

Science Fair for Young Children 2017 Report

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Executive Summary

Science Fair for Young Children, SFYC, is an annual programme held to encourage science among primary school children. Science Fair for Young Children, SFYC started as a pilot project in 2007 focussing for Tamil schools in Selangor and Kuala Lumpur, Wilayah Persekutuan. In 2008, SFYC was held nationwide in 6 zones followed by a national event.

SFYC has been a platform for young students to showcase their scientific knowledge and skills. This programme has brought together schools from the entire country for the sole purpose of participating and excelling in the world of science.

SFYC's success has enabled the organisers to conduct the fair at 3 levels since 2010; which are the School, Zone and National Level. Every year the organisers and the zone coordinators has ensured that the training for school level and zone level science fair were conducted smoothly. A total of 420 teachers participated in our training held in 9 zones across the country this year.

In 2017, a total of 305 schools had completed their School Level Science Fairs as of October 2017. Meanwhile, 326 schools participated in 10 Zone Level Science Fairs completed by the month of May 2017. The National Science Fair for Young Children was held on 12th and 13th August 2017 at the German Malaysian Institute. Sixty

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eight teams were selected from the 10 zones to take part in the national event. Besides the overall winners, prizes were also given for Innovation Category and Research Paper Category.

Based on surveys conducted among our main stakeholders, especially teachers and students, it shows that SFYC has been very successful in motivating the interest in science in Tamil schools. A detailed R & D Report has been launched regarding this study and is available to be downloaded from ASTI's



One interesting aspect from our report is that, when a teacher transfers from a school, the success of science fair in that school tends to follow the teacher. We believe the main reason for the success of SFYC is due to a teacher's commitment. Thus, ASTI have launched the Ramanujan Award and the "Wings of Fire" initiative to encourage teachers to be the best that they can.

Funding remains SFYC's main challenge. We hope more individuals & organisations would come forward to fund this programme so that the journey continues for both the young children and the Science Fair team. However, considering this main issue, we will continue to make modification for the long term sustainability of SFYC. As Albert Einstein once said, "Life is like riding a bicycle. To keep your balance, you must keep moving." We will continue to move. We will try not to fall.



1 Introduction

1.1 Summary

From ancient times, people have said that the best way to understand a concept is to explain it to someone else. A Roman philosopher Seneca once said, "While we teach, we learn". This is a basis for SFYC. The students are asked to conduct their own experiments and explain to us their findings in a way we can understand.

The best way to learn science is by the 'hands-on' manner of conducting experiments and drawing an inference from it ourselves, rather than just reading, understanding and remembering its contents. Science students who are young should be encouraged to learn science by doing projects that will bring to 'life' the underlying scientific concepts.

With this, they can understand the concept clearly and adopt the concept in their daily life. This method will also empower the young minds to take the learning process into their own hands, thus inculcate independent thinking.

Because of the importance of this, a group of community based non-profit organization founded Science Fair for Young Children, or SFYC in 2007. Since then, SFYC has been organised jointly with Tamil schools annually with more and more students participating every year at the school, zone and national levels.

This was our 11th year of SFYC. Last year we celebrated our 10th anniversary. This year we achieved the highest number of teams participating at zone level.

We have seen many successes but some problems too. Some problems we have overcame, some we still have not. We have seen many changes, mostly positive ones in schools and especially among the young people. Their confidence has certainly increased. This has been truly a worthwhile and meaningful journey for us.

SFYC organising team does not just organize the Fair at Zone and National Levels, the team also encourages schools to hold School Level Science Fairs (SLSF). The organisers think that School Level Science Fairs and Zone Level Science Fairs (ZLSF) have a better impact and benefit to the students who are 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, 305 of schools have organized School Level Science Fair at their respective schools as at October 2017. At the Zone Level Science Fair, 326 schools and 370 teams have participated nationwide. Meanwhile, the National Level event was held on 12th and 13th August 2017 at German Malaysian Institute, Bangi with 68 schools from categories A & B taking part in it. The total expense for organising the School, Zone and National Level Science Fair amounted to RM 519,923.40

1.2 Background

Science is the systematic study of nature and there is much knowledge to be gained and while scientific facts are important, if the methods employed to discover or learn them are incomplete it could, hamper scientific progress.

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 scientific skills;
- take an open and creative approach to problem solving;
- to create/increase awareness, interest, motivation in the study of science in school;
- sharpen their writing skills and their ability to work in a team, to plan and execute tasks;
- develop their soft skills as public speaking, which they present projects to schoolmates and judges;
- improvement of their own learning process in critical thinking based on experience and project;
- 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 organize "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 recognizing the benefits of a science fair, we initiated Science Fair for Young Children (SFYC) in 2006. A team of scientists and educationists was formed and tasked with developing the concept, materials and the supporting structure to implement the pilot project. The following year, the first SFYC was held at the Dewan Tunku Canselor, Universiti 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 then Secretary General of the Education Ministry, Tan Sri Dr. Zulkurnain bin Haji Awang. Since 2008, the program has grown with participation of larger amount of schools.

Participation of schools in Zone Level Science Fair from 2010 to 2017.

Zone	State		Total Schools							
Zone		2010	2011	2012	2013	2014	2015	2016	2017	
1	Kedah & Perlis	17	41	34	52	49	38	47	40	
2	Penang	16	16	19	15	18	20	14	22	
3	Perak	50	47	53	56	48	38	38	59	
4	Selangor	54	56	35	47	9	25	31	44	
5	Kuala Lumpur & W. Persekutuan	14	13	10	10	19	9	12	13	
6	Negeri Sembilan	18	18	30	30	34	22	30	46	
7	Melaka	21	21	21	21	10	4	19	21	
8	Johor	59	45	52	41	49	45	38	57	
9	Pahang & Kelantan	14	17	15	19	25	20	29	24	
	Total Teams	263	274	269	282	261	221	258	326	

Table 1: Zone Level Science Fair Participation

From 2011, we started School Level Science Fair so that more students can take part in this program. The participation of schools in School Level Science Fairs has been very good. The details of the number of schools participating in the past years are shown in the table below.

ı	Zono	State	Total Schools								
ı	Zone		2011	2012	2013	2014	2015	2016	2017		
	1	Kedah & Perlis	46	43	56	32	45	55	40		
	2	Penang	-	14	20	26	28	22	24		
	3	Perak	45	73	93	80	50	40	45		
I	4&5	Selangor & W. Persekutuan	36	59	87	80	50	40	30		
	6	Negeri Sembilan	20	46	42	40	55	35	45		
	7	Melaka	21	21	21	17	12	16	21		
	8	Johor	70	70	72	68	70	70	70		
	9	Pahang & Kelantan	18	12	32	25	32	30	30		
	Total Teams		256	338	423	338	327	308	305		

Table 2: School Level Science Fair Participation



1.3 OBJECTIVES of SFYC

SFYC has the following objectives:

- To organise a national level science fair for the best 60 science projects.
- To encourage the students to participate in National and International Science Competition / Exhibitions / Fairs.
- To encourage schools to organise School Level Science Fair.
- To train science teachers from schools on 'hands-on' science, science project and encourage to organise School Level Science Fair.
- To empower co-ordinators to organise the Zone Level Science Fair.

1.4 METHODOLOGY

Many non-profit organisations involved in the SFYC have been jointly organising the event successfully since 2007. We have also diligently recorded the challenges faced along the way, and have developed handbooks or guidebooks for all the stakeholders. This handbook and guidebook are contained in the SFYC Folder. The folder is a key tool for the organisers, teachers, students, parents, facilitators and judges. It helps all parties to better understand the scope and nature of the project and the role of each stakeholder.

The following aspects are included in the folder:

1. How to use this folder.

Explains how the folder should be used by each group.

2. Science Project, Scientific Method and Science Fair

Simple explanation about what is science project, scientific method and science fair.

3. Organizer's Manual

Basically gives an explanation on how to organize a science fair.

Example in schools, classrooms, organisations, etc.

4. Teachers' Manual

Explains the roles and responsibilities of the Science Teachers to guide the participants of the fair.

5. Students' Manual

Helps the students to develop their project and provides the format of writing a report.

6. Parents' Manual

Guides the participant's parents to motivate their child to perform well in SFYC.

7. Facilitator's Manual

Gives a guideline to the Facilitators on how to facilitate so that they can help teachers and students during school visits.

8. Judges Manual

Gives proper guidelines on how to judge a science project effectively. This manual had been improvised considerably after 2016's feedback on the Judging criteria.

9. Conference Paper

Guideline for conference paper preparation

10. Scenarios in which participants had to develop experiments to proof or disproof them. This will help them develop higher order thinking skills from an early age. Two types of scenarios were developed:

Category A: Scenarios or Experiments based on school syllabus.

Category B: Scenarios or Experiments based on Invention and Innovation.

There were 20 experiments in Category A and 15 experiments in Category B, in both English and Tamil to be chosen by the schools. The division of Category A and B was done for the first time this year as a pilot.

As SFYC is a partnership project, we work with various partners to enquire about their interest in joining the programme, and their ability to contribute towards SFYC's success. After the NGO partners have been identified and brought on-board, the SFYC Advisory Council, which sets the policy and makes the key decisions with regards to SFYC, will form an inclusive Working Group. The Working Group Committee is responsible to implement and deliver the SFYC. The representatives of partner NGOs are members of the Working Group Committee. (Refer Appendix 3 for the Organisational Chart). The SFYC Secretariat, under ASTI is responsible for the day-to-day operations of the project.

Next, the project recruits co-ordinators and organisations to organize the Zone Level Science Fair. This year, as before, we planned to organise fairs in 9 zones -- Kedah, Pulau Pinang, Perak, Selangor, Kuala Lumpur, Pahang, Negeri Sembilan, Melaka, and Johor. The co-ordinators will be tasked with approaching the schools, recruiting facilitators & volunteers, organising teachers' trainings and sending facilitators to schools to guide the students and teachers. The staff at the SFYC secretariat assists the co-ordinators.

For organising the Zone Level Science Fair, the coordinators are given RM250 as seed money for every school that had confirmed their participation. For 2017, we expect about 300 schools to take part and the coordinators are encouraged to raise more funds, if needed, to stage their Zone Level Science Fair.

All participating teams are judged by a team of individuals with a strong science background and they must follow the judges' manual to accurately evaluate a project's merit. The best 60 schools from the zones are selected and invited to participate at the National Science Fair for Young Children. The Judging Committee is independent and is led by a National Chief Judge and his / her central committee comprising the 9 Zone Level Chief Judges.

Milestones for SFYC 2017

Milestones of SFYC 2017 (October 2016-October 2017)							
ltem	Time Frame						
SFYC 2017 Workshop	Dec-2016						
Identify Partner NGO and State Coordinators	Dec -2016 to Jan-2017						
Form SFYC Working Group Committee	Dec -2016						
Develop Detailed Implementation Plan for SFYC 2017	Dec -2016						
Train the Coordinators on conducting School & Zone Level Science Fairs	Jan-2017						
School & Zone Level Resources, Materials & Experiment Review & Finalization	Nov -2016 to Jan-2017						
School & Zone Level Training & Workshop for Teachers	Feb-2017 to Mar-2017						
Zone Level Science Fairs	Apr-2017 to May-2017						
National Level Science Fair	June - August 2017						
Postmortem of SFYC 2017	Aug-2017 to Oct-2017						
SFYC 2017 Final Report Preparation	Aug-2017 to Oct-2017						

1.5 ZONE CATEGORISATION



Figure 1.1: Zone Categorisation of SFYC

Zone	State	Total Tamil Schools
1	Kedah & Perlis	59 Schools
2	Penang	28 Schools
3	Perak	134 Schools
4	Selangor	97 Schools
5	Kuala Lumpur	15 Schools
6	Negeri Sembilan	61 Schools
7	Melaka	21 Schools
8	Johor	70 Schools
9	Pahang & Kelantan	38 Schools
	Total	524 schools

Table 1.2: Number of Tamil Primary Schools in Malaysia

1.6 ORGANISATIONS INVOLVED

2017's Science Fair for Young Children is a group effort by:

- Association of Science, Technology and Innovation (ASTI)
- Majlis Guru Besar Sekolah-Sekolah Tamil Malaysia (MGB)
- Pertubuhan Kebajikan dan Amal India Baru Malaysia (PERINNBAM)
- Society of Rising Individuals (SRI)
- Johore Intellectual Graduates Association (JIGRADS)
- Persatuan Bahasa Tamil, Universiti Pendidikan Sultan Idris (UPSI)

The funding partners are:

- Socio-Economic Development of Indian Community (SEDIC)
- Yayasan MyNadi
- National Land Finance Corporate Society (NLFCS)
- Malaysian Indian Visionery Association (MIVA)

The organisation structure is as follows:

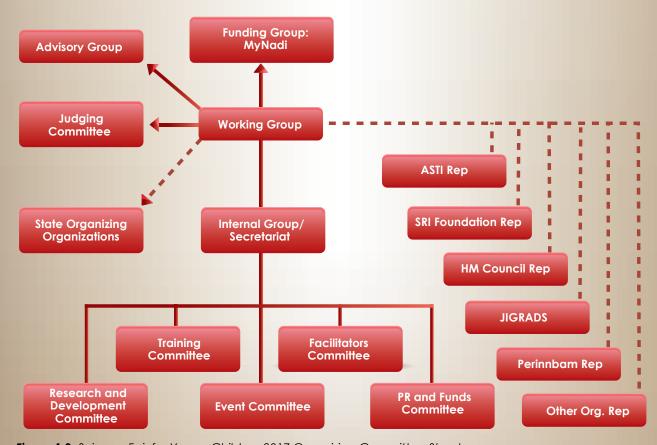


Figure 1.2: Science Fair for Young Children 2017 Organising Committee Structure

Groups	Members	Job Function
Advisory Council	Advisors: Dr.Mohd Yunus Mohd Yasin Dr.Subramaniam Gurusamy Mr.Nadarajah Kalimuthu Maj.Dr. Vikneswaran Munikanan Mr.Saravanan Vimalanathan Mr.Suresh Ramasamy	 Decision Making at policy level Meets twice a Year Takes over the SFYC after the Working Group Committee dissolves
Working Group Committee (WGC)	 Partner organizations representatives Project Advisor(s) Project Director (chairman) 	 Policy making for SFYC Event Decision making of operational level Financial approval Delegate and monitor the project Guide the Internal Group Meet every fortnight
SFYC Secretariat	 Project Advisor(s) Project Director Project Officer 	 Plan and implement SFYC 2017 Prepare weekly progress reports of each department for the Working Group Committee's consideration Meet every week Provide all administrative support for SFYC. Organize Working Group Committee and Internal Group meetings, prepare minutes and reports Co-ordinate with Facilitators and Judging Committee, and provide assistance needed Provide information on the progress to relevant groups SFYC Project Officers report to the Project Director Core coordinator in the implementation of the projects
Judges Committee	 Dr. Subramaniam Gurusamy Mr. Suresh Ramasamy National Level Chief Judges Zone Level Science Fair Chief Judges 	 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

Groups	Members	Job Function
School Level Science Fair Committee	Volunteers Chaired By the Project Advisor	 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.
Zone Level Science Fair Organising Committee	 Zone Level Partner Organisations Coordinators 	 The Zone 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 Zone 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 Zone committees are required to recruit sufficient volunteers to serve as facilitators and organising team members. The Zone 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 Zone Committee's HQ). The acceptance of their request is at the full discretion of the Working Group Committee.
Facilitators Committees	TeachersUniversity studentsParents	Help out in organizing School Level, Zone Level and National Level Science Fair.

Table 1.3: Responsibilities of Each Group

1.7 ACHIEVEMENTS OF THE PROJECT

Below is the progress of Science Fair since 2007.

Year	Zones	No. of Schools Participated	No. of Teams Participated	No. of Students Participated
2007	Selangor & Wilayah Persekutuan Only	44	49	49 x 5 Students=245
2008	National Level (6 Zones)	180	197	197 x 5 Students = 985
2009	National Level (6 Zones)	188	207	207 x 5 Students =1,035
2010	National Level (9 Zones)	263	285	285 x 5 Students =1,425
2011	National Level (9 Zones)	274	274	274 x 5 Students =1,370
2012	National Level (9 Zones)	269	269	269 x 5 Students =1,345
2013	National Level (9 Zones)	282	282	282 x 5 Students =1,410
2014	National Level (9 Zones)	261	261	261 x 5 Students = 1,305
2015	National Level (9 Zones)	221	221	221 x 5 Students =1,105
2016	National Level (9 Zones)	258	258	258 x 5 Students = 1,290
2017	National Level (9 Zones)	326	370	370 x 5 students = 1,850

Table 1.4: Progress of Science Fair since 2007

In 2017, the Zone Level Science Fair was held in 10 zones. A total of 326 Tamil schools with 370 teams participated in the Zone Level Science Fair. From the 370 teams, 68 best teams were shortlisted from Category A & Category B to participate in the National Level Science Fair 2017 that was held at German Malaysian Institute, Bangi on 12th and 13th August 2017 (Saturday & Sunday).

It was noted that the students who qualified from the Zone Level Science Fairs had improved their presentation and public communication skills for their presentation at the National Level Science Fair. The students brought Science to life through their hands-on experiments as they tackled investigative questions which helped them to develop and demonstrate their interest and knowledge in science enquiring. They were able to explain their findings to the judges and members of public confidently.

The students who participated in SFYC also showed improvements in their thinking process and were noticeable in many areas, among them:

- students solved the problems by 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 co-operatively as a team.
- 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.

SCIENCE FAIR ACHIEVEMENT – 2017

Competition	School Name	Achievement (Medal)			
Young Inventors Competition, YIC	SJK (T) Buluh Akar	Silver medal (overall)Gold award (overall) from the Philippines.			
The Malaysia Open Vex Championship 2017	SJK (T) Pulau Sebang	Participated in the competition which was open for primary school, secondary school and university students.			
Malaysian Technology Expo 2017	Expo 2017				
International Invention,	SJK (T) Kangkar Pulai	1 gold and 1 silver			
Innovation and Design	SJK (T) Jalan Yahya Awal	2 bronze			
Competition Johor 2017	SJK (T) Mentakab	1 bronze			
(IIID Johor 2017)	SJK (T) Taman Tun Aminah	1 bronze			
Innovation Design Research International Symposium (IDRIS 2017)	SJK (T) Nibong Tebal	gold			
Penang Invention, Innovation and Design Research platform 2017	SJK (T) Ringlet	gold medalsilver medalbronze medal			
Innovative Research, Invention and Application Expo 2017 (I-Ria 2017) Competition		2 Gold medal1 Silver medal1 Bronze medal			
	SJK (T) Kajang	won 6 golds, 2 silvers and 3 bronzes			
	SJK (T) Ramakrishna	• 2 golds			
ITEX 2017	SJK (T) Jalan Yahya Awal	 won one gold, one silver and 2 bronzes 			
	SJK (T) Jenjarum	one gold			
	SJK (T) Ladang Kinrara	one gold			
International Eureka Innovation Exhibition 2017	SJK (T) Ramakrishna, SJK (T) Arumugam Pillai and SJK (T) Ladang Pyre	won medals			
Pahang State Robotic Competition	SJK (T) Ringlet	was awarded as Pahang State Robotic Competition Champion and won best mentor award. The rest of SJK (T) Ringlet team won 4th, 5th and 8th place respectively.			
	SJK (T) Mentakab	won third place in State level robotic competition and also won best innovation award.			
2017 International Invention Innovation Competition (iCAN 2017)	SJK (T) Mentakab	won silver medal at the iCAN 2017 Preliminary Round and was a finalist eligible to attend iCAN 2017 Finalists' Exhibition & Award Ceremony which took place on 26th August 2017 in Canada.			

Competition	School Name	Achievement (Medal)			
National Robotics Competition 2017	SJK (T) Ramakrishna	won Gold & Bronze in Robotic category Jen-2 Football			
	SJK (T) Ringlet (4 teams)	won 1 Gold, 2 Silver and 1 Bronze			
	SJK (T) Mentakab	1 Gold			
iidex 2017	SJK (T) Ladang Blue Valley	1 Gold			
	SJK (T) Ladang Shum Yip Leong	1 Silver			
	SJK (T) Ladang Bee Yong	1 Silver			
	SJK (T) Kajang	won 5 golds and 1 silver			
	SJK (T) Puchong	1 gold			
	SJK (T) Taman Tun Aminah	1 gold			
IYIA Jakarta 2017	SJK (T) Mentakab	1 gold			
THA Sakaria 2017	SJK (T) Masai	1 gold			
	SJK (T) Jenjarum	1 gold			
	SJK (T) Kajang and SJK (T) Puchong	both won special award at the competition			
TVET Innovation Competition	SJK (T) Kangkar Pulai	won silver medal for their invention "Smart Usage of Recycle Plastic Bags"			
International Kuala	SJK (T) Jalan Yahya Awal	won 5 bronzes			
Lumpur Engineering	SJK (T) Kinrara	won 1 gold and 1 bronze			
Science Fair 2017	SJK (T) Pasir Gudang	• won 1 gold			
Melaka International Intellectual Exposition 2017	SJK (T) Ringlet	 won 2 Emerald Award which was for Inovation and for Design Ringlet won two gold awards and a silver award for international innovation products 			
	SJK (T) Taman Tun Aminah	won 1 gold, 1 silver and 1 bronze			





2 School Level Science Fair 2017

2.1 INTRODUCTION

There are three 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.
- Science advances critical thinking, problem solving and creativity in early learners.

The School Level Science Fair (SLSF) was initially introduced in Tamil schools back in 2009 as a pilot project in Johor. The project was conducted in all 70 Tamil Schools in Johor and it was a great success.

With the pilot project results, the SFYC Advisory Council concluded that School Level Science Fair create a better impact and more students nationwide would benefit from it. Thus, the council decided that the School Level Science Fair has to be introduced in all states throughout Malaysia. As a result, the council undertook the task of conducting and implementing the fair in every zone. The fair was first implemented nationally by a special school level science fair committee chaired by the founder of SFYC Dr. Mohamed Yunus Yasin.

In 2010, each school was provided up to RM300 to assist them to organise School Level Science Fair in their school and as a result 98 schools staged such fairs.

Ву 2011, after receiving positive feedback, SLSF increased its target of participation to at least 250 schools by having national level roadshows in 9 zones across the nation. The response from the participating schools overwhelming and beyond expectations. A total of 264 schools successfully organised the fair in their respective schools. In 2012, we set the bar even higher by targeting 325 schools. But 365 schools successfully staged the fairs exceeding our target. Meanwhile in 2013, a total of 423 schools held School Level Science Fair, averaging more than 1 fair per day for 2013.

For 2017, a compiled CD of SLSF and ZLSF was prepared with sample proposals, forms, experiments, sample reports, guidebook for parents & teachers and modules to be used by participating schools.

2.2 SEED FUNDING

In 2017, each school that confirmed its participation by sending their proposal to the zone coordinators were given prizes such as medals, certificates and story books. Each school was given 100 medals, books and certificates of participation for their students.

The schools were given from February 2017 until September 2017 to organise School Level Science Fair in their school. This year a total of 305 schools out of 524 Tamil schools organised School Level Science Fairs.

2.3 Implementation of School Level Science Fair 2017

This year the School Level Science Fair for Young Children started in February 2017. Just like in the years before, the organising committee has decided to combine both the School Level & Zone Level Science Fair Teachers Training. An official invitation letter inviting teachers and headmasters/headmistress to participate in School Level & Zone Level Science Fair Teacher's Trainings was sent by each zone coordinator.

The details of participation of schools in School Level Science Fairs in the past years are shown in the table below.

Zor	ne State		Total Schools							
201	ne sidie	2010	2011	2012	2013	2014	2015	2016	2017	
1	Kedah & Perlis	-	46	43	56	32	45	55	40	
2	2 Penang	-	-	14	20	26	28	22	24	
3	B Perak	-	45	73	93	80	50	40	45	
4&	Selangor & W. Persekutuan	11	36	59	87	80	50	40	30	
6	Negeri Sembilan	-	20	46	42	40	55	35	45	
7	7 Melaka	-	21	21	21	17	12	16	21	
8	3 Johor	70	70	70	72	68	70	70	70	
9	Pahang & Kelantan	-	18	12	32	25	32	30	30	
	Total Teams	82	256	338	423	338	327	308	305	

Table 2.1: Schools Participation in SLSF from 2010 till 2017



Zone Level Science Fair 2017

3.1 INTRODUCTION

Over the years, the participation of schools in the Zone Level Science Fair has been on the rise. The organisers initially, divided the nation into 6 zones. In 2010, due to experience gained by the organisers on how to run the Zone Level Science Fair and the need to give more schools the opportunity to participate in the fair, the organising committee pre-designated the zones and increased the number of zones from six to nine. We have maintained these zoning criteria since then and it has proven to be optimal by organisers and acceptable to schools.

In order to accommodate the increased number of schools participating in the competition, another change was made to the Zone Level Science Fair in 2011. The number of teams from each school allowed to participate was changed. Previously up to 2 teams from each school were allowed to take part in the competition. Change was made to allow only 1 team from a school to take part in the competition. This change, however, did not cause a drastic reduction in the number of teams participating because the number of schools that took part had increased. In fact, in 2013 a total of 282 teams, and 261 teams in 2014, participated nationwide. In 2015, 221 schools participated in Zone Level Science Fair and in 2016 it increased to 258 schools. In 2017, a total of 326 schools took part in Zone Level Science Fair, a drastic increase in the number of schools.

Zone	2008 and 2009	2010 - 2017
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	Kuala Lumpur, Wilayah Persekutuan
6	Pahang & Kelantan	Negeri Sembilan
7	-	Melaka
8	-	Johor
9	-	Pahang and Kelantan

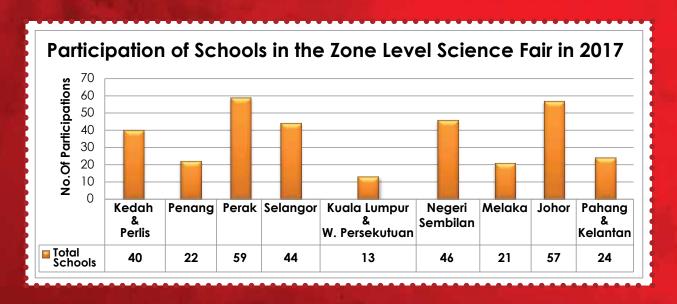
Table 3.1: Comparison of Zone Categories

Zone	State	Total Schools		
ZONE	Sittle	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 3.2: Participation of Schools in Zone Level Science Fair in 2008 and 2009

Zone	State	Total Schools						
Zone State		2010	2011	2012	2013	2014	2016	2017
1	Kedah & Perlis	17	41	34	52	49	47	40
2	Pulau Pinang	16	16	19	14	18	14	22
3	Perak	50	47	53	56	48	38	59
4	Selangor	54	56	35	43	9	31	44
5	W.Persekutuan, Kuala Lumpur	14	13	10	10	19	12	13
6	Negeri Sembilan	18	18	30	30	34	30	46
7	Melaka	21	21	21	21	10	19	21
8	Johor	59	45	52	37	49	38	57
9	Pahang & Kelantan	14	17	15	19	25	29	24
TOTAL :			274	269	282	261	258	326

Table 3.3: Participation of Schools in the Zone Level Science Fair in 2010 - 2017





The Zone Level Science Fairs were held in April and May 2017. The shortlisted schools for the National Level Science Fair were given sufficient time to improvise their experiment. The details of the Zone Level Science Fairs are shown in the table below.

