



ANNUAL *Report* 2014



ASSOCIATION OF SCIENCE, TECHNOLOGY & INNOVATION

ANNUAL *Report* 2014



ASTI Annual Report 2014

Compiled by,
ASTI Committee

Produced by,
ASTI R&D Department

Design, Layout & Editing by,
Ragavan Pandian (Freelance Designer)

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Tel/Fax : 03 8940 5595

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Message from the President



President

Dr. Mohamed Yunus Mohamed Yasin

ASTI began with a dream; the dream to make learning more fun and meaningful. For anything to be meaningful, first it has to be useful; useful to both oneself and society. There are few subjects today that have been more useful to society than science. From science comes technology, which has arguably brought about the biggest change in society ever. Science and technology have freed humans to do more things, faster and more efficiently. This has resulted in a wealthier society, which, in return, gives us back time so that we could become more innovative. Today, innovation is the key factor that brings change - good or bad.

Change is important, but is all change good? Can change bring us happiness? Would just learning facts and figures help us make better decisions in life or help solve complex problems? We believe that these are some of the very important questions that need to be answered, especially among the youth. They are to face a world that will change at a pace never seen before on Earth. Besides the many new career options being created every day, many may also disappear tomorrow. We are also faced with challenges such as environmental destruction, and many more.

To face these challenges, a holistic education system needs to be adaptable and gives the power of learning back to the learner. This is the only way we would ever be able to prepare the future generations to face the uncertainty of the future.

Our projects and initiatives are developed with the aforementioned challenges in mind. Science Fair for Young Children, our first project, which has already been running for 9 years, hopes to put the learning process back into the hands of the young minds. Our second initiative, the Young Inventors Challenge has the aim to provide a platform for young people to use as an impetus to transform their ideas from the realm of imagination to the realm of physical reality. Our third major project is called the Creative and Critical Thinking Camp, with which we hope to help the young, shaping them to think holistically as they make decisions in life.

Furthermore, we have been very actively involved in various media engagement - with more than 65 educational TV capsules produced with ASTRO and about 40 articles published as a newspaper column called "Arivom Ariviyal" (Understanding Science) and "Vazhi Payanam" (Journey's Path) which is a career column focused for both the young and older readers.

As of 2014, we have also completed a programme called the ASTI Edu Tour conducted for and with the ATY Group from Vietnam so as to develop leadership skills among the youth. We are also proud to have partnered with the Goethe-Institut from Germany in their globally successful "Science Film Festival" which uses films to showcase the importance of science and technology for the future of mankind. In line with finding good role-models for the youth, the ASTI-Innovation in Community Award recognised an amazing young person, Mr. Adham El Sharkawy, from Egypt for his contribution to society through the use of Science and Technology. Year 2014 saw ASTI going global with the appointment of Mr. Mohamed Al-Harthy, former CEO at Oman Society for Petroleum Services, as ASTI's first International Advisor.

All the aforesaid efforts would not have been possible and our dreams could never have been realised without the support from all the stakeholders, from funders to supporters, from volunteers to well-wishers, from teachers to school administrators, from committee to community, from organisations to civil society, from participants to recipients, and many-many more stakeholders. We hope that you will join us in this dream - to imagine a better world, if not today, perhaps tomorrow.



SFYC

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Awards

Awards

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INTRODUCTION

The Association of Science, Technology and Innovation (ASTI) is an association of educators, scientists, industry representatives and individuals who are committed to advancing the role of the scientific community in inspiring the youth of the nation to join and excel in the world of science.

The members aim to help revolutionise the teaching, understanding, and awareness of the vital role Science, Technology and Innovation (STI) plays in fulfilling the economic, health and environmental requirements of the world's population.

Members are also seeking to mentor and encourage youth to seek new innovative methods and technologies that will enhance the understanding and learning of the sciences.

In addition, ASTI tries to use Science, Technology and Innovation for the advancement of mankind and protection of the environment that nourishes us all. ASTI believes that STI are part of the wider realm of knowledge such as the arts, history, languages and others.

ASTI was set up by the founders of Science Fair for Young Children (SFYC) on the 25th of October 2012.

1.1 ASTI Vision Statement

To be the premier Malaysian association for the promotion of education and understanding of scientific knowledge, technological advancement and innovational projects in both Malaysia and the world.

1.2 ASTI Mission Statement

The Association of Science, Technology and Innovation (ASTI) provides leadership in scientific education and technical support to improve and grow awareness in all areas of science through the generation, dissemination and exchange of information and services.

1.3 ASTI Objectives

- To stimulate the discovery, application and dissemination of knowledge.
- To create an atmosphere in which various segments of the scientific community freely exchange knowledge and expertise for the betterment of the community.
- To provide encouragement and support to the younger generation, in particular, students through a variety of activities which are able to develop and help creativity, invention and innovative results in science, technology and innovation.
- To recognise outstanding personal achievement in science, technology and innovation within the community.
- To sponsor programmes for challenging and developing youth for leadership responsibilities.
- To undertake projects which contribute towards the development of science, technology and innovation.
- To provide training and solutions to organisations and institutions in the area of science, technology and innovation.



