




കൂടാമ്
കുടുംബസൗഹൃദം
കൗതുകപരമായ
Science *അതികൈക*
Fair for Young
Children *Report*
2014



ഭൂതം
കൃഷ്ണപ്രാണികൾ
കർമ്മങ്ങൾ
Science *അതികേക*
Fair *for* Young
Children *Report*
2014



Science Fair for Young Children
2014 Report

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And last but not least the headmasters, headmistresses, teachers, hundreds of individuals, and parents, who contributed their time, money and knowledge.

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Table of Contents

Page

Our Heartfelt Thanks	ii
Working Group Committee of SFYC 2014	iii
Table of Contents	iv
List of Tables	vi
List of Figures	vi
Abbreviations	vii
Executive Summary	1
1.0 Introduction	2
1.1 Summary	2
1.2 Background	3
1.3 Objectives of SFYC 2014	4
1.4 Methodology	4
1.5 Zone Categorisation	6
1.6 Organisations in Consortium	8
1.7 Achievements of the Project	12
2.0 School Level Science Fair	15
2.1 Introduction	15
2.2 Seed Funding	16
2.3 Implementation of School Level Science Fair	17
3.0 Zone Level Science Fair	18
3.1 Introduction	18
3.2 Implementation of Zone Level Science Fair	20
3.2.1 Zone 1: Kedah and Perlis	20
3.2.2 Zone 2: Penang	20
3.2.3 Zone 3: Perak	20
3.2.4 Zone 4 & 5: Selangor and Kuala Lumpur	20
3.2.5 Zone 6: Negeri Sembilan	21
3.2.6 Zone 7: Melaka	21
3.2.7 Zone 8: Johor	21
3.2.8 Zone 9: Pahang and Kelantan	21
4.0 Training and Development	22
4.1 Training Preparation and Progress	22
4.1.1 Science Fair Folder	22
4.1.2 VCD Production	23
4.1.3 Training for Trainers	24
4.2 School Level and Zone Level Teachers Training	25
5.0 National Science Fair for Young Children 2014	26
5.1 Overview	26
6.0 Research and Development Department	29
6.1 Experiments	29
6.2 Surveys	29
7.0 Public Relations	30
8.0 Funding	33

9.0 Judging	35
9.1 Zone Level Chief Judges Training	35
9.2 Zone Level Judges Training	36
9.3 National Science Fair for Young Children	37
9.3.1 Student's Research Paper	37
9.3.2 Event Day Judging	38
10.0 Account Statement of SFYC 2014	41
11.0 Recommendations for the Future	44
11.1 Working Group Committee (WGC)	44
11.2 Partner Organisations	44
11.3 School Level Science Fair (SLSF)	44
11.4 Zone Level Science Fair (ZLSF)	44
11.5 Training	45
11.6 Public Relations	45
11.7 Judging	45
11.8 National Level Science Fair	45
12.0 Conclusion	46
Appendix A: Zone Level Science Fair Participation List	48
i. Zone 1: Kedah and Perlis	48
ii. Zone 2: Penang	49
iii. Zone 3: Perak	50
iv. Zone 4: Selangor	51
v. Zone 5: Kuala Lumpur	52
vi. Zone 6: Negeri Sembilan	53
vii. Zone 7: Melaka	54
viii. Zone 8: Johor	55
ix. Zone 9: Pahang and Kelantan	56
Appendix B: National Level Science Fair Participation List	57
Appendix C: Partially Guided Experiments for SFYC'14	59
Appendix D: SYFC 2014 in Public Media	61

List of Tables

Table 1.1: Milestones of SLSF 2014 (October 2013 – October 2014)	4
Table 1.2: Milestones of SFYC 2014 (October 2013 – October 2014)	5
Table 1.3: Number of Tamil Primary Schools in Malaysia	6
Table 1.4: Responsibilities of Each Group	10
Table 1.5: Progress of the Science Fair over the Last 8 Years	12
Table 2.1: Schools Participation in SLSF 2010, 2011, 2012, 2013 and 2014	17
Table 3.1: Comparison of Zone Categories	18
Table 3.2: Participation of Schools in the Zone Level Science Fair in 2008 and 2009	19
Table 3.3: Participation of Schools in the Zone Level Science Fair in 2010, 2011, 2012 and 2013	19
Table 3.4: Zone Level Science Fair 2014 Dates and Venues	19
Table 3.5: Schools Participation in the Zone Level Science Fair 2014	20
Table 4.1: SLSF & ZLSF Teachers Training Agenda	24
Table 4.2: Participation of the Schools in the SLSF & ZLSF Teacher Training	25
Table 5.1: List of Heads of Departments for the National Science Fair for Young Children 2014	27
Table 8.1: Sponsor of Products for NSFYC 2014	33
Table 8.2: Summary of Funding for the Science Fair for Young Children 2014	34
Table 9.1: Zone Chief Judges	35
Table 9.2: Zone Level Judges Training	36
Table 10.1: Statement of Income and Expenditure Account of SFYC 2014	41

List of Figures

Figure 1.1: Zone Categorisation of SFYC	6
Figure 1.2: The Organisation Structure of the Science Fair for Young Children 2014	9

Abbreviations

DHRRA Malaysia	Development of Human Resources in Rural Areas, Malaysia
ISRO	Indian Space Research Organisation
MITC	Melaka International Trade Centre
MCEF	Malaysian Community & Education Foundation
MGB	Majlis Guru Besar
NSFYC	National Science Fair for Young Children
NGO	Non Governmental Organization
NLFCS	National Land Finance Co Operative Society
PERINNBAM	Pertubuhan Kebajikan dan Amal India Baru Malaysia
PR	Public Relations
PPT	Power Point Presentation
Q&A	Question and Answer
SLSF	School Level Science Fair
SFYC	Science Fair for Young Children
USM	Universiti Sains Malaysia
UM	Universiti Malaya
WGC	Working Group Committee
Youth MC	Pertubuhan Graduan Belia India



Executive Summary

Science Fair for Young Children, SFYC, is an annual event that has been spurring primary school children to discover the joys of science. From simple beginning of a pilot programme in 2007, focussed only in Selangor and Wilayah Persekutuan Kuala Lumpur, it became nationwide the following year with more than a 400% increase, reaching to about 190 teams. The result clearly showed to the organisers that there was a need for such an event, focussing on science - which was not present in the past. The project was able to network and bring together schools from the entire country for the sole purpose of participating and winning. Despite the organisers' attempt to focus on the participating and learning aspects of the project, the competition elements also played a role in bringing teams to the Fair. The success spurred the organisers to conduct the project at 3 levels - school, zone and national.

The organisers also played a role in training the teachers on the Science Fair methodology and empowered the schools to run their own Fairs. This year the school-level and zone-level trainings were combined and a total of almost 400 teachers were trained. In the 2014 SFYC, a total of 338 schools successfully organised the School Level Science Fairs in their schools and 261 schools nationwide participated in these Fairs which were held in 9 zones. The National Level event was held on 11 October 2014 at Dewan Raja Muda Musa, Shah Alam.

The 2014 SFYC has also seen some major achievements for former Science Fair participants. 3 teams have won gold medals and the other team winning silver in the ITEX exhibition at the Malaysia level. These teams were also able to win 3 silver and 1 gold at the Asian levels, competing with teams from Japan, Korea, China and so on. Former participants also won a gold medal at the innovation competition in London and another being invited to Beijing for an exhibition.

Sustainability has been one of the major issues of SFYC from the onset. SFYC has grown fast in terms of participation, but the funding for SFYC has not grown in a similar manner to reflect the size of the project. This year was particularly problematic considering that the project was not successful in attracting enough funds to complete it. Thus, in the implementation of the final stage of the programme, the National Science Fair had to be postponed by 4 months until adequate funds were received. We are thankful to the generous donors who came forth to help us complete SFYC 2014. For the future well-being of the project, the organisers and supporters need to come up with a method to ensure that the long-term funding of the project is safeguarded.

1 Introduction

1.1 Summary

The best way to learn science is by the 'hands-on' manner of conducting experiments and drawing an inference from it rather than just reading, understanding and remembering its contents. Science students especially the young should be encouraged to learn science by doing projects that will bring to "life" underlying scientific concepts. By doing this, they can understand the concept clearly and adopt them in their daily life.

Recognising this urgent need, a group of community-based non-profit organisations developed the Science Fair for Young Children, or SFYC, an annual event that has been spurring primary school children to discover the joys of science since 2007. SFYC is organised jointly with the Tamil schools with over 15,000 children participating every year at the school, zone and national levels.

Besides organising the Fair at Zone and National Levels, the SFYC organising team also encourages the schools to hold School Level Science Fairs (SLSF). The organisers are of the opinion that School Level Science Fairs and Zone Level Science Fairs have a better impact and benefit to students interested in science. Each school was given prizes to organise their own SLSF and training was provided on how to organise these Fairs.

This year, a total of 338 schools successfully organised the School Level Science Fairs in their schools and 261 schools nationwide participated in these Fairs which were held in 9 zones. The National Level event was held on 11 October 2014 at Dewan Raja Muda Musa, Shah Alam. The total expenses for organising the Schools, Zones and National Level Science Fairs amounted to **RM 510,785.71**.

1.2 Background

Science is the systematic study of nature and there is an infinite amount of knowledge to be gained from this. While scientific facts are important, if the basic methods employed to discover or learn about them are not followed, it could hamper the scientific understanding of the young ones.

We use our five senses to see, taste, smell, feel and hear, and explore the world around us. As Edwin Hubble, the American astronomer who first demonstrated the existence of galaxies outside the Milky Way, once said, "equipped with his five senses, man explores the universe around him and calls the adventure Science". Our senses are the gateway keys to the world of science.

Students learn science with greater interest when it is more 'hands-on' or experimental, whereby they are led on a path of discovering scientific truths as they seek to satisfy their curiosity.

Science Fairs are ideal as they give students an opportunity to learn a scientific 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 and their ability to work in a team, to plan and execute tasks;
- Develop their public speaking skills as they present projects to schoolmates and judges;
- Compete and be recognised for academic achievement – the judging process also provides students with the invaluable experience of developing poise and thinking on their feet.

In 2003, a team was set up to organise the Young Scientific Explorers, and a group of volunteers visited schools to demonstrate

simple yet exciting projects to students followed by a trip to the National Science Centre. Upon its success, and recognising the benefits of a science fair, we initiated the SFYC in 2006.

A team comprising of scientists and educationists was formed and tasked with developing the concept, materials and the supporting structure to implement a pilot project. The following year, the first SFYC was held at the Dewan Tunku Canselor, University Malaya, and it was a big success with 49 teams from Selangor and Wilayah Persekutuan taking part. The enthusiasm shown by the participating students was simply electrifying!

The SFYC was then expanded nationwide in 2008 with 197 teams from eight states participating. The final event was held at the National Science Centre, and was graced by the Chief Secretary of the Education Ministry, Tan Sri Dr. Zulkurnain bin Haji Awang.

In 2009, a total of 207 teams participated in the State Level Science Fairs and the 60 best teams were selected for the National Event which was staged at the Kelab Kilat (TNB Hall) in Kuala Lumpur.

The following year, 285 teams successfully took part in the State Level events in 9 states nationwide and the National Event was held at the AIMST University with participation of the 60 best teams. The State Level Science Fairs of 2011, 2012 and 2013 were staged in 9 states nationwide with 274, 269 and 282 schools taking part respectively. The National Events of 2011, 2012 and 2013 were held at the German-Malaysian Institute (GMI) with 60 top teams taking part.

This year, a total of 261 schools successfully participated in the State Level Science Fairs and the 60 best teams were invited for the National Event which was held at the Dewan Raja Muda Musa, Shah Alam.

1.3 Objectives of SFYC 2014

SFYC 2014 has the following objectives:

1. To review and improve the resource materials—the ‘SFYC Folder’—provided to students, teachers and co-ordinators of SFYC; to add new science projects to the sample projects already available.
2. To train science teachers from schools on ‘hands-on’ science, science project and encourage to organise School Level Science Fairs.
3. To encourage more schools to organise School Level Science Fairs.
4. To encourage students training for each zone.
5. To promote parents training to each zone to help the students and schools to organise the Science Fairs.
6. To empower co-ordinators to organise the Zone Level Science Fairs.
7. To organise a National Level Science Fair for the best 60 science projects.
8. To encourage the students to participate in National and International Science Competition / Exhibitions / Fairs.

1.4 Methodology

The School Level Science Fair was organised by the Working Group and the Secretariat. Last year’s booklet was revised based on the comments from teachers on randomly selected schools. A special combined training session was conducted in all the 9 zones. During the training, a CD was distributed to the representatives from each school. The purpose was to encourage the schools to organise their own School Level Science Fair by giving them as much moral and technical support as possible.

Milestones for SLSF 2014

Table 1.1: Milestones of SLSF 2014 (October 2013 – October 2014)

Item	Time Frame
School Level Science Fairs Meetings	Oct 2013
Booklet & Resource Materials Preparation	Oct - Nov 2013
Coordinators Meeting & Presentation on SLSF to Coordinators	Dec 2013
School Level Science Fairs Soft Launching	Dec 2013
Sending of Letter to schools	Dec 2013 - Jan 2014
School Level Science Fairs Teachers Training	Jan- Feb 2014
School Level Science Fairs in Schools	Feb- Sep 2014
Closing of School Level Science Fairs	Sep 2014

The task of conducting the Zone and National Level Science Fairs was given to the Working Group and the Secretariat. For the Zone Level Science Fair, the folder/handbook was revised based on the feedback from the participants of the previous years. The folder/ handbook was then compiled as a folder and also in VCD format. The VCD was distributed to the participating schools during the teachers training and workshops.



Milestones for SFYC 2014

Table 1.2: Milestones of SFYC 2014 (October 2013 - October 2014)

Item	Time Frame
SFYC 2014 Workshop	Oct 2013
Identify Partner NGOs and State Coordinators	Oct - Nov 2013
Form SFYC Working Group Committee	Nov 2013
Develop Detailed Implementation Plan for SFYC 2014	Nov 2013
Train the Coordinators on conducting School Level & Zone Level Science Fairs	Dec 2013
School & Zone Level Resources, Materials & Experiment Review & Finalization	Nov 2013 - Jan 2014
School & Zone Level Training & Workshop for Teachers	Feb - Mar 2014
Zone Level Science Fairs	Apr - May 2014
National Level Science Fair	Jun 2014
Postmortem of SFYC 2014	Jul - Aug 2014
SFYC 2014 Final Report Preparation	Aug - Oct 2014

1.5 Zone Categorisation



Figure 1.1: Zone Categorisation of SFYC

Table 1.3: Number of Tamil Primary Schools in Malaysia

Zone	States	Total Tamil Schools
Zone 1	Kedah & Perlis	59 Schools
Zone 2	Pulau Pinang	28 Schools
Zone 3	Perak	134 Schools
Zone 4	Selangor	97 Schools
Zone 5	Wilayah Persekutuan, Kuala Lumpur	15 Schools
Zone 6	Negeri Sembilan	61 Schools
Zone 7	Melaka	21 Schools
Zone 8	Johor	70 Schools
Zone 9	Pahang & Kelantan	38 Schools
TOTAL		523 Schools



1.6 Organisations in Consortium

This year's Science Fair for Young Children is a group effort by:

- Association of Science, Technology and Innovation (ASTI) as the Secretariat
- Malaysian Community & Education Foundation (MCEF)
- Tamil Schools Head Masters Council
- Putera MIC
- Negeri Sembilan's Headmaster Council
- Kedah's Head Masters Council
- Perak's Head Masters Council
- Pertubuhan Graduan Belia India (Youth MC)
- Pertubuhan Kebajikan dan Amal India Baru Malaysia (PERINNBAM)
- ASTRO served as our official broadcaster
- Malaysian Nanban as our official print media partner

The details of the organisation structure and the responsibilities of each group are shown in Figure 1.2 and Table 1.4.





The organisation structure is as follows:

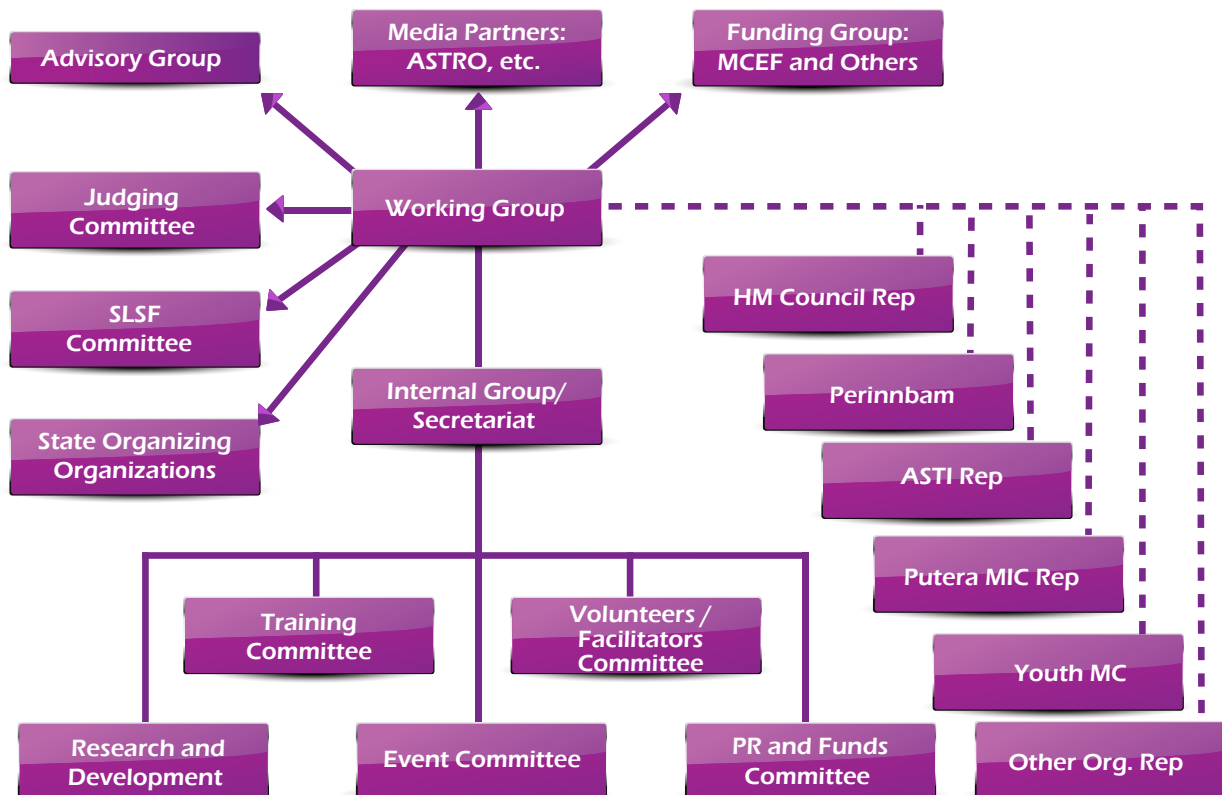


Figure 1.2: The Organisation Structure of the Science Fair for Young Children 2014

Table 1.4: Responsibilities of Each Group

Groups	Members	Job Function
Advisory Council	Advisors: Dr. Mohd Yunus Mohd Yasin Dr. Subramaniam Gurusamy Mr. Nadarajah Kalimuthu Maj. Dr. Vikneswaran Munikanan Mr. CM Vignaesvaran Jayandran Mr. Saravanan Vimalanathan	<ul style="list-style-type: none"> • Decision Making • Meet Twice a Year • Take over the SFYC after the Working Group Committee Dissolves
Working Group Committee (WGC)	Partner organizations representatives, Project Advisor(s), and Project Director, who will be the chairman.	<ul style="list-style-type: none"> • Policy making for SFYC Event • Decision making • Financial approval • Delegate and monitor the project • Guide the Internal Group • Meet every fortnight
Internal Group	Project Director, and SFYC Project Officers	<ul style="list-style-type: none"> • Plan and implement SFYC 2014 • Prepare weekly progress reports by each department for the Working Group's consideration • Meet every week • Provide all administrative support for the SFYC. • Organize Working Group and Internal Group meetings, prepare minutes and reports • Co-ordinate with the Facilitators and Judging Groups, and provide assistance as needed • Provide information on the progress to the relevant groups • Report to the Project Director • Core coordinator in the implementation of the projects
Judges Committee	Volunteers selected to serve in the National SFYC	<ul style="list-style-type: none"> • Review the judging manual and upgrade the judging instruments • Work with state coordinators to identify suitable judges for the state level science fairs • Meet state level judges as needed, provide training and guidance
Schools Level Science Fair Committee	Volunteers Chaired By the Project Advisor	<ul style="list-style-type: none"> • Provide materials for the running of the school level science Fair. • Conduct road shows and training in the respective states. • Work with the State coordinators to make the programme a success.

Groups	Members	Job Function
State SFYC Organisers	State Level Partner organisations and Coordinators	<ul style="list-style-type: none"> The State committees will be given a free hand to run their own science fair within the broad guidelines set by the Working Group. Seed funding will be given to the state committee, provided the Key Performance Indicators (KPI) are met. The State committees that fail to meet the KPI will not be provided with any funds, and the fair may not be held in the said state. The seed funding, as per the proposal, will be returned to the donors. The State committees are required to recruit sufficient volunteers to serve as facilitators and organising team members. The State committees are encouraged to seek their own means of funding to cover the expenses incurred, based on their plan. The respective schools may request to change the zones if there are good reasons (e.g. distance to the State Committee's HQ). The acceptance of their request is at the full discretion of the Working Group.
Facilitators Group Implementation Committees	Teachers and Volunteers (University students)	<ul style="list-style-type: none"> Help out in organizing zone level and national level fair



1.7 Achievements of the Project

The progress of the Science Fair over the last 8 years is as follows:

Table 1.5: Progress of the Science Fair over the last 8 years

Year	Zones	No. of Schools Participated	No. of Teams Participated	No of Students Participated
2007	Selangor and Wilayah Persekutuan Only	44 Schools	49 Schools	49 x 5 Students=245
2008	National Level (6 Zones)	180 Schools	197 Schools	197 x 5 Students =985
2009	National Level (6 Zones)	188 Schools	207 Schools	207 x 5 Students =1,035
2010	National Level (9 Zones)	263 Schools	285 Schools	285 x 5 Students =1,425
2011	National Level (9 Zones)	274 Schools	274 Schools	274 x 5 Students =1,370
2012	National Level (9 Zones)	269 Schools	269 Schools	269 x 5 Students =1,345
2013	National Level (9 Zones)	282 Schools	282 Schools	282 x 5 Students =1,410
2014	National Level (9 Zones)	261 Schools	261 Schools	261 x 5 Students =1,305

This year, the Zone Level Science Fair was conducted in 9 zones, with 261 Tamil schools taking part. 60 schools were shortlisted to take part in the National Level Science Fair 2014 which was held at the Dewan Raja Muda Musa, Shah Alam on 11 October 2014 (Saturday).

The organisers, as noted by the judges, were pleasantly surprised and were happy to acknowledge that the participating students who qualified from the Zone Level Science Fairs had improved their presentation and public communication skills during their presentation at the National Level Science Fair. The students, through hands-on experiments, brought science to life as they tackled investigative questions which helped them develop and demonstrate their interests and knowledge in science. They were able to critically explain their findings to the judges and public.

Over the years, the organisers have noted improvements in the thinking process of the Tamil school students who have participated in the SFYC and noticeably among them are:

- Students approached problems using scientific methods.
- Students asked questions, formed hypotheses and created experiments to test their hypotheses.
- Students were able to collect data from their experiments and present them in an easy-to-understand manner.
- Students studied recorded data and drew conclusions from it.
- Students communicated their scientific research articulately and confidently to others.
- Students worked cooperatively as a team of 3 - 5 persons.
- Students budgeted their time, organised their work into manageable chunks, kept to a schedule and delegated work diligently.
- Students developed their reading, writing, research and computer skills.
- Students were able to answer questions from different perspectives.
- Students were confident during the presentations.

Other Achievements of SFYC:

Competition : Genius Olympiad 2012 International High School Project Fair on Environment, New York.

Title : Bronze Medal

Student Names: Ramamurthi & Sri Arivesh

Former-School : SJKT Kulim

Invention : Neighbours Wonder, an alarm system

Competition : Invention, Innovation & Design, Johor

Title : Gold Medal

School : SJKT Kangkar Pulai

Student Names: Jegathiswary, Satish, Samoga

Invention : Invents Water Recycle

Competition : Pertandingan Inovasi Sempena Hari Guru Peringkat Negeri

Title : Silver Medal

School : SJKT Kangkar Pulai

Invention : Invents Water Recycle

Competition : Pertandingan Inovatif Zon Timur, Kementerian Sains, Teknologi dan Inovatif (MOSTI)

Title : Overall Category Winner

School : SJKT Mentakab

Invention : Missiles Launcher (Newton's Third Law)

Competition : Asian Young Inventors Exhibition (AYIE)

Title : Gold Medal

School : SJKT Ramakrishna

Invention : Eco-friendly Thermo Container

Competition : Asian Young Inventors Exhibition (AYIE)

Title : Silver Medal

School : SJKT Jalan Yahya Awal

Invention : Twin Aquest Bottle

Competition : Malaysia Young Inventors Exhibition (MYIE)

Title : Gold Medal

School : SJKT Ramakrishna

Invention : Eco-friendly Thermo Container

Competition : Malaysia Young Inventors Competition (MYIC)

Title : Champion Award (Primary Level)

School : SJKT Ramakrishna

Invention : Eco-friendly Thermo Container

Competition : Malaysia Young Inventors Competition (MYIC)

Title : Gold Medal

School : SJKT Jalan Yahya Awal

Invention : Twin Aquest Bottle

Competition : International Invention, Innovation and Design, UITM Johor

Title : Silver Medal

School : SJKT Kangkar Pulai

Invention : Bio-Organic Fertilizer

Competition : Science Innovative Camp, USM Penang
Title : Champion Award (Secondary school category, State Level)
School : SJKT Ramakrishna
Invention : Noise Reducer

Competition : E-scosa Competition, USM Penang
Title : Best Post Award (Secondary school category, State Level)
School : SJKT Ramakrishna
Invention : Eco-friendly Thermo Container









Competition : Science Innovative Camp, USM Penang
Title : Champion Award (Primary school category, State Level)
School : SJKT Ramakrishna
Invention : Noise Reducer

Competition : International Convention and Innovation (UTM)
Title : Bronze Medal & Silver Medal
School : SJKT Kangkar Pulai
Invention : Bio-Organic Fertilizer & Robotic Football Player

Competition : British Invention Show (BIS) 2014, London
Title : Double Gold Award
School : SJK(T) Kulim
Invention : Energy-Saving Machine Dispensing Drinks

Competition : International Science Olympiad Exam
Title : Bronze Medal & Merit Award
School : SJK(T) Kangkar Pulai

Competition : Johor Biotech Innovation
Title : Participation Award
School : SJK(T) Kangkar Pulai

-  Science Fair for Young Children in Year Four (4) Bahasa Malaysia Text Book & Year Three (3) Bahasa Tamil Text Book.
-  A special invitation to SJKT Kangkar Pulai to showcase the experiment during the UNITEN's annual event.
-  Encouraging Ms. Gomathy, teacher from SJKT Kangkar Pulai, to further her studies, Master/PhD in Science field.
-  92% increase in UPSR Science Results in Kedah mentioned by PST Kedah, Mr. Ramakrishnan Tharumaini, during ZLSF 2013.
-  A special invitation to Beijing was sent to SJKT Ramakrishna which will be organized next year.
-  A special invitation to the Champion of NSFYC 2014 to showcase their experiment to Prime Minister Dato' Sri Haji Mohammed Najib bin Tun Haji Abdul Razak during the MyNadi Foundation's 5th year anniversary celebration.
-  A special publication about the Winning Team of NSFYC 2014 by Arivan.
-  Interview of SJKT Yahya Awal and SJKT Ramakrishna on THR Raaga

2 School Level Science Fair

2.1 Introduction

There are three simple reasons why science is important for our children:

1. Children love science because it engages their curiosity.
2. Science provides practical tools for understanding everyday life.
3. Science advances critical thinking, problem solving and creativity in early learners.

The School Level Science Fair (SLSF) was introduced in Tamil schools in 2009 as a pilot project in the state of Johor or Zone 8. The project was conducted in all 70 Tamil schools in Johor and it was a great success.

Through that pilot project results, the SFYC advisory board concluded that School Level Science Fairs create a better impact and it would benefit more students nationwide. Therefore, the board decided that the School Level Science Fair was to be introduced in all states in Malaysia.

As a result, the board undertook the task of conducting and implementing the Fair in every zone. The first implementation was conducted by a special school level science fair committee chaired by the project founder Dr. Mohamed Yunus Yasin to be done firstly on a pilot level.

In 2010, up to RM300 was allocated per school depending on their size, to assist them to organise School Level Science Fairs resulting in about 98 schools staging such Fairs.

By 2011, after positive feedback, SLSF committee increased its target participation to at least 250 schools by having national level roadshows in 9 locations across the country. Once again the response by the participating schools was overwhelming, beyond our expectations, and 264 schools successfully organised the Fair in their schools. In 2012 we pushed the bar even higher and committed ourselves to getting 325 schools participating. The pleasantly unprecedented response resulted in 365 schools successfully staging the Fairs. Last year, a total of 423 schools of the target have already held their School Level Science Fair.

For 2014, a compiled CD of SLSF and ZLSF was prepared with sample proposals, forms, experiments, reports, guidebook for parents & teachers, modules and some voice recordings of prominent world scientists.

2.2 Seed Funding

Every school that confirmed its participation by sending their proposal to the zone coordinators were given the prizes such as medals, Certificates and Souviners. Each school was given 100 medals for participants, certificate of participation for all the students in school and 10 souvenirs for judges.

The timeframe given to organize the School Level Science Fair was from February 2014 until October 2014. This year, 338 Schools out of 523 Tamil Schools participated in the project.



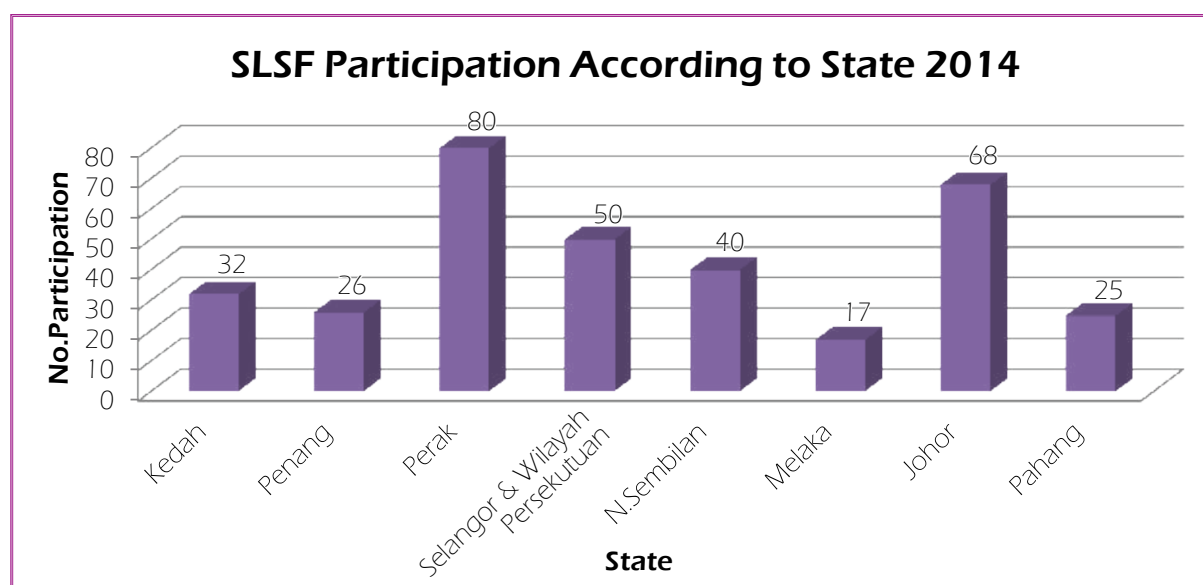
2.3 Implementation of School Level Science Fair

The School Level Science Fair for Young Children started in February 2014. This year, the organizing committee decided to combine the School Level & Zone Level Science Fair Teachers Training. An official invitation letter inviting teachers and headmasters / headmistresses to participate in School Level & Zone Level Science Fair Teacher Trainings was sent by each zone coordinator.

The participation in the School Level Science Fairs has been increasing every year, and this reminds us even more on the level of support given by the schools for this programme. The details of their participation over the past 5 years are shown below in Table 2.2.

Table 2.1: Schools Participation in SLSF 2010, 2011, 2012, 2013 and 2014

Zone	State	Total Schools				
		2010	2011	2012	2013	2014
1	Kedah & Perlis	-	46	43	56	32
2	Pulau Pinang	-	-	14	20	26
3	Perak	-	45	73	93	80
4 & 5	Selangor & Wilayah Persekutuan	11	36	59	87	50
6	Negeri Sembilan	-	20	46	42	40
7	Melaka	-	21	21	21	17
8	Johor	70	70	70	72	68
9	Pahang	1	18	12	32	25
TOTAL		82	256	338	423	338



3 Zone Level Science Fair

3.1 Introduction

The participation in the Zone Level Science Fair has been on the rise over the years. In 2008 and 2009, the organizers divided the nation into 6 zones. Then in 2010, due to both the experience gained by the organisers on how to run the Zone Level Science Fair and the need to give as many schools as possible the opportunity to take part in the Fair, the organising committee redesignated the zones and increased the number of zones to nine. This zoning criteria has been used since then and has proven to be optimal by organisers and acceptable to schools.

In order to accommodate the increase in the number of schools taking part, another change was made to the Zone Level Science Fair in 2011. This was a change in the number of teams each school was allowed to enter. Previously, two teams had been allowed from each school, this was reduced to one. This change, however, due to the increase in the number of schools taking part, did not result in a drastic reduction in the number of teams participating. In fact, 2013 saw a total of 282 teams, and 261 teams in 2014, participating nationwide.

Table 3.1: Comparison of Zone Categories

Zone	2008 and 2009	2010, 2011, 2012, 2013 and 2014
1	Kedah, Pulau Pinang & Perlis	Kedah and Perlis
2	Perak	Pulau Pinang
3	Selangor & Kuala Lumpur	Perak
4	Melaka and Negeri Sembilan	Selangor
5	Johor	W.P Kuala Lumpur
6	Pahang & Kelantan	Negeri Sembilan
7	-	Melaka
8	-	Johor
9	-	Pahang and Kelantan

Table 3.2: Participation of Schools in Zone Level Science Fair in 2008 and 2009

Zone	State	Total Schools	
		2008	2009
1	Kedah, Pulau Pinang & Perlis	28	28
2	Perak	18	15
3	Selangor & W.P Kuala Lumpur	58	74
4	Melaka & Negeri Sembilan	4	3
5	Johor	57	54
6	Pahang & Kelantan	15	14
TOTAL		180	188

Table 3.3: Participation of Schools in the Zone Level Science Fair in 2010, 2011, 2012 and 2013

Zone	State	Total Schools			
		2010	2011	2012	2013
1	Kedah & Perlis	17	41	34	52
2	Pulau Pinang	16	16	19	15
3	Perak	50	47	53	56
4	Selangor	54	56	35	47
5	Wilayah Persekutuan, Kuala Lumpur	14	13	10	10
6	Negeri Sembilan	18	18	30	30
7	Melaka	21	21	21	21
8	Johor	59	45	52	41
9	Pahang & Kelantan	14	17	15	19
TOTAL		263	274	269	282

This year, the Zone Level Science Fair was held in April and May 2014. The shortlisted schools for the National Level Fair were given more than a month to improvise their experiment. The details of the Zone Level Fairs and the schools participation at each zone are as shown below:

Table 3.4: Zone Level Science Fair 2014 Dates and Venue

Zone	States	Dates	Venues
1	Kedah & Perlis	Saturday, 26 April 2014	AIMST
2	Pulau Pinang	Sunday, 4 May 2014	Kompleks Belia dan Sukan
3	Perak	Saturday, 3 May 2014	Maha Mariamman Temple Hall Ipoh
4	Selangor	Sunday, 4 May 2014	University Malaya
5	W.P Kuala Lumpur	Sunday, 4 May 2014	University Malaya
6	Negeri Sembilan	Saturday, 26 April 2014	TAFE College
7	Melaka	Sunday, 4 May 2014	Melaka Media House
8	Johor	Saturday, 19 April 2014	UTHM
9	Pahang & Kelantan	Sunday, 4 May 2014	SMK HWA LIAN

Table 3.5: Schools Participation in the Zone Level Science Fair 2014

Zone	State	Total Schools
1	Kedah & Perlis	49
2	Pulau Pinang	18
3	Perak	48
4	Selangor	9
5	Kuala Lumpur	19
6	Negeri Sembilan	34
7	Melaka	10
8	Johor	49
9	Pahang & Kelantan	25
TOTAL		261

Note: For the list of the schools that participated in the Zone Level Science Fair, kindly refer to Appendix A.

3.2 Implementation of Zone Level Science Fairs

3.2.1 Zone 1: Kedah & Perlis

The Zone 1 Science Fair was coordinated and organised by Mr. Sam Subramaniam, Head of Zone Kedah MGB. The Zone Level Science Fair was held on 26 April 2014 (Saturday) at AIMST University. The event was officiated by Yang Berbahagia Datuk R.S. Thanenthiran, President of Parti Makkal Sakti Malaysia. A total of 49 schools participated in the Zone Level Fair and the top 11 schools were selected to participate in the National Level Science Fair. Even though the coordinator and his team were conducting the Fair for the first time, they managed to encourage the schools to take part and perform well in ZLSF.

3.2.2 Zone 2: Penang

The Zone 2 Science Fair was coordinated and organised by SFYC partner NGO, YOUTH MC (Pertubuhan Graduan Belia India), headed by Mr Edwin Anand Raj. The zone Fair was conducted at Kompleks Belia dan Sukan, Penang on Sunday the 4th of May 2014. The Fair was officiated by Mr. Mohan Sankaran, Project Director of Science Fair for Young Children 2014. A total of 18 schools successfully participated in the Fair and the top 4 teams were selected to the National Fair. They managed to successfully encourage the schools to take part in ZLSF.

3.2.3 Zone 3: Perak

Zone 3 was organised by Perak MGB and coordinated by Mr. Archunan. The zone Fair was held on the 3rd of May 2014 (Saturday) at the Maha Mariamman Temple Hall, Ipoh. The event was officiated by Mr. Saravanan, Personal Secretary of Dato' Elango (Special Adviser and Special Officer on Indian affairs to Perak Menteri Besar Datuk Seri Dr Zambry). A total of 48 schools successfully participated in the Fair and the top 11 schools were selected to participate in the National Level Science Fair. Even though the coordinator and his team were conducting the Fair for the first time, they managed to encourage the schools to take part and perform well.

3.2.4 Zone 4 and 5: Selangor & Kuala Lumpur

This year, the Selangor and Kuala Lumpur Science Fair was organised by SFYC partner NGO, SETIA and was coordinated by Mr. Jaya Prakash. The Fair was held on 4 May 2014 (Sunday) at Dewan Perdana Siswa University of Malaya. The event was graced by the presence of Dr. Sivakumar Balasundram, (PM Fakulti Pertanian). A total of 19 schools from Selangor and 9 schools from Kuala Lumpur took part in the Zone Level event. The top 5 schools from Selangor and the top 2 schools from Kuala Lumpur were chosen for the National Level event.

3.2.5 Zone 6: Negeri Sembilan

The Zone Level Fair was organised by the Negeri Sembilan Head Masters Council, headed by Mr Sundraj Letchumanan. The Fair was held on 26 April 2014 (Saturday) at TAFE College, Seremban, and was officiated by Dato' Saravanakumar, Entrepreneur. A total of 35 schools successfully took part in the Zone Level Fair. The top 8 schools were selected to participate in the National Level Science Fair 2014. The organisers managed to increase the schools participation in the Zone Level Fair.

3.2.6 Zone 7: Melaka

The Melaka Zone Fair was organised by ASTI which was led by Mr. Anandan Shanmugam. The team staged the Fair on the 4th of May 2014 (Sunday) at Rumah Media, Melaka International Trade Centre (MITC). The closing ceremony was officiated by YB Datuk M.S Mahadevan Sanacy, the exco member of the Melaka State Government. A total of 10 schools participated in the ZLSF. The top 2 schools were chosen to take part in the National Level Science Fair.

3.2.7 Zone 8: Johor

Johor Putera MIC and UTHM students teamed up to organise the Johor Zone Science Fair and was coordinated by Mr. Subaasha Krishnan. The event was held on the 19th of April 2014, Saturday, at University Tun Hussein Onn Malaysia (UTHM), Batu Pahat. The guests of honour for the closing ceremony were YB Tuan Hj Md. Jais Bin Sarday, Chief Minister Representative, and Dato' S Balakrishnan. A total of 49 schools participated in the Fair and the top 11 schools were selected to participate in the National Level Science Fair.

3.2.8 Zone 9: Pahang & Kelantan

The Pahang Zone Fair was organised by our partner, Pertubuhan Kebajikan dan Amal India Baru Malaysia (PERINNBAN) and coordinated by Mr. Jayashri Selvendran. The event was held on 4 May 2014, Sunday, at SMK Hwa Lian, Mentakab, and the chief guest was Mr Goonasekaran, the Pahang Menteri Besar's Special Officer. A total of 25 schools participated in the Fair and the top 6 schools were chosen to take part in the National Level Science Fair. The organisers managed to increased the schools participation in the ZLSF.



4 Training and Development

4.1 Training Preparation and Progress

4.1.1 : Science Fair Folder

The Science Fair folder is a key tool for the organisers, teachers, students, parents, facilitators and judges to implement the project effectively and efficiently. This folder was prepared for the first time in 2008 by the Working Group Committee (WGC) members and a group of professionals. The following year, the folder was revised, reviewed and translated into English and Tamil by the Working Group Committee (WGC) and Secretariat based on the comments from teachers, students, organisers and judges. This year, the folder was revised, new partially guided experiments were added and distributed in the form of VCDs to all the participating schools during the Zone Level Teachers Training. Some of the new schools were also given the hardcopy folder / file. The content of the folder is as follows:

- 🌐 How to use this folder: Explains how the folder should be used by each group.
- 🌐 Science Projects, Scientific Methods and Science Fair: Simple explanation about what a science project is, scientific method and science fair.
- 🌐 Organisers Manual: Basically gives an explanation on how to organise a science fair. Examples on holding it in schools, classrooms, organisations, etc.
- 🌐 Teachers Manual: Explains the roles and responsibilities of the Science Teachers to guide the participants of the fair.
- 🌐 Students Manual: Helps the students to develop their project and provides the format for writing a report.
- 🌐 Parents Manual: Guides the participant's parents on how to help motivate their child to perform well in SFYC.
- 🌐 Facilitators Manual: Gives a guideline to the facilitators on how to facilitate so that they can help teachers and students during school visits.
- 🌐 Judges Manual: Gives 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.
- 🌐 Conference Paper: Guidelines for conference paper preparation of the top 3 teams in each zone.
- 🌐 Partially Guided Experiments: There were 20 partially guided experiments given in English and Tamil to be chosen by the schools.

We hope that the manual would be helpful for the future members to organise science fairs at school, district, zone or national levels. The manual was upgraded from time to time to improve the quality and output of the Science Fair for Young Children.

4.1.2 VCD Production

In the previous years, all the materials in the SFYC folder were given out to schools in hardcopy format, but for the last three years the content of the folder was made into VCDs and were given to all the participating schools during the Teachers Training. However, this year, since the School Level & Zone Level Teachers Trainings had been combined, the content in the VCD has also been combined and upgraded with new information to help schools prepare for the School Level, Zone Level and National Level Fairs. The content of the VCD is shown below:

School Level Science Fair

- 🌐 SLSF 2014 Booklet
- 🌐 Proposal Format & Report Format
- 🌐 Judging Form
- 🌐 Evaluation Form of Scrapbook
- 🌐 Additional Activities for Students and Visitors
- 🌐 Additional Materials such as picture gallery, motivational recordings & SLSF Checklist
- 🌐 Experiment for Students (Standard 1 - 5)
- 🌐 Parents Guide
- 🌐 Teachers Guide

Zone Level Science Fair

- 🌐 Science Fair Folder Content (PDF Copy)
- 🌐 ZLSF Experiment titles (Word Document & PDF Copy)
- 🌐 Sample Conference Paper of NSFYC 2013 (PDF Copy)
- 🌐 Booth Set-Up and Preparation of NSFYC 2013 (Video)
- 🌐 Photo Gallery of NSFYC 2013



4.1.3 Training for Trainers

Training for Trainers was conducted by Dr.Subramaniam Gurusamy, the advisor of the Science Fair for Young Children. Before the training team conducted the Zone Level Science Fairs teachers training, they were briefed by Dr.Subramaniam on the agenda and information to be delivered to the teachers. The agenda of the training for trainers and teachers is shown below:

Table 4.1: SLSF & ZLSF Teachers Training Agenda

Time	Details
8.30am to 9.00am	Arrival and Registration
9.00am to 9.05am	Welcoming Speech by Organizer
9.05am to 9.10am	Speech by MGB Chairman
9.10am to 9.20am	Opening Ceremony and Speech By Guest of Honour, Penyalia Sekolah Tamil
9.20am to 9.45am	Introduction of SFYC by Organizer
9.45am to 10.30am	SLSF 2014 Introduction and Overview Presentation 1 <ul style="list-style-type: none"> • Introduction of Partner Organizations • How to Organize School Level Science Fair? • Experiment & CD Content
10.30am to 11.00am	Tea Break
11.00am to 12.00pm	Hands-on Experiment
12.00pm to 12.15pm	Judging Methodology and Requirements Presentation 2 <ul style="list-style-type: none"> • Judging Procedure
12.15pm to 1.15pm	ZLSF 2014 Experiment and CD Content Presentation 3 <ul style="list-style-type: none"> • CD Content • Experiments
1.15pm to 1.30pm	Evaluation of School Level Science Fair
1.30pm	Certificate Presentation & Lunch.



4.2 School Level and Zone Level Teachers Training

This year, the School Level & Zone Level Science Fair Teachers Training were combined and conducted as a one (1) half-a-day session. The training was conducted in 9 zones on different dates. The session was facilitated by the Organizing Committee together with the facilitators.

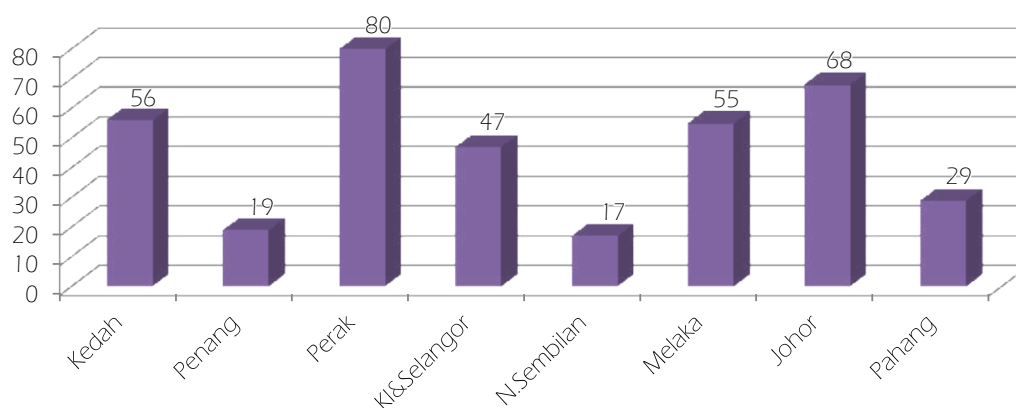
The training sessions were arranged by the respective zone coordinators and conducted by the trainers from the Working Group Committee.

The training sessions and materials were prepared and planned by the trainers from the Working Group Committee and the training dates were given by the respective zone coordinators in advance so that the training teams could make prior arrangements. All the School Level and Zone Level training sessions were conducted as stated below.

Table 4.2: Participation of the Schools in the SLSF & ZLSF Teachers Training

Zone	State	Training Dates	Training Venue	Schools Participation
1	Kedah	Saturday, 22 February 2014	SJKT Sg Tok Pawang	56
2	Penang	Saturday, 22 February 2014	USM, BT 141	19
3	Perak	Saturday, 22 February 2014	SJKT Sangeetha Sabah, Ipoh	80
4 & 5	KL & Selangor	Saturday, 1 March 2014	University of Malaya	47
6	Melaka	Saturday, 22 February 2014	Balaram Krishna Indian Arts & Cultural Society Hall	17
7	Negeri Sembilan	Saturday, 8 February 2014	SJKT Convent Kompleks Sekolah Wawasan	55
8	Johor	Saturday, 8 February 2014	UTM	68
9	Pahang	Saturday, 8 February 2014	SJKT Mentakab	29
Total				371

Schools Participation in SLSF & ZLSF 2014 Training



5 National Science Fair for Young Children 2014

5.1 Overview

The National Science Fair for Young Children 2014 was held as a one (1) day event which started on Saturday morning at 7.00am and ended at 5.00pm. The event was a great success. The details of the event are as follows:

- Date** : 11 October 2014, Saturday
Venue for Accommodation : Hotel Laman Seri, Delta Hotel, Delta Inn
(those are required and requested accommodation)
Venue for Science Fair Event: Dewan Raja Muda Musa (DRMM),
Kompleks Belia & Kebudayaan Selangor, Shah Alam.

A special team was formed to organise the one (1) day National Science Fair for Young Children 2014 a month prior to the event by the Working Group Committee. The event committee was led by Ms. Thinaheswary Gunashakaran. 13 Departments were formed and tasks were delegated to each Head of Department (HOD). The HOD list is shown in Table 5.1 below. The NSFYC was assisted by more than 65 volunteers from UNITEN and other university / college volunteers.



Table 5.1: List of Heads of Departments for the National Science Fair for Young Children 2014

No	Name	Position
1	Mr. Mohan Sankaran	Project Director and Advisor for Event Committee
2	Ms. Thinaheswary Gunashakaran	Head of Event Committee
3	Ms. Vanitha Vasu	Head of Accommodation Department
4	Ms. Umahsankariah Muthunaikar	Head of Registration Department
5	Mr. Saktivel	Head of Hall Management
6	Ms. Shubashini Mathyalingam	Head of Judging Department
7	Ms. Archana Buthiyappan	Head of Stage and Prize Management
8	Mr. Jaganath Rajaendran	Head of Crowd Management
9	Ms. Kalaimathi	Head of Food and Beverages Department
10	Mr. Sivaraj Arumugam	Head of Press Management
11	Mr. Joseph	Head of Media Management
12	Ms. Gunasundari	Head of Ushering Department
13	Mr. Ragonathan	Head of Survey Department
14	Mr. Jayaseelan	Head of Traffic, Transportation and Security Department

The various job functions making up the event were well coordinated by the volunteers and integrated well to result in a smooth, seamless, well run one (1) day event. The Head of Event Committee and the HODs executed well with the volunteers to ensure those participating and those attending the event could do so easily and were provided with all the necessary assistance needed.

The events were coordinated as follows:

10 October 2014, Friday

Participants and teachers from the selected zones and those who requested accommodation facilities started arriving from 4pm onwards, and were divided by schools at the respective hotels such as Hotel Laman Seri, Delta Hotel and Delta Inn. They registered themselves at the reception of each hotel. During the registration, an envelope consisting of food allowance was given to each school for dinner. Meanwhile, the schools from Johor and Kedah received their transportation allowance as well.

11 October 2014, Saturday

The day started at 7.00am with the arrival and registration of the participants and teachers at the ASTI booth. The in-charge teachers from each school were allowed to register at the counter. Meanwhile, the students and other teachers were allowed to just place their display items at their booths. During the registration, each school received a 'goodie' bag which consisted of tags, food coupons, guidebooks, annual report, souvenir books and a mug. After the registration and breakfast, the students and teachers were allowed to enter the hall to set-up their booth until 8.45am.

Exactly at 9.00am, the Opening Ceremony was held in the same hall and officiated by the Chief Guest of Honour, YB Datuk Seri Dr. S. Subramaniam, Minister of Health Malaysia. YB Datuk launched the event by placing the challenge trophy of National Science Fair for Young Children 2014 which were handed over to the Minister by last year's champion SJKT Convent, Seremban. YB Datuk visited all the 54 booths, and the students were very happy with his presence and interaction with them. His presence and keen interest in their booths was a great source of motivation for our young scientists.

From 9.30am onwards, the judges were allowed into the hall for an evaluation. The judges took 3 hours for the evaluation.

Meanwhile, the teachers were involved in activities such as discussion and sharing sessions with the organising team, which involved a motivational talk, an experience sharing session and dialogue with the Judging Department. Lunch was served from 12.00 noon to 1.00 pm. The participants continued with the judging evaluation. At the end of the teachers sharing session, the teachers were given a set of books for the school and certificates as a token of appreciation.

The public viewing officially started at 12.30pm until 2.30pm. During the session, all the participants were presented with certificates and medals by our special guest at their respective booth. A few booths were set-up at the entrance by organisations such as Association of Science, Technology & Innovation (ASTI), Science Fair for Young Children and Grolier Books.

Our guest of honour for the Closing Ceremony was Datuk Dr Jeyaindran Tan Sri Sinnadurai, Chairman of MyNadi Foundation. Datuk arrived around 3.00pm and visited the booths with our special guests, accompanied by Dr. Mohamed Yunus Muhamed Yasin - President of ASTI, Dr. Subramaniam Gurusamy – Vice President of ASTI, Major Dr. Vikneswaran Munikanan - Treasurer of ASTI, Mr. Anandan Shanmugam - ASTI Committee Member, Mr. Velu Perumal - ASTI Advisor, Mr. Mohan Sankaran - Project Director of Science Fair For Young Children 2014, Mr. Murugiah - Head of Indian Customers Business (ASTRO), Mr. Elanmaran - MyNadi Foundation, Mr. Jayaraman - Vice President of PERINNBAM, Mr. Muthusamy - Assistant Coordinator of Action Plan For Future of Tamil Schools and Mr. Yuvarajan Subramaniam, Director of Community Education.

At 3.30pm, the closing ceremony began, which ended at 5.30pm. There were 3 categories of winners: Innovation Category, Research Paper Category and NSFYC Winners. All categories were judged by capable judges. The top 3 winners of the Innovation Category received certificates and cash prizes worth RM500, RM400 and RM300. The top 3 winners of the Research Paper Category also received certificates and cash prize of RM500, RM400 and RM300. Whereas the top 10 winners of the event received a trophy, certificates, sets of laboratory apparatus and prize money of RM2000, RM1500, RM1250, RM750 and RM500. The list of NSFYC 2014 winners is as follows:

NSFYC WINNERS

1. SJK (T) Jalan Yahya Awal, Johor
2. SJK (T) Bukit Mertajam, Penang
3. SJK (T) Ramakrishna, Penang
4. SJK (T) Wellesley, Kedah
5. SJK (T) Tun Aminah, Johor
6. SJK (T) Tun Sambanthan, Selangor
7. SJK (T) Convent Seremban, Negeri Sembilan
8. SJK (T) Alor Gajah, Melaka
9. SJK (T) Kangkar Pulai, Johor
10. SJK (T) Jalan Sialang, Johor

INNOVATION CATEGORY

1. SJK (T) Ladang Menteri, Pahang
2. SJK (T) Ramakrishna, Penang
3. SJK (T) Keruh, Pengkalan Hulu, Perak

CONFERENCE PAPER PRESENTATION

1. SJK (T) St Theresa's Convent, Perak
2. SJK (T) Ramakrishna, Penang
3. SJK (T) Jalan Yahya Awal, Johor

6 Research and Development Department

6.1 Experiments

The experiments were developed by the R&D Department of ASTI. A team was formed comprising professionals from various fields. They developed a list of partially guided experiments which consisted of 20 experimental titles. All the experiments were then analyzed for their relevance, cost, applicability, difficulty, material availability and safety. These experiments were then discussed and finalized by the core judges and advisors of SFYC. The finalized experiments were sent for translation into the Tamil language, and once translated were submitted to all schools. The list of experiments are attached in **Appendix B**.

6.2 Surveys

This year the R&D Department conducted the following surveys:

- I. School Level & Zone Level Science Fair Teachers Training
- II. Zone Level Science Fair for Young Children
- III. National Level Science Fair for Young Children
- IV. Survey on Effectiveness of Science Fair for Young Children

The data collected from the surveys will be used to correct and upgrade our future projects. **(Please refer to attached CD and website www.nsfyc.org)**

7 Public Relations

For the Science Fair for Young Children 2014, the Public Relations (PR) Department managed the flow of information between the organisers of the Science Fair and general public. Information about the Science Fair for Young Children programme was promoted to the public via press releases and interviews over national radio and television.

The flow of information between internal and external stakeholders was reached through various levels such as the School Level Science Fair, Zone Level Science Fair and the National Level Science Fair. Astro Vaanavil as our official electronic media and Nanban as our official print media highlighted our event throughout Malaysia. In addition, for the second time, we approached the public via a "Road Show" at three (3) public places to promote the National Level Science Fair. To draw attention of the public to our road show, we used our official mascot 'Arivan' as an identity of SFYC. The road show was conducted in Shah Alam and Klang. The Public Relations activities carried out to promote the Science Fair for Young Children 2014 are shown below:

1. SFYC Soft Launching

-  Science Fair for Young Children 2014 Soft Launching officiated by Mr. Paskaran, School Management Division, Ministry of Education on 11 January 2014 at Dynasty Hotel, Kuala Lumpur.
-  The Science Fair for Young Children 2014 Soft Launching was broadcast over RTM TV2 Tamil News.
-  The Science Fair for Young Children 2014 Soft Launching was broadcast over ASTRO Vaanavil 360°.
-  The Science Fair for Young Children 2014 Soft Launching was published in Tamil newspaper such as Malaysia Nanban.

2) **School Level Science Fair 2014**

- Press release for School Level Teachers Training in Tamil media newspapers such as Malaysia Nanban, Thinakural, Makkal Osai and etc.
- Promotional Capsule which was sponsored by ASTRO was telecast over ASTRO Tamil Channels.
- Promotional via SFYC Facebook & Website.

3) **Zone Level Science Fair 2014**

- Press release for Zone Level Teachers Training and Zone Level Science Fair by zone.
- Pamphlets were distributed to the coordinators for them to promote the Fair in their respective zones.
- Interview in ASTRO Vaanavil Vizhuthugal attended by Mr. Jaya Prakash, Ms.Umahsankariah Muthunaikar & Ms. Thinaheswary.
- Interview in Minnal FM attended by Mr. S. Anandan & Ms. G. Thinaheswary on 4 April 2014.
- Dissemination of information via SFYC & ASTI Website.
- Dissemination of information via SFYC & ASTI Facebook.

4) **National Level Science Fair 2014**

- Road Show at SACC Mall, Ole-Ole Shopping Centre, Little India of Klang, Little India of Brickfields.
- Pamphlets were sent to VIPs, Guests, Funders and all well-wishers to provide information about the NSFYC.
- NSFYC 2014 invitations were sent to VVIPs, VIPs, Guests, Public University and Private University lectures, funders and well-wishers.
- A special invitation was sent to the public to attend the NSFYC 2014.
- 7 capsules related to science were sponsored by ASTRO and was telecast over ASTRO Tamil Channels until the National Level Science Fair. The capsules' content was developed jointly by SFYC Working Group and ASTI Committee.
- A promotional capsule which was sponsored by ASTRO was telecast over ASTRO Tamil Channels a month before the National Event.
- Dissemination of information via SFYC & ASTI Website.
- Dissemination of information via SFYC & ASTI Facebook.



5) Post-National Level Science Fair 2014

- A special invitation by MyNadi Foundation to the Champion of NSFYC 2014 to showcase their experiment to the Prime Minister during the celebration of 5th year anniversary by MyNadi Foundation.
- A special publication about the Winning Team of NSFYC 2014 by Thumbi.
- Interview of the Winning Team of NSFYC 2014 on ASTRO & THR Raaga after the event.
- A special invitation to Beijing was received by SJKT Ramakrishna which will be organized next year.

The project also received wide coverage in newspapers such as The Malaysia Nanban, Tamil Nesan, Makkal Osai, Tamil Malar, Thinakural, The News Straits Times and The STAR for the School Level and Zone Level trainings, Zone Level Science Fair and National Event before and after.

(For details, please refer to [Appendix C](#))



8 Funding

This year, the organizing committee of SFYC 2014 had to postpone the National Level Science Fair due to lack of funding. The committee was also considering cancelling the National Event this year. Nevertheless, looking at the overwhelming response from the Tamil schools to hold the National Level Science Fair this year, the organizing committee had decided to organize a scaled down version of the National Level Science Fair with a smaller budget. After much deliberation, the committee had decided to hold a one (1) day National Level Science Fair instead of the usual three (3) day event. The total cost for the event was estimated to be around RM 110,000.00 to which the ASTI Committee had committed.

The Science Fair for Young Children 2014, together with others, were principally supported and funded by various NGOs and corporations such as ECM Libra Foundation, MyNadi Foundation, Malaysian Community & Education Foundation – Centre for Community Initiative (MCEF-CCI), Vijayratnam Foundation, Development of Human Resources in Rural Areas (DHRRRA) Malaysia, Action Plan for Future of Tamil Schools, National Land Finance Co Operative Society Ltd. and PERINNBAM.

Various other corporations were also approached to sponsor products for the event. This year the company which responded positively and donated their products for the National Science Fair for Young Children 2014 event was Sasbadi Sdn Bhd. The details of the products donated by the company are as follows:

Table 8.1: Sponsor of Products for NSFYC 2014

Sponsor	Item	Quantity
Sasbadi Sdn Bhd	Kamus Dwibahasa Kontemporari	300
	Target Bestari (Mathematics)	300
	Target Bestari (Science)	300
	Nexus Bestari (Tatabahasa)	300

The products sponsored were distributed to the participants during the event days. These contributions were greatly appreciated by the Working Committee of SFYC 2014 as they helped ensure the success of the Science Fair by providing refreshments to all who attended and participated.

We also believe that this kind of contribution produced a 'win-win' situation for both the organisers and sponsors by providing good publicity and a direct marketing avenue for the company's products to our participants aged between 10 and 12 years old, teachers, parents, as well as to the general public who visited the Fair.

In return for their generosity in cash or kind all, corporate sponsors had their company logo included in the SFYC 2014 promotional material such as the programme book.

The summary of funding for the Science Fair for Young Children 2014 is stated below:

Table 8.2: Summary of Funding for the Science Fair for Young Children 2014

No	Sponsor	Amount (RM)
1	ECM Libra Foundation	100,000.00
2	MCEF	*100,000.00
3	MyNadi Foundation	60,620.00
4	Datuk Seri Dr. S. Subramaniam	**50,000.00
5	Anonymous	50,000.00
6	Vijayaratnam Foundation	30,000.00
7	DHRRRA Malaysia	14,110.00
8	Anonymous	10,000.00
9	Action Plan for Future of Tamil Schools	7,500.00
10	NLFCS	5,000.00
11	YB Kamalanathan	4,500.00
12	PERINNBAM	*3,000.00
13	Anonymous	1,000.00
14	Gloria	350.00
GRAND TOTAL		486,918.45

Note: * The amount will be carried forward and shown in the next year's account.

**Pending Payment.

9 Judging

The Judges Panel is an independent group of qualified individuals who are responsible for the evaluation of the students' research, experiments, exhibits and for compliance with the rules and regulations throughout the SFYC. The judges were selected based on their educational background, occupational background and knowledge of science. Therefore, most of the judges selected are individuals with science degrees. From this core group of judges, separate ZLSF Judges Panel and NSFYC Judges Panel were set up to judge the students' performance based on the specific categories and requirements for each event. The respective Judging Panel's decisions were final and independent of the organizing committee. Each zone level Judge was headed by a zone level Chief Judge.

9.1 Zone Level Chief Judges Training

The Judges Panel was responsible for synchronizing the judging criteria and methodology in all the zones. In order to make the process more efficient, Chief Judges were identified for each zone. The Zonal Chief Judges list is as stated below:

Table 9.1: Zone Chief Judges

Zone	State	Chief Judges
1	Kedah and Perlis	Mr. Saravanan Manian
2	Pulau Pinang	Dr. Sukumar Letchmunan
3	Perak	Mr. Sathiakumaran Krishnan
4 & 5	Selangor and W.P.Kuala Lumpur	Dr. Rajesh Ramasamy
6	Negeri Sembilan	Dr. Siva Kumar Dhar Malingam
7	Melaka	Prof. Madya. Ir. Dr. Sivarao Subramonian
8	Johor	Mr. Suresh Ramasamy
9	Pahang	Mr. Prem Kumar Apasamy

The Chief Judges meeting was conducted on 1st February 2014 to brainstorm the following aspects:

- Discuss the overall judging criteria and process.
- Discuss the methods and training materials required for the training of Zone Level / State Level Judges.
- Finalize criteria to select the Zone Level / State Level Judges.
- Discuss the scope for the non-guided experiments developed for the Zone Level Science Fair.
- Finalize the 20 non-guided experiments for the Zone Level Science Fair.
- Prepare training materials such as presentation slides, worksheets, handouts and illustrations.
- Conduct workshop sessions to ensure the core judging panel was well-equipped with the “experimental” and theoretical knowledge of all the experiments presented by the students.

9.2 Zone Level Judges Training

The Chief Judges of each zone were tasked with conducting training for the judges in their team. All the Zone Chief Judges conducted the training in their respective zone one week before the actual Zone Level Science Fair. The details of the judges training are as follows:

Table 9.2: Zone Level Judges Training

Zone	Date	Venue	Trainer
Kedah and Perlis	Saturday, 19 April 2014	SJKT Wellesley	Mr. Saravanan Manian
Pulau Pinang	Sunday, 4 May 2014	Kompleks Belia & Sukan	Mr. Saravanan Manian
Selangor & Wilayah Persekutuan	Saturday, 3 May 2014	Bilik Seminar, Jabatan Pengajian India, Fakulti Pendidikan, Universiti Malaya	Dr. Rajesh Ramasamy
Pahang	Sunday, 4 May 2014	SMK Hwa Lian	Mr. Prem Kumar Apasamy
Negeri Sembilan	Saturday, 26 April 2014	TAFE College	Dr. Siva Kumar DharMalingam & Prof. Madya. Ir. Dr. Sivarao Subramonian
Melaka	Sunday, 4 May 2014	Rumah Media MITC	Dr. Siva Kumar DharMalingam & Prof. Madya. Ir. Dr. Sivarao Subramonian
Johor	Saturday, 12 April 2014	SJKT Tun Aminah	Mr. Suresh Ramasamy

9.3 National Science Fair for Young Children

9.3.1 Student's Research Paper

This year the Conference Paper has been renamed as the Research Paper. The concept of the Research Paper remains the same as the previous years, which is writing about the research that has been done for the project. Interested parties can easily understand students' research by reading the content of the Research Paper which is prepared in a standardised format. In the Conference Paper category of the past, students were required to present their papers, but in the Research Paper category, students only had to submit their written papers.

The top 2 winning teams from each Zone Level Science Fair were eligible to participate in the Research Paper category. The selected teams were asked to submit a 4-pages paper of their experiment and findings. A special team of judges was formed, and they reviewed and marked the papers. The marking was done by the judges a week before the event.

The objectives of the Research Paper are as follows:

- To cultivate the concept of research findings and sharing of 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.

The guidelines for the Research Paper are as follows:

- Two Research Papers are to be submitted by each zone (Two best teams of Zone Level competition)
- The Research Papers should be written based on the experiment conducted at the Zone Level Science Fair for Young Children.
- The Research Papers can be in either Tamil or English.
- The school is required to only submit the Research Papers as there is no power point presentation to be conducted.
- Central committee will select the best Research Papers submitted by the school.
- The Paper should be written following the format given in template:
 - Font size: **12 point**, Font Type: **Times New Roman**, Spacing: **single spacing**
- The Paper should not exceed four (4) pages maximum.



9.3.2 Event Day Judging

Judges started to arrive as early as 7.00 am for the Judges Briefing. Breakfast was served to the judges as they arrived. Briefing started at 8.00 am and was conducted by Mr. Suresh Ramasamy. First, he introduced all the Zone Chief Judges to all the other judges.

Next, he briefed all the judges on the Judging Methodology for Booth Judging as a few changes were made to the marking criteria. After this, he announced the group leaders assigned for each group. Group leaders were chosen after discussion with all the Zone Chief Judges. A total of 9 groups were formed with 2 teams in each group. Each team had a leader with two judges. Judges from all zones were mixed up in their respective groups. Judges were then asked to prepare questions that will be asked to the contestants later at the booths.

Judges were brought to the judging venue at 9.30 am just after the opening ceremony of the competition. All the judges were asked to observe all the booths first before going to their allocated booths. This was to give them an overall big picture of the booths in the event. The judges were assisted by one facilitator from the organizing event committee. The estimated time allocated for judging was 20 minutes per school; 15 minutes for Booth Judging and 5 minutes for question and answers. All the scores were then tabulated and combined for submission to the Zone Chief Judges for finalizing. The Chief Judges did the final evaluation on the marking. To ensure fairness, in the second round of judging, the selected teams had a different panel of judges to assess their booth. This year, all Zone Chief Judges were involved in the second round judging, with 3 Chief Judges assessing for the placing of 1st to 6th position and 3 other Chief Judges assessing for the placing of 7th to 10th position. The winning school names were then submitted to the Secretariat at the closing ceremony.

A few judges were tasked with marking for the Innovation Category. Innovation Category stands for the development of a new concept or a variation of an existing idea by students using innovative methods or devices for their experiments. All team leaders were asked to identify the schools in their group that showed innovativeness in their projects. These schools were then assessed by the judges chosen for this category. A total of 5 judges were appointed for this task. This judging was done after the main judging process. Judges did the marking by asking simple questions as well as observing the students' presentation and confidence. The judges then assessed and submitted the scores to the Zone Chief Judges for the Innovation Category.


Mr. Sathiakumaran Krishnan, Chief Judge of Perak Zone, accompanied by all the other Zone Chief Judges and committee members of the Organising Committee had a discussion with the school heads and teachers to explain to them about the judging methodology, tactics, judges qualification and judging requirement during the teachers briefing which was held while the judging process was still going on. The teachers at this point were given an opportunity to question Mr. Sathiakumaran Krishnan about the judging, judges requirement, and students performance. He answered all the teachers' queries and explained the significance of the different judging areas to them.

To round off the day of judging, after finalising the marks, Mr. Suresh Ramasamy thanked all the judges who had shown professionalism and commitment to ensure that all booths were judged fairly and accurately and all the students' work was treated with respect. All the judges were acknowledged by the Organising Committee and were given certificates and a souvenir as a token of appreciation for their time and support.







A postmortem was immediately held on the judging process for the entire programme (all levels - school, zone and national). The main finding was that SFYC judging process is more rigorous than many other international competitions. However, in the interest of more improvements, some of the results are below:

RECOMMENDATIONS FOR THE FUTURE (Judging)







School Level

-  Need to include more specific criteria for scrapbook evaluation.
-  Teachers should be trained on the scientific problem-solution approach.
-  Specific and structured training to be given to school teachers on judging content.

Zone Level

-  Setting the date of competition in advance will enable the Chief Judges to recruit sufficient judges from various disciplines.
-  Organisers should prepare the list of Tamil science terminologies that are commonly used by schools in order for the judges to better understand the terms during the evaluation.
-  Organisers need to play a more involved role by reminding the schools more often about the logbook and report submission due date.
-  Judging criteria for logbook should be revised to include deductions for late submission.
-  Questions prepared for ZLSF have to be vetted through by all Zone Level Chief Judges. More time is needed for this and new questions need to be prepared to replace rejected questions. The questions are then to be submitted to NSFYC Committee for their approval. By doing this, all Chief Judges can understand the experiments and questions very well.
-  Experiment titles should be given much earlier to the particular Chief Judge to understand the nature of experiments.

National Level

-  Better planning is needed to address the issue of punctuality of judges arrival.
-  Comprehensive training related to the theory behind the Innovation Category should be provided to teachers during Teachers Training.
-  Recruit new volunteers from various educational institutions and industries.
-  Train the judges more with some experimental processes for even better processes and sharing of burden during judging.
-  More judges should be selected for logbook and report book checking to share the burden.
-  Team leaders for each judge group should be picked according to their expertise and the given relevant questions to be judged according to their expertise so that the judging can be done even better.



10 Statement of Accounts SFYC 2014

STATEMENT OF INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST OCTOBER 2014

INCOME	Notes	2014 (RM)	2013 (RM)
Income - Science Fair		280,980.00	604,530.00
Donations From ECM Libra Foundation		100,000.00	
TOTAL INCOME		380,980.00	604,530.00
LESS : EXPENDITURE			
Accommodation		10,320.00	9,346.00
Advertisement and Promotion		-	2,750.00
Accounting Fee		2,100.00	-
Design		3,190.00	9,150.00
Website		-	2,015.00
Audit Fee		1,500.00	1,500.00
Bank Charges		112.00	1,016.09
Booth Set Up		-	-
Cleaning Services		-	500.00
Coordinator Allowances		18,862.00	18,932.50
Canopy expenses		-	-
Depreciation	4	16,343.51	13,200.07
Donation		1,000.00	4,650.00
EPF & SOCSO		-	3,667.50
Insurance		1,843.20	2,034.00
Honorarium Expenses		3,000.00	5,500.00
Soft Launching Ceremony		21,564.76	19,811.00
Food and Staff Refreshment		14,294.79	3,518.25
National Science Fair Expenses		58,532.45	137,142.94
School Level Science Fair Expenses		145,004.00	93,306.00
Zone Level Science Fair Expenses		8,000.00	3,900.00
School Level Science Seed Funds		-	82,700.00
Zone Level Science Seed Funds		104,540.00	96,561.60

Other Operating Expenses	-	2,440.00
Postage, Courier & Stamping	1,450.00	7,027.67
Printing & Stationery	57,569.95	64,261.23
Vehicle hire	-	-
Translation Expenses	277.00	5,254.15
Video and Photography	1,500.00	8,600.00
Prizes & Souveniers	15,825.00	46,451.39
Rental	-	17,000.00
Training	8,327.05	4,170.00
Salary & Allowances	-	13,422.10
Telephone	-	2,930.00
Travelling & Transpotation	15,630.00	12,756.35
Repair and Maintenance	-	360.00
TOTAL EXPENDITURE	510,785.71	695,873.84
EXCESS OF (EXPENDITURE) / INCOME	(129,805.71)	(91,343.84)
INCOME AND EXPENDITURE ACCOUNT		
Total Income	380,980.00	604,530.00
Total Expenditure	510,785.71	695,873.84
(Deficit) / Surplus	(129,805.71)	(91,343.84)

The annexed notes from an integral part on the Accounts.

Balance Sheet as at 31st October, 2014

Assets	Notes	2014 (RM)	2013 (RM)
Non-current assets			
Property, Plant and Equipment	3 (e) & 4	20,348.62	26,353.53
Current assets			
Other Receivables	5	10,000.00	10,000.00
Amount due from NSFY	5	42,095.95	126,548.36
Deposits & Prepayments	5	10,120.75	10,120.75
Cash and Bank Balance		801.92	36,550.31
		63,018.62	183,219.42
Total assets		83,367.24	209,572.95
Represented by:			
Accumulated Funds			
Accumulated Funds b/f		170,239.30	261,583.14
(Deficit) / Surplus For the Year		(129,805.71)	(91,343.84)
Accumulated Funds c/f		40,433.59	170,239.30
Current liabilities			
Other Payables		42,933.65	39,333.65
Total liabilities		42,933.65	39,333.65
Total Funds and Liabilities		83,367.24	209,572.95

*The annexed notes from an integral part on the Accounts.



11 Recommendations for the Future

The following recommendations were suggested during the Coordinators and Working Group Committee postmortem for the future improvement of SFYC.

11.1 Working Group Committee (WGC)

- Improve the WGC members attendance for the meeting.
- Strongly encourage to start the SFYC planning and funding earlier.
- Strongly encourage the WGC members to make decision to study the effectiveness of the Science Fair for Young Children.
- Strongly encourage to fix the dates of the WGC meeting except in urgent situations.

11.2 Partner Organisations

- Encourage to identify the new potential funders for the sustainability of the Science Fair for Young Children.
- Strongly encourage the partners to do publicity so that all partners can play an equal part on the success of the SFYC.
- Strongly encourage the prizes for the School Level Science Fair rather than seed fund.
- Strongly encourage to partners for detailed reports.

11.3 School Level Science Fair (SLSF)

- Strongly encourage all the students to participate in the School Level Science Fair.
- Encourage parents' involvement to help the school to organize the School Level Science Fair.
- Improve and implement the report collection method.
- Strongly encourage the prizes to be delivered to the schools before the Fairs.

11.4 Zone Level Science Fair (ZLSF)

- Coordinators & partner organizations fully responsible and accountable for the Zone Level report based on agreements.
- Strongly encourage the coordinators to submit the reports according to the agreements.
- Coordinators are strongly encouraged to attend the coordinator meeting and postmortem.
- Coordinators must follow the rules and regulations of Working Group Committee.
- Coordinators are strongly encouraged to follow the procedural rules set by the Judging Department.

11.5 Training

- Strongly encourage to combine training for the School and Zone Level Science Fairs.
- Strongly encourage professional trainers to conduct the training.
- Encouraging parents training on event day.
- Strongly encourage students training for each zone to reduce teachers commitments.

11.6 Public Relations

- Encourage frequent publicity in the media.

11.7 Judging

- Strongly encourage to mark the logbook and report book at least 2 days before the event.
- Strongly encourage judges to attend the training.
- Judges are not allowed to be involved in any other department during the event.

11.8 National Level Science Fair

- Encourage to organize the National Level Science Fair as a one-day event.
- Strongly encourage to invite an adequate number of volunteers for the event.



12 Conclusion

This year, a total of 338 schools successfully organised the School Level Science Fairs in their schools and 261 schools nationwide participated in these Fairs which were held in 9 zones. The National Level event was held on 11 October 2014 at Dewan Raja Muda Musa, Shah Alam. The long-term funding sustainability of the project has to be secured for the project to succeed in the future.





SCIENCE FAIR FOR YOUNG CHILDREN

11 October 2011

Dewan Raja Muda

Tempat Belia Dan Kebudayaan Negara



APPENDIX A : Zone Level Science Fair Participation List

Zone 1: Kedah & Perlis

No	Name of School	Title
1.	SJKT Harvard 1	Drying Material
2	SJKT Ldg.Henrietta	Boiling
3	SJKT Ldg.Kim Seng	Strength of Material
4	SJKT Ldg.Victoria	Drying Material
5	SJKT Ldg.Sg.Batu	Boiling
6	SJKT Lgd.Malakof	Strength of Material
7	SJKT Tun Sambanthan	Boiling
8	SJKT Ldg.Sg.Bongkoh	Strength of Material
9	SJKT Wellesly	Maglev Train
10	SJKT Sg.Raya	Paper Plane
11	SJKT Harvard 2	Rocket
12	SJKT Ldg.Pelam	Maglev Train
13	SJKT Darul Aman	Paper Plane
14	SJKT Ldg.Bukit Sidim	Rocket
15	SJKT Bkt.Selarong	Maglev Train
16	SJKT BMR	Paper Plane
17	SJKT Bedong	Rocket
18	SJKT Ldg.Kuala Ketil	Newton's Second Law
19	SJKT Sungkap Para	Strenght of Magnet
20	SJKT Somasundram	Electromagnetism
21	SJKT Sg.Dingin	Friction
22	SJKT Bkt Jenun	Strenght of Magnet
23	SJKT Kalaivaani	Electromagnetism
24	SJKT Ketumba	Strenght of Magnet
25	SJKT Ldg.Harvard 3	Electromagnetism
26	SJKT Palanisamy Kumaran	Newton's Second Law
27	SJKT Saraswathy	Melt
28	SJKT Binjol	Heat Absorbs
29	SJKT Mahajothi	Newton's Second Law
30	SJKT Barathy	Melt
31	SJKT Kupang	Heat Absorbs
32	SJKT Sg.Puntar	Melt
33	SJKT Sg.Getah	Heat Absorbs
34	SJKT Kulim	Chemistry of Tea

No	Name of School	Title
35	SJKT Sg.Tok Pawang	Noise Reduction
36	SJKT Ldg Tupah	Chemistry of Tea
37	SJKT Thiruvaluar	Noise Reduction
38	SJKT Bagan Sena	Chemistry of Tea
39	SJKT Ldg.Kuala Muda Home	Boric Acid
40	SJKT Ldg.Perbadanan	Chemistry of Tea
41	SJKT Pdg.Meiha	Boric Acid
42	SJKT Ldg.Lubuk Segintah	Rate of Reaction
43	SJKT Jabi	BOD
44	SJKT Ganesar	Heat Conductivity
45	SJKT Ldg.Somme	Antiaoxidants
46	SJKT Ldg.Bt.Pekaka	BOD
47	SJKT Ldg. Bkt.9	Heat Conductivity
48	SJKT Sg.Ular	BOD
49	SJKT Changlun	Heat Conductivity

Zone 2: Penang

No	Name of School	Title
1.	SJKT Nibong Tebal	Friction
2	SJKT Ladang Kerian	Newston's Second Law
3	SJKT Subramaniya Barathee	Heat Conductivity
4	SJKT Ladang Mayfield	Chemistry Of Tea
5	SJKT Ladang Alma	Heat Conductivity
6	SJKT Ramakrishna	Noice Pollution
7	SJKT Bukit Mertajam	Newston's Second Law
8	SJKT Jalan Sungai	Strength Of Magnet
9	SJKT Ladang Pyre	Chemistry Of Tea
10	SJKT Sungai Ara	Melt
11	SJKT Ladang Valdor	Rate Of Reaction
12	SJKT Bayan Lepas	Paper Plane
13	SJKT Jawi	Heat Absorbs
14	SJKT Ladang Transkrian	Paper Plane
15	SJKT Permatang Tinggi	Strength Of Magnet
16	SJKT Palaniandy	Paper Plane
17	SJKT Perai	Friction
18	SJKT Tasek Permai	Newston's Second Law

Zone 3: Perak

No	Name of School	Title
1.	SJKT Sir Chulan Selama	Drying Material
2	SJKT YMHA, Taiping	Maglev Train
3	SJKT St'teresa's Convent	Melt
4	SJKT Ladang Sin Wah, Taiping	Melt
5	SJKT Kamunting	BOD
6	SJKT Slim River	Drying Material
7	SJKT Behrang River	Strength of Material
8	SJKT Slim Village Slim River	Paper Plane
9	SJKT TROLAK	Paper Plane
10	SJKT Tun Sambanthan, Bidor	Paper Plane
11	SJKT Bidor Tahan, Bidor	Rocket
12	SJKT Ladang Cluny	Rocket
13	SJKT Ladang Tong Wah	Heat Absorbs
14	SJKT Tan Sri Dato Manikkavasagam	Chemistry of Tea
15	SJKT Ladang Bikam, Bidor	Chemistry of Tea
16	SJKT Simpang Lima	Heat Absorbs
17	SJKT St. Marys	Antiaoxidants
18	SJKT Bagan Serai	BOD
19	SJKT Ghandi Memorial. Kk	Boiling
20	SJKT Ladang kati K.kangsar	Boiling
21	SJKT PK River Valley	Maglev Train
22	SJKT Changkat Salak	Paper Plane
23	SJKT Ladang Dovanby	Rocket
24	SJKT Ladang Gapis K.k	Rocket
25	SJKT Mahantha Gandhi Kalasalai	Strength of Magnet
26	SJKT Ladang Sungai Biong	Noise Reduction
27	SJKT Ladang Klabang Chemor	Strength of Material
28	SJKT Chettiar's Ipoh	Friction
29	SJKT Tanjung Rambutan	Strength of Magnet
30	SJKT Kerajaan Sungai Pari	Gel Electrophoresis
31	SJKT Methodist Buntong	Electromagnetism
32	SJKT Menglembu, Ipoh	Newton's Second Law
33	SJKT Taman Desa Pinji	Boric Acid
34	SJKT Jendrata 1	Boiling
35	SJKT Ladang Teluk Buloh	Friction
36	SJKT New Coconut	Newton's Second Law
37	SJKT Ladang Rubana	Heat Absorbs
38	SJKT Ladang Nova Scotia 2	Boric Acid
39	SJKT Bagan Datoh	Antiaoxidants

No	Name of School	Title
40	SJKT Ayer Tawar	Newton's Second Law
41	SJKT Maha Ganesa Vidyasalai S'wam	Antioxidants
42	SJKT Mambang Diawan	Antioxidants
43	SJKT Gopeng	Heat Conductivity
44	SJKT Ladang Serapoh, Parit	Melt
45	SJKT Buluh Akar. Parit	Electromagnetism
46	SJKT Ladang Gleaney, Parit	Melt
47	SJKT Gerik	Paper Plane
48	SJKT Keroh, Pengkalan Hulu.	Boric Acid

Zone 4: Selangor

No	Name of School	Title
1.	SJKT Ladang Semenyih	Antioxidants
2	SJKT Ladang Kalumpang	Paper Airplane
3	SJKT Batu Caves	Heat Conductivity
4	SJKT Rri Sungai Buloh	Strength of Material
5	SJKT Kajang	Heat Absorbs
6	SJKT Ladang Batu Ampat	Maglev Train
7	SJKT Vivekananda, selangor	Strength of Magnet
8	SJKT Ladang Midlands	Antioxidants
9	SJKT Ladang West Country 'Barat'	Strength of Magnet
10	SJKT Simpang Lima	BOD
11	SJKT Sepang	Friction
12	SJKT Vageesar	Newton's Second Law
13	SJKT Tun Sambanthan	Maglev Train
14	SJKT Taman Permata	Heat Conductivity
15	SJKT Teluk Merbau	Paper Airplane
16	SJKT Castlefield	Heat Absorbs
17	SJKT Jalan Meru	Boric Acid
18	SJKT Ladang Rinching	Melt
19	SJKT Ladang West Country 'Timur'	Maglev Train

Zone 5: Kuala Lumpur

No	Name of School	Title
1.	SJKT Jalan San Peng	Heat Absorbs
2	SJKT ST. Joseph	Boric Acid
3	SJKT Ladang Bukit Jalil	Rocket
4	SJKT Sentul	Rocket
5	SJKT Segambut	Chemistry of tea
6	SJKT Saraswathy	Strength of Material
7	SJKT Thamboosamy Pillai	Boiling
8	SJKT Appar	Melt
9	SJKT Vivekananda, Kuala Lumpur	Sound Pollution



Zone 6: Negeri Sembilan

No	Name of School	Title
1.	SJKT Air Kuning Selatan	Heat Absorbs
2	SJKT Ladang Sg Sebaling	Strength of Magnet
3	SJKT Ladang Pertang	Heat Absorbs
4	SJKT Ladang Seremban	Strength of Magnet
5	SJKT Ladang Kirby	Heat Absorbs
6	SJKT Jawa Lane	Maglev Train
7	SJKT Desa Cempaka	BOD
8	SJKT Dato' K.Pathmanaban	Melt
9	SJKT Kuala Pilah	Boiling
10	SJKT Ladang Chembong	Melt
11	SJKT Ladang Kubang	Newton's Second Law
12	SJKT Ladang Sg Salak	Heat Absorbs
13	SJKT Convent Wawasan	Newton's Second Law
14	SJKT Lobak	Paper Plane
15	SJKT Ladang Geddes	Paper Plane
16	SJKT Ladang Labu Bhg 4	Rocket
17	SJKT Bandar Spring Hill	Paper Plane
18	SJKT Ladang Middleton	Rocket
19	SJKT Ladang Jeram Padang	Paper Plane
20	SJKT Gemas	Rocket
21	SJKT Ladang Cairo	Heat Conductivity
22	SJKT Ladang Senama	Friction
23	SJKT Ladang Lenggeng	Heat Conductivity
24	SJKT Kem Askar Melayu	Friction
25	SJKT Ladang St Helier	Heat Conductivity
26	SJKT Nilai	Friction
27	SJKT Ladang Batang Benar	Heat Conductivity
28	SJKT Ladang Labu Bhg 1	Chemistry of tea
29	SJKT Ladang Tampin Linggi	Strength of Material
30	SJKT Tampin	Chemistry of tea
31	SJKT Port Dickson	Strength of Material
32	SJKT Ladang Sialang	Chemistry of tea
33	SJKT Ladang Perhentian Tinggi	Melt
34	SJKT Ladang Air Hitam	Melt

Zone 7: Melaka

No	Name of School	Title
1.	SJKT Bukit Lintang	Melt
2	SJKT Rumbia	Chemistry of tea
3	SJKT Ladang Tebong	Strength of Magnet
4	SJKT Ladang Diamond Jubilee	Melt
5	SJKT Pulau Sebang	Maglev Train
6	SJKT Merlimau	Heat Conductivity
7	SJKT Durian Tunggal	Heat Absorbs
8	SJKT Alor Gajah	Rocket
9	SJKT Ladang Gadek	Newton's Second Law
10	SJKT Ladang Sungai Baru (H/D)	Rocket



Zone 8: Johor

No	Name of School	Title
1.	SJKT Ladang Sungai Muar	Drying Material
2	SJKT Ladang Ulu Tiram	Boiling
3	SJKT Ladang Southern Malay	Boiling
4	SJKT BATU ANAM	Boiling
5	SJKT Jalan Tajul	Strength of Material
6	SJKT Gelang Patah	Strength of Material
7	SJKT Ladang Temiang Renchong	Strength of Material
8	SJKT Ladang Yong Peng	Strength of Material
9	SJKT Desa Cemerlang	Friction
10	SJKT Ladang REM	Friction
11	SJKT Jalan Haji Manan	Friction
12	SJKT Ladang Mount Austin	Maglev Train
13	SJKT Kulai Besar	Maglev Train
14	SJKT Cantuman Chaah	Maglev Train
15	SJKT Ladang Lanadron	Maglev Train
16	SJKT Palaniappa	Maglev Train
17	SJKT ladang fotrose	Paper Plane
18	SJKT Bandar Segamat	Paper Plane
19	SJKT Ladang Sagil	Paper Plane
20	SJKT Permas Jaya	Rocket
21	SJKT Masai	Rocket
22	SJKT Ladang Ban Heng	Rocket
23	SJKT Ladang Ulu Remis	Rocket
24	SJKT Labis	Rocket
25	SJKT Ladang Bukit Serampang	Strength of Magnet
26	SJKT Jalan Sialang	Electromagnetism
27	SJKT Bekok	Electromagnetism
28	SJKT Ladang Tanah Merah	Newton's Second Law
29	SJKT Ladang Bekoh	Newton's Second Law
30	SJKT Jalan Khalidi & Air Manis	Newton's Second Law
31	SJKT Jalan Bukit Rengam	Newton's Second Law
32	SJKT Ladang Nam Heng	Newton's Second Law
33	SJKT Ladang Kulai Oil Palm	Melt
34	SJKT Ladang Voules	Melt
35	SJKT Ladang Cep. Niyor	Melt
36	SJKT Ladang Pelepah	Melt
37	SJKT Seri Pelangi	Heat Absorbs
38	SJKT Kangkar Pulai	Heat Absorbs

No	Name of School	Title
39	SJKT Jalan Ismail, Mersing	Heat Absorbs
40	SJKT Ladang Tangkah	Heat Absorbs
41	SJKT Ladang Elaeis	Heat Absorbs
42	SJKT Ladang Tebrau	Chemistry of tea
43	SJKT Ladang Nagappa	Chemistry of tea
44	SJKT Ladang Tun Dr Ismail	Chemistry of tea
45	SJKT Taman Tun Aminah	Boric Acid
46	SJKT Jalan Setesyen Paloh	Boric Acid
47	SJKT Jalan Yahya Awal	Antioxidants
48	SJKT Ladang Rini	Antioxidants
49	SJKT Ladang Mados	BOD

Zone 9: Pahang

No	Name of School	Title
1.	SJKT Ladang Gali	Searching Boiling Point
2	SJKC Sungai Jerik Bahagian Tamil	Various Shopping Bags
3	SJKT Raub	Maglev Train
4	SJKT Ladang Cheroh	Maglev Train
5	SJKT Kemayan	Paper Plane
6	SJKT Ladang Menteri	Paper Plane
7	SJKT Ladang Jeram	Balloon Rocket
8	SJKT Bentong	Balloon Rocket
9	SJKT Ladang Semantan	Strength Of The Magnet
10	SJKT Ringlet	Strength Of The Magnet
11	SJKT Mentakab	Vegetables Dna
12	SJKT Sungai kawang	Velocity
13	SJKT Ladang Selborne	Velocity
14	SJKT Lipis	How To Slow Down Ice Melting
15	SJKT Kuala Reman	How To Slow Down Ice Melting
16	SJKT Karak	Effect Of The Colours On Heat
17	SJKT Shum Yip Leong	Strength Of Tea On Longer Brewing Time
18	SJKT Blue Valley	Strength Of Tea On Longer Brewing Time
19	SJKT Lurah Bilut	Boric Acid In Food
20	SJKT Ladang Mentakab	Boric Acid In Food
21	SJKT Ladang Lanchang	Antioxident On Food
22	SJKT Ladang Edensor	Antioxident On Food
23	SJKT Ladang Sg.tekal	Biological Oxygen Demand
24	SJKT Bukit Fraser	Heat Conductivity In Different Materials
25	SJKT Indera Mahkota	Heat Conductivity In Different Materials

APPENDIX B :

National Level Science Fair Participation List

No	Name of School	Zone	Title
1	SJKT Bedong	Kedah	Rocket
2	SJKT Sungai Tok Pawang	Kedah	Noise reduction
3	SJKT Wellesly	Kedah	Maglev Train
4	SJKT Ladang Batu Pekaka	Kedah	BOD
5	SJKT Lagang Lubuk Segintah	Kedah	Rate of Reaction
6	SJKT Sungai Ular	Kedah	Electromagnetism
7	SJKT Sungai Dingin	Kedah	Electromagnetism
8	SJKT Somasundram	Kedah	Heat Absorbs
9	SJKT Binjol	Kedah	BOD
10	SJKT Ramakrishna	Penang	Noise reduction
11	SJKT Nibong Tebal	Penang	Friction
12	SJKT Bukit Mertajam	Penang	Maglev Train
13	SJKT Subramaniya Barathee	Penang	Heat Conductivity
14	SJKT Mahathma Gandhi Kalasalai	Perak	Strenght of Magnet
15	SJKT St'Teresa's Convent	Perak	Melt
16	SJKT Maha Ganesa Vidyasalai	Perak	Antiaoxidants
17	SJKT Ghandi Memorial	Perak	Boiling
18	SJKT Ladang Rubana	Perak	Heat Absorbs
19	SJKT Ladang Sungai Biong	Perak	Noise reduction
20	SJKT Slim River	Perak	Drying Material
21	SJKT Keroh, Pengkalan Hulu	Perak	Boric Acid
22	SJKT Ladang Cluny	Perak	Rocket
23	SJKT Sentul	Wilayah	Rocket
24	SJKT Ladang Bukit Jalil	Wilayah	Ballon Rocket
25	SJKT Vageesar	Selangor	Newton's Second Law
26	SJKT Ladang Semenyih	Selangor	Antioxidants
27	SJKT Taman Permata	Selangor	Heat Conductivity
28	SJKT Tun Sambanthan	Selangor	Maglev Train
29	SJKT West Country (Timur)	Selangor	Maglev Train
30	SJKT Nilai	Negeri Sembilan	Friction
31	SJKT Convent	Negeri Sembilan	Newton's Second Law
32	SJKT Jawa Lane	Negeri Sembilan	Maglev Train
33	SJKT Bandar Spring Hill	Negeri Sembilan	Paper Plane
34	SJKT Ladang Kirby	Negeri Sembilan	Heat Absorbs

No	Name of School	Zone	Title
35	SJKT Ladang Simpang Pertang	Negeri Sembilan	Heat Absorbs
36	SJKT Ladang St.Heiler	Negeri Sembilan	Heat Conductivity
37	SJKT Kuala Pilah	Negeri Sembilan	Boiling
38	SJKT Pulau Sebang	Melaka	Maglev Train
39	SJKT Alor Gajah	Melaka	Rocket
40	SJKT Permas Jaya	Johor	Rocket
41	SJKT Yahya Awal	Johor	Antioxidants
42	SJKT Jalan Khalidi	Johor	Newton's Second Law
43	SJKT Kulai Besar	Johor	Maglev Train
44	SJKT Jalan Sialang	Johor	Electromagnetism
45	SJKT Taman Tun Aminah	Johor	Boric Acid
46	SJKT Ladang Tebrau	Johor	Chemistry of tea
47	SJKT Bandar Segamat	Johor	Paper Plane
48	SJKT Masai	Johor	Rocket
49	SJKT Ulu Tiram	Johor	Boiling
50	SJKT Kangkar Pulai	Johor	Heat Absorbs
51	SJKT Ladang Semantan	Pahang	Strength of Magnet
52	SJKT Raub	Pahang	Maglev Train
53	SJKT Ladang Mentari	Pahang	Paper Plane
54	SJKT Blue Valley	Pahang	Chemistry of Tea
55	SJKT Ladang Edensor	Pahang	Antioxidants
56	SJKT Karak	Pahang	Heat Absorbs



APPENDIX C :

Partially Guided Experiments for SFYC 2014

1. There are many methods used to dry materials, such as application of hot air, indirect or contact drying, freeze drying, and natural air drying. How does the type of material affect how long a shirt takes to dry? Design an experiment to investigate the statement and explain the mechanism involved.
2. Boiling is the rapid vaporization of a liquid, which occurs when a liquid is heated to its boiling point, the temperature at which the vapour pressure of the liquid is equal to the pressure exerted on the liquid by the surrounding environmental pressure. Given the same amount of water, how does a container's size and type of material used affect the amount of time it takes to boil? Design an experiment to investigate the statement and explain the mechanism involved. Make sure you have adult supervision when handling hot objects.
3. Shopping bags are medium sized bags with different thickness and materials that are often used by grocery shoppers to carry home their purchases. It is believed that by varying the thickness and type of materials of the shopping bag, the amount of load it withstands varies. Design an experiment to test the statement.
4. The wheel of a vehicle rotates to allow the vehicle to move. Design a mechanical system that involves minimal force that gives maximum distance travelled by the vehicle. Discuss the mechanism involved.
5. A few countries are using powerful electromagnets to develop highspeed trains, called maglev trains. Maglev is short for magnetic levitation, which means that these trains will float over a guideway using the basic principles of magnets to replace the old steel wheel and track trains. Build your own levitating train model and test how much weight it can hold before it stops hovering above the tracks. Explain the mechanisms involved.
6. A paper plane, paper airplane (US), paper glider, paper dart or dart is a toy aircraft, usually a glider made out of paper or paperboard; the practice of constructing paper planes is sometimes referred to as aerogami[(Japanese:kamihikōki),after origami, the Japanese art of paper folding. How does the shape and design of the wings of a paper airplane affect its ability to fly? Build your own paper. Explain the mechanisms involved. You must keep the mass of the paper airplane constant.
7. A balloon rocket is a balloon filled with air. Besides being simple toys, balloon rockets are a widely used teaching device to demonstrate physical principles and the functioning of a rocket . How does the amount of air in a balloon rocket affect how high it flies? Design an experiment to investigate the statement and explain the mechanism involved.
8. A magnet is a material or object that produces a magnetic field. This magnetic field is invisible but is responsible for the most notable property of a magnet: a force that pulls on other ferromagnetic materials, such as iron, and attracts or repels other magnets. Design an experiment to measure the strength of a magnet. Based on your finding, come up with a tool to collect iron scraps. Explain the mechanism involved.
9. Gel electrophoresis is a method for separation and analysis of macromolecules (DNA, RNA and proteins) and their fragments, based on their size and charge. Design a gel electrophoresis and use it to separate DNAs of different vegetable. Explain the mechanism involved.
10. Electromagnetism denotes the interaction between electrical fields or currents with magnetic fields. It is known electromagnetism is produced when electrical current is passed through a conductor. Design an experiment to investigate the most suitable conductor to produce the best electromagnet. If you are using electrical currents, please seek advice of an adult before conducting the experiment.

11. In physics, acceleration is the rate at which the velocity of a body changes with time. As described by Newton's Second Law, acceleration is caused by mass and speed. Find out how increased mass affects speed by doing a project with dynamic carts. Design an experiment to investigate the effect of mass on speed and explain the mechanism involved.
12. Fresh fish is a perishable commodity with a very short shelf period. Fishmongers use ice as a method to keep their sea products fresh. But, ice melts fast and the fishmongers have to keep on adding ice. Find a solution by adding foreign substances to ice to slow down ice melting. Design an experiment and explain the mechanism involved.
13. Why is it more comfortable to wear light-colored clothes on a hot summer day? Why wear a dark-colored jacket for early-morning fishing on a cold lake? How much difference can it make? How does the color of an object affects how much heat it absorbs when exposed to incandescent light? Design an experiment to investigate the statement and explain the mechanism involved.
14. A nice hot cup of tea sure can wake and warm you up in the morning. In this science fair project, you will investigate the chemistry of tea. The longer you steep a tea bag in hot water, the stronger the tea will be. But how does the strength of the tea change with longer brewing time? Design an experiment to investigate the statement above. Be careful when handling hot water.
15. Noise pollution is the disturbing or excessive noise that may harm the activity or balance of human or animal life. High noise levels can contribute to cardiovascular effects in humans, a rise in blood pressure, and an increase in stress and vasoconstriction, and an increased incidence of coronary artery disease. What are the best materials to use to reduce noise from the environment? Design an experiment to investigate the statement and explain the mechanism involved.
16. Food preservation usually involves preventing the growth of bacteria, fungi (such as yeasts), or any other micro-organisms as well as retarding the oxidation of fats that cause rancidity. There are many chemicals that can be used as a preservative, such as salt, sorbic acid and its salts, benzoic acid and its salts, calcium propionate, sodium nitrite, and boric acid. As your Science Fair project, find out the effect of boric acid on our health and design an experiment to investigate the amount of boric acid used in foods that we consume. Explain the processes involved in your investigation.
17. The reaction rate (rate of reaction) or speed of reaction for a reactant or product in a particular reaction is intuitively defined as how fast or slow a reaction takes place. For example, rusting of iron under Earth's atmosphere is a slow reaction that can take many years, but the combustion of cellulose in a fire is a reaction that takes place in fractions of a second. The rate of the reaction depends upon the surface area of the solid reactant. Design an experiment to investigate the statement and explain the mechanism involved.
18. Antioxidants have become very popular in the news lately for their potential health and antiaging properties. Antioxidants work by preventing oxidation reactions that produce free-radicals which can cause harm to the body. As your Science Fair project, find out the types of antioxidants and design an experiment to investigate the amount of antioxidants in foods that we consume. Explain the processes involved in your investigation.
19. Biological oxygen demand, BOD, is the standard method for the indirect measurement of the amount of organic pollution (that can be oxidized biologically) in a sample of water. BOD test procedure is based on the activities of bacteria and other aerobic microorganisms (microbes), which feed on organic matter in presence of oxygen. Higher the BOD, higher the amount of pollution in the test sample. As your Science Fair project, design an experiment to find out the BOD of water samples in your area. Explain the mechanisms involved in your findings.
20. Heat conductivity is an important concept in many processes and has to be considered before inventing many equipments. All materials conduct heat to some extent. Although metals are commonly considered to be conductors, any material can be. As your Science Fair project, design an experiment to find out heat conductivity of different types of materials. Explain the mechanisms involved in your findings. Have adult supervision when handling heavy objects.



2014 இளம் ஆய்வாளர்களின் அறிவியல் விழா யஹ்யா அவ்வால் தமிழ்ப்பள்ளி மாணவர்கள் சாதனை

ப.புவனேஸ்வரன்/படங்கள்:சனாதீபர் பாலன்

தேசிய ரீதியிலான 2014 இளம் ஆய்வாளர்களின் அறிவியல் விழாவில், ஜோசர் மாநிலத்தைச் சேர்ந்த யஹ்யா அவ்வால் தமிழ்ப்பள்ளி வாசக குடியுறு. நேற்று முன்தினம் லூ ஆலம் செக்ஷன் 7 இல் அமைந்துள்ள இளைஞர், விளையாட்டுத்துறை மண்டபத்தில் நடைபெற்ற தேசிய ரீதியிலான இளம் ஆய்வாளர்களின் அறிவியல் விழா மிகச் சிறப்பாக நடைபெற்றது.

இதில் மாநிலத்திலிருந்து நடத்தப்பட்ட அறிவியல் ஆய்வுக்கான போட்டியில் இருந்து தேர்வு செய்யப்பட்ட பள்ளிகள் பங்கேற்றிருந்தன. முதல் நிலையில் ஜோசர் மாநிலத்தைச் சேர்ந்த யஹ்யா அவ்வால் தமிழ்ப்பள்ளி வென்றி பெற்றது.

இவ்வாறான நிலையில் பின்னாடு மாநிலத்தைச் சேர்ந்த புகூட் வெந்தாஸ் தமிழ்ப்பள்ளியும் பூநேரம் நிலையத்தில் பின்னாடு மாநிலத்தைச் சேர்ந்த இராமலிங்குலா தமிழ்ப்பள்ளியும் தேசிய ரீதியிலான 2014 இளம் ஆய்வாளர்களின் அறிவியல் விழாவில் பங்கேற்றனர்.

இளைஞர் தொழில்நுட்ப மையலைச் சேர்ந்த வெல்லாவி தமிழ்ப்பள்ளி 4ஆவது நிலையிலும், ஜோசரைச் சேர்ந்த லூர் ஆகீஸ் தமிழ்ப்பள்ளி 5ஆவது நிலையிலும் கோலாலம்பூரைச் சேர்ந்த லூர் சம்பந்தன் தமிழ்ப்பள்ளி 6ஆவது நிலையிலும் தெலிளி செம்பிவாணைச் சேர்ந்த சிபாயர் லூர் ஆகீஸ் தமிழ்ப்பள்ளி 7ஆவது நிலையிலும் மலாக்கா அரென் லூர் ஆகீஸ் தமிழ்ப்பள்ளி 8ஆவது நிலையிலும், ஜோசர் சம்சார் பூலம் தமிழ்ப்பள்ளி 9ஆவது நிலையிலும், லூர் லூர் சிபாயர்

தமிழ்ப்பள்ளி 10ஆவது நிலையிலும் வெற்றி வாசக குடியுறு. தேசிய ரீதியில் நடத்தப்பட்ட இளம் ஆய்வாளர்களின் அறிவியல் விழாவின் அறிவினை, தொழில்நுட்பம், பத்திரிகை இயக்கத்தினர் அறிமுகப்படுத்தினர். ஏற்றுமதி செய்துள்ள சம்பந்தப்பட்டிருக்கிறது. மாநில வாரியக அறிவியல் விழா நடத்தப்பட்டு அதன் வெற்றியாளர்கள் தேசிய ரீதியில் நடத்தப்பட்ட இப்போட்டியில் பங்கு பெற்றனர்.

ஒவ்வொரு பள்ளியும் தங்களுக்குள்ளே அறிவியல் ஆய்வை வெளிப்படுத்தக்கூடிய ஒரு தலைப்பை தேர்ந்தெடுத்தது. அந்ததலைப்பைப்போட்டி ஆய்வு நடத்தி அந்த ஆய்வின் முடிவை வெளிப்படுத்தக்கூடிய இப்போட்டியாகும்.

வெல்லாவு தமிழ்ப்பள்ளிகள் வெல்லாவு விதமான தலைப்பில் ஆய்வுகளை நடத்தியிருந்தனர் என்பது குறிப்பிடத்தக்கது.

இந்தநாள் பல நாட்கட்ட ஆய்வுகளை மானவர்கள் தயார் செய்திருந்தனர். சுமார் 10,000 மணி நேரங்கள் முதல் 2,000 மணி வரை இப்போட்டி நடைபெற்றது. ஒவ்வொரு தமிழ்ப்பள்ளியிலும் தனித்தனியான மேலாண்மைக்குரிய முயற்சிகள் ஆய்வுக்கூடத்தை அமைத்து ஆய்வின் திறமிகளிடம் ஆரம்பம் சி தொட்பான விளக்கத்தைக் கொடுக்க வேண்டும்.

எல்லா தமிழ்ப்பள்ளிகளும் தங்களின் ஆய்வு விளக்கத்தை ஆய்வில் வெற்றியிலேயே மேற்கொண்டனர் என்பது குறிப்பிடத்தக்கது.

தமிழ்ப்பள்ளி மாணவர்கள் அறிவியலில் தனித்துவம் பெற வேண்டும். நற்பெருகு களையி பாடம் என்று எடுத்துக் கொள்ளும்

சீமப்பள்ளி மாணவர்கள் திங்கள் சிறப்பாகவா இருக்கிறார்கள் என்பது அனைவரது கருத்தாகும். அறிவியல் துறையிலான மாணவர்கள் தனித்துவத்தில் சிறந்தவர்களாக விளங்க வேண்டும். அது விஞ்ஞானத்துறையாக விளங்க வேண்டும் என்று கோருகிறார்கள். தேசிய ரீதியிலான அறிவியல் விழா உதவியாகும்.

இதனை அறிவிக்கும் தொழில்நுட்பத்திற்கு இயக்கம் ஆண்டுதொழுவும் பெற்றுப்பெற்று நடத்தியிருக்கிறது. இதன் வாயிலாக தமிழ்ப்பள்ளி மாணவர்களுக்கு அறிவியல் துறையில் ஆர்வம் தூண்டப்படுகிறது.

வருங்காலத்தில் இவர்களுக்கு ஆய்வுக்கான அலுவலகம் ஏற்படுத்தும் இந்த அறிவியல் விழா தொடக்கத்திலேயே சிறந்த சிந்தனைகளை மாணவர்களுக்கு புகட்டுகிறது என்று இவ்வியலின் ஏற்பாட்டுக்குழுவினர் கூறினர்.

இருந்த போதிலும் வடந்த காலங்களில் இவ்வியலிற்கு பிரதமர் துறையில் இருந்து நேரடியான மானவர்களிடம் வந்த அனைத்துமூன்று ஆண்டுகளில் நடத்துவதற்கு அரசாங்கத்தின் இருந்து மானியம் ஒதுக்கிக்கொடுக்கவில்லை என்ற ஆதரவற்றதையும் அவர்கள் முன்வைத்தனர் என்பதும் குறிப்பிடத்தக்கது.



நூல்நிலை கனிமியலையே அதிக வைப்பின் சி



லூர் ஆலம், அக். 13- மாநில உட்குழுத் தேர்வுகளை எடைட்டியின் சி இயல் பெறுவதற்கு முடிந்தவர்களைப் பின்பற்றும்

மனிதர்கள் ஆரோக்கியமாக வாழ்வதற்கு உடைட்டியின் சி அறிவியல் துறையில் அதிக அறிவு பெறும் முயற்சி எடுக்க வேண்டும். அந்த போன்றும் தேர்வுக்கான சி அறிவியல் இயக்கத்து சம்பந்த இளைஞர்களின் அறிவியல் மூலம் கண்டுபிடிக்கப்படுகிறார்கள். சிட்டித்தட்ட 11 விதமான பூக்களின் மேற்கொண்ட போட்டி ஆய்வின் முடிவான சி தேர்வுக்கான சி அறிவியல் இயக்கத்து சம்பந்த இளைஞர்களின் அறிவியல் மூலம் கண்டுபிடிக்கப்படுகிறார்கள். சிட்டித்தட்ட 11 விதமான பூக்களின் மேற்கொண்ட போட்டி ஆய்வின் முடிவான சி தேர்வுக்கான சி அறிவியல் இயக்கத்து சம்பந்த இளைஞர்களின் அறிவியல் மூலம் கண்டுபிடிக்கப்படுகிறார்கள்.



லூர் ஆலம், அக். 13- மாநில உட்குழுத் தேர்வுகளை எடைட்டியின் சி இயல் பெறுவதற்கு முடிந்தவர்களைப் பின்பற்றும்

சி -என் இருக்கிறது என்பதை அடிப்படையாக மாற்றித்தான் ஜோசர் மாநிலத்தைச் சேர்ந்த யஹ்யா அவ்வால் தமிழ்ப்பள்ளி மாணவர்கள், தங்களுக்கும் ஆதிதிறமிகளாக மாற்றித்தான் இளைஞர் தொழில்நுட்ப மையலைச் சேர்ந்த லூர் ஆகீஸ் தமிழ்ப்பள்ளி 4ஆவது நிலையிலும், ஜோசரைச் சேர்ந்த லூர் சம்பந்தன் தமிழ்ப்பள்ளி 5ஆவது நிலையிலும், கோலாலம்பூரைச் சேர்ந்த லூர் சம்பந்தன் தமிழ்ப்பள்ளி 6ஆவது நிலையிலும், தெலிளி செம்பிவாணைச் சேர்ந்த சிபாயர் லூர் ஆகீஸ் தமிழ்ப்பள்ளி 7ஆவது நிலையிலும், மலாக்கா அரென் லூர் ஆகீஸ் தமிழ்ப்பள்ளி 8ஆவது நிலையிலும், ஜோசர் சம்சார் பூலம் தமிழ்ப்பள்ளி 9ஆவது நிலையிலும், லூர் லூர் சிபாயர்

வெற்றி பெற்ற 3 குழுக்கள் பிரதமர் முன்முகிவைப்பில் அறிவியல் ஆய்வை நடத்துவர்

லூர் ஆலம், அக். 13- தேசிய ரீதியிலான இளம் ஆய்வாளர்களின் அறிவியல் விழா போட்டி வெல்லாவு அறிவியல் துறையில் அறிவியல் ஆய்வுகளை சி சிறப்பு பரிசைகளையும் அறிவித்தது.

முதல் நிலை வெற்றியாளர்களுக்கு இதன் ஏற்பாட்டுக்கு குழுவினர் 2000 வெள்ளி ரொக்கப் பரிசையும் வழங்கியுள்ளனர். இத்தகைய அந்தந்தவர்களுக்கு நடைபெற்ற போட்டியில் எல்லா அறிவியல் துறையிலும் சிறப்பு தொலை ஒன்றையும் பரிசுத் தொகையாக அறிவிப்பது செய்தது. மேலும் வெற்றி பெற்ற குழுவை வெல்லாவுக்கு அடிப்படையில் திட்டத்தை ஆய்வித்திருந்தது.

லூர் ஆலம், அக். 13- தேசிய ரீதியிலான இளம் ஆய்வாளர்களின் அறிவியல் விழா போட்டி வெல்லாவு அறிவியல் துறையில் அறிவியல் ஆய்வுகளை சி சிறப்பு பரிசைகளையும் அறிவித்தது. முதல் நிலை வெற்றியாளர்களுக்கு இதன் ஏற்பாட்டுக்கு குழுவினர் 2000 வெள்ளி ரொக்கப் பரிசையும் வழங்கியுள்ளனர். இத்தகைய அந்தந்தவர்களுக்கு நடைபெற்ற போட்டியில் எல்லா அறிவியல் துறையிலும் சிறப்பு தொலை ஒன்றையும் பரிசுத் தொகையாக அறிவிப்பது செய்தது. மேலும் வெற்றி பெற்ற குழுவை வெல்லாவுக்கு அடிப்படையில் திட்டத்தை ஆய்வித்திருந்தது.

லூர் ஆலம், அக். 13- தேசிய ரீதியிலான இளம் ஆய்வாளர்களின் அறிவியல் விழா போட்டி வெல்லாவு அறிவியல் துறையில் அறிவியல் ஆய்வுகளை சி சிறப்பு பரிசைகளையும் அறிவித்தது. முதல் நிலை வெற்றியாளர்களுக்கு இதன் ஏற்பாட்டுக்கு குழுவினர் 2000 வெள்ளி ரொக்கப் பரிசையும் வழங்கியுள்ளனர். இத்தகைய அந்தந்தவர்களுக்கு நடைபெற்ற போட்டியில் எல்லா அறிவியல் துறையிலும் சிறப்பு தொலை ஒன்றையும் பரிசுத் தொகையாக அறிவிப்பது செய்தது. மேலும் வெற்றி பெற்ற குழுவை வெல்லாவுக்கு அடிப்படையில் திட்டத்தை ஆய்வித்திருந்தது.

லூர் ஆலம், அக். 13- தேசிய ரீதியிலான இளம் ஆய்வாளர்களின் அறிவியல் விழா போட்டி வெல்லாவு அறிவியல் துறையில் அறிவியல் ஆய்வுகளை சி சிறப்பு பரிசைகளையும் அறிவித்தது. முதல் நிலை வெற்றியாளர்களுக்கு இதன் ஏற்பாட்டுக்கு குழுவினர் 2000 வெள்ளி ரொக்கப் பரிசையும் வழங்கியுள்ளனர். இத்தகைய அந்தந்தவர்களுக்கு நடைபெற்ற போட்டியில் எல்லா அறிவியல் துறையிலும் சிறப்பு தொலை ஒன்றையும் பரிசுத் தொகையாக அறிவிப்பது செய்தது. மேலும் வெற்றி பெற்ற குழுவை வெல்லாவுக்கு அடிப்படையில் திட்டத்தை ஆய்வித்திருந்தது.













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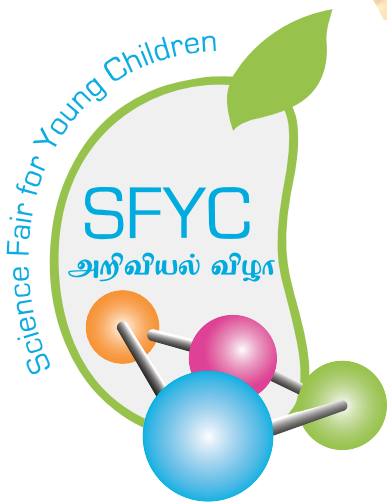
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