Zone ZLSF Date		Venue Details		
Kedah/Perlis	13/5/2017	University Insaniah ,Kuala Ketil, Kedah		
Penang	13/5/2017	Dewan Utama Peperiksaan, USM		
Perak	29/4/2017	SJK (C) Chong Min, Teluk Intan, Perak		
reiak	13/5/2017	Dewan Kampung Jambu, Taiping, Perak		
Kuala Lumpur W.P & Selangor	RDA Banguet Hall, Sri Damansara, Selang			
Negri Sembilan	13/5/2017	Nilai Square Commercial Centre, Negri Sembilan,		
Melaka	13/5/2017	SMK Seri Pengkalan, Alor Gajah, Melaka		
Johor	13/5/2017	Dewan Serbaguna Johor Jaya, JB		
Pahang 30/4/2017		SMK Hwa Lian, Mentakab, Pahang		

Table 3.4: Zone Level Science Fair 2017 Dates and Venue

The details of the team's participation at each zone are shown below.

Zone	State	Total Schools				
1	Kedah & Perlis	46				
2	Penang	27				
3	Perak	63				
4	Selangor	51				
5	Wilayah Persekutuan Kuala Lumpur	17				
6	Negeri Sembilan	52				
7	Melaka	25				
8	Johor	63				
9	Pahang & Kelantan	26				
	Total 370					

Table 3.5: Number of Teams Participating in Zone Level Science Fair 2017



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 help them implement SLSF, ZLSF and SFYC effectively and efficiently. The Working Group Committee (WGC) and a group of professionals prepared this folder for the first time in 2008. The following year, the folder was revised, reviewed and translated into English and Tamil by the Working Group Committee (WGC) and Secretariat based on comments from teachers, students, organisers and judges. In 2014, the folder was revised again, where new partially guided experiments were added and distributed in the form of CDs to all the participating schools during the Zone Level Teachers Training. Some new schools were also given the hardcopy folder / file. The content of the folder is as follows:

i. How to use this folder

Explains how the folder should be used by each group / stakeholder.

ii. Science Projects, Scientific Methods and Science Fair

Simple explanation on what a science project, scientific method and science fair is.

iii. Organisers Manual

Gives an explanation on how to organise a science fair. Examples on holding it in schools, classrooms, organisations, etc.

iv. Teachers Manual

Explains the roles and responsibilities of the science teachers to guide the participants of the fair.

v. Students Manual

Helps the students to develop their project and provides the format for writing a report.

vi. Parents Manual

Guides the participant's parents on how to help motivate their child to perform well in SFYC.

vii. Facilitators Manual

Gives a guideline to the facilitators on how to facilitate so that they can help teachers and students during school visits.

viii. Judges Manual

Gives proper guidelines on how to judge a science project effectively. This manual has been improved considerably after 2013's feedback on the judging criteria.

ix. Scientific Paper Presentation

Guidelines for Scientific Paper Presentation preparation for the 60 eligible teams for National Level Science Fair.

x. Experiments Questions

There were 20 experiments for Category A, and 15 experiments for Category B given in English and Tamil to be chosen by schools.

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

4.1.2 CD PRODUCTION

Previously, all the materials in the SFYC folder were given out to schools in hardcopy format, but for the past six years the content of the folder was made into CDs and were given to all the participating schools during the Zone Level Teachers' Training. However, since the School Level & Zone Level Teachers Trainings had been combined since 2014, the content of the CD had 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 CD is shown below:

School Level Science Fair

- i. SLSF 2017 Booklet
- ii. Experiment for Students (Standard 1 5)
- iii. Teachers' Guide
- iv. Parents' Guide
- v. Proposal Format
- vi. Report Format
- vii. Judging Form
- viii. Scrapbook Competition Evaluation Form
- ix. Additional Activities for Students and Visitors
- x. Additional Materials such as picture gallery, motivational recordings
- xi. SLSF Checklist

Zone Level Science Fair

- i. Science Fair Folder Content (PDF Copy)
- ii. ZLSF Experiment titles (Doc & PDF Copy)
- iii. Sample Research Paper of NSFYC 2016 (PDF Copy)
- iv. Booth Set-Up and Preparation of NSFYC 2016(Video)
- v. Photo Gallery of NSFYC 2016

4.1.3 TRAINING FOR TRAINERS

Training for Trainers was conducted by Dr. Mohamed Yunus Mohamed Yasin and Dr. Subramaniam Gurusamy, Advisors of Science Fair for Young Children. All the 9 zones were represented by the zones' Chief Judges and a representative of the organizing committee. The participants were briefed on SLSF, ZLSF, Judging Methodology and Requirements, ZLSF Experiments and the content of the SFYC CD. They were also briefed by Dr. Subramaniam on the agenda and the information need to be delivered to the teachers during the Teachers' Training session. Below is the agenda for Teachers Training Session:

Time	Details	
8.30 am - 9.00 am	Arrival and Registration	
9.00 am - 9.05 am	Welcoming Speech by Organizer	
9.05 am - 9.10 am	Speech by MGB Chairman	
9.10 am - 9.20 am	Opening Ceremony and Speech By Guest of Honour Pengelola Sekolah Tamil Jabatan Pendidikan Negeri	
9.20 am - 9.45 am	Presentation 1 Introduction of SFYC by Organizer	
9.45 am - 10.30 am	Presentation 2 SLSF 2017 Introduction and Overview	
10.30 am - 11.00 am	Tea Break	
11.00 am - 12.00 pm	Presentation 3Judging Methodology and RequirementsJudging Procedure	
12.00 pm - 1.15 pm	Presentation 4 ZLSF 2017 Experiment and CD Content CD Content Experiments Presentation 5 Proposal Writing	
12.15 pm - 1.30 pm	Evaluation of School Level Science Fair	
1.30 pm	Certificate Presentation & Lunch.	

Table 4.1: SLSF & ZLSF Teachers Training Agenda



4.2 SCHOOL LEVEL AND ZONE LEVEL TEACHERS TRAINING

Just as in year 2014, this year's School Level & Zone Level Science Fair Teachers Trainings were combined and conducted as a half-day session. The training was conducted in all the 9 zones on different dates. The session was facilitated by the Organizing Committee together with the facilitators.

The respective zone coordinators arranged the training sessions and the training sessions were 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. Below are the details of all the School Level and Zone Level training sessions that were conducted.

Zone	State	Training Dates	Training Venue	No. of Partcipants
1	Kedah & Perlis	11.03.2017	Pejabat Pendidikan Daerah Kuala Muda	55 Schools 62 Teachers
2	Penang	02.02.2017	USM, Penang	28 Schools 25 HMs ,26 Teachers
3	Perak	25.02.2017	SJK (T) Kg. Simee, Ipoh	87 Schools, 115 Teachers
4 & 5	KL & Selangor	25.02.2017	Auditorium Hall, Sivananda Ashram Batu Caves	73 Schools
6	Negeri Sembilan	11.03.2017	SJK (T) Bukit Bertam Auditorium New School	57 Schools 84 Teachers
7	Melaka	25.02.2017	Krishna Balaram Centre, Ayer Keroh	21 Schools, 45 Teachers
8	Johor	25.02.2017	UTHM-Dewan Kuliyah 1	67 Schools, 154 Teachers
9	Pahang	18.02.2017	SJK (T) Mentakab Temerloh Pahang	29 schools, 60 Teachers
	415 Schools			

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



5 National Science Fair for Young Children 2017

OVERVIEW

The National Science Fair for Young Children 2017 was held as a two (2) day event which started on 12th August 2017, Saturday morning at 7.00 am and ended on 13th August 2017 at 4.00 pm. The event was a great success. The details of the event are as follows:

Date: 12th and 13th August 2017 (Saturday and Sunday) Venue: German Malaysian Institute, Bangi, Selangor.

A committee was set up to organise the two (2) days National Science Fair for Young Children 2017 a month prior to the event by the Working Group Committee. The Event Committee was led by Ms. Umahsankariah Muthunaikar. A total of 16 departments were formed and tasks were delegated to each Head of Department (HOD). The list of HODs is shown in Table 5.1 below.

No	Name	Position
1	Mr. Jayashri Selvendran J Thanapal	Project Director
2	Ms. Umahsankariah Muthunaikar	Head of Event Committee
3	Ms. Vanitha Vasu	Head of Volunteers Management
4	Mr. Sakthivel Ganesan	Head of Safety & Hall Management
5	Mr. Jaganath Rajaendran	Head of Crowd Management
6	Ms. Noorul Huda Hassan	Judging & Conference
7	Dr. Archana Buthiyappan	Stage & Prizes Management
8	Ms. Dharisinee Jegathisan	F&B Management
9	Mr. Kumaresan Ramakrisnan	Media Management
10	Ms. Yugeswari Krishnan	Press Management
11	Mr. Sivaraj Arumugam Mr. Puvaniswaran Thangavelu	Traffic, Transportation & Security
12	Ms. Dharisinee Jegathisan	Ushering
13	Ms. Caroline Maria Iridianathan	Survey
14	Ms. Nagananthini Paramasivan	Registration, Games & Quizzes
15	Mr. Mohamed Hassan Habibu Rahiman	Public Relation

Table 5.1: List of Heads of Departments for the National Science Fair for Young Children 2017

The NSFYC was assisted by 33 volunteers from Universiti Pendidikan Sultan Ismail (UPSI) and Manipal Medical College, Melaka. The various job functions for the event were well coordinated and integrated by the volunteers resulting in a smooth, seamless, well run two (2) days event. The Head of Event Committee and the HODs executed the tasks well together with the volunteers to ensure those participating in and visiting the fair could do so easily and were provided with all the necessary assistance needed.

The events were coordinated as follows:

12th August 2017, Saturday

The event began on 12th August 2017 with the Registration. Registration started at 7.00 am till 9.00 am. A goodie bag, containing T-shirt, Tag, Guidebook, Souvenir Book, 2016 Science Fair for Young Children Report, 2015 ASTI Annual Report and 2016 ASTI Annual Report, was given to each school during registration. Each school was given token for transportation and accommodation on the second day of the event. Next was the Hands-On Experiments session from 9.00 am till 11.00 am. It was compulsory for all the selected 68 schools to participate. Students were given questions and apparatus to carry out an experiment within the 2 hours.

Teachers Sharing Session was held from 9.30 am to 4.30 pm. A few speakers were invited to share their knowledge during the session. Mr. Rohn Rajan gave an activity based talk and Dr. Subramaniam Gurusamy from ASTI gave a talk on 21st Century Education. Judging Sharing Session was conducted by National Chief Judge, Mr. Rajeswara Rao. In the Judging Sharing Session Mr. Rajeswara Rao explained the judging criteria for the Scientific Paper Presentation, Booth Judging and Hands-On Experiment. A discussion was also held with ASTI. The session ended by giving out certificates to teachers and a set of books for each school.

The judges arrived at 7.00 am to get started with their judging task. They had their lunch break from 1.00 pm to 2.00 pm. After lunch break, the judging Session continued from 2.00 pm until 4.30 pm. Tea and refreshments were served at 5.00 pm.

The Opening Ceremony began at 4.30 pm. The guest of honour for the opening ceremony was Dr. Mohamed Yunus Yasin, President of ASTI, Dr. Subramaniam Gurusamy, Vice President of ASTI, Mejar Dr. Vikneswaran Munikanan, Treasurer of ASTI, Mr. Selvendran J. Thanapal, Project Director of SFYC 2017, State PST & MGB Chairmans and State Coordinators. The Welcoming Speech was given by Mr. Selvendran J.Thanapal. SFYC Mascot, Arivan, was invited to place the Challenge Trophy on the stage. After the opening ceremony, Scientific Paper Presentation began at 5.30pm till 7.00pm. The 5 shortlisted schools did their presentation. Other schools were allowed to watch the presentation. During this time PST – MGB Forum was held. The PST – MGB Forum is the discussion on the current and the future Science Fair.

13th August 2017, Sunday

The second day of NSFYC began at 8.00 am with breakfast. Breakfast was from 8.00 am till 9.00 am. After breakfast was the 2nd Round Judging session. It was held from 9.00 am until 11.00 am. Public viewing was held simultaneously from 9.00 am to 12.30 pm. Lunch was served from 12.00 noon till 1.00 pm for the participants.

Closing & Prize Giving Ceremony began at 2.00 pm and ended at 3.45 pm. There were 3 categories of winners: Innovation Category, Conference Paper Presentation and

NSFYC Winners. All categories were judged by capable judges. The top 3 winners of the Innovation Category received certificates and cash prizes worth RM700, RM500 and RM300 respectively. The top 3 winners of the Conference Paper Presentation also received certificates and cash prize of RM500, RM400 and RM300 respectively. The Platinum winner for Category B received a trophy, certificates and cash prize of RM2,000. The 5 Gold winners received trophy, certificates and cash prize of RM1,500. Meanwhile the Silver and Bronze winners took home trophy and certificates. All the NSFY participants went back home with medals, certificate of participation and T-shirts as souvenir. The judges were given certificates and goodie bags. The volunteers were also given certificates and T-shirts. Teachers were given certificates and T-shirts.

The list of NSFYC 2017 winners is as follows:

Category A – Gold Award

SJK (T) Port Dickson

Category B – Platinum Award

SJK (T) Kinrara

Category B - Gold Award

SJK (T) Nilai

SJK (T) Permatang Tinggi SJK (T) Taman Permata SJK (T) Permas Jaya

Innovation Challenge

Champion :SJK (T) Taman Tun Aminah

1st Runner Up : SJK (T) Permas Jaya

2nd Runner Up: SJK (T) Permatang Tinggi

Scientific Paper Presentation

Champion: SJK (T) Tun Aminah1st Runner Up: SJK (T) Taman Permata2nd Runner Up: SJK (T) Permas Jaya



Research and Development Department

6.1 EXPERIMENTS

The experiments were developed by the Judging R&D Department of ASTI. A team comprising professionals from various fields was formed. They developed a list of partially guided experiments that consisted of 35 experimental titles of Category A & B. All the experiments were then analyzed for their relevance, cost, applicability, difficulty, material availability and safety. The core judges and advisors of SFYC will then discuss and finalise these experiments. Then, the finalized experiments were sent for translation into Tamil language, and once translated the questions were forwarded to all schools. The list of experiments is attached in Appendix C.

6.2 SURVEYS

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

- I. School & 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
- V. Questionnaire for Teachers on Seminar / Workshop

The data collected from the surveys will be used to improvise and upgrade our future projects. A separate R&D report will be prepared based on these surveys.



Public Relations

For Science Fair for Young Children 2017, 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 radio, facebook, live video and national 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. The Public Relations activities that were carried out to promote the Science Fair for Young Children 2017 are shown below:

1. SFYC Soft Launching

- Science Fair for Young Children 2017 Soft Launching was officiated by Datuk Dr Jeyaindran Tan Sri Sinnadurai, President of MyNadi Foundation 21st January 2017 at Grand Seasons Hotel, Kuala Lumpur.
- The Science Fair for Young Children 2017 Soft Launching was also published in Tamil newspaper, Thai Molhzi.

2. School Level Science Fair 2017

- Press release for School Level Teachers' Training were published in Tamil media newspapers such as Malaysia Nanban, Thai Molhzi and Makkal Osai
- It was also promoted via SFYC Facebook & Website.

3. Zone Level Science Fair 2017

- Press release for Zone Level Teachers Training and Zone Level Science Fair by zone.
- ASTI Pamphlets were distributed to the coordinators for them to promote the Fair in their respective zones.
- Dissemination of information via SFYC & ASTI Websites and Newsletter.
- Dissemination of information via SFYC & ASTI Facebook.

4. National Level Science Fair 2017

- Pamphlets were sent to VIPs, Guests, Funders and all well-wishers to provide information about the NSFYC.
- NSFYC 2017 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 2017.
- Dissemination of information via SFYC & ASTI Website and Newsletter.
- Dissemination of information via SFYC & ASTI Facebook.
- The National Science Fair for Young Children 2017 was published in Makkal Osai,
 The Malaysia Nanban, Tamil Nesan, Thaimoli and RTM 2.

Post-National Level Science Fair 2017

THE MALAYSIA OPEN VEX CHAMPIONSHIP 2017

Youth on Unity, Multimedia University (MMU) and Centillion Robotics organised The Malaysia Open VEX Championship 2017 (MOVC2017) at Multimedia University – Melaka (MMU – Melaka) on February 17-19 2017. The competition is open for primary school, secondary school and university students. These students will compete in VEX IQ Challenge, VEX Robotics Competition and VEX U competition, with three full days of robotics matches hosted in MMU Melaka. A total of 50 students from 5 schools were selected to participate in the CSR event. The schools involved included SJKC Wen Hua in Batu Berendam, SJKC Keh Seng in Bukit Baru, SJK (T) Pulau Sebang in Tampin, SK Batu Berendam 2 in Batu Berendam, and SK Paya Rumput in Taman Seri Paya Rumput.

Malaysian Technology Expo 2017

Two Inventors groups of students from SJK (T) Jalan Yahya Awal participated in Malaysian Technology Expo 2017 at PWTC from 16 till 18 February 2017. Mitrashree d/o Suresh, Vimalanayagi a/p Ravi and Srileysmhshri a/p Kumaran came up with the invention titled "3D BOB (Basic Operation Board)". Meanwhile Mugilan a/l Kovalan, Thivagar a/l Parameswaran and Selian a/l Balan came up with the invention titled "Convenience car head restraint". The students managed to win 2 silver medals in the International Asian Youth Innovation category.

International Invention, Innovation and Design Competition Johor 2017 (IIID Johor 2017)

SJK (T) Kangkar Pulai won 1 gold and 1 silver, SJK (T) Jalan Yahya Awal won 2 bronze, SJK (T) Mentakap won 1 bronze and SJK (T) Taman Tun Aminah won 1 bronze at the International Invention, Innovation and Design Competition Johor (IIID 2017).

Innovation Design Research International Symposium (IDRIS 2017)

SJK (T) Nibong Tebal won GOLD in the Innovation Design Research International Symposium (IDRIS 2017).

Penang Invention, Innovation and Design Research platform 2017

SJK (T) Ringlet won Gold Medal, a Silver Medal and a Bronze Medal in Penang's Invention, Innovation and Design Research platform 2017.



Innovative Research, Invention and Application Expo 2017 (I-Ria 2017) Competition SJK (T) Ringlet won 2 Gold medal, 1 Silver medal and 1 Bronze medal at Innovative Research, Invention and Application Expo 2017 (I-Ria 2017) competition held at UUM Sintok, Kedah.

International Science Drama Competition 2017

SK Bandar Baru Bangi won the second place in the primary school category at International Science Drama Competition held at Science Centre Singapore. Two actresses from SK Bandar Baru Bangi, Cahaya Kaseh and Lyra Kosai also jointly won the Outstanding Performers award. SK Bandar Baru Bangi was one of the top 10 favourite teams selected out of 20 entries and they eventually emerged as winners in the Malaysian Finals that was recently held on 13 May 2017. ASTI as one of the partners helped out in the judging panel and also to reach out to schools.

ITEX 2017

At the ITEX 2017, SJK (T) Kajang won 6 golds, 2 silvers and 3 bronzes; SJK (T) Ramakrishna won 2 golds; SJK (T) Jalan Yahya Awal won one gold, one silver and 2 bronzes; SJK (T) Jenjarum won one gold and SJK (T) Ladang Kinrara won one gold.

Eureka Innovation Exhibition 2017

SJK (T) Ramakrishna, SJK (T) Arumugam Pillai and SJK (T) Ladang Pyre won medals in International Eureka Innovation Exhibition 2017.

Pahang State Robotic Competition

SJK (T) Ringlet was awarded as Pahang State Robotic Competition Champion and won best mentor award. The rest of SJK (T) Ringlet team won 4th, 5th and 8th place respectively. SJK (T) Mentakab won third place in State level robotic competition and also won best innovation award.

2017 International Invention Innovation Competition (iCAN 2017)

SJK (T) Mentakab won silver medal at the iCAN 2017 Preliminary Round and is a finalist eligible to attend iCAN 2017 Finalists' Exhibition & Award Ceremony which will take place on 26th August 2017 in Canada.

National Robotics Competition 2017

SJK(T) Ramakrishna won Gold & Bronze in Robotic category Jen-2 Football.

iidex 2017

A total of 5 schools from Pahang participated in iidex 2017. Four teams from SJK (T) Ringlet participated in the competition. They won 1 Gold, 2 Silver and 1 Bronze medals. Meanwhile, SJK (T) Mentakab won 1 Gold, SJK (T) Ladang Blue Valley won 1 Gold, SJK (T) Ladang Shum Yip Leong won 1 Silver and SJK (T) Ladang Bee Yong won 1 Silver medal respectively.

IYIA Jakarta 2017

Eleven Teams from 6 Tamil Schools have made excellent achievements by winning 10 golds, 1 silver and 2 special awards in International Young Inventors Award, Indonesia (IYIA 2017). SJK (T) Kajang won 5 golds and 1 silver medals, SJK (T) Puchong won 1 gold medal, SJK (T) Taman Tun Aminah won 1 gold medal, SJK (T) Mentakap won 1 gold medal, SJK (T) Mentakap won 1 gold medal, SJK (T) Jenjarum also won 1 gold medal at the competition. Meanwhile, SJK (T) Kajang and SJK (T) Puchong both won special award at the competition.

TVET Innovation Competition

SJK (T) Kangkar Pulai students won silver medal for their invention "Smart Usage of Recycle Plastic Bags" in TVET Innovation Competition at University Malaysia Pahang

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

8 Funding

The total cost for the event was estimated to be RM675,967.25 to which ASTI Committee had committed.

The Science Fair for Young Children 2017, together with others, were principally supported and funded by various NGOs and corporations such as SEDIC, Azman Printing, NLFCS and MyNadi Foundation. The summary of Funding for the Science Fair for Young Children 2017 is stated below:

No	Sponsor	Amount (RM)
1	SEDIC B/F from 2015	160,000.00
2	Undisclosed Generous Donor	100,000.00
3	MYNADI	100,000.00
4	Undisclosed Generous Donor	100,000.00
5	Mr. Suresh Emmanuel	50,000.00
6	Firdaus Press Sdn Bhd	20,000.00
7	NLFCS	20,000.00
8	Percetakan Azman Sdn Bhd	17,000.00
	Total	567,000.00

Table 8.1: Summary of Funding for the Science Fair for Young Children 2017

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

In return for their generosity in cash or in-kind, all corporate sponsors had their company logo included in the SFYC 2017 promotional material such as the programme book, multimedia and report book.

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. These judges were selected based on their educational background, occupational background and knowledge of science. Therefore, most of the judges selected were 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 from 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. Chief Judges were selected for each zone to make the process more efficient. The Zone Chief Judges list is as stated below:

Zone	State	Chief Judges
1	Kedah & Perlis	Dr. Jimmy Nelson
2	Penang	Mr.Kalaiselvam
3	Perak	Mr.Satiyah Kumaran
4 & 5	Selangor & Kuala Lumpur, W.P.	Mr.Rajeswara Rao
6	Negeri Sembilan	Ms.Kalai Selvi Ettikan
7	Melaka	Mr.Vikneswaran Rao
8	Johor	Mr. Mani Maran Subban
9	Pahang & Kelantan	Assoc.Prof.Dr.Gaanthy Pragas Maniam

Table 9.1: Zone Chief Judges

The Chief Judges meeting was held on 12th November 2016 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 experiments developed for Zone Level Science Fair.
- finalize the 35 experiments for Categories A & B for 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 assigned to conduct 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:

Zone	Venue	Trainer
Kedah	Pejabat Pendidikan Daerah Kuala Muda	Mr.Saravanan
Penang	USM	Mr.Kalaiselvam
Perak	SJK (T) Kg. Simee, Ipoh	Mr.Satiyah Kumaran
Wilayah & Selangor	Auditorium Hall, Sivananda Ashram Batu Caves	Mr.Rajeswara Rao
Negeri Sembilan	SJK (T) Bukit Bertam Auditorium	Ms.Kalai Selvi
Melaka	Krishna Balaram Centre, Ayer Keroh	Mr.Vigneswara Rao
Johor	SJK (T) Taman Tun Aminah	Dr. Subramanian Gurusamy Mr. Suresh Ramasamy
Pahang	SJK (T) Mentakab Temerloh Pahang	Dr.Gaanthy

Table 9.2: Zone Level Judges Training

9.3 NATIONAL SCIENCE FAIR FOR YOUNG CHILDREN

9.3.1 Scientific Paper Presentation

The Scientific Paper Presentation was previously known as Research Paper/Conference Paper Presentation. The concept of the Scientific Paper Presentation is different from last year. Last year students had to write about the research conducted for their respective science project. This year for the Scientific Paper Presentation, students had to submit their written papers and also present their paper. The Scientific Paper Presentation is prepared in a standardised format.

All the schools that were selected for the final event were eligible to participate in the Scientific Paper Presentation category. The teams have to submit a 4-page paper on their experiment and findings. This year, 46 teams submitted their Scientific Paper. From these 46 teams, 5 teams were selected and they had to do their presentation. Out of these 5 teams, 3 teams were selected as winners for this category. A special team of judges that was formed reviewed and marked the papers. The marking was done by the judges a week before the event.

The objectives of the Scientific Paper Presentation are as follows:

- To cultivate the concept of research findings and sharing them with the other participants of the Fair in an academic manner.
- To provide an opportunity to write the research findings in an organised and systematic manner.
- The guidelines for the Scientific Paper Presentation are as follows:
- The Scientific Paper Presentation is open to all the selected 68 schools (from Zone Level Science Fair competition).
- The Scientific Paper Presentation should be written based on the experiment conducted at the Zone Level Science Fair for Young Children.
- The Scientific Paper Presentation can be in either Tamil or English.
- The school is required to submit the Scientific Paper Presentation first and the 5 schools that are shortlisted will have to do power point presentation.
- Central committee will select the best Scientific Paper Presentation 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 the 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 were arriving. Briefing started at 8.00 am and was conducted by Dr.Subramanian Gurusamy. He started by introducing 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 that, he announced the group leaders assigned for each group. Group leaders were chosen after having 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 11.00 am. All the judges were asked to have a look at all the booths first before going to their allocated booths. This was to give them an overall big picture of the participating teams at the event. The judges were assisted by one volunteer. The estimated time allocated for judging was 20 minutes per school; 15 minutes for Booth Judging and 5 minutes for Question and Answer session. All the scores were then tabulated and combined for submission to the National Chief Judges for finalizing.

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 for the Platinum and Gold Awards. The winning school names were then submitted to the Secretariat during the closing ceremony.

A few judges were tasked with marking for the Innovation Category. Innovation Category stands for the development of a new idea or a variation of an existing idea by students using innovative methods or devices for their experiments to help them get an accurate result. All judging team leaders were asked to identify the schools in their group that showed innovative in their projects. These schools were then assessed by the judges chosen for this category. A total of 3 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 National Chief Judge for the winner of the Innovation Category.

To round off the day of judging, after finalizing the marks, Mr. Rajeswara Rao thanked all the judges who had shown professionalism and commitment to ensure that all the 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 post-mortem 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 recommendations are below:

RECOMMENDATIONS FOR THE FUTURE (Judging)

- For 2nd round judging, time is limited to 5 minutes for each participating team to present their experiment in a simplified manner and another 5 minutes is allocated for Q & A session in order to get a faster result next year
- A team of photographers for the judging committee to take pictures or video shot of all the display of each participating team in orderly manner for further reference of the judges. Move video shooting for demo and presentation earlier.
- Have a judge's appreciation event to recognize the judges throughout Malaysia.

1. LOG BOOK

- For zone level participants, a lot of improvement needs to be done by schools; briefing
 on the requirements of a log book was already given to schools during the teacher's
 training workshop but many aspects were seen missing in the log books.
- For national level participants, participating schools had made well preparation for their log book; 10 out of 60 participating schools managed (17 %) to get full 15 marks for their log book
- Overall, log books still lack the following details:
 - 1. Suggestions and recommendations for their experiment
 - 2. Method of writing the procedure for the experiment conducted not in passive and past tense sentences
 - 3. Does not give the impression that genuine work has been carried out by the students
 - 4. Results were not well interpreted and discussed



2. REPORT BOOK

- For zone level participants, presentation can be improved further; briefing on the contents of a report book was already given to all the school teachers during the teacher's training session held in all zones
- For national level participants, overall presentation was good; 1 out of 60 participating schools (2 %) managed to get full 40 marks for their report book
- **Overall**, report books still lack the following aspects:
 - 1. Interpretation and discussion of results were not very well done
 - 2. 2nd hypothesis was not well explained in their report book
 - 3. The conclusion made was not very relevant with the hypothesis investigated and the results obtained from the experiment
 - 4. Introduction of the experiment was not clearly done; most schools introduced their school and the team members in this section
 - 5. Scientific principles involved in the experiment chosen were not identified and explained its relevance to the experiment conducted; this greatly affected the student's performance during demo and presentation and during the Q & A session
 - 6. Steps taken as the procedure of the experiment were not well established in passive and past tense sentences.

3. DISPLAY, DEMO AND PRESENTATION

- For zone level participants, a lot of improvements is needed; some schools came very well prepared but most schools came with just enough preparation for a simple presentation; a lot of motivation and energy required from organizing team to request schools for a better presentation.
 - presenting skills and demonstration of the experiments by students were excellent; Students able to grasped the experiment title well and were able to explain the scientific principles used in their experiment. No schools managed to score full marks for any of the 3 aspects

overall,

- 1. Students were all very confident when it came to presenting and demonstrating their experiments
- 2. Display was well organized and arranged
- Lack in the understanding of the scientific principles and concepts involved in their experiment among some of the students; this made them cannot relate the experiment with other things (cannot think out of the box).
- 4. Most of the titles has a lot of opportunities for innovation; many schools created something new and claimed it as their innovation; these creations did not help the teams to improvise their methodology in executing their experiment in a simplified manner to get better results than the conventional methods used. However, some schools did well in innovating the experiment.



4. HANDS ON EXPERIMENS

• Overall, the title given for the hands on experiment were very simple and all that was needed from the students, was to complete the experiment and answer the given questions within 2 hours. The idea was to test their knowledge and fundamental skills in performing the experiments. Some schools did very well, but there are still rooms for improvement. Efforts can be made to ensure students understand the basic fundamental principle to conduct an experiment.

5. SCIENTIFIC PAPER

• Overall, a total of 52 schools submitted their Scientific Paper and 5 schools were selected for the presentation. We saw very high quality scientific papers presented by these schools. This ensures that the students have developed the required skills associated with Journal Paper preparation. Though mistakes were made, we are sure it can be improved in future participations.

6. JUDGES

STRENGTH

- Talented & experienced judges, had previous exposure in science fair as zone level judges
- 2. An experts in their field, all judges were with science background
- 3. Judges were a mixture of teachers, lecturers, engineers, doctors etc
- 4. Committed judges
- 5. Focused on the facts, concepts and the scientific principles involved in the experiments

CONSTRAINTS

- Lack of time during cross judging process
- 2. Tired and exhausted

OPPORTUNITY

- 1. A good pool of judges in the country
- 2. Judges come from all over the country
- 3. Many volunteers

THREAT

Easily influenced by the "impressed" factor



Statement of Accounts SFYC 2017

Income Statement for the Project Period ended 30 October 2016

Income	Amount (RM)
SEDIC B/F	160,000.00
Undisclosed Generous Donor	100,000.00
MYNADI	100,000.00
Undisclosed Generous Donor	100,000.00
Mr. Suresh Emmanuel	50,000.00
Firdaus Press Sdn Bhd	20,000.00
NLFCS	20,000.00
Percetakan Azman Sdn Bhd	17,000.00
Total Income	567,000.00
Less: Expenditure DEVELOPMENT & TRAINING:	
Material Layout	2,977.50
Folder Softcopy DVD Duplication	2,226.00
Judges Brainstorm & Training Session	-
Coordinator PST & MGB Conference(2 Days)	12,860.00
Coordinator Interim Meeting	325.00
Experiment Development	3,500.00
Teachers Training for 3 Regions	2,966.50
Total	24,855.00
SCHOOL LEVEL FAIRS:	
School Level Seed Funding	97,387.00
Total	97,387.00
STATE LEVEL FAIRS:	
State Level Science Fair Seed Funding	124,700.00
State Coordinator Allowance	8,000.00
Total	132,700.00

Income	Amount (RM)
NATIONAL SCIENCE FAIR: 1 DAY	
Hands on Experiments & Judging Department	8,000.00
Events Department	8,000.00
National Science Fair Venue	25,673.80
Exhibition Booths	23,002.00
Prizes & Souvenirs	27,938.00
Insurance(For Students &Volunteers)	3,677.00
Accommodation(Judges & Volunteers)	21,045.00
Meals (Students & Volunteers)	26,190.00
Audio / Visual Rental	5,250.00
Bus Rental(State-Accommodation & venue)	13,690.00
Printing & Promotion	12,103.52
Post-mortem & Appreciation Lunch	4,500.00
Total	179,069.32
ADMIN &OTHER EXPENSES:	
Project Manager	56,628.00
Project Manager Benefit	7,632.60
Assistant Project Officer (50% of Man Days)	7,800.00
Project Directors Allowance	12,000.00
Website Maintenance	4,200.00
Total	88,260.60
SECRETARIAT EXPENSES:	
Secretariat & Miscellaneous Expenses	35,000.00
Total	35,000.00
Total Expenditure	557,271.92
INCOME AND EXPENDITURE ACCOUNT	
Total Income	567,000.00
Total Expenditure	557,271.92
Surplus/(Deficit)	9,728.08

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Recommendations for the Future

Here are some recommendations that were suggested during the Coordinators and Working Group Committee postmortem SWOT analysis for the future improvement of SFYC.

11.1 Working Group Committee

- Improve the WGC attendance for the meeting
- Strongly encourage to explore more funding to sustain the project
- Coordinators strongly encouraged to improve the reporting system and funding
- Get committed organisation to organise SFYC
- Conduct early brainstorming among organisation, coordinator, PST & MGB

11.2 School Level Science Fair

- Coordinators strongly encouraged to improve method of collecting report from the schools
- Strongly encourage to provide medals to the students together with books
- Deliver the prizes to schools according to the time line

11.3 Zone Level Science Fair

- Coordinators are strongly encouraged to follow the SOP of the ZLSF
- Standardise the prizes and the design of backdrop
- Organise the ZLSF event within the time period stated
- Increase the Seed Fund of ZLSF

11.4 National Level Science Fair

- Organise opening ceremony agenda early
- Strongly encouraged to not set up a hectic agenda for the kids

11.5 Training

- Encourage to invite only in-charge teachers of SFYC for the Training
- Upload or provide the experiments title before the training

11.6 Event Committee

- Provided better accommodation to the Volunteers
- Set enough time to rest before the next day event
- Encourage to prepare the walkie talkie for Head of The Departments

12 Conclusion

A total of 305 schools successfully participated in School Level Science Fairs as of 524 total schools in Malaysia. Meanwhile, 326 schools and 370 teams took part in Zone Level Science Fairs held in 10 zones nationwide. This is the largest number to date. The National Level event took place on 12th August 2017 and 13th August 2017 for 68 teams at German Malaysian Institute, Bangi. Our survey results shows very positive response from all stakeholders.







APPENDIX A: Zone Level Science Fair Participation List Zone 1: Kedah

NI-	Maria	- (S - h l	Title
No.		of School LADANG WELLESLEY	Title
1			Vegetable Oils
2		LDG SG ULAR	Roller Coaster
3		LADANG PERBADANAN KEDAH	Solar Cell
4		SOMASUNDRAM / SUNGAI TUKANG	Magnets Paper Speaker
5		HENTRAITA	Balloon-Powered Car
6		BEDONG	Power of Water
7		SARASWATHY	Metal lons
8		BINJOL	Magnets Paper Speaker
9		LADANG BUKIT MERTAJAM	Radiometer's Rotation Speed
10		PALANISAMY KUMARAN	Strength of Magnets
11		SOMME	Cear
12		MAHAJOTHI (INTEG)	Saturated Fat in cooking oils
13		GANESAR	Loudness of paper speaker
14	SJK(T)	LADANG BATU PEKAKA	Ballon powered car
15	SJK(T)	JALAN PAYA BESAR	Boat's propeller
16	SJK(T)	PADANG MEIHA	Radiometer rotation speed
17	SJK(T)	BARATHY	Power of water
18	SJK(T)	LADANG HARVARD BHG 3	Saturated Fat in cooking oils
19	SJK(T)	LADANG LUBOK SEGINTAH	Power of water
20	SJK(T)	THIRUVALLUVAR	Boat's propeller
21	SJK(T)	LADANG BUKIT JENUN	Saponification
22	SJK(T)	LADANG KATUMBA	Boat's propeller
23	SJK(T)	KULIM	Boat's propeller
24	SJK(T)	LADANG BAGAN SENA	Saturated Fat in cooking oils
25	SJK(T)	LADANG BUKIT SEMBILAN	Biodiesel
26	SJK(T)	KALAIVAANI	Strenght of Magnets
27	SJK(T)	LADANG PELAM	Loudness of paper speaker
28	SJK(T)	LADANG SCARBORO BHG 2	Solar Cell
29	SJK(T)	SUNGALTOK PAWANG	UV radiation
30	SJK(T)	LADANG MALAKOFF	Biodiesel
31	SJK(T)	LADANG SUNGAI PUNTAR	Strenght of Magnets
32	SJK(T)	TUN SAMBANTHAN	Spring vibration frequency
33	SJK(T)	LADANG JABI	Strenght of Magnets
34	SJK(T)	LADANG KUPANG	Guitar string vibration frequency
35	SJK(T)	LADANG TUPAH	Strenght of Magnets
36	SJK(T)	HARVARD BHG I	Solar Cell
37	SJK(T)	KANGAR Sound	Travel Speed Versus Temperature
38	SJK(T)	DARUL AMAN	Static Electricity
39	SJK(T)	LADANG KUALA MUDA BHG HOME	Energy
40	SJK(T)	LADANG BUKIT SELARONG	Saponification
41	SJK(T)	SUNGAI GETAH	Static Electricity
42	SJK(T)	LADANG KUALA KETIL	Ballon powered car
43	SJK(T)	LADANG SUNGAI DINGIN	Ballon powered car
44		CHANGLUN	Ballon powered car
45		LADANG SUNGKAP PARA	Spring vibration frequency
46		LADANG SUNGAI RAYA	UV radiation
47		KALAIMAGAL	Guitar string vibration frequency
			in thing merenion magazine,

Zone 2: Penang

No.	Name of School	Title
-1	SJK(T) SUNGAI ARA	Sunscreen Products
2	SJK(T) LADANG ALMA	Balloon-Powered Car
3	SJK(T) RAMAKRISHNA	Materials Produce The Static Electricity
4	SJK(T) PERMATA TINGGI	Boat's Propeller
5	SJK(T) LADANG PRYE	Gear
6	SJK(T) JALAN SUNGAI	Strength of Magnets
7	SJK(T) RAJAJI	Soap
8	SJK(T) SUBRAMANYA BARATHEE	Balloon-Powered Car
9	SJK(T) BAYAN LEPAS	Soap
10	SJK(T) PERAI	Power of Water
11	SJK(T) BUKIT MERTAJAM	Roller Coaster
12	SJK(T) LADANG KRIAN	Gear
13	SJK(T) LADANG TRANSKRIAN	Boat's Propeller
14	SJK(T) NIBONG TEBAL	Metal Ions





Zone 3: Perak

No.	Name of School	Title
1	SJK(T) LADANG BIDOR TAHAN	Roller Coaster
2	SJK(T) RUBANA	Power of Water
3	SJK(T) SLIM RIVER	Strength of Magnets
4	SJK(T) LADANG SUNGKAI	Cooking Oils
5	SJK(T) TROLAK	Cooking Oils
6	SJK(T) TAN SRI DATO MANICKAVASAGAM	Soap
7	SJK(T) LADANG KELAPA BALI	Weight of Load
8	SJK(T) BARATHI	Boat's Propeller
9	SJK(T) LADANG JENDERATA BAHAGIAN 3	Balloon-Powered Car
10	SJK(T) BAGAN DATOH	Guitar's String Vibration
-11	SJK(T) LADANG KAMATCHY	Cooking Oils
12	SJK(T) CHANGKAT	Guitar's String Vibration
13	SJK(T) KAMPAR	Balloon-Powered Car
14	SJK(T) LADANG BULUH AKAR	Boat's Propeller
15	SJK(T) ST. TERESA	Sound Travels
16	SJK(T) KAMPONG BARU BATU MATANG	Strength of Magnets
17	SJK(T) KAMUNTING	Power of Water
18	SJK(T) MAHATMA GHANDI KALASALAI	Magnets Paper Speaker
19	SJK(T) LADANG CHANGKAT SALAK	Solar Cell
20	SJK(T) LADANG SIN WAH	Materials Produce The Static Electricity
21	SJK(T) GANDHI MEMORIAL	Soap
22	SJK(T) LADANG SUNGAI BIONG	Balloon-Powered Car
23	SJK(T) LADANG GAPIS	Vegetable Oils
24	SJK(T) DOVENBY	Sun Screen Product
25	SJK(T) KERAJAAN	Soap
26	SJK(T) PERAK SANGEETHA SABAH	Gear
27	SJK(T) KG.SIMEE	Guitar's String Vibration
28	SJK(T) MENGLEMBU	Battery's Voltage
29	SJK(T) TAMAN DESA PINJI	Roller Coaster
30	SJK(T) LADANG MATANG	Strength of Magnets
31	SJK(T) LADANG YAM SENG	Sound Travels
32	SJK(T) SIMPANG LIMA	Gear
33	SJK(T) BAGAN SERAI	Roller Coaster
34	SJK(T) LADANG SOON LEE	Boat's Propeller
35	SJK(T) SAINT MARY'S	Cooking Oils
36	SJK(T) MAHA GANESA VIDDYASALAI	Cooking Oils
37	SJK(T) PANGKOR	Materials Produce The Static Electricity
38	SJK(T) LADANG KLABANG	Weight of Load



Zone 4: Selangor

No.	Name of School	Title
1	SJK(T) TAMAN PERMATA	Boat's Propeller
2	SJK(T) CASTLEFIELD	Boat's Propeller
3	SJK(T) VAGEESAR	Balloon-Powered Car
4	SJK(T) LADANG KINRARA	Metal Ions
5	SJK(T) METHODIST KAPAR	Cooking Oils
6	SJK(T) LADANG SG CHOH	Solar Cell
7	SJK(T) LADANG HIGHLANDS	Sound Travels
8	SJK(T) SUNGAI RENGAM	Power of Water
9	SJK(T) LADANG MIDLANDS	Magnets Paper Speaker
10	SJK(T) RAWANG	Solar Cell
11	SJK(T) DENGKIL	Cooking Oils
12	SJK(T) LADANG BATU AMPAT	Magnets Paper Speaker
13	SJK(T) PERSIARAN RAJA MUDA MUSA	Balloon-Powered Car
14	SJK(T) KUALA KUBU BARU	Soap
15	SJK(T) LADANG SEMENYIH	Cooking Oils
16	SJK(T) SEPANG	Gear
17	SJK(T) BANDAR BARU SALAK TINGGI	Balloon-Powered Car
18	SJK(T) TUN SAMBANTHAN	Materials Produce The Static Electricity
19	SJK(T) HICOM	Power of Water
20	SJK(T) RRI SUNGAI BULOH	Cooking Oils
21	SJK(T) LADANG VALLAMBROSA	Balloon-Powered Car
22	SJK(T) BESTARI JAYA	Power of Water
23	SJK(T) LADANG AMPAR TENANG	Guitar's String Vibration
24	SJK(T) TELOK MERBAU	Strength of Magnets
25	SJK(T) BUKIT BERUNTUNG	Gear
26	SJK(T) LADANG KERLING	Soap
27	SJK(T) BATU ARANG	Materials Produce The Static Electricity
28	SJK(T) EBOR	Metal Ions
29	SJK(T) LADANG BUKIT CHERAKA	Materials Produce The Static Electricity
30	SJK(T) SEAPORT	Strength of Magnets
31	SJK(T) EFFINGHAM	Materials Produce The Static Electricity

Zone 5: Kuala Lumpur

No.	Name of School	Title
1	SJK(T) SENTUL	Boat's Propeller
2	SJK(T) VIVEKANANDA	Boat's Propeller
3	SJK(T) KAMPUNG PANDAN	Boat's Propeller
4	SJK(T) THAMBOOSAMY PILLAI	Strength of Magnets
5	SJK(T) SEGAMBUT	Strength of Magnets
6	SJK(T) JALAN CHERAS	Balloon-Powered Car
7	SJK(T) LADANG BUKIT JALIL	Spring
8	SJK(T) SUNGAI BESI	Balloon-Powered Car
9	SJK(T) APPAR	Cooking Oils
10	SJK(T) ST. JOSEPH	Soap
11	SJK(T) LADANG EDINBURGH	Cooking Oils
12	SJK(T) BANGSAR	Guitar's String Vibration

Zone 6: Negeri Sembilan

No.	Name of School	Title
1	SJK(T) NILAI	Power Of Water
2	SJK(T) LOBAK	Balloon-Powered Car
3	SJK(T) LADANG SENAWANG	Boat's Propeller
4	SJK(T) LADANG BATU HAMPAR	Strength Of Magnets
5	SJK(T) LORONG JAWA	Solar Cell
6	SJK(T) LADANG PERTANG	Soap
7	SJK(T) LADANG ST HELIER	Boat's Propeller
8	SJK(T) KUBANG	Guitar's String Vibration
9	SJK(T) CONVENT	Magnets Paper Speaker
10	SJK(T) LADANG BRADWALL	Roller Coaster
11	SJK(T) DESA CEMPAKA	Boat's Propeller
12	SJK(T) SPRING HILL	Gear
13	SJK(T) KIRBY	Balloon-Powered Car
14	SJK(T) LADANG SAGGA	Balloon-Powered Car
15	SJK(T) LADANG AIR HITAM	Balloon-Powered Car
16	SJK(T) LADANG SEREMBAN	Gear
17	SJK(T) CAIRO	Balloon-Powered Car
18	SJK(T) LADANG GADDES	Soap
19	SJK(T) TAMPIN LINGGI	Spring
20	SJK(T) AIR KUNING SELATAN	Guitar's String Vibration
21	SJK(T) LADANG SENGKANG	Soap
22	SJK(T) LADANG ST LEONARDS	Sound Travels
23	SJK(T) LADANG PERHENTIAN TINGGI	Vegetable Oils
24	SJK(T) TAMPIN	Balloon-Powered Car
25	SJK(T) TUN SAMBANTAN	Guitar's String Vibration
26	SJK(T) LADANG MIDDLETON	Sound Travels
27	SJK(T) LADANG SILIAU	Roller Coaster
28	SJK(T) CHEMBONG	Power of Water
29	SJK(T) MUKUNDAN	Strength of Magnets

Zone 7: Melaka

No.	Name of School	Title
1	SJK(T) PULAU SEBANG	Power of Water
2	SJK(T) MERLIMAU	Strength of Magnets
3	SJK(T) ALOR GAJAH	Balloon-Powered Car
4	SJK(T) JASIN	Guitar's String Vibration
5	SJK(T) LDG BUKIT ASAHAN	Balloon-Powered Car
6	SJK(T) BATANG MELAKA	Cooking Oils
7	SJK(T) LADANG TEBONG	Spring
8	SJK(T) LDG SUNGAI BARU	Balloon-Powered Car
9	SJK(T) MELAKA KUBU	Strength of Magnets
10	SJK(T) LDG JASIN LALANG	Boat's Propeller
11	SJK(T) BUKIT LINTANG	Spring
12	SJK(T) DURIAN TUNGGAL	Boat's Propeller
13	SJK(T) PEKAN TEBONG	Materials Produe The Static Electricity
14	SJK(T) LDG DIAMOND JUBILEE	Strength of Magnets
15	SJK(T) LADANG GADEK	Cooking Oils
16	SJK(T) LDG KEMUNING KRU	Soap
17	SJK(T) LADANG SERKAM	Guitar's String Vibration
18	SJK(T) LDG BUKIT KAJANG	Materials Produe The Static Electricity
19	SJK(T) PAYA RUMPUT	Guitar's String Vibration

Zone 8: Johor

No.	Name of School	Title
1	SJK(T) YAHYA AWAL	Balloon-Powered Car
2	SJK(T) KULAI BESAR	Power of Water
3	SJK(T) JALAN KHALIDI	Roller Coaster
4	SJK(T) JALAN SIALANG	Gear
5	SJK(T) DESA CEMERLANG	Roller Coaster
6	SJK(T) TAMAN TUN AMINAH	Metal Ions
7	SJK(T) PERMAS JAYA	Materials Produce The Static Electricity
8	SJK(T) MASAI	Soap
9	SJK(T) KANGKAR PULAI	Spring's Vibration Frequency
10	SJK(T) LANADRON	Magnets Paper Speaker
11	SJK(T) KULAI OIL PALM	Roller Coaster
12	SJK(T) HAJI MANAN	Strength of Magnets
13	SJK(T) LADANG TANGKAH	Balloon-Powered Car
14	SJK(T) STATION PALOH	Soap
15	SJK(T) LADANG RINI	Gear
16	SJK(T) LADANG LAMBAK	Balloon-Powered Car
17	SJK(T) PASIR GUDANG	Metal Ions
18	SJK(T) MERSING	Solar Cell
19	SJK(T) LADANG REM	Cooking Oil
20	SJK(T) CANTUMAN CHAAH	Cooking Oil
21	SJK(T) MOUNT AUSTIN	Strength of Magnets
22	SJK(T) PASAK	Spring
23	SJK(T) LADANG BEKOH TANGKAK	Cooking Oil
24	SJK(T) ULU REMIS	Guitar's String Vibration
25	SJK(T) JALAN TAJUL	Roller Coaster
26	SJK(T) BUKIT RENGGAM	Weight of Load
27	SJK(T) ULU TIRAM	Weight of Load
28	SJK(T) FOTROSE	Strength of Magnets
29	SJK(T) GELANG PATAH	Soap
30	SJK(T) LADANG PELEPAH	Vegetable Oils
31	SJK(T) LADANG TEBRAU	Battery's Voltage
32	SJK(T) SERI PELANGI	Balloon-Powered Car
33	SJK(T) LABIS	Balloon-Powered Car
34	SJK(T) PARIT IBRAHIM	Balloon-Powered Car
35	SJK(T) KAHANG BATU 24	Strength of Magnets
36	SJK(T) SG. PLENTONG	Guitar's String Vibration
37	SJK(T) BATU ANAM	Roller Coaster
38	SJK(T) SIMPANG RENGGAM	Strength of Magnets



Zone 9: Pahang

No.	Name of School	Title
1	SJK(T) LADANG BEE YONG	Vegetable Oils
2	SJK(T) KARAK	Strength Of Magnets
3	SJK(T) MENTAKAB	Cooking Oil
4	SJK(T) LADANG EDENSOR	Vegetable Oils
5	SJK(T) RAUB	Gear
6	SJK(T) RINGLET	Soap
7	SJK(T) BLLUE VALLEY	Sunscreen Products
8	SJK(T) LADANG LANCHANG	Soap
9	SJK(T) TANAH RATA	Gear
10	SJK(T) LADANG SG.TEKAL	Cooking Oil
11	SJK(T) SYUM YIP LEONG	Boat's Propeller
12	SJK(T) KUALA LIPIS	Magnets Paper Speaker
13	SJK(T) BENTONG	Soap
14	SJK(T) LDG LANCHANG	Soap
15	SJK(T) YCL	Roller Coaster
16	SJK(T) LDG JERAM	Roller Coaster
17	SJK(T) KEMAYAN	Balloon-Powered Car
18	SJK(T) LDG MENTERI	Balloon-Powered Car
19	SJK(T) KUALA TERLA	Balloon-Powered Car
20	SJK(T) KUALA REMAN	Balloon-Powered Car
21	SJK(T) JERANTUT	Strength Of Magnets
22	SJK(T) SUNGAI KAWANG	Strength Of Magnets
23	SJK(T) LDG SEMANTAN	Materials Produce The Static Electricity
24	SJK(T) LDG MENTAKAB	Materials Produce The Static Electricity
25	SJK(T) LURAH BILUT	Magnets Paper Speaker
26	SJK(T) TANAH RATA	Gear
27	SJK(T) RENJOK	Cooking Oil
28	SJK(T) LDG SUNGAI TEKAL	Cooking Oil
29	SJK(T) INDERA MAHKOTA	Solar Cell



APPENDIX B : National Level Science Fair Participation List

No	Name of School	Title	Zone
1	SJK(T) Ladang Wellesley	Vegetable oils	Kedah
2	SJK(T) Ladang Sungai Ular	Roller coaster	Kedah
3	SJK(T) Ladang Perbadanan	Solar cell	Kedah
4	SJK(T) Somasundram / Sungai Tukang	Magnets Paper Speaker	Kedah
5	SJK(T) Hentraita	Balloon-Powered Car	Kedah
6	SJK(T) Bedong	Power of Water	Kedah
7	SJK(T) Saraswathy	Metal Ions	Kedah
8	SJK(T) Binjol	Magnets Paper Speaker	Kedah
9	SJK(T) Ladang Bukit Mertajam	Radiometer's Rotation Speed	Kedah
10	SJK(T) Palanisamy Kumaran	Strength Of Magnets	Kedah
11	SJK(T) Somme	Gear	Kedah
12	SJK(T) Sungai Ara	Sunscreen Products	Penang
13	SJK(T) Ladang Alma	Balloon-Powered Car	Penang
14	SJK(T) Ramakrishna	Materials Produce The Static Electricity	Penang
15	SJK(T) Ladang Bidor Tahan	Roller Coaster	Perak
16	SJK(T) Rubana	Power Of Water	Perak
1 <i>7</i>	SJK(T) Slim River	Strength Of Magnets	Perak
18	SJK(T) St. Teresa's Convent	Sound Travels	Perak
19	SJK(T) Kampong Baru Batu Matang	Strength Of Magnets	Perak
20	SJK(T) Kamunting	Power Of Water	Perak
21	SJK(T) Mahatma Ghandi Kalasalai	Magnets Paper Speaker	Perak
22	SJK(T) Ladang Changkat Salak	Solar Cell	Perak
23	SJK(T) Ladang Sin Wah	Materials Produce The Static Electricity	Perak
24	SJK(T) Sentul	Boat's Propeller	Wilayah Persekutuan
25	SJK(T) Vivekananda, Brickfields	Boat's Propeller	Wilayah Persekutuan
26	SJK(T) Kampong Pandan, KL	Boat's Propeller	Wilayah Persekutuan
27	SJK(T) Taman Permata	Boat's Propeller	Selangor
28	SJK(T) Castlefield	Boat's Propeller	Selangor
29	SJK(T) Vageesar	Balloon-Powered Car	Selangor
30	SJK(T) Kinrara	Metal Ions	Selangor

No	Name of School	Title	Zone
31	SJK(T) Methodist, Kapar	Cooking Oil	Selangor
32	SJK(T) Ladang Sungai Choh	Solar Cell	Selangor
33	SJK(T) Ladang Highlands	Sound Travels	Selangor
34	SJK(T) Nilai	Power of Water	Negeri Sembilan
35	SJK(T) Lobak	Balloon-Powered Car	Negeri Sembilan
36	SJK(T) Ladang Senawang	Boat's Propeller	Negeri Sembilan
37	SJK(T) Ladang Batu Hampar	Strength of Magnets	Negeri Sembilan
38	SJK(T) Lorong Jawa	Solar Cell	Negeri Sembilan
39	SJK(T) Ladang Pertang	Soap	Negeri Sembilan
40	SJK(T) Ladang St Helier	Boat's Propeller	Negeri Sembilan
41	SJK(T) Pulau Sebang	Power of Water	Melaka
42	SJK(T) Merlimau	Strength of Magnets	Melaka
43	SJK(T) Alor Gajah	Balloon-Powered Car	Melaka
44	SJK(T) Jasin	Guitar's String VibratioN	Melaka
45	SJK(T) Yahya Awal	Balloon-Powered Car	Johor
46	SJK(T) Kulai Besar	Power of Water	Johor
47	SJK(T) Jalan Khalidi	Roller Coaster	Johor
48	SJK(T) Jalan Sialang, Tangkak	Gear	Johor
49	SJK(T) Desa Cemerlang	Roller Coaster	Johor
50	SJK(T) Taman Tun Aminah	Metal Ions	Johor
51	SJK(T) Permas Jaya	Materials Produce The Static Electricity	Johor
52	SJK(T) Masai	Soap	Johor
53	SJK(T) Kangkar Pulai	Spring's Vibration Frequency	Johor
54	SJK(T) Ladang Bee Yong	Vegetable Oils	Pahang
55	SJK(T) Karak	Strength Of Magnets	Pahang
56	SJK(T) Mentakab	Cooking Oil	Pahang
57	SJK(T) Ladang Edensor	Vegetable Oils	Pahang
58	SJK(T) Raub	Gear	Pahang
59	SJK(T) Ringlet	Soap	Pahang
60	SJK(T) Ladang Blue Valley	Sunscreen Products	Pahang

APPENDIX C: Partially Guided Experiments for SFYC 2017

- 1. How does a light bulb's wattage affect the amount of heat produced? Design an experiment to investigate the query above and explain the concepts involved.
- Does the mass of a clock's pendulum affect its period? Design an experiment to investigate the query above and explain the concepts involved.
- 3. Does the type of liquid in a container affect the sound it produces? Design an experiment to investigate the query above and explain the concepts involved.
- 4. Different food products contain different amount of acid. Design an experiment to investigate the statement above and explain the concepts involved.
- How does the shape of a boat's hull affect its' speed? Design an experiment to investigate the query above and explain the concepts involved.
- How does water pressure vary with depth?
 Design an experiment to investigate the query above and explain the concepts involved.
- How does the design of a solar cooker affect its temperature? Design an experiment to investigate the query above and explain the concepts involved.
- 8. Different food samples contain different amount of DNA. Design an experiment to investigate the statement above and explain the concepts involved.
- Using a simple machine, design an experiment to lift a load using less force. Explain the concepts involved.
- 10. Different food samples contain different amount of calories. Design an experiment to investigate the statement above and explain the concepts involved.

- 11. How does the angle of the Sun striking a solar cell affect how much electricity the cell produces? Design an experiment to investigate the statement above and explain the concepts involved.
- 12. Design an experiment to determine whether there is enough energy stored in a fruit or a vegetable to power a light. Explain the concepts involved.
- 13. Build a very simple magnetic accelerator to launch steel balls at targets and prove that the velocity of the projectile would increase as number of magnet stages increased. Explain the concepts involved.
- 14. How will temperature affect the elasticity of rubber? Design an experiment to investigate the query above and explain the concepts involved.
- 15. Design an experiment to observe how increasing a liquid's temperature can affect its' surface tension. Explain the concepts involved.
- 16. Investigate what kind of packaging material works best to protect products from damage. Explain the concepts involved.
- 17. How does the size of a windmill's sail affects the amount of electricity produced? Design an experiment to investigate the query above and explain the concepts involved.
- 18. Amount of light affects the rate of photosynthesis. Design an experiment to investigate the statement above and explain the concepts involved.
- 19. Design an experiment to find out the best way to remove chlorine in water. Explain the concepts involved.
- 20. Different concentration of solutions affects the rate of osmosis. Design an experiment to investigate the statement above and explain the concepts involved.



APPENDIX D:

SFYC2017 In Media: Selected Samples











Запатаніці, дал. 22-

தமிழ்ப்பள்ளி மாணவர்களுக்கான இளம் ஆய் வாளர்களின் அறிவியல் விழா தொடந்து 10 ஆண்டுக னாக மிகச் சிறப்பான முறையில் நடைபெற்று வருகிறது.

அந்த வகையில், 2017ஆம் ஆண்டிற்கான 11ஆ வது இளம் ஆய்வாளர்களின் அறிவியல் விழா நேற்று க்ரேன்ட் சீசன் விடுதியில் அதிகாரப்பூர்வமாக திறப்பு விழா கண்டது.

ஒவ்வொரு ஆண்டும் நடைபெறும் இந்த அறி வியல் வீழாவில் அதிகமான தமிழப்பள்ளிகள் கலந்து கொண்டு பயன் பெற்று வருகின்றன.

தமிழ்ப்பள்ளி மானவர்களிடையே இருக்கும் அறி வியல் திறனை வெளிப்படுத்துவதை முதன்மை நோக் கமாகக் கொண்டு இந்த அறிவியல் விழா ஒவ்வொரு ஆண்டும் நடத்தப்பட்டு வருகிறது என அறிவியல் தொழின்றுட்பம் மற்றும் புத்தாக்க இயக்கத்தின் தவை வரும் இளம் ஆய்வாளர்களின் அறிவியல் விழாவின் தோற்றுந்ருமான டாக்டர் முகமட் யூனோஸ் முகமட் யாசின் தெரிவித்தார்.

இந்த இளம் ஆய்வாளர்களின் அறிவியல் விழா பள்ளி, மாநிலம் மற்றும் தேசிய ரீதிவில் நடை பெறவுள்ளது

இந்த ஆண்டு நடைபெறவுள்ள பள்ளி அளவிலான அறிவியல் விழாவில் சுமார் 350 பள்ளிகளும் மாநில ரீதிவில் சுமார் 300 தமிழ்ப்பள்ளிகளும் பங்குபெற்று பய கடைவார்கள் என்று எதிர்பார்க்கப்படுகிறது என அவர் தெரிவித்தார். அறினியல் விழாவை அதிகாரப்பூர்வமாக திறந்து வைத் தப் பீள்ளர் மை நாடி அறவாரியத்தின் தலைவர் டத்தோ டாக்டர் ஜெயத்திரன் டான்ஸ்ரீ சின்னதுரை கூறுமகமில், இந்த அறிவியல் விழாவிற்கு தமிழ்ப்பள்ளிகளின் ஆதரவு சிறப்பாகவே உள்ளது.

அதே வேளையில், இந்த விழாவின் முன்னேற்றத்திற்கு தமிழ்ப்பள்ளி அமைப்பாளர்கள், தலைமையாசிரியர்கள், ஆசிர் யர்கள், பெற்றோர்கள் மற்றும் சமூக அமைப்புகளும் ஒத்துவழப்பு வழங்க வேண்டும் என்றும் அவர் கேட்டுக் கொண்டார்.

மற்றப் பள்ளிகளைக் காட்டிலும் தமிழ்ப்பள்ளி மான வர்கள் அறிவியல் பாடத்தில் சிறந்து விளங்குகின்றனர். இது போன்ற அறிவியல் விழாக்களில் மானவர்கள் தங்களை ஈடுப டுத்திக் கொண்டு தங்களது திறமைகளை வெளிப்படுத்துவதற்கு ஒரு அரிய வாய்ப்பாகத் திகழ்கிறது என இளம் ஆய்வாளர்களின் அறிவியல் விழா தலைமை இயக்குநர் திரு செவ்வேந்திரன் தெரி வித்தார்.

இந்த அறிவியல் விழாவிற்கு டத்தோ டாக்டர் ஜெயந்தி ரன் மானியம் வழங்கியது மகிழ்ச்சி அளிக்கிறது.

அதே போன்று, பொது மக்களும் நமது மாணவர்களின் முன் னேற்றத்திற்கு இந்த அறிவியல் விழாவிற்கு உதவ முன்வரலாம் என அவர் கேட்டுக் கொண்டார்.

இவ்விழாவில் பங்கேற்க நிலாக்கும் தமிழ்ப்பள்ளிகள் 03-78778571 மற்றும் 03-78655557 என்ற எண்களையும் அல்லது nafyc@gmail.com http://www.nafyc.org/ என்ற மில் எஞ்சல், அலப்பக்க முகவரிகளையும் தொடர்பு கொள்ளமைப் என அவர் தெரிவித்தார்.





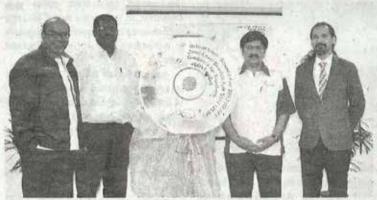
அறிவியல் சமுதாயமாக உருமாற அனைவரும் களமிறங்குவோம்!

(கே.வி. இளவரசி -கி.தீபன்)

கோலாலம்பூர், ஜன.22-தமிழ்ப்பள்ளி மாணவர்கள் அறிவியல் பாடத்திலும் தனியொரு துறையிலும் முத்திரையைப் பதிக்க வேண்டும் என்ற நோக்கத்தில் கடந்த 10 ஆண்டுகளாக நாடு தழுவிய நிலையில் அஸ்தி ஏற்பாடு செய்து வரும் இளம் ஆய்வாளர் களின் அறிவியல் விழா, சமுதாய மக்களின் பொதுவிழாவாக மாற வேண்டும். அதற்கு சமூகத்தில் உள்ள அனைத்து தரப்பினரும் களமிறங்கி தங்களின் பங்களி ப்பை வழங்க வேண்டும் என அதன் தலைவர் டாக்டர் முகமட் யூனூஸ் கேட்டுக்கொண்டார்.

தமிழ்ப்பள்ளி மாணவர்களுக் கான 2017ஆம் ஆண்டின் இளம் ஆய்வாளர்களின் அறிவியல் விழா நேற்று இங்குள்ள கிராண்ட் சீசன்ஸ் தங்கும் விடுதியில் நடைபெற்ற அதிகாரப்பூர்வத் திறப்பு விழாவில் அவர் மேற்கண்டவாறு தெரிவித்தார்.

ஒவ்வோர் ஆண்டும் இந்த அறிவியல் விழாவில் மாணவர் களின் எண்ணிக்கை அதிகரித்து வருகிறது. மேலும், தமிழ்ப்பள்ளி மாணவர்கள் அறிவியல் பாடத் தில் சிறப்புத் தேர்ச்சியைப் பதிவு செய்து வருகின்றனர். கடந்தா ண்டு யூபிஎஸ்ஆரில் மாணவர்க ளின் தேர்ச்சியில் எதிர்பாராத சரிவு ஏற்பட்டிருந்தாலும் அறிவிய லில் தமிழ்ப்பள்ளி மாணவர்க ளின் அடைவுநிலை மட்டும் உயர்ந்துள்ளது, நம் மாணவர்கள் அறிவியலில் அடைந்து வரும் முன்னேற்றத்தைக் காட்டுகிறது. மேலும், மாணவர்கள் அனைத் துலக அளவிலும் தங்களின் சாதனைகளைப் பதிவு செய்து



இளம் ஆய்வாளர்கள் அறிவியல் விழாவை டத்தோ டாக்டர் ஜெயந்திரன் அதிகாரப்பூர்வமாகத் தொடக்கி வைத்தார்.

வருகின்றனர்.

அதனால், அஸ்தி மற்றும் நம் முடைய நோக்கம் வெற்றி யடைந்து விட்டது. இப்போது நீண்ட காலத்திற்கு அதைத் தக்க வைக்க வேண்டிய கடமை நம் சமுதாயத்தில் உள்ள அனை வருக்கும் உண்டு என்பதை உணர்ந்து தங்களின் பங்களிப்பை வழங்க முன்வர வேண்டும். தனியொரு இயக்கத்தின் விழா வாக இல்லாமல் சமுதாயத்தின் பொது விழாவாக உருமாற வேண்டும்.

ஆண்டுதோறும் மாநில அளவி லும் தேசிய அளவிலும் அதிக மான பள்ளிகளை இடம்பெறச் செய்ய வேண்டும் என்பதுதான் அஸ்தியின் இலக்கும் கூட. ஆனால், அதற்கு நிதி தடையாக இருப்பதால் மாநில அளவில் 300 பள்ளிகளும் தேசிய அளவில் 60 பள்ளிகளும் மட்டுமே இடம்பெறு கின்றன என்று அவர் குறிப் பிட்டார்.

சமுதாயத்தில் உள்ள அனை வருமே தங்களால் இயன்ற நிதி யுதவியை வழங்கினால், இன்னும் சிறப்பான முறையில் இந்த அறி

வியல் விழாவை நடத்த முடிவ தோடு அறிவியலில் சாதிக்கக் கூடிய அதிகமான மாணவர்களை யும் உருவாக்க முடியும் என இந்நிகழ்வை அதிகாரப்பூர்வ மாகத் தொடக்கி வைத்த மை நாடியின் தலைவர் டத்தோ டாக்டர் ஜெயந்திரன் டான்ஸ்ரீ சின்னதுரை தெரிவித்தார். இந்தாண்டு நடைபெறவுள்ள இளம் ஆய்வாளர்களின் அறிவியல் விழாவிற்கு முதல் நிதியுதவியாக மை வெ.50,000ஐ 15 TIG. குறிப்பிடத் வழங்கியுள்ளது தக்கது.

இதனிடையே, இதற்கு
முந்தைய அறிவியல் விழாவில்
கலந்துகொண்ட மாணவர்கள்
இன்று என்ன செய்கிறார்கள்
என்பது குறித்து தரவு திரட்டப்
படும் எனவும் மாநில அளவில்
அல்லது தேசிய அளவில்
தேர்ந்தெடுக்க வில்லை
யென்றாலும் பள்ளி அளவில்
அதிகமான மாணவர்கள்
பங்கெடுக்க வேண்டும் என இளம்
ஆய்வாளர்களின் அறிவியல் விழா
குழுவின் தலைமை இயக்குநர்
செல்வேந்திரன் குறிப்பிட்டார்.

புத்தாக்க சிந்தனையையும் தன்னம்பிக்கையையும் வளர்த்த அறிவியல் விழா! பூச்சோங் கீன்றாரா தமிழ்ப்பள்ளி வெற்றி வாகை சூடி சாதனை



த்திக் கட்டுறவு என்னம் உள்ளி. டவக்களின் அதுவேட்டு அன்டி வின் ஏற்பாட்டில் தடைபெற்ற இத்த தேகில் இசும் ஆய்வைக் களின் அடுவியல் விழா 2017 தேற்ற கோலல்லையக் தடை வெற்ற மூடிக்கு. இதில் அன்னத்து வாளவக் ஒன், அளிகர் பெறவக்களின் உற்று என்னையேர்டு தங்களது







பெர்வத்தா ஆகிய பர்ளிகள் தங்கம் வெண்றன. மென்னி ஏ பிரிவில்



கோலாலம்பூர், சிலாங்கூர் மாநிலங்களுக்கான அறிவியல் விழா

தாமான் பெர்மாத்தா, செந்தூல் தமிழ்ப்பள்ளிகள் வாகை சூழன

பற்றன. கோலமைப்பூகில் வியேகா ந்தா, கங்கைபீசி, சொத்துல், காட்சர், ஆகிய பள்ளிகள் வந்நிப் பெற்றன. வெற்றிப் பெற்றன.



மாற்பதாகும் போற்ற வறைநார். முக்கோல், பந்து அல்பாட்ட நோட்டம், நான் சல்பத்தன் அல்ப பண்டிகள் செல்றூல் பெற்றன. கோலாலம்பூர் மாறிலத்தில் கோல்புல், அமேன் மான்றதா, கோட்டல், வமேன் மான்டான் அலிய பன்னிகள் வெற்றிப் பெற்றன.





Sie Geophi Gupper.

uppräss India alla

stenker, Guydystri.

derlie, Astoli, gesuintak Guydi Gupper.

utellie Guydi Gupper.

utellie Autorie mis

Getha autori Gug

தின் தேசியத் தனல்வர் உ துரெவதுவ், துணைத் தனவல் செலுமாவன், உதவித் தலைவ தித்யானத்தல், தலைவ செயலாளர் குபேரன் உட்ப பல பிருநக்கள் பகிக்களா ஈடுத்து வழங்கி சிறப்பித்தனர்







உலுத்திராம் தோட்டத் தமிழ்ப்பள்ளியில்

இளம் ஆய்வாளர்களின் அறிவியல் விழா

(எம்.கே.வள்ளுவன்)

உலுத்திராம், ஏப். 29தூங்கும்போது காண்பது
கனவல்ல. வீழித்திருக்கும் போதும் காண்பதே உண்மை யான கணவு. அதுவே திணை வும்கூட எனும் அப்துல் கலாமின் கருத்துக் களோடு தொடங்கிய உலுத்திராம் தோட்டத் தமிழப்பள்ளி அளவி லான 2017ஆம் ஆண்டு அறி வியல் விழா இங்கு பள்ளி அள வில் மாணவர்களின் திறமை களை வெளிப்படுத்தும்





நிகழ்வாக அமைத்திருத்தது.

முதலாம் ஆண்டு முதல் ஐந்தாம் ஆண்டு மாணவர்கள் வரை தங்களது கண்டுபிடிப்புக் களை அறிமுகப்படுத்தி நடுவர் களின் பாராட்டை மட்டுமின்றி கூடியிருந்த பெற்றோர்கள் சமூகத் தலைவர்கள் உட்பட அனைவரின் பாராட்டையும் பெற்றனர்.

இந்த விழாவை தொடக்கி வைத்த தெங்காரோ சட்டமன்ற டறுப்பினர் கே. ஏவின்குமார் ஜொக்ச் மாநிலத்தில் பெரும் பாலும் அனைத்து தமிழ்ப்பள்ளி களிலும் இம்மாத இறுகிக்குள் பள்ளி அளவிலான அறிவியல் விழா நடைபெற்று முடித்துவிடும் என குறிப்பிட்டார். மே மாதம் 13ஆம் தேதி மாதில அளவிலான அறிவியல் விழா நடைபெறவிருக்கும் வேளை மில் ஜொகூர் மாநிலத் தில் 70 தமிழ்ப்பள்ளிகளும் கலந்து கொள்ளும் என எதிர் பார்ப்பதாக குறிப்பிட்ட அவர், ஜொகூரில் 9ஆம் ஆண்டாக நடைபெறும் விழாவிற்கு அனை வரும் ஆதரவு வழங்கி மாண வர்களை ஊக்கப்படுத்த வேண் டும் என கேட்டுக் கொண் டார், முன்னதாக கடத்த சில ஆண்டு களாக தமிழ்ப்பள்ளி மணைவர்கள் அறிவியல் துறை மில் சிறத்து விளங்கி வருவ தையும் அவர் கட்டிக் காட்டினார், பன்னியின் தேவைகளுக்காக மஇன், தெப் சாவ் தொகுதி ஆதரவுடன் ஒவி பெருக்கியை வழங்குவதாகவும் கே.ரவின் குமார் தெரிவித்தார்.







ജாலான் யாஹ்யா அவால் தமிழ்ப்பள்ளி அளவிலான

ിമിധര് മിഥന

(எம்.கே.வள்ளுவன்)

ஜொகூர்பாரு, மே 27-ஜொகூர் அளவிலும் தேசிய அளவிலும் அறிவியல் விழாவை சிறப்பாக செய்து வரும் ஜாலான்

யாஹ்யா அவால் தமிழ்ப்பள்ளி இங்குள்ள பள்ளி மண்டபத்தில் பள்ளி அளவிலும் பாலர் பள்ளி மாணவர்கள் முதல் ஆறாம் ஆண்டு மாணவர்கள் வரை பங்கு கொள்ளும் வகையில் இளம்

ஆய்வாளர்களின் அறிவியல் விழாவை மிகவும் சிறப்புடன் நடத்தியது.

நடத்தயது. பள்ளியின் பெற்றோர் ஆசிரியர் சங்கம், பள்ளி வாரியம், தெமங் கோங் இப்ராஹிம் ஆசிரியர் பயிற்சிக் கல்லூரி மற்றும் ஜொகூர் மாநில காப் பகங்கள் இலாகாவுடன் இணைந்து பள்ளி மாணவர்களுக்காக 955

அறிவியல் விழாவில் மொத்தம் 450 மாணவர்கள் பங்கெடுத்துக் கொண்டதாக பள்ளி தலைமையா சிரியர் நடராசன் தெரிவித்தார்.

ஒரு குழுவில் 5 பேர் வீதம் 90 குழுக்கள் உருவாக்கப்பட்டு ஆசிரியர்கள் துணையுடன் மாணவர்கள் தங்கள் திறமையை வெளிப்படுத்த இத்த அறிவியல் வீழா கைகொடுத்ததாக குறிப் ا غالا பிட்ட நடராசன் முதன் முறையாக பாலர் பள்ளியின் 25 மாண வர்களும் விழாவில் பங்கேற்க வழி ஏற்படுத்திக் கொடுத்த தாகவும் குறிப்பிட்டார்.

இந்த அறிவியல் விழாவினை தந்த அறிப்பின் கே.ஏவீன் சட்டமன்ற உறுப்பினர் கே.ஏவீன் குமார் தொடக்கி வைத்த வேளையில் உள்துறை துணை யமைச்சர் டத்தோ நூர் ஐஸ்லான் முகமட் ரஹ்மாட்டின் பிரதிநிதி யாக எஸ்.சிவன் சண்முகமும் ஜொகூர்பாரு அவர்களும் மாவட்ட அலுவலக இந்திய பிரதிநிதி பி.சரவணனும் கலந்து



இளம் ஆய்வாளர் அறிவியல் விழா ரவூப் தமிழ்ப்பள்ளிக்கு பாராட்டு

சம்பட்ட மே 26-அண்ணையில் மெற்றகாப்பில் தடைபெற்ற பகங் மறில் நீப்பான இலம் ஆப்பாளர் அறிவியல் விழக்கில் ஒழு அறிபுடமானி முகல் இடத்தில் மெற்றி வாகை ஒடியது வேட்டியைவிலிருந்து திரவியம் கண்டுபிடித்து அதனைக் கொண்டு வீட்டில் உள்ள கொக்கணை விரட்டிபடிக்க முடியும் எனும் ஆராய்ச்சியை தங்கள் கண்டுபிடிப்பின் மூலம் தடுவக்களின் அதிகப் புஸ்வீயை

(தடராஜன்) பெற்ற பகால் பல விழகம் வல்றி வரகை வருற்ற வரகை வரகை நக்கள் கள்ள தங்கம் கால் அரக்கள் கால் அரக்கள்



அறிவியல் துறையில் திமியாங் ரெஞ்சோங் தோட்ட பள்ளி மாணவர்கள் சாதனை

(எம்.கே.வள்ளுவன்)

பாகோ, மே 24அறிவியல் ஆற்றல் எட்டாத
கனியாக ஒரு காலத்தில் தமிழ்ப்
பள்ளி மாணவர்களுக்கு இருந்து
வந்த வேளையில் இன்று
நிலைமை மாறி அறிவியல்
தமிழ்ப் பள்ளி மாணவர்களுக்கே
சொந்தம் என்பதுபோல் தமிழ்ப்
பள்ளி மாணவர்கள் இன்று பல
அரிய சாதனைகளை புரிந்து
வருகின்றனர்.

அவ்வகையில் குறைந்த மாணவர்களைக் கொண்ட பாகோ திமியாங் ரெஞ்சோங் தோட்டத் தமிழ்ப்பள்ளி மாணவர்கள் ஜொகூர் மாநில இளம் ஆய்வாளர்களின் அறிவியல் விழாவின் ஏ பிரிவில் தங்களின் கண்டுபிடிப்பை அறிமுகப் படுத்தி முதல் நிலையில் வந்த துடன் அடுத்த ஜூன் மாதம் 17 மற்றும் 18ஆம் தேதிகளில் தலைநகரிய நடைபெறும் தேகிய நிலையிலான இளம் ஆய்வாளர் கள் அறிவியல் விழா போட்டியில் பங்கு கொள்ளும் வாய்ப்பை பிரகாசப் படுத்திக் கொண்டுள்

போட்டியில் பள்ளி மாணவர் களான ஜி.தாகேஸ்வரராஜ், ஜி.தேவதர்ஷிணி, சி.மதுமிதா மற்றும் வி.ரவியாகாஷ் ஆகியோர் 'பொருண்மையும் வேகமும்'





எனும் கருவில் பொருண்மைக் கும் வேகத்திற்கும் இடையே உள்ள தொடர்பை ஆராய்த்து அதனை சிறப்பாக செய்து காட்டியதன் வழி ஏ பிரிவு வெற்றியாளர்களாக வாகை குடினர்.

இதனிடையே அந்த வெற்றி

யைக் கொண்டாடும் வகையில் பள்ளிவில் நடந்த போட்டியில் பங்கு கொண்ட மாணவர்க ளுக்கும் அவர்களுக்கு கைகொடு த்த ஆசிரியர்களுக்கும் பாராட்டுக்கள் குவிந்தன.

பள்ளி மாணவர்களின் சாதனை பள்ளிக்கும், பள்ளி குடும்பத்தின ருக்கும் பெருமை சேர்த்துள்ளதாக பள்ளி தலைமையாசிரியை த.லேககாம்பாள் குறிப்பிட்டார்.

இத்த வெற்றி பள்ளி மாணவர் களுக்கு உத்வேகத்தை தந் துள்ளது. மாணவர்களின் அறி வியல் ஆற்றல் மற்ற மாண வர் களையும் ஊக்குவிக்க வழி ஏற் படுத்தித் தந்துள்ளதாக குறிப் பிட்ட த.லோகாம்பாள் பள்ளி ஆசிரியர்களுக்கும் உற்சாகத்தைத் தந்துள்ளதாக குறிப்பிட்டார்.

தந்துள்ளதாக குறிப்பிட்டார். பெற்றோர்களும் மாணவர் களின் வெற்றியில் பங்கு கொண்டு பரவசமடைந் தனர்.

தெப்ராவ் தோட்டத் தமிழ்ப்பள்ளியில்

இளம் ஆய்வாளர்களின் அறிவியல் விழா

(mb.Gs. antegents)

உருத்திரம், ஏப், 21— ஜெக்கி மறில் அளகிகளை ஆப்பானிகளின் இளக் ஆப்பானிகளின் அறிகியம் இரசு மருந் பே மாழும் நாமை இரசுக் தோம் மன்ப நக்கில் நாக் ட ட ப நாவி ஒ கரும் கோண்டில் மனி அணிகளை அறிகியல் விறச் போட்டியும் பம் விக்கில் அடைபெற்ற மருகின்றன்

அல்லகையில் நேற்று நேற்கல் தெடங்கி மாலை லனர் தெர்கல் தோட்டித் தமிழ்ப் பண்ணிறும் முதல் வருப்பு முதல் ஐந்தால் வருப்பு கணையின்ன மல்னவல் சின் பங்கு கொண்ட அறிவிய விழர் சிறப்புடன் தடை



பேற்றது. ஆச்சியை எஸ்.சாந்தி போறுப் பேற்ற நடத்திய இந்த அறிவியம் விறவிற்கு சிதப்பு பிரமுகரக கலத்து கொண்ட டத்தேர

பிரமேஷ்குமார் மாரையிகளில் அறிவியல் நிறாகைகளைக் கார்டு வெறுவை பாராட்டினர்.

கின்றி அறிவியார்லும் நிறன் பெற வேண்டும் எறும் தோகிக் இதுபேண்ற பயனான நிகழ்க் கண்ன நடத்தும் நமிழ்ப்பங்கி களின் ஆசிர்புக்கணையும் அவ



வெருவக பரர் புன்க பள்ளி தலைமையாகிகிகை திரும்தி க.பழனியம்கள் பெற்றேக் ஆகிகிய சக்கு

















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இளம் ஆய்வாளர்களின் அறிவியல் விழா Science Fair for Young Children

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