1.4 ASTI Core Values Statement

The members of ASTI are guided in everything we do by the following core values:

Alignment to the Nation's Vision

To support the country's vision to transform Malaysia into an innovative nation.

Commitment to Youth

Our youth are our most important resource. Therefore, we encourage continuous learning and development to help empower all youth to be innovative in reaching their full potential.

Honesty and Integrity

We demonstrate integrity every day by practising the highest ethical standards and by ensuring that actions follow our words.

Communication

We promote a culture of open-mindedness, where we actively listen, communicate openly, respect the views of others, and encourage all to participate by expressing their thoughts and ideas.

Teamwork

Success centers on inclusiveness and all involved working together and sharing information and resources to achieve common goals. We value each member and remain united in our successes and failures.

Respect

We are dedicated to ensuring that everyone is treated with dignity and respect, and that differences are valued and individual abilities and contributions are recognized.

Social Responsibility

We are obligated to secure the sustainability of the environment for future generations.

Wisdom

We cherish wisdom in all our actions drawn from our own traditions and that of others.

1.5 ASTI Guiding Principles

- Long-standing commitment to youth and science through our association's structure which gives equal attention to science, technology and innovation.
- Building and maintaining a relationship with likeminded societies.
- Building and maintaining synergistic partnerships for the advancement of science, technology and innovation through education and training.

1.6 ASTI Core Activities

- **Raising Awareness, Promotion & Training**

The ASTI membership will use its expertise to conduct training and workshops at various levels on areas related to science, technology and innovation as well as wider related subjects. This will be two pronged. ASTI will prepare its own training and workshop modules to promote its service and it will also prepare custom training and workshops for specific stakeholders. The training and workshop sessions may be chargeable and help in raising funds for ASTI.

- **Conceptualization, Design & Implementation**

ASTI will act as the Secretariat for all projects initiated under the ASTI's umbrella. As the Secretariat, it will provide all administrative needs to each project. The expenses incurred by the Secretariat will be funded by the Project. ASTI will advise the Project Working Committee on the amount of funds to be allocated in the budget for administration and management costs. ASTI may become a member of other associations for projects not initiated by ASTI, where it is not the Secretariat.

- **Advisory & Consultancy**

ASTI will use the expertise of its members and supporters to raise awareness of ASTI by taking on advisory roles for any project in the field of science, technology or innovation. To help raise funds for ASTI, it will also promote itself as a Consultancy Provider for a fee. If needed, ASTI may set up a company to do this work. ASTI may also work with other companies or organizations to deliver these outputs.

- **Stakeholder Management**

ASTI will also use its funds to help sponsor others viable projects or research. The decision to do so will be made by the Committee. The Committee can only approve up to RM 10,000; anything above this amount will require approval from the AGM. However, no funds should be given at the expense of any of ASTI projects. The funding can be in the form of:

- Seed money (Social Enterprise)
- Sponsorship
- Loan (Social Enterprise / Project Funding)

The Committee will also decide on the role ASTI should be allowed to play in these projects, if funding was given. Moreover, ASTI will act as Funding Advisor to all projects initiated by ASTI or others. ASTI will also act as Funding Advisor for third parties for a fee in order to raise funds for the association.



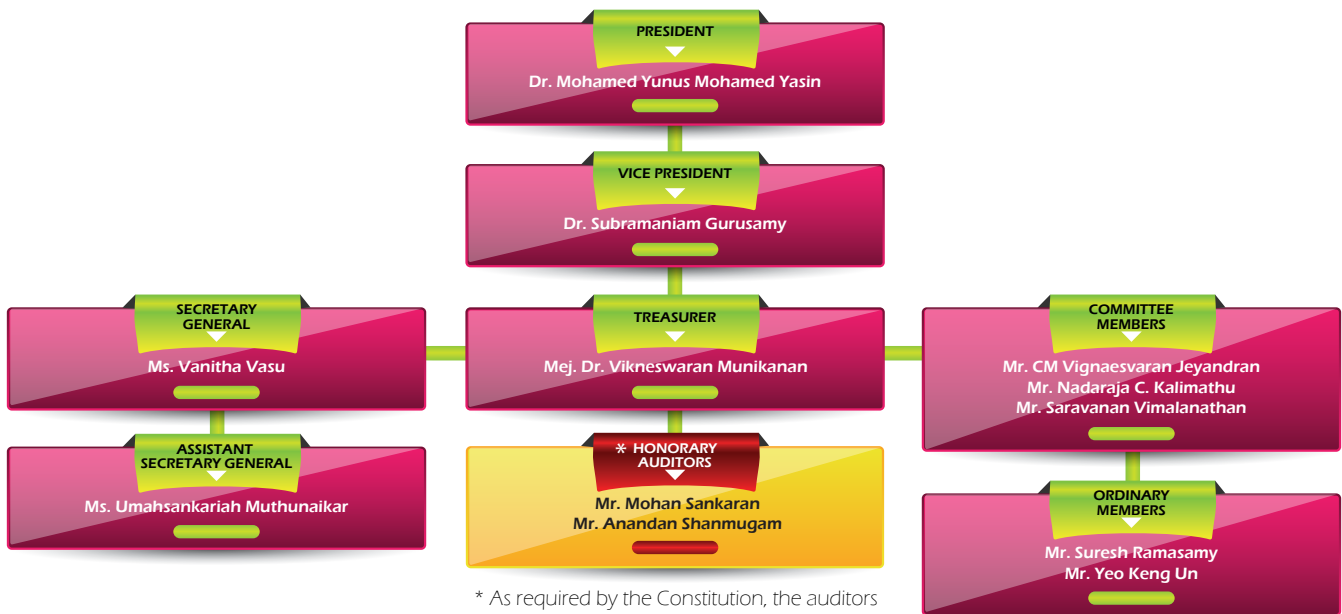
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STRUCTURE AND ORGANIZATION

2.1 Membership

ASTI's total membership as of 31 December 2014 was 12 people and in order for ASTI to maintain a high level of expectancy from both members and the public it deals with, membership will be strictly controlled and kept at an optimal number.

2.2 Committee



* As required by the Constitution, the auditors have dutifully examined ASTI's annual accounts for the Financial Year 2013/2014 and approved them.

2.3 Advisory Panel

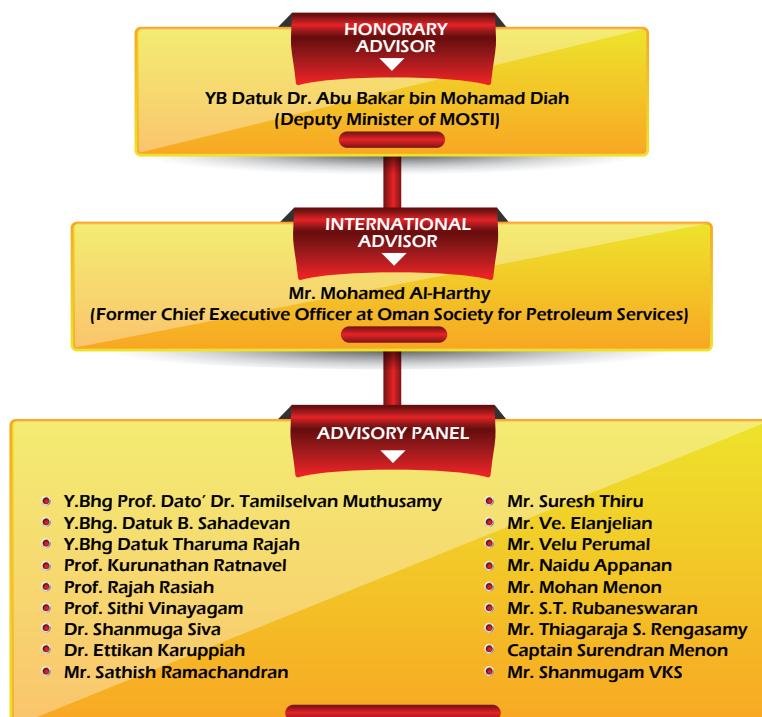
The ASTI Committee shall invite person(s) to be a member of ASTI's advisory panel. ASTI's advisory panel is made up of Science Experts, Industrial Leaders and Community leaders.

The role of the advisory panel is to advise ASTI on:

- Developing professionalism and leadership in its area of work
- The implementation of its projects
- The further development of existing and future projects for ASTI
- To help resolve potential disagreements within ASTI

In addition to the above, ASTI hopes that its advisors will also be ambassadors for ASTI in order that the achievement of the association's mission and objectives is facilitated.

ASTI's advisory panel consists of the following members:



3

PROGRAMMES AND ACTIVITIES

3.1 Science Fair for Young Children (SFYC)



3.1.1 Background

Science is the systematic study of nature. There is an infinite amount of knowledge and wisdom that can be gained from this. While scientific facts are important, if the basic methods employed to discover or learn about them were not followed, scientific progress could be hampered. Thus, for science, both the means and the end are important.

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 gateways to our understanding nature and the world of science.

Students learn science with greater interest when it is more ‘hands-on’ or experimental, through which they are led on a path of discovering scientific truths as they seek to satisfy their curiosity. This method will allow them to learn both the scientific facts and to be more engaged in the method employed in achieving them.

Thus, Science Fairs are ideal as they give students an opportunity to learn a scientific concept in greater depth, while simultaneously allowing them to:

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

3.1.2 History of SFYC

In 2003, a team was set up to organise the Young Scientific Explorers, and a group of volunteers visited schools to demonstrate simple yet exciting projects to students followed by a trip to the National Science Centre. Upon its success for 3 years, and recognising the benefits of a science fair, we initiated the development of SFYC in 2006.

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

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

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

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

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

This year, 2014, a total 261 schools successfully participated in the State Level Science Fairs and the 60 best teams were selected for the National Event which was held at the Dewan Raja Muda Musa, Shah Alam.



3.1.3 Objectives of SFYC 2014

SFYC 2014 has the following objectives:

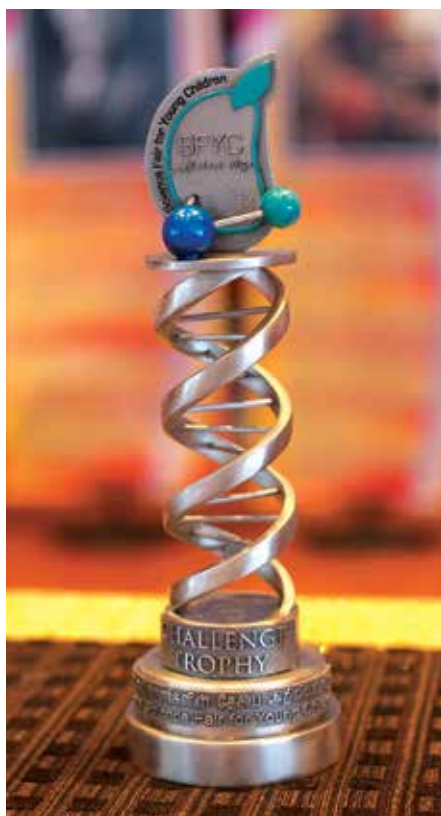
1. To review and improve the resource materials—the ‘SFYC Folder’—provided to students, teachers and coordinators of SFYC; to add new science projects to the sample projects already available.
2. To train science teachers from schools on ‘hands-on’ science and science project to encourage the organisation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

3.1.4 The School Level Science Fair, SLSF

School Level Science Fair was conducted by providing schools with training and materials to conduct the Fairs. It was designed and conducted for all students in the school from Standards one to five. We also provided all participants certificate and prizes. The total number of schools participating in SLSF 2014 was 338 schools.

3.1.5 The Zone Level Science Fair, ZLSF

Zone Level Science Fairs were conducted in 9 zones. The total number of schools participated in ZLSF in 2014 was 261 schools.





3.1.6 The National Science Fair for Young Children: Event Summary⁴

The National Science Fair for Young Children (NSFYC) 2014 was held as a one (1)-day event which started on Saturday morning at 7.00am and ended at 5.00pm with a great success. The details of the event are as follows: Zone Level Science Fairs were conducted in 9 zones. The total number of schools participated in ZLSF in 2014 was 261 schools.

Date:

11 November 2014 (Saturday)

Venue for Accommodation:

Hotel Laman Seri,
Delta Hotel,
Delta Inn.

Venue for the Science Fair Event:

Dewan Raja MudaMusa(DRMM),
Kompleks Belia & Kebudayaan Selangor,
Shah Alam.

A special team was formed to organise the one (1)-day National Science Fair for Young Children 2014 a month prior to the event by the Working Group Committee. The Event Committee was led by Ms. Thinaheswary Gunashakaran. A total of 13 departments were formed and tasks were delegated to each Head of Department (HOD). The National SFYC was assisted by more than 65 volunteers from UNITEN and also other university/ college volunteers.

The Head of Event Committee and the HODs executed well with the volunteers to ensure those participating in and those attending the event could do so easily, and were provided with all the necessary assistance needed.



The NSFYC was coordinated as follows:

10 October 2014 (Friday)

Participants and teachers from selected zones who required and requested accommodation facilities started arriving from 4pm onwards where they were divided by schools at their respective hotels, which were Hotel Laman Seri, Delta Hotel and Delta Inn.

They registered themselves at the reception of the respective hotels. During the registration, an envelope which consisted of a food allowance was given to each school for dinner. Meanwhile, the schools from Johor and Kedah received a transportation allowance as well.



11 October 2014 (Saturday)

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

Exactly at 9.00am, the Opening Ceremony was held at the same hall and was officiated by the chief guest of honour YB Datuk Seri Dr. S. Subramaniam, Minister of Health Malaysia. YB Datuk visited all the 54 booths and the participants were very happy with his presence. His presence and keen interest in their booths were a great source of motivation for our young scientists to be more involved in our event.

From 9.30am onwards, the judges were allowed into the hall for the evaluation which took 3 hours. Meanwhile, the teachers were involved in activities such as discussion sessions with the organising teams, a motivational talk, a sharing session and dialogue with the Judging Department. Lunch was served from 12.00 noon to 1.00pm. The students continued with the judging evaluation.

At the end of the teachers sharing session, the teachers were given a set of books for the school and certificates as a token of appreciation.

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

Our guest of honour for the Closing Ceremony was Datuk Dr Jeyaindran Tan Sri Sinnadurai, Chairman of MyNadi Foundation and Deputy Director General of the Ministry of Health. Datuk arrived at around 3.00pm and visited the booths.

At 3.30pm, the Closing Ceremony began and ended at 5.30pm. The top 3 winners of the Innovation Category received certificates and cash prizes worth of RM500, RM400 and RM300. The top 3 winners of the Research Paper Category also received certificates and cash prize of RM500, RM400 and RM300. Whereas the top 10 winners of the event received a trophy, certificates, sets of laboratory apparatus and prize money of RM2000, RM1500, RM1250, RM750 and RM500.



The list of NSFYC 2014 winners is as follows:

NSFYC Winners

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

Innovation Category

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

Conference Paper Presentation

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

3.1.7 Conclusion

We were generally well pleased with the achievement of SFYC 2014, although we had problems obtaining funding, which resulted in us having to postpone the National Event from July to October.

Kindly refer to attached CD for full report of Science Fair for Young Children 2014.





EXTERNAL
FACTOR

APPARATUS

3.2 Young Inventors Challenge (YIC)



3.2.1 Background

The Science Fair for Young Children (SFYC) is a project designed for primary school students, and about 200,000 participants have taken part in this initiative, at the school, regional and national levels. As a follow-up to the SFYC, a competition at a more advanced level for the Alumni was proposed in the form of the Young Inventors Challenge (YIC). Which requires teams of up to 5 Alumni each to put their minds together and come up with an invention under the Young Inventors Challenge 2013 (YIC 2013) theme "GREEN INVENTIONS: IDEAS ON SUSTAINABILITY". A total of 12 teams from all over the country participated in this pilot project, showcasing their green inventions.

In 2014, the Young Inventors Challenge competition was open once again to secondary school students aged 13 to 17, and we encouraged the teams to be in groups of 3-5 students of different races to come together in an inventive process. The purpose of the programme was to encourage the creative and inventive capabilities of young people. The theme for YIC 2014 was kept the same: "GREEN INVENTIONS: IDEAS ON SUSTAINABILITY". We received a total of 156 teams that registered for YIC.

After the initial publicity and acceptance of statement of interest from teams, the students were given a student manual to help write a proposal about their invention.

The project was then implemented in 3 phases comprising:

Phase One: The student's proposal submission. 111 proposals with various

teams were received, and 56 teams were shortlisted to participate in the Grand Finale.

Phase Two: Workshop session for selected participants and their mentors. The shortlisted teams were given training in 5 locations across the country, which were Penang, Johor, Pahang, KL & Selangor, Sabah and Sarawak.

Phase Three: Final Competition. The final competition was held in Dewan Tun Dr Siti Hasmah, Rumah Puspanita on 20 September 2014. There were 49 teams from all over the country participating in the Grand Finale.

Among the main aims and objectives of YIC 2014 were:

- To give an opportunity to young inventors to develop and showcase their inventions in the area of sustainability.
- To help young inventors to experience the inventive cycle, from conceptualisation to product / prototype.
- To introduce the concept of sustainability to the participants.
- To give opportunities to young adults who are inventive to promote their ideas to the outside world.

It was hoped that, by participating in YIC 2014, the participants would:

- Produce an original invention and receive recognition for participating in the event.
- Develop creative and innovative thinking skills.
- Develop teamwork dynamics to solve problems.
- Use resources such as the internet and library to hone their research skills.
- Learn to document their invention project.
- Enhance self-esteem.
- Acquire public presentation and writing skills.

The participating teams were also requested to come up with a 5-minute video documenting their invention journey, but it was not made compulsory. A total of 16 teams participated in this competition and submitted their videos on time.

A production team from ASTRO judged these videos and the best three videos were selected to be given prizes of RM1000 for the Champion, RM700 for the 1st Runner-Up and RM500 for the 2nd Runner-Up.





3.2.2 Event Day Summary

The YIC 2014 event started on the 20th of September 2014 at 7am with the arrival and registration of the participants. A total of 49 teams comprising 214 students and over 70 mentors arrived on time to start preparing for the event. After breakfast, the participants were allowed to set up their booth and models.

At 9am there was a short opening ceremony. Then the floor was officially handed over to the judging team. The inventions were judged by a team of about 40 judges made up of university lecturers, engineers, environment consultants, intellectual property specialist, etc.

During the judging process, the parents and mentors were ushered to attend the YIC 2014 Seminar which was held in Institute of Diplomacy and Foreign Relations from 10:00am to 12:30pm. The seminar was conducted by field experts to enrich the mentors and parents with the following topics:

- Future Job Seeker - Capacity and Competence: What does the future job market require?
Mr. Suresh Sakadivan, Product Owner, Job Street
The presenter showed what are the attributes needed from job seekers.
- "Garbage Dreams: Recycling for a Living in Cairo - My Personal Journey"
Mr. Adham El Sharkawy, Recipient of ASTI Innovation in Community Award 2014
The presenter showed how his journey in life has turned him to a Recycling Entrepreneur
- Creating New Economy through Science and Innovation
Ms. Hazami Habib, Chief Operating Officer, Academy of Sciences Malaysia
Ms. Hazami shared the vision of Academy Sciences Malaysia to foster a thinking and scientific community.

Following the judging process, the hall was opened for public viewing at 12:30pm and all the participants were presented with certificate of participation by our special guests in their respective booth. At around 2:30pm, our guest of honour YB Tuan P. Kamalanathan, Deputy Minister, Ministry of Education arrived and viewed the exhibits.

Mr. Drake Weisert, Information Officer of the Embassy of the United States of America, Mr. Sathia Moorthy, Area Retail Manager of CIMB Bank, Mr. Vesuanathan Suppiah, Trustee of MyNadi Foundation, Dr. Mohamed Yunus bin Mohamed Yasin, President of ASTI, Mej. Dr. Vikneswaran Munikanan, Treasurer of ASTI, Mr. Anandan Shanmugam, Project Director of YIC 2014, Mr. Adham El Sharkawy, Recipient of the ASTI - Innovation in Community Award, Mr. U. Thamotharan, President of Perinnbam were also among the VIPs present at the event.

After viewing the exhibits, the guest of honour YB Tuan P. Kamalanathan graced the Prize Giving Ceremony where the winning teams of Young Inventors Challenge 2014 and winning teams of YIC 2014 Video Log Competition were announced. A trophy, cash prize and certificates were presented to each winning team member. The champions also received a revolving YIC Challenge Trophy. The details of the winning teams are as below:

Winning Teams of **Young Inventors Challenge 2014** Grand Finale

CHAMPION

Team Name : White Penguin
Project Name : Environmental Friendly Pen
School Name : SM Lodge Kuching, Sarawak

1ST RUNNER UP

Team Name : Intelligent Recyclers
Project Name : I-Bin
School Name : SMJK Chung Ling Butterworth

2ND RUNNER UP

Team Name : Sky Salvador
Project Name : UV Schutz
School Name : Tunku Kursiah College, Negeri Sembilan

Winning Teams of **YIC 2014 Video Log** Competition

CHAMPION

Team Name : MRSMTAR1
Project Name : Palm Oil Leaves (ElaeisGuineensis Eco Paper)
School Name : MRSM Tun Abdul Razak, Pahang

1ST RUNNER UP

Team Name : The Salvagers
Project Name : Automated Waste Sorter Powered by Solar Power
School Name : SMK Datuk Haji Abdul Samad, Negeri Sembilan

2ND RUNNER UP

Team Name : MRSMTAR9
Project Name : Aloe-Eco Tissue
School Name : MRSM Tun Abdul Razak, Pahang



3.2.3 The ASTI - Innovation in Community Award (ASTI-ICA)

ASTI proudly announced the First Winner of the ASTI - Innovation in Community Award (ASTI-ICA) during the grand finale of the YIC.

ASTI-ICA is designed to recognize the contribution of an individual, a group of people or an organization for doing projects within the community by utilizing Science and/or Technology and/or Innovative methods. In line with YIC 2014 theme – “Green Inventions: Ideas on Sustainability”, ASTI announced the winner of the ASTI-ICA 2014 to be Mr. Adham El Sharkawy, from Cairo, Egypt. More information of this initiative can be found below.

3.2.4 Conclusion

Overall, YIC 2014 was a huge success. We managed to attract multiracial teams from various parts of Malaysia. Out of 111 received proposals, 56 were selected and 49 teams participated in the grand finale.

Students have the potential to invent and innovate, given guidance and opportunity. We hope that YIC 2015 will attract more participants and encourage young minds to solve problems through inventions.

Kindly refer to attached CD for full report of Young Inventors Challenge 2014.

3.3 Creative and Critical Thinking Camp (CCT)



3.3.1 Background

Young people with the modern education system have become spectators rather than participants in their own ‘learning futures’. This is happening. They are overwhelmed with facts and figures in school; they memorize for tests and exams, but soon afterwards they forget. It should be argued that real education must help create a creative and critical mind by empowering the learner to take charge of his or her learning. Subjects and topics are mere tools to nurture this new independent thinking mind. Thus any subject in science or arts is able to create this ultimate goal if ‘delivered’ properly.

We hope to use this camp to inculcate and introduce the concept of thinking creatively and critically when students make choices in their lives. Both methods of logic and empirical reasoning will be introduced with simple lectures and fun activities. In addition, competitive and collaborative methods of producing an outcome will be explored by the participants.

The participants are charged a minimal amount of fees in order to cover some of the costs of the programme. However, if funds permit, ASTI will also provide scholarships to deserving students.

As a test, ASTI held a ‘pre-pilot’ programme for 36 young students who had just completed their UPSR at the end of November 2013. It was an all-inclusive 3-day 2-night event.

3.3.2 Objectives of CCT

- Helping to empower the young to think in both creative and critical manner with presentations and activities to help the young build this capacity.
- To build effective resources, guides and know-how to make this a recurring camp for young people across the country.
- Using competitive and collaborative methods to produce positive outcome when making choices.
- Helping the young to realize that learning can be fun by not just memorizing facts but also by understanding.

3.3.3 Target Groups and Type of Camps

There will be 3 different levels of camp target groups:

- Primary Level
- Secondary Level
- University Level

With different types of camps as below:

1) Project Camp

The student has to send application to CCT and the CCT Committee will choose the participants. A partial scholarship is provided. The facilities such as accommodation & meals will be organised for the participant for 3 days 2 nights.

2) Exclusive Camp

The participants will be chosen by the organizing school/organization with ASTI's agreement. The accommodation & meals will be provided by the organizer of the camp. ASTI will provide camp materials and trainers. Require minimum 35 to maximum 50 participants to proceed.

3.3.4 Benefits of CCT Camp

- A medium to introduce the concept of thinking creatively and critically when making choices in life and introducing innovative problem-solving techniques.
- Participate in exciting workshop sessions under the guidance of skilled facilitators and instructors.
- Fun outdoor and indoor activities that will help the participant to realize his or her creative and critical thinking capabilities.
- Use competitive and collaborative methods to produce positive outcome when making choices and performing tasks.



3.3.5 CCT Camp 2014 Summary

After the success of the pre-pilot programme in 2013, ASTI decided to conduct a pilot camp in 2014. The Southern Region Creative and Critical Thinking Camp (CCT) 2014 was a three-day event which started on Friday morning and ended on Sunday afternoon. The details of the camp are as below:

Date :

28 November – 30 November 2014
(3 days 2 nights)

Venue :

Pusat Kecemerlangan &
Pembangunan Insan YPJ, Mersing,
Johor.

DAY 1 – FRIDAY 28 November.

The day started at 10:30 am with the arrival and registration of the participants at the foyer of the hall. During the registration, the participants received their name tag, camp grouping, a T-shirt and a guide book. The formal event started at 11:00am with all participants having arrived.

There was a short briefing on camp safety and rules & regulations followed by a short briefing on the programme for the coming day 2. The programme started with the participants seated according to their groupings, made up of 6 per group. There were a total of 4 groups seated in 4 round tables.

There was an ice-breaking session conducted for the participants by our facilitators which was to set the theme of the camp. The participants participated in various modules which were delivered in the morning and afternoon. The sessions include 5 Reasons Why Humans Are Capable of Genius, Boosting Your 5 Senses, and Healthy Body and Healthy Mind. Each module consists of a presentation and activities.

In the evening, the students participated in an outdoor activity, 'the flying fox'. The participants freshened up and had their dinner at 7:30pm, followed by watching a movie. There was a short discussion about the movie after focusing on the lesson and message conveyed by the movie. Day one sessions ended with the participants having their supper. Meanwhile, the Event Committee continued with the set-up preparations for the following day's sessions.

DAY 2 - SATURDAY 29 November.

The full-day activities started at 6:45am, with the participants having their morning exercise led by Major Dr. Vikneswaran followed by breakfast. The session continued with module called the 'living earth' by Dr. Yunus Yasin. It was a preparatory presentation for the outdoor activity. The purpose of the outdoor activity, where the participants gathered in the field for 'Juggle tracking' exercise, was to show the living flora and fauna in a mangrove area. After this outdoor activity, the participants had their shower and had a group photograph. Then the morning activities started at 9am and continued until lunch at 1:15pm with sessions on: Problem Solving (CSI).

After lunch and a quick warm-up game, the sessions continued with the subjects of: Relaxation and Concentration, Critical Thinking in Conversation, Boosting Your 10 Intelligences, and Lateral Thinking. The evening session continued at 8pm after shower and dinner with: Expressing Your Creativity. The participants then retired for the night after having supper at around 10:30pm.

DAY 3 – SUNDAY 30 November. On the final day, at 7:00am after the morning exercise session, the participants gathered in the cafeteria for breakfast. Then, after a short warm-up game, the sessions continued with: CSI and Long and Short Term Memory Tips and special presentation on Coral Reef done by a representative from 'Reef Check' and NGO focused on keeping the coral reefs in Malaysia safe. These sessions ended by 11:30am with the Certificate Presentations and Camp Closing Speeches.

The parents who had arrived early were invited into the hall for the Closing Ceremony. Each participant was presented with a certificate and a book. Project Director Major Dr. Vikneswaran and ASTI President Dr. Yunus Yasin each gave a short speech and closed CCT Camp 2014.



3.3.6 Short CCT Workshop

This year, a special one-day CCT was conducted very successfully for young people. It was found to be more popular especially among teenagers and young adults. More information on these can be found in the proceeding chapters.

3.3.7 Conclusion

The CCT Camp was conducted successfully this year as a pilot. The following year, we hope to run more camps particularly for secondary levels and University students, and also explore shorter workshops and seminars.

Kindly refer to CD for full report of Creative and Critical Thinking Camp 2014.





3.4 ASTI Innovation In Community Award (ASTI-ICA)

ASTI-ICA is designed to recognise the contributions of an individual or a group of people in doing projects in the community by using Science and/or Technology and/or Innovative methods.



3.4.1 Background of the Award

ASTI recognises that great work and change can source their origin from simple acts of an individual or groups of individuals. There are rare breed of people who see a problem and do not sit by and let the world dictate to them their future. These are the people who work tirelessly, often not wanting recognition or, in most cases, are not recognised for their work, no matter how amazing they are. These people also use simple and yet innovative methods to start their work.

ASTI, being a group of scientists, engineers, educators, professionals and more, recognises the need to be able to use knowledge effectively when conducting projects in society. Often some people are able to use their knowledge effectively with minimal funds to be able to make a huge difference in society.

3.4.2 Objectives

With the above in mind, ASTI has launched this initiative called "The ASTI Innovation in Community Award, ASTI-ICA". The objectives of this award include:

- To recognise individuals and/or a group of people (and the community in which they work) who use innovative methods to make a positive difference to the people around them (the community);
- To highlight these types of work in order to give young people a source of inspiration and role model in hopes of inspiring them to be positive change agents in their community;
- To avoid already well-known change agents - but rather focussing on the newer up and coming, not yet recognised change agents.

3.4.3 Method

ASTI-ICA will be administered by a committee elected by ASTI's Central Committee who would request nominations for the award annually from its networks. The recipient can be from any part of the world. The Committee will deliberate on the nominations received, and the award will be given based on:

- The impact of the project on the community both horizontally and vertically (horizontal = numbers-quantity, vertical = depth-quality);
- The innovative methods used in the project which include the effective use of resources and knowledge and the level of perseverance to achieve their goal.

We hope to give the award annually in conjunction with the Young Inventors Challenge, YIC. It can be given in person, or in absence when the person is unable to attend.

3.4.4 Funding and Budget

Considering the nature of ASTI being a non-profit organisation, the awards will be conducted modestly, with internally generated funds. Each year the quantum amount of the award will be determined by the ASTI Central Committee based on funds generated.

3.4.5 Announcement of the First Winner of the ASTI - Innovation in Community Award

It has been proposed that this is an award that would be given to deserving recipient(s) annually in conjunction with the Young Inventors Challenge, YIC - where possible, since this award is to be funded by internal funds from ASTI.

YIC 2014 theme is "Green Inventions: Ideas on Sustainability". As such, we are proud to announce the winner of ASTHCA 2014 to be

Adham El Sharkawy
from Cairo, Egypt

Adham was born into a community which literally lives in a garbage village. They live by collecting and recycling garbage from Cairo. They recycle more than 80% of all the garbage they collect. Their mostly Coptic community is called the Zabaleens. Adham has been an active member of the community and has been very active in helping 'modernise' the community.

At the age of 12, he was interviewed for the documentary "Everyday". In 2005, he was featured in the highly acclaimed documentary "Garbage Dreams", which went on to win numerous international awards and became a part of the PBS series "The Independent Lens".

Adham is an internationally known trainer and speaker in the field of non-organic waste recycling, specifically source separation. His company is based in the Moqattam Hills, which is an area long famous for its informal but efficient recycling systems.

Adham has spoken at various institutions and schools, both in Cairo and overseas (Wales, USA and Norway), presenting information on the Spirit of Youth Recycling School as well as giving workshops on source separation.

Adham was a teacher at the Recycling School from 2007 to 2011 and continues to volunteer at the centre. Since then, he lived in the USA for 2 years, where he studied English and continued to develop his knowledge on source separation. He knows that source-separation is the foundation of effective recycling programmes and wants to share his passion, knowledge and experience with anyone who is willing to listen.



3.5 ASTI Media Engagement Programmes



3.5.1 Project Promotional Activities

3.5.1.1 Science Fair for Young Children

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

The flow of information between internal and external stakeholders was reached through various levels such as the School Level Science Fair, Zone Level Science Fair and the National Level Science Fair. Astro Vaanavil as our official electronic media and Nanban as our official print media highlighted our event throughout Malaysia.

In addition, for the second time, we approached the public via a “Road Show” at four (4) public places to promote the National Level Science Fair. Moreover, to draw attention to our road show, we used our official Mascot ‘Arivan’ as an identity for SFYC. The Public Relations activities carried out to promote the Science Fair for Young Children 2014 are shown below:

1) SFYC Soft Launching

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

2) School Level Science Fair 2014

- Press release for School Level Teachers Training in Tamil media Newspapers such as Malaysia Nanban, Thinakural, Makkal Osai and etc.
- Promotional Capsule which was sponsored by ASTRO was telecast over ASTRO Tamil Channels.
- Promotional via SFYC’s Facebook & Website.
- Many School Level Science Fairs were featured in Tamil Newspapers. We estimate more than 10 articles for SLSF in particular schools alone.

3) Zone Level Science Fair 2014

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

4) National Level Science Fair 2014

- Road Show at SACC Mall, Ole-Ole Shopping Centre, Little India of Klang, Little India of Brickfields.
- Pamphlets were sent to VIPs, Guests, Funders and all well-wishers to provide information about the NSFYC.
- NSFYC 2014 invitations were sent to VVIPs, VIPs, Guests, Public University and Private University lectures, funders and well-wishers.
- A special invitation enticed the public to NSFYC 2014.
- 10 capsules related to science were sponsored by ASTRO and were telecast over ASTRO Tamil Channels over a period of 8 months until just before the National Level Science Fair event.
- A promotional capsule which was sponsored by ASTRO was telecast over ASTRO Tamil Channels a month before the National Event.
- Dissemination of information via SFYC's & ASTI's Website.
- Dissemination of information via SFYC's & ASTI's Facebook.
- Interview of the winning team of NSFYC 2014 on ASTRO & THR Raaga after the event.
- A special invitation by MyNadi Foundation to the Champion of NSFYC 2014 to showcase their experiment to the Prime Minister during the celebration of the 5th year anniversary by MyNadi Foundation which was also featured on the New Straits Times newspaper.
- A special publication about the Winning Team of NSFYC 2014 by Thumbi magazine.

The project received wide coverage in newspapers such as the Malaysia Nanban, Tamil Nesan, Makkal Osai, Tamil Malar, Thinakural, the New Straits Times and The Star for the School Level and Zone Level Training, