fair a success. State level Project Director, Mr.S.Navarajan said that this programme inspired our Tamil school students to widen their knowledge in the field of Science and Mathematics through continuous research and learning.

Our guest of honour, Y.B. Dr.Xavier Jeyakumar, Selangor State Government Exco Member officiated at the Selangor and Kuala Lumpur state level science fair for Young Children 2010. In his opening speech he said that this programme was the right platform for the children to establish themselves as young scientists.

Mr.Hakim Hamzah, CEO of 1 Malaysia Centre also attended our event representing Kementerian Wilayah Persekutuan dan Kesejahteraan Bandar. He was amazed with our Tamil school students knowledge in Science.

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This year, all the participants were awarded prizes in honour of the 5 Tamil scientists namely APJ Abdul Kalaam, Sir C.V. Raman, Subramanian Chandrasekar, Venkatraman and Prof.Dr.Selvanathan.

SJKT Taman Permata emerged the champions in the Selangor zone while SJKT Jalan San Peng, Kuala Lumpur lifted the title for the Kuala Lumpur zone for the second consecutive year.

### FINANCIAL REPORT OF ZONE 4 & 5 SELANGOR & KUALA LUMPUR

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Committee	18,975.00	Stationary	3,906.35
NLFCS	20,000.00	Transport	3,311.45
Kementerian Wilayah & Kesejahteraan	2000.00	Food & Beverage	5710.15
Participation Fees	2,950.00	Phone / Prepaid	1048.00
Tamil foundation	53,442.95	Postage	186.80
		School Visiting Allowances	9,210.00
		EVENT- DAY	6,550.00
		Booth Setup	14,200.00
		Prizes	12,700.00
		Printing	5,216.00
		Security (RELA)	200.00
		Multimedia Quiz	500.00
		Photograph	500.00
		Video Shooting	850.00
		P.A. System	800.00
		Meal	8,400.00
		(Breakfast & Lunch)	0.040.00
		Insurance	2,342.00
		(students, teachers etc) T-shirt for volunteers	2,700.00
		OPERATIONAL COST Fulltime Staff Salary	12,250.00
		Assistant Project	6,400.00
		Officers	-,
		Misc expenses	187.20
TOTAL(RM)	97,367.95	TOTAL(RM)	97,367.95

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# REPORT SUMMARY OF ZONE 6 NEGERI SEMBILAN IMPLEMENTATION

### **Training**

All the schools was sent letters by the central committee and the HM Council and were invited to attend the training at SKJT Ladang Seremban. 20 schools participated in the training for the State level Science Fair which was held at SJK (T) Seremban on 12 March. The experiments titles and objectives was clearly explained to them and the Science Fair folders and CDs were provided to the schools as a guidance. State Facilitator, Mr.Thaneswaran visited and guided our school teachers by explaining the procedures, methods, science processes skills, apparatus, and briefed them about the science fair day.

### **Road Show**

The road show training for the SLSF was held on 30 January at SJK (T) Lobak and 31 schools out of 61 schools participated. Teachers were provided guide books and CDs to organise their own School Level Science Fair. Dr.Subramaniam conducted the training at Negeri Sembilan.

### **Event-day - State level Science Fair**

The State level Science Fair was staged organised at SJK (T) Seremban on 21 May. 18 schools participated in the Science Fair for Young Children 2011 which started at 8.00am ended at 4.00pm. Their performance was overhelming and their presentation skills had improved compared to last year. Their experiments and innovation was good.

Our guest of honor YB Dato V.S Mohan, State Executive Councillor of Negeri Sembilan officiated at the ceremony. The judges evaluated the students' performance and their creativity on the experiments. About 100 students and 50 teachers participated in the science fair and about 40 parents and members of the public visited the science booths. Parents encouraged the HM council to continue with this project for the Tamil schools.

All the winners were provided a trophy, certificates and cash vouchers. 4 schools were selected to participate in the National Science Fair. The champion was SJKT Mukundan.



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### FINANCIAL REPORT OF ZONE 6 NEGERI SEMBILAN

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Committee	4,950.00	To build and fix backdrops	1170.00
MGBNS	1,935.80	(3m x 2m) (wood)	
		Science Fair 'Tags'	470.80
		Food and Drinks	2150.00
		(breakfast, lunch and evening tea)	
		Hampers	50.00
		Dismantling and Cleaning	250.00
		Science Fair site	
		Cash Prize	1200.00
		Meeting with the teachers	267.00
		(2 sessions)	
		Prizes	928.00
		PA System	250.00
		Backdrop	150.00
TOTAL(RM)	6,885.80	TOTAL(RM)	6,885.80



# REPORT SUMMARY OF ZONE 7 MELAKA IMPLEMENTATION

### **Teacher and Facilitators Training**

The teachers and facilitators training was held on 1st April at the Melaka MIC Office and it was conducted by Mr Saminathan and trainers from the Malaysian Indian Science Intellectuals on behalf of the National Science Fair Committee. The training was attended by 16 teachers and 5 Headmasters and Headmistress with Mr S. Asogan, Penyelia Kannan Bahasa Tamil Melaka Education Department also attending.

### **Judges Training**

The Judges training was held on 24th April at Universiti Teknikal Melaka (UTeM). Mr Ranjit Singh from UTeM was appointed as the Chief Judge and the training was attended by 8 judges from UTeM, MMU and Politeknik Melaka. It was conducted by Mr Elan Tamil from the National Science Fair Judging Committee.

### **Facilitators School Visits**

15 facilitators mainly from the Science and Engineering background were appointed to assist and report on the progress of the respective schools. The facilitators conducted about three visits and based on the feedback most of the schools projects were done at the very last minute nearing the State level competition.

### **Event-day – State level Science Fair**

The 2011 state level Science Fair was held on 15th May at the Planetarium Melaka. For the second consecutive year, 100 percent participation was achieved for the Melaka zone State Level Science Fair from all the 21 Tamil Schools. The students and teachers of each respective school were required to be in the Planetarium Melaka by 7.30am. They were given one hour to set up their respective booths with the information and experiment details.

The Melaka state level science fair 2011 was officially opened by YBhg. Tuan Hj Ismail bin Hj Alias, Ketua Unit Matematik Sektor Pengurusan Akademik who represented the Melaka Education Director. In his address, he lauded Putera MIC Melaka and MICESS efforts to uplift the Indian community through education and knowledge particularly in the field of Science and Technology.

During the opening ceremony, certificates to each mentor was presented by Tuan Hj Ismail and a celebration was held to appreciate all teachers in conjunction with Teachers Day which fell 16 May. Among those present were Datuk R.Raghavan, MICESS Chairman, Captain Dr. Vicky, National SFYC 2011 Organising Chairman, Mr. Aloyxious Xavier, Melaka HM Council Chairman, Mr. S. Asogan, Penyelia Kanan Bahasa Tamil JPM and Madam S.Vasuki, Penyelia Sekolah Tamil JPM.

The closing ceremony was graced by YB Datuk G. Palanivel, President of the Malaysian Indian Congress (MIC) which was held from 2.00pm to 3.30pm. Datuk Palanivel visited all the 21 booths and among those present were YB Datuk R.Perumal, Melaka State Exco Member and Melaka State MIC Liaison Chairman, Datuk R.Raghavan, Captain Dr. Vicky, Mr. Aloyxious Xavier, Mr. S. Asogan, and Madam S.Vasuki.

In his address, Datuk Palanivel said that he was extremely delighted with the students English proficiency during the presentation at their respective booths. He added that it was a great effort by Putera MIC Melaka and MICESS and hoped that their efforts will continue and improve in the coming years. He later presented the certificates of appreciation to each participating student, headmasters, headmistress, judges and the organising committee.

The Melaka State Level Science Fair was a huge success due to the commitment and assistance given by the respective Tamil school headmasters and teachers.

### FINANCIAL REPORT OF ZONE 7 MELAKA

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Commitee	5,775.00	Cash Prizes	1,200.00
YB Datuk Yaakub	1,000.00	Facilitators allowance	450.00
Other Contributions	3,020.90	Planetarium Tickets and Venue Rental	1,000.00
		Teacher's Day Celebration Expenses	138.00
		Stationery and Prizes	1421.80
		Food (Training, Pre SFYC and Post Dinner)	664.05
		Transportation (lorry)	450.00
		Photography	50.00
		Printings	405.00
		Tags	50.00
		Food Allowance for Committee	15.00
		Food on SFYC day	2,000.00
		PA system	100.00
		Food and Drinks for SFYC National Briefing	227.15
		School level SFYC deficit	124.90
		Provision for Committee and Facilitators dinner (50 pax)	1,500.00
TOTAL(RM)	9,795.90	TOTAL(RM)	9,795.90



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# REPORT SUMMARY OF ZONE 8 JOHOR IMPLEMENTATION

# **Road Show Training**

All the schools were sent out letters about the School Level Science Fair Young Children (SLSF). The details of the road show were mailed, followed up with phone calls to the respective schools. The SLSF road show was held on 19 February at UTHM. 64 teachers participated in the training at 2.00pm. All schools were told about the duration of the SLSF from March until April and the response from all the teachers was positive and they supported the SFYC 2011.

## **Zone Training**

The second teacher's training was held on 5 March at UTHM and it was held from 8.00am until 1.00pm with 67 schools from 70 schools participating.

# **Judging Training**

The judge's training was held on 14 May at SJK (T) Tun Aminah, Skudai, Johore. The training started at 8.00am and 25 judges participated. The selected judges were well experienced in the science field and had participated in the Science Fair 2010. The chief Judge Dr. Karthigesu explained about the past science fair experience. The marking method for the log books, report books and the booth evaluation was explained to the all the judges and were advised to be aware of the time frame in each booth. The judges were divided into 8 teams to mark the log books which were collected on 11 May. It took about an hour to complete the marking of all the log books and the judges were given refreshment at 2.00pm.

# **Event-day - State level Science Fair**

The Science Fair for Young Children 2011 was held on 21 May at University Tun Hussein Onn Malaysia, (UTHM) Batu Pahat. This programme was organised by Putra MIC jointly with Biro Kebudayaan Mahasiswa India, UTHM. This year, all the 47 schools in the state participated in this programme. This third science fair was officiated by YB Asojan Muniandy, Johore state Government Exco Member. The Judging was divided int 2 phases, with the first session in the morning and the second phase in the afternoon.

The closing ceremony began at 4.00pm and our guest of honour was Vice Chancellor, Prof.Dr.Ir.Amir Hashim who officiated at the ceremony. The winning teams from one to twenty were given hampers, a trophy, and vouchers worth RM500 to RM2000.

The champion was SJKT Jalan Yahya Awal and 10 schools were selected to participate in the National level Science Fair 2011.

# FINANCIAL REPORT OF ZONE 8 JOHOR

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Committee	23,800.00	Prizes & Souvenirs	33,982.00
(School Level)		Booths	15,050.0
Central Committee	12,375.00	T-Shirts	13,270.00
(State Level)		Food and Drinks	13,076.00
UTHM	13,000.00	Hall	13,000.00
Mr Raja	10,500.00	Students Goody Bags	7,050.00
Mr Soros Kim	10,000.00	Facilitators Claims	2,397.50
Mr Steven	3,000.00	Phone Calls	850.00
Mr Thenarasoo	2,000.00	Stationery	438.75
Dato Randir	2,000.00	Printings	436.30
Mr Elan Ko	2,000.00		
Datin Sornavalli	1,000.00		
Mr Ravin Chandran	1,000.00		
Johor SFYC Committee	22,334.55		
TOTAL(RM)	103,009.55	TOTAL(RM)	103,009.55



# REPORT SUMMARY OF ZONE 9 PAHANG IMPLEMENTATION

# **Training**

The teachers training at state level was held on 5 March (Saturday) which was held at 2 venues -- SJK (T) Raub and SJK (T) Mentakab at the request of HM council Pahang. The first session started in the morning at SJK (T) Raub and the second session in the afternoon at SJK (T) Bandar Mentakab. 29 schools out of the 37 schools attended the training.

The facilitators training was also held on the same date as the teachers training. All the students and school leavers were invited to attend this training, but the response was poor.

## **Facilitators Visiting**

The first visit was scheduled from 12 April until 28 April and the facilitators gave their feedback after the first visits to the schools to the state coordinators. The second visit was from 7 May to 10 May before the final week for the state level science fair. During the second visit, the facilitators collected the report books and the log books.

# **Judge's Meeting**

Mr. Prem Kumar was appointed as the chief judge for the Pahang SFYC 2011 and the judges meeting was held on 28 April. The Judges were selected from various professions such as engineers, doctors, and pharmacists (from Hospital Sultan Ahmad Shah, Temerloh) and secondary school teachers.

# **Event-day - State level Science Fair**

On the science fair day, 17 schools from Pahang participated at the Sekolah Menengah Hwa Lian, Mentakab on 14 May and 30 Secondary School students and 15 undergraduates volunteered to help organise the event. We got the hall at a discounted rate because we applied through the Tamil Society of the school.

The volunteers from the Tamil Society are also Police Cadets in the schools. These cadets (volunteers) took charge of the parking and security while the members of the Tamil Society helped to arrange the hall, put up partitions and helped with the cleaning and food arrangements.

A rehearsal for the fair was held in the evening, the day before and the event coordinator explained the sequence of the events to all the facilitators, who were delegated the tasks. The fair started on time and the participants were given a briefing after the registration and all the participants started their booth preparation and decoration on time. The event was divided into 3 parts – Judges Evaluation (Morning), Public viewing (afternoon) and the closing ceremony.

The judging evaluation started half an hour late after the schools had requested for more time to prepare their booths. The public viewing started as early as 12.30pm even though the judges evaluation was not completed. During the public viewing, 3 games – treasure hunt, science quiz, mathematic puzzle and the best booth nominee lucky draw were held.

The Multimedia quiz was conducted by the Tamil Foundation's facilitators and was held for the non-participating students, teachers and also parents and attracted a lot of students and the public. The closing ceremony, which started at 3.00pm ended at 4.30pm. We invited Mr.Thiraviam, Vice President of the Tamil Foundation as our chief guest to officiate the Science fair which ended at 6.30pm.

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# FINANCIAL REPORT OF ZONE 9 PAHANG

INCOME	AMOUNT (RM)	EXPENDITURE	AMOUNT (RM)
Central Committee	4,675.00	Food for training sessions	100.00
Pahang State	10,000.00	Drinks for volunteers	32.10
Government		Hall	500.00
Participation Fees	850.00	PA Technician	300.00
		Phone claims	250.00
		chairs	330.00
		T-shirts for participants	1260.00
		Food for event day	1575.00
		Photostat	30.00
		Electrical appliances	93.60
		courier	7.00
		Renting houses	400.00
		- for far away schools	
		Pamphlets	250.00
		Visiting allowance	1020.00
		Prize money for winners	1000.00
		School prizes	420.00
		Prizes and trophy	4000.00
		Coordinators Allowance	500.00
		Garbage bags	10.00
		Printer cartridges	80.00
		Appreciation dinner for volunteers	350.00
TOTAL(RM)	16,275.00	TOTAL(RM)	12,507.70



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# APPENDIX C I. LIST OF EXPERIMENTS

The complete list of experiments are as follows:

- 1. Gears are the main equipment which is being used in almost all the mechanical devices. There are many types of gears and they come in various sizes too. Thus, gears can be utilised for different purposes. By understanding more about gears, design a model by using various types and sizes of gears and explain their usage.
- The dream to fly made mankind to invent air gliders and aircrafts. Now, we are flying beyond earth. But it all started with a simple sketch and models. Using some easily available items things such as cardboards, rubber bands, toy propellers and wooden sticks design a model of a plane that can take-off and land.
- 3. Spiderman is a comic super hero, who has the power to generate super strength from his wrist. In our real world, there are scientists who are on the mission of inventing such strings and some of them actually succeeded with nano technology. Now, your task is to find out the characteristic and strength of different existing strings and perform a demonstration based on your findings.
- 4. Travelling downwards on an inclined route is easier than travelling upwards. In theory, the increase of mass and potential energy will increase the velocity of an object that moves downwards. With this information, determine whether the theory is acceptable or not with a help of a model, and identify as many ways as you can to decrease or increase (depends on your own results) the velocity of the object. Explain your methodology.
- 5. Have you realised that carrying your school bag on both your shoulders is lighter than carrying it on one side of your shoulder? Do you know why it varies? Linking it to this scenario, there are possibilities to make a person stand firmly on a board which only has 'Poker cards' as its pillars. Do you believe this? Well, you are the one who is going to amaze others by conducting a similar experiment to prove the above possibilities with an explanation.
- 6. Wind is an element of nature that can be useful to us when harnessed to generate electricity. It is a renewable source and environmentally clean. Based on the given statement, design a model to demonstrate the use of wind as a renewable source of energy.
- 7. All kids would have heard of Superman, one of the favourite comic strip characters. He can lift almost anything without worrying about the size or weight of the object. Using a system of pulleys you too can carry weights many times greater than your own. Design a system that can have a mechanical advantage of six. That is, it can lift a load six times greater than the effort you use to lift it. Compare the distances travelled by the effort and the load. What do you conclude?
- 8. Light travels in straight lines and does not pass through opaque materials. Light can be reflected and can be refracted when passing through transparent materials. Use a single source of light, for example a laser beam. By causing refractions and reflections, use this beam of light to produce an interesting pattern. ATTN: Do not have direct contact with laser beams to your eyes!!!
- 9. Ships are made of materials that are denser than water. Yet, they float on water and carry heavy loads. This is all due to the way the ships are designed. Using the same amount of base material, design boats of different shapes to demonstrate the effect of shape on the ability of the ship to carry heavy loads.

to shape on the ability of the ship to early heavy loads.

- 10. The world is getting hotter each and every day due to green house effects and global warming. The nature lovers and environmental researchers are keeping on emphasizing the importance of plants on recovering the earth's temperature. If this is true, then how effective is the presence of plants in an environment to decrease the surrounding temperature? Start an experiment to study the effectiveness of the presence of plants in a controlled space or environment. Make sure your experiment is presentable in a science fair event.
- 11. Sun as the centre of our solar system provides energy in the form of light for all the nine planets. However, the amount of light received by earth varies from sunrise to sunset. Thus, photosynthesis in a plant occurs at a different rate too. Come up with an experiment to test the effect of light intensity on the rate of the photosynthesis process.
- 12. Water plays a major role in all living organisms, and the same goes to plants which contain 90 percent of water which are accumulated by the roots and pulled through by an internal feature of the plant which is known as xylem. Study the function of xylem which can be related to stem size and create an experiment which explains the transpiration rate.
- 13. Water is important to human life. It is difficult to get clean water due to river pollution. So, raw water cannot be consumed directly. We need to purify the water for human usage. Build a water purification system model using basic materials such as sand, stones and so forth.
- 14. Food is one of the basic requirements for human beings to survive. This is because it is the source of energy and nutrients for us to grow. Foods contain various nutrients and thus, they have different amounts of energy (E). Prove or disprove this statement by investigating the various kinds of nuts.

# $E = 4.2 X M X \Delta T$

- 15. Soft drinks, like coca cola, have been found to be of different acidity. They can also cause corrosion of metals. Use red cabbage to make a pH indicator solution. Use this solution to determine the pH level of at least eight soft drinks available in the market. (You may need the indicator colour chart from the internet). Use strips of zinc, copper, aluminium and iron to show the degree of corrosion that is caused by those drinks. You must device a mechanical system that you can use to dip the metal strips into and remove them from the drinks at the same time.
- 16. Detergents are useful in cleaning clothes. Sometimes cleaning agents like Clorox are added to increase the cleanliness of clothes. Develop your own cleaning agents using natural products to show the effectiveness of removing different types of stains.
- 17. Battery is one of the sources of voltage and can be used to supply electrical energy to light up bulbs or to move things easily. Use the idea of voltaic cell to create a voltage source. The effect of different types of liquids, concentration of liquids and amount of liquids can be studied to light up a bulb.
- 18. Carbonated drinks are very tasty and these drinks contain different amounts of carbonic acid which subsequently will release CO2 gas when it reacts with certain substances. You may study the release of CO2 gas from different types of carbonated drinks.
- 19. Fruits are one aspect in our food pyramid. We gain various benefits from consuming fruits as part of our meal. There are vitamins present in fruits, Vitamin C is one of the major vitamins which benefits humans. With this information, determine the ways to identify the amount of Vitamin C and its benefits.
- 20. Breathing is an essential involuntary process for the survival of living things. During the breathing process, organisms inhale and exhale air by using the lungs. However, the respiratory rate changes according to different activities. Based on this, find out ways of the breathing system in living things and how the system differs through a demonstration.

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# PPENDIX G EVENT SURVEY REPORT

# EDAH & PERLIS

The State level Science Fair for Young Children for Zone 1 was conducted on 6 - 7 May at the AIMST University, Kedah. Dr. Jayaseelan Marimuthu was the coordinator representing the National Working Group of SFYC 2011. 41 schools participated in the event.

# **Overall Satisfaction of Teachers**

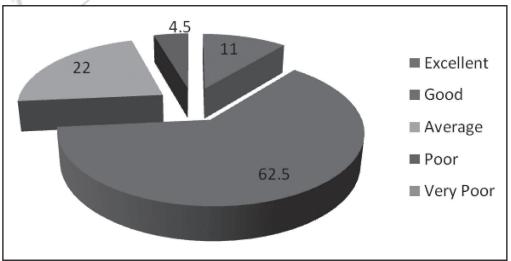


Figure 1.1: Zone 1 Overall Satisfactory Level of Teachers

According to the diagram above, 45 percent of the respondents were very satisfied and 46 percent were satisfied with the event. 3 percent of the respondents commented that the event was poor and 6 percent mentioned that the event was of average standard. This particular group was dissatisfied with the location guidelines within the event area, distance between each subevents and the judging methods.

The Kedah and Perlis State Level Science Fair was well organised and well managed by the event committee as the event venue was suitable for two days to accommodate a big crowd. Since the area was big, the distance between each sub-event's locations made the participants tired. The agenda of the event was smoothly managed by the organising committee but it will be better if the numbers of speeches are reduced. This is the first zone which introduced a two day event which included the conference paper presentation which is only done at the national level.

# **ZONE 2 - PULAU PINANG**

The State level Science Fair for Young Children for Zone 2 was conducted on 22 May at the Institut Perguruan Gelugor Pulau Pinang by Dr. S. Balasubramaniam. 16 schools participated in the event.

# **Overall Satisfaction of Teachers**

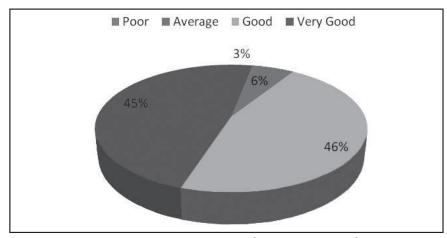


Figure 1.2: Zone 2 Overall Satisfactory Level of Teachers

According to the diagram above, 11 percent of the respondents were very satisfied and 62.5 percent were satisfied with the event. No respondents commented on the event as very poor, however 4.5 percent listed the event as poor. This particular group felt that the venue and distance were their major problems.

## **Overall Satisfaction of Students**

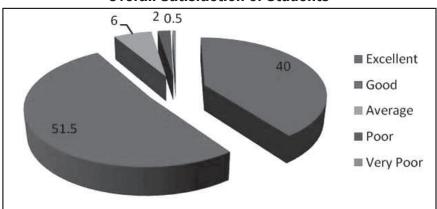


Figure 1.3: Zone 2 Overall Satisfactory Level of Students

40 percent were satisfied and 51.5 percent were very satisfied with the event. However, a small group of students felt dissatisfied with the event. 2.5 percent of the respondents felt that the event was poorly organised, as they were not satisfied with the venue and the lack of information regarding additional activities.

On the whole, the visitors expected many changes in the event, such as the event location, public viewing duration and experiments. Many of them suggested that such events should be held in halls which are located on the mainland so that more people can be part of this event and it was easy to get media publicity.

They also suggested that the event be held on Saturdays so that the students can rest on Sundays. Some of the visitors who were the parents of the participants suggested that the fair should be staged during the holidays and not near the exam dates.

They also preferred a better variety of experiments in future and some even encouraged the committee to develop an agenda for the public to evaluate the participants as the public could get more involved in the event. They also felt that the involvement of teachers and parents on designing or conducting the experiments should be limited and the schoolchildren should do more tasks. The visitors also suggested more space between the respective booths.

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# **ZONE 3 - PERAK**

The State level Science Fair for Young Children for Zone 2 was conducted on 22 May at the Institut Perguruan Gelugor Pulau Pinang by Dr. S. Balasubramaniam. 16 schools participated in the event.

## **Overall Satisfaction of Teachers**

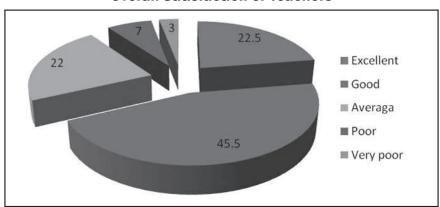


Figure 1.4: Zone 3 Overall Satisfactory Level of Teachers

According to the diagram above, 22.5 percent of the respondents were very satisfied and 45.5 percent satisfied with the event. Three percent of the respondents commented that the event was poorly organised and 7 percent listed the event as poor. This particular group was dissatisfied with the location guidelines within the event area, event flow, hospitality provided by the facilitators and the judging methods.

## **Overall Satisfaction of Students**

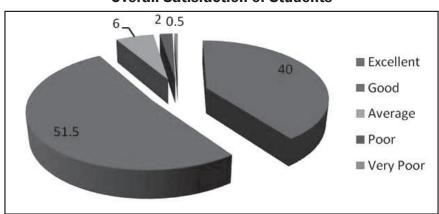


Figure 1.5: Zone 3 Overall Satisfactory Level of Students

28 percent of the students were satisfied and 64.5 percent were very satisfied with the event. However, 2 percent, of the students felt dissatisfied and 1 percent felt that the event was poorly staged in our survey. The respondents were not happy with the distance of the venue from the school.

The public wanted many changes in the event, almost in every section. They strongly suggested that the event should be held inside the hall, because the weather was very hot and it exhausted the students. Some of them suggested that such events should be held in halls which is near to the major roads so that more members of the public can visit the fair and it would be easy to promote the event. They also preferred more variety in the experiments in future and some of them even felt that the presentation in English can improve the language skills among the students. The respondents also suggested that the time frame of the overall event be shortened.

# ZONE 4 AND 5 -WILAYAH PERSEKUTUAN & SELANGOR

## **Overall Satisfaction of Teachers**

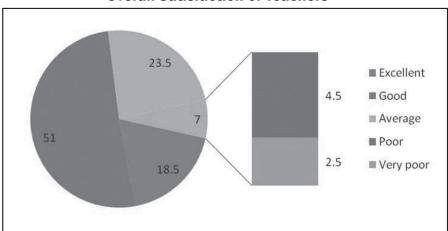


Figure 1.6 : Zone 4&5 Overall Satisfactory Level of Teachers

According to the diagram above, 18.5 percent of the respondents were very satisfied and 51 percent were satisfied and 2.5 percent of the respondents commented that the event was very poor and 4.5 percent felt that the event was poorly staged. This particular group was dissatisfied with the location guidelines within the event area, event flow, hospitality provided by the facilitators and judging methods.

## **Overall Satisfaction of Students**

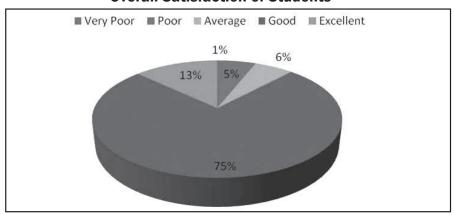


Figure 1.7 : Zone 4&5 Overall Satisfactory Level of Students

75 percent of the students were satisfied and 13 percent were very satisfied with the event. However, 6 percent of the respondents felt dissatisfied with the event and indicated poor and very poor ratings in the survey. The majority of the participating students agreed with the flow of the event by ticking no changes to the overall event, but a certain number of them expected some changes especially on the time allocation for presentation and booth preparation.

The visitors expected many changes in the event, especially on the event location, as they said that the event should start a little later, so that schools from far way places can prepare their booths and get ready for the presentation. They felt that there was a need to have some food stalls for the visitors and also the parents. Some respondents suggested that this event should be run over 2 days while some parents want to be in the hall during the judging.

There was also a request for clear location guidelines (signages) so that the people who came from far away places couldc reach the location on time. They was also a need for a proper information counter to get details. They also preferred a better variety of experiments in future which are related to the syllabus and requested the organisers to arrange some facilities and food for the public and also for the students who were not participants of the event.

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# **ZONE 6 - NEGERI SEMBILAN**

The State level Science Fair for Young Children for Zone 6 was conducted on 21 May at the SJK(T) Ladang Seremban, by Mr. Roslan Abdullah. A total of 18 schools participated in the event.

## **Overall Satisfaction of Teachers**

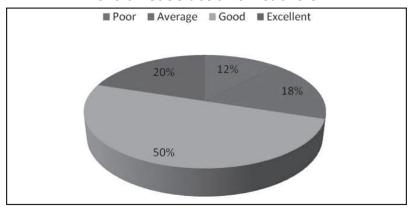


Figure 1.8: Zone 6 Overall Satisfactory Level of Teachers

According to the diagram above, 20 percent of the respondents were very satisfied and 50 percent of those surveyed were satisfied with the event. Another 18 percent said that they were happy with the organisers and none of the respondents commented that the event was very poorly organised. However, 12 percent stated that the event was poorly handled. This particular group felt that the venue and the distance were their major problems.

## **Overall Satisfaction of Students**

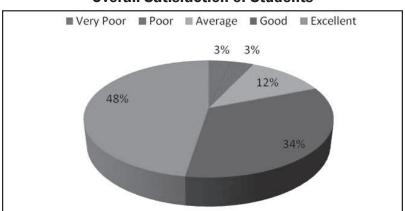


Figure 1.9: Zone 6 Overall Satisfactory Level of Students

48 percent of the students were satisfied and 34 percent were very satisfied with the event. However, 3 percent voted in the poor and very poor category in our survey. The respondents were dissatisfied with the venue and the lack of information regarding additional activities.

Overall the Negeri Sembilan State Level Science Fair was well organised and managed by the event committee this year. The booth size which was provided to the participants were well designed as per the guidance in our science folder. The judging was also well conducted with the help of the teachers and volunteers. But the event venue was not a good choice to organise the science fair and the judging was lengthy and finished only at the lunch hour. Apart from that, the event was smoothly managed by the organising committee.

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# ZONE 7 - MELAKA

The Zone 7 Science Fair for Young Children was conducted on 15 May at the Planetarium Melaka, by Putera MIC which saw the participation of 21 schools.

# Overall Satisfaction of Teachers Very Poor Poor Average Good Excellent 5% 6% 14%

# Figure 1.10: Zone 7 Overall Satisfactory Level of Teachers

According to the diagram above, 36 percent of the respondents were very satisfied and 39 percent were satisfied with the event. 5 percent commented that the event was very poor and 6 percent viewed it as poor. This particular group was dissatisfied with location of the event, event flow, food and beverages and hospitality provided by the facilitators.

# Overall Satisfaction of Students Poor Average Good Excellent 2% 8% 23%

Figure 1.11: Zone 7 Overall Satisfactory Level of Students

67 percent of the students were satisfied while 33 percent were very satisfied. However, a small group of students felt dissatisfied with the event. 8 percent voted average and 2 percent ticked poor in our survey. The respondents were dissatisfied with the distance of the venue from the school.

The visitors are expecting many changes in the event, especially in the event location, experiments and the viewing duration. Many of them would like to have more time allocated to view the booths and the presentation of the participants. They also prefer to have more variety of experiments in future which are related to the school syllabus.

They also suggested that such events should be held at more familiar locations where the public can visit the fair without paying enterance fees. They also wanted a change in the event location in future because the light was very dim inside the planetarium. They also requested that the organisers arrange some facilities for the public and also for the students who were not participants in the event.

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# ZONE 8 - JOHOR

The State Level Science Fair for Young Children for Zone 8 was held on 21 May at the UTHM, Johor, by Putera MIC and 45 schools participated in the event.

## **Overall Satisfaction of Teachers**

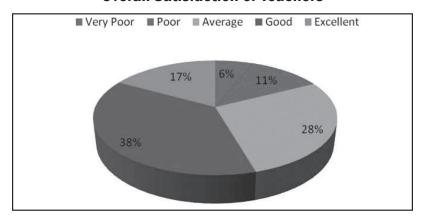


Figure 1.12: Zone 8 Overall Satisfactory Level of Teachers

According to the diagram above, 17 percent of the respondents were very satisfied and 38 percent were satisfied with the event. 6 percent felt that the fair was very poor and 11 percent rated the event as poorly staged. This particular group was dissatisfied with the duration of the event, booths allocation and also food and beverages.

## **Overall Satisfaction of Students**

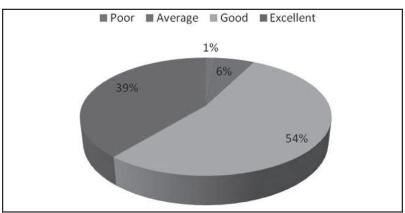


Figure 1.13: Zone 8 Overall Satisfactory Level of Students

54 percent of the students were satisfied and 39 percent were very satisfied according to the survey. Out of the respondents, 6 percent and 1 percent indicated poor organising respectively. The majority of the students agreed with the flow of the event while some expected some changes and requested for more chairs to sit in the booth, venue with air conditioned facilities and decoration with clowns and balloons.

Overall, the visitors expected many changes in the event, especially on the event location, experiments and the viewing duration. Many of them would like to have more time allocated to view the booths and the presentation by the schoolchildren. They also suggested more variety in the experiments in future which are related to the school syllabus.

They felt that the standard for this year's experiments were too high. Apart from these, they suggested a change in the event location every year and added that the venue was very warm. They have requested the organisers to arrange some facilities and activities for the public and also for the students who were not participants and arrange food and visual facilities. The visitors also felt that the students must carry out the experiments and not the teachers.

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# ZONE 9 - PAHANG

The State level Science Fair for Young Children for Zone 1 was staged on 14 May at Dewan Hwa Lian, Mentakab, with Mr. J. Jayashri Selvendran as the coordinator from the Tamil Foundation and 17 schools participating in the event.

# Overall Satisfaction of Teachers Very Poor Poor Average Good Excellent 1% 16% 7% 20%

# Figure 1.14: Zone 9 Overall Satisfactory Level of Teachers

According to the diagram above, 16 percent of the respondents were very satisfied and 56 percent were satisfied respectively with the event. 7 percent considered the event as poor and 6 percent stated that the event was of average standard. This particular group was dissatisfied with the booth allocation, food and beverages.

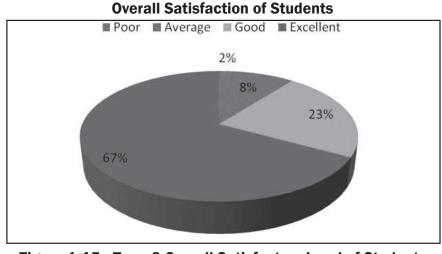


Figure 1.15: Zone 9 Overall Satisfactory Level of Students

The majority of the students were satisfied posting 57 percent and 37 percent of the visitors were very satisfied according to the survey. However, a small group of students – 5 percent felt that the event was of average quality and 1 percent said that it was of poor standard. They were dissatisfied with the booth allocation and facilities at the event hall.

The visitors expect some changes in the event, especially the viewing duration and experiments. Many of them would like to have more time allocated to view the booths and the presentation by the schoolchildren. They also prefer a better variety of experiments in future which are related to the school syllabus.

They also suggesed that such events should be organised after the UPSR so that many students can participate and requested the organisers to promote the event on a bigger scale to the general public and create a better awareness of the progressiveness of the Tamil schools.

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# NATIONAL LEVEL SCIENCE FAIR 2011

The Research and Development (R&D) Department conducted a few tasks on the event day which included surveys and observation of the experiments during the experiment presentation and conference paper presentation done by the students. The survey for the teachers, students and visitors was also conducted at the same time and their 2 day tasks started on the second day of the event.

After the judging on the second day of the event around 3pm, the R and D team observed the students experiments and the purpose was to ensure that the experiments were conducted in an orderly manner with experiment questions, students understanding level of the experiments, new ideas or inventions in the experiments.

They also observed the Conference Paper Presentation by the students on the second day of the event from 8pm until 10pm which was held in 3 different halls in both English and the Tamil language. The fluency, confidence level, points and facts presented were evaluated for further improvements in the future.

The survey was conducted on the third day of the National Science Fair event for the students, teachers and visitors from 10am until 1pm. About 6 volunteers were involved in this survey which involved the students and the visitors. The teachers survey was performed by the head of the department.

The main purpose of this survey was to identify the satisfaction and dissatisfaction levels and to seek the opinion of the teachers, students and visitors regarding the event. Through this survey, the R and D department can do some improvements for the following year. The survey was held in the morning from 10am until 10.30am for the teachers after they had a sharing session with Dr Subramaniam. They targeted to survey 120 teachers -- 2 teachers from each school but only managed to get feedback from 112 teachers.

The volunteers gathered in front of the event hall by 10.30am and they were briefed with the survey forms for about 15 minutes by the head of the department and the forms were then distributed to all the volunteers. A total of 60 students and 60 visitors were targeted for the survey. The students survey was completed by 3 volunteers, each volunteer surveying 20 schools each thus covering all the participating schools. The other 3 volunteers surveyed 20 visitors each, targeting all the visitors in the hall or in the event venue.

The students and visitors surveys were done at the same time from 10.45am until 1pm and all the forms were collected from the volunteers. The survey was successfully conducted as planned and it could be concluded that the tasks pre-planned by the R and D department were completed successfully.

# APPENDIX D JUDGING PROGRESS REPORT

# FEBRUARY 2011

The school level science fair competition started in February. At the same time, the head of the judging department, Mr.Tamilmani held the core judges' training, once every 2 weeks. He planned meetings to get feedback from the members and finalised the Judging criteria based on the experiments and projects, working closely with the Research and Development team.

### **MARCH 2011**

The Core Judging Panel was formed and there was a brainstorming session to discuss the methods and training materials needed for training the state and zone level judges and also to set the criteria to select the state and zone level judges. Training materials (Slides/handouts, etc), were prepared to train the judges. The judging panel was given a detailed briefing on the experiments (like a workshop session) to make sure that they were well equipped with the "experimental" and "theoretical" knowledge of all the experiments.

### **APRIL 2011**

The zone level science fair was held during the first week of March, and Mr.Tamilmani organised the first regional judges training for the Southern region judges. The North and Central Regional Judges training was held during the second week of March. On 26 -- 27 March, Mr.Tamilmani planned and organised the first Regional Judges Training for the Eastern region. The Core Judges meeting was held to get feedback and provide updates about the training.

## **MAY 2011**

The zone level science fairs were held in May. During the state level science fair, the judging team started preparation for the National level fair. At the end of May, Mr.Tamilmani prepared the state level judging report for all the zones and the State level science fairs were visited by the core judges with a few members picked to serve in the Core Judging Panel.

## **JUNE 2011**

The judges meeting and training was held for the National Level Science Fair 2011. The judging was a closed door affair by the selected judging group from each zone. All the zone chief judges called for a post-mortem meeting and the head of the judging department started to prepare the SFYC 11 report.

## **JULY 2011**

Comments were sent to all the schools about the students performance during the Science Fair. Letters were also sent to all the judges and facilitators thanking them for their services. Preparation of the NSFYC 2011 judging report begins.

# APPEND



சியிலிங், லே 10- (பெ.க. நாராயணன்) முதல்முறையாக ஏய்ம்ஸ்ட் பல்கலைக் கழகத்தில் நடைபெற்ற இனம் ஆய்வாளர்களின் அறிலியல் விழா 2011இல் கெடர்-பெர்வில் மாறிலங் களிலிருத்து 41 ஆயிழ்ப்பள்ளிகள் கலந்து கொண்டதை காணும்போது நாலைய வரலாற்றில் அதிகமான இத்தியர்கள் அறிலியல் அறையில் ஈடுபடு காட்டுக்கிலான் அறிலியல் அறையில் ஈடுபடு காட்டிக்கில் கறிலியல் விழா 2011இன் ஒருங்கிலலைப்பாளர் பேராசிரியர் டாக்டர் ஜெயலிலன் மாரிமுத்து செய்தியாளர்கள் கட்டத்தில் கறிலார். தமிழ்ப்பள்ளி மாணவர்களுக் கிடையே அறிவியல் துறையில் ஈடுபாடு மேனோக்க கேண்டு மென்ற நல் நோக்கத்தில் ஆரம்பிக்கப்பட்ட இவ்றிறாவ் மலின் ஒத்தையப்பட்டன் சிறப்பாட் நடத்த முடிந்தெனவும் சியினிய் ஏய்ம்பட் பல்கலைக்கழகத் தின் மண்டத்தில் நடந்த பரிசளியு விறாவில் பயர்ளிறும் டாக்டர் ஜெயலிலை மாரிமுத்து கரையாற்றி னார். கமிழ்ப்பள்ளிகளில் நடத்தப்பட்ட அடுவியல் மறிநிகினால் இம்மான வர்கள் 6, 7ஆம் தேதிகளில் நடை பெற்ற கட்டுரை படைப்பிலும்,

# AGAMTU AGAN WALAYA <u> அறிவியல்குறையில் ஈடுபாடு காட்டுவீர்!</u>



அறிவியல் கண்காட்சியிலும் சிறப்பாக பங்கேற்க முடிந்ததென அவர் சொன்னார். இவ்விறா சிறப்புற நடைபெற ஒத்துழைப்ப நல்கிய ஏய்ம்ஸ்ட் பல்கலைக்கழகத் தின் துணைவேந்தர் பேராசிரியர் சார்லஸ் ஸ்மித் அவர்களுக்கும், டாக்டர் யூனூஸ், கேப்டன் டாக்டர் விக்கேணல்வரன், இனமாறன், எஸ். சரவணன், கெடா மாநில தமிழ்ப் பள்ளிகளின் அமைப்பாளர் த. இராம கிருவணன், பெற்றோர்கள், மாணவர்கள் அமைப்பாளர் த. இராம கிருவணன், பெற்றோர்கள், மாணவர்கள் அமைப்பாளர் த. இராம கிருவணன், பெற்றோர்கள், மாணவர்கள் அனைவருக்கும் ஏற்பாட்ட டுக் குழுவீன் சார்பில் நக்ஷீர் சொல்ல கடமைப்பட்டுள்ளதாக ஏய்ம்ஸ்ட் பல்கலைக்கழகத்தின் பொறியியல்



துறைத் கூலவர் பேராசிரியர் டாக்டர் ஜெயசீலன் மாரிமுத்து கூறினார்.
இளம் ஆய்வாளர்களின் அறிவியல் விழாவில் நடைபெற்ற கட்டுரைர்.
இளம் ஆய்வாளர்களின் அறிவியல் விழாவில் நடைபெற்ற கட்டுரைர்.
போட்டியில் முதல் பரிசுக்கான 300 வெள்ளியை சங்கை ஆப்பாவாங் கமிழ்ப்பள்ளியும் இரண்டாம் பரிசுக்கான 200 வெள்ளியை விக்டோரியா கமிழ்ப் பள்ளியும் வென்றன.அடுத்து இரண்டாம் நாளாக நடைபெற்ற அறிவியல் கண்காட்சி போட்டியில் முதல் பரிசுக்கான 1,000 வெள்ளியையும் கடைமத்தையும் பீடோன் தமிழ்ப்பள்ளி வென்றது.
இரண்டாம் பரிசுக்கான 300 வெள்ளியையும் நினைவுட்பரிசுகயும் சும்தை துக்கான் தமிழ்ப்பள்ளி வெண்றது. மூன்றாம் பரிசுக்கான 300 வெள்ளியையும் நினைவுட்பரிசையும் வெல்லவல் தமிழ்ப்பள்ளியும், நான்காம் பரிசுக்கான 300 வெள்ளியையும் நினைவுப் பரிசையும் மைல்லத் தமிழ்ப்பள்ளியும், நான்காம் பரிசுக்கான 300 வெள்ளியையும் நினைவுப் பரிசையும் மன்றோத்தால் பரிசுக்கான 200 வெள்ளியையும் நினைவுப் பரிசையும் மன்றேனி தமிழ்ப்பள்ளியும் வென்றன.

அறிவியல் கண்காட்சி போட்டி யில் வெற்றி பெற்ற 5 தமிழ்ப்பள்ளி கரும் கோலாலம்பூரில் நடைபெறு கின்ற தேசிய அளவிலான இளம் குயும் கேர்வானின் அறிவியல் விழாவில் கலந்து சிறப்பிக்கும்.



மலேசிய நண்பன் ஞாயிற்றுக்கிழமை 26-6-2011

# மிழ்ப்பள்ளிகளுக்கான அறிவியல் விழா

# 60 குழுக்கள் பங்கேற்பு



(கப்ரா)
எனுள்கு ஐசின் 28—
தமிழ்ப்பள்ளி மாணவர்களுக்கான
இளம் ஆய்வாளர்கள் அறிவியல் விழா
நற்று தொடல்வியது பார்கிவிலுள்ள
ஜேர்பன் பசேசியன் கல்றுரிவில்
நாற்று தொடல்வியது பார்கிவிலுள்ள
ஜேர்பன் பசேசியன் கல்றூரிவில்
நாடு கருவிய அளவில் பாரில ரீதியாக
தொடக்கிய இருக்கு அறிவியல் விழாகில்
நாடு கருவிய அளவில் பாரில ரீதியாக
தாடு கருவிய அளவில் பாரில ரீதியாக
தோது செய்யப்பட்ட 60 தமிழ்ப்
பள்ளிக்கடங்கள் கலந்துகொன்படன.
படானவர்கள், ஆசியியர்கள்,
பெற்றோர்கள், ஈநியாட்டுக்குவுளினர்கள்
படிக்குற்றன்னனர்.
படுக்கிய இந்தியன் அறிவியல்,
அறிவாந்தேரார் கடிதல் இதன் பிரதான
ரற்பாட்டு அவலப்பாக இருக்குரும் பிரத்தும்
பட்சத்தில் விறுய ரத்தினம் அறவளியல்,
ஆவிய படிக்கியர்கள், நரா யகேசியா,
இனில் விரா அறவரியில், ஆனிய படுக்கிய
அமைப்புகள் ஆகிய
அமைப்பில் இருக்குற்றுள்ளனர்.
கல்வி அமைச்சின் ஆகியில் ஆகிய
அமைப்புகள் அறிக்குறன் கலிழ்
பிருவில் வடிக்குறார் தமிழ் அரக
கிறப்புப் பிரமுகராக இதில் கலந்து



கொள்டார். தமிழ்ப்பள்ளி மாணவர்களிடைய ஆற்றிலம் ஆற்றவை முழுமையாக விரு அமைத்திரும்புக்க விருகிக்க கொள்டு செய்பப்பட்டுள்ளது. இந்த விழா ஏற்பாடு செய்பப்பட்டுள்ளது. இந்த விழா ஏற்பாடு செய்பப்பட்டுள்ளது. இந்த விழா பண்ணி மாணவர்கள் புதிய

தமிழ்ப்பள்ளி மாணவர்களும் அறிவியல் துறையில் சிறந்த சாதனைகளை படைக்க முடியும் என்பது இந்த விழாவின் வழி அறிய முடிகிறது என் டிரா யலேசியர் தலைவர் சரவன்ன் சொன்னார்.

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# **Budding young scientists** show off their inventions















மடக்கள் க. தாமன்கட்டி தமிழ்ப்பள்ளி மாணவர்களிடையே அறிவியல் தன்மைகளை முழுமை யாக விளங்கிக் கொள்ளும் வகை பீல் "இனம் ஆய்வாளர்களின், தேசிய அறிவியல் விறா 2011" பாக்கியில் அமைத்துள்ள அற்பக்கு கட்டிற்ற கட்டுற்றது. நாடு தழுவிய அளவில் கயார் பிலக்கும் மேற்றபட்ட தமிழ்ப்பள்ளி மாணவர்களின் அறிவியல் திறன் மாணவர்களின் அறிவியல் திறன் மடைப்பாற்றமை இது வேளிப் படுத்தியது. இருபது தலைப்புகளில் 50 தமிழ்ப்பள்ளினர் மானவர்களின் மானவர்களின் மானவர்களின் மானவர்களின் மானவர்களின் நாடியில் அறிவியல் ஆற்றல் விக்க சாதனைகளையும் பலரும் கண்டு வியக்கும் வண்ணம் இங்



குள்ள பாங்கி, ஜெர்மன்–மலேசியா கல்விக் கழகத்தில் மிகக் கோலாகல மாக நடைபெற்றது என்பது குறிப்பிடத் நடைபெற்றது. பெற்றோர், ஆசிரியர் மைக் கண்டு களித்தனர்.

விழா திட்ட இயக்குநர் கேப்டன் முனைவர் எபிக்கோஸ்வரன், மினி தலைவர் சாமிநாதாகுமரன், டிரா தலைவர் சாமிநாதாகுமரன், டிரா தலைவர் சாமினர், குழிக்கமிலுர் எஸ். பகபதி, கல்வி அமைச்சின் தமிழ்ப்பள்ளி மேம்.பாட்டுத் தலைவர் பாஸ்கரன், தலைமையாசிப்பட மன்றத் தலைவர் பி.அரைசாமி, ஆஸ்ட்ரோ வானவில் இந்திய வர்த்தகப் பிரிவுத் தலைவர் முருகையா, பலபிரமுளர்கள் கலந்து கொண்டனர் என கேப் காட்கபர் விக்கோஸ்வரன் தெரிவித் தார். தன்னவபற்ற சேவையை வழங்கி நிகழ்வை வெற்றிபேறச் செய்த எல்வா நல்லுள்ளங்களுக்கும் மன்பார்த்த நன்றியை தெரிவித்துக் கொண்டனர்.

# இளம் ஆய்வாளர்களுக்கான நிதி திரட்டும் நிகழ்வு



கோலாலம்பூர், மார்ச் 10--தமிழ்ப்பள்ளி மாணவர்களுக்கான இளம் ஆய்வாளர்களின் அறிவியல் விழா 2011 கலம் ஐந்து தொடங்க உள்ளது.

இந்த இளம் ஆய்வாளர்களின் அறிவியல் விழா அறிமுகம் மற்றும் நிதி திரட்டும் விழா டேவான் டாக்டர் சித்தி ஹஸ்மா புஸ்பானிதா கோலாலம்பூரில் நடந்தது. இவ்விழாவினை மனித வள அமைச்சர் டத்தோ டாக்டர் எஸ்.சுப்பிர மணியம் தொடக்கி வைத்தார்.

இவ்வாண்டு மலேசியா இந்திய

அறிவியல் அறவொளிகள் இயக்கமும், மலேசியா தலைமையாசிரியர் மன்ற மும், மலேசிய சமூக கல்வி அற வாரியமும், தமிழ் அறவாரியம், புத்ரா மஇகா மலேசிய மனிதவள புறநகர் மேம்பாட்டுக் கழகம் இணைந்து அறிவியல் விழா 2011ஐ நடத்துகின் றனர். ஆஸ்ட்ரோ வானவில் இவ் விழாவின் அதிகாரப்பூர்வ ஒளிபரப்பு நிறுவனமாகும்.

அறிவியல் விழா செயற்குழு அறிவியல் விழாவை மூன்று பிரிவுகளாக பிரித்துள்ளார்கள். அவை பள்ளி ரீதியிலான அறிவியல் விழா, மாநில அளவிலான அறிவியல் விழா மற்றும் தேசிய ரீதியிலான அறிவியல் விழா. இதன்வழி நம் மாணவர்களி டையே அறிவியல் ஈடுபாட்டை அதிகப் படுத்துவதுடன் அறிவியலைப் பாட மாக மட்டும் பயிலாமல், மேலும் ஆற்றல் மிக்க சிந்தனையைத் தூண் டும் அங்க மாக மாணவர்களிடையே உருவாக்க அறிவியல் விழா திகழ்கிறது. மேலும் அறிவார்ந்த சமுதாயத்தை உருவாக்கு வது இந்நிகழ்வின் தலையாய நோக்க மாகும். தொடர்புக்கு 03-78778571.



# சரம்பான், ஜாவா லேன் தமிழ்ப்பள்ளியின்

சிரம்பான், மார்ச் 7-

அம்பான், மார் 22 ஆங்கு சிரப்பான் ஜாவா லேன் தமிழ்ப்பள்ளி அளவிலான நிலையில் நடைபெற்ற 2011 ஆண்டுக்கான இளம் ஆய்வாளர்களின் அறிவியல் விழாவை கண்டுகளிக்க பள்ளி மாணவர்களுடன் திரளான பெற் றோர்களும் கலந்து கொண்டு சிறப்பித்தார்கள்.

கடந்த 5ஆண்டுகளாக மாநில நிலையிலான மற்றும் தேசிய நிலையிலான இளம் ஆய்வாளர்களின் அறிவியல் விழாவில் தொடர்ந்து பங்கெடுத்து வரும் சிரம்பான், ஜாவா லேன் தமிழ்ப்பள்ளி இவ்வாண்டு முதல் முறையாக ஜாவா லேன் தமிழ்ப்பள்ளி ரீதியிலான, அறிவியல் விழாவினை ஏற்பாடு செய்துள்ளதாக அதன் ஏற்பாட்டுக் குமு ஆலோசகரும், ஜாவா லேன் தலைமையாசிரியர் ரோஸ்லான் பின் தலைமையாசிரியர் ரோஸ்லான் பின் அப்துல்லா கூறினார். இவ்விழாவில் பள்ளியைச் சார்ந்த 40 மாணவர்கள் பள்ளமைச் சார்ந்த 40 மாணவர்கள் இளம் ஆய்வாளர்களாக 6 குழுக் களாக பங்கெடுத்துக் கொண்டார் கள். பள்ளி நிலை யிலான இவ் விழாவில் சிறந்த இளம் அறிவியல் ஆய்வாளர் குழுவாக தேர்ந் தெடுக்கப்படும் குழுவினர், நெகிரி



மாநில நிலையிலான இளம் ஆய்வாளர்களின் அறிவியல் விழாவில் கலந்து கொள்வார்கள் என்றும்

கலந்து கொள்வார்கள் என்றும் ரோஸ்லான் கூறினார். இவ்விழாவின் உரையாற்றிய ரோஸ்லான் தமது உரையில் மேலும் கூறியுதாவது ஆசிரியர் களுடன் பெற்றோர்களும் இணைந்து நமது மாணவர்களை அறிவியல் உலகத் திற்கு கொண்டு செல்வதே இந்த ஏற்பாட்டில் முதன்மை நோக்கம் என்றும் ரோஸ்லான் கூறினார். யூ.பி.எஸ்.ஆர். கல்வி தேர்வில் மட்டுமல்லாது, இதுபோன்ற துறைகளிலும் ஜாவா லேன் தமிழ்ப் புள்ளி பாணவர்கள்

இலக்காகும். இதன்வழி இவர்களின் இதுபோன்ற சாதனை, பள்ளிக்கு இலக்காகும். இதன்வழ் இவர்களின் இதுபோன்ற சாதனை, பள்ளிக்கு மட்டுமல்லாது பெற்றோர் களுக்கும் பெருமை சேர்ப்பதோகு பெருமை சேர்ப்பதாக அமையும் என்று ரோஸ்லான் நம்பிக்கை தெரிவித்தார். இதே நிகழ்வின் நிறைவு விழாவில்

உரையாற்றிய நீலாய் ஆசிறியர் உரையாற்றிய நீலாய் ஆசிறியர் கருவுலப் பள்ளியின் ஆய்வாளர் தனேஷ் இதுபோன்ற இளம் அறிவியல் ஆய்வாளர்களின் விழாவின் வழி அனைத்துலக நிலையிலான அறிவியல் துறைக்கு முதல் நோபல் பரிசை நமது மலேசிய நாட்டுக்கு பெற்றுத் தரும் ஒரு சாதனையாளர் தமது தொடக்க கல்வியை தமிழ்ப்பள்ளியில் கற்று தேர்ந்த ஒரு மாணவராக இருக்க வேண்டும் என்பதை ஒரு அடிப்படை



தேர்வு பெற்ற குழுவுடன் ரோஸ்லான் மற்றும் பொறுப்பாளர்கள்.

இலக்காக கொண்டிருக்க வேண்டும்

ஆல்களில் வெண்ணும் வண்ணும் வண்டும் என்று வலியுறத்தினர். பள்ளி நிலையிலான இந்த இளம் அறிவியல் ஆய்வாளர்களின் விழாவில் பங்கெடுத்த இப்பள்ளியை சார்ந்த 1,2 மற்றும் 3ஆம் ஆண்டு மாணவர் களின் ஆற்றலையும், திறனையும் கானும் பொழுது, இவர்கள் நாட்டின் நம்பிக்கை மாணவர்களாக திகழ் கிறார்கள் என்று தனேஷ் கூறினார்



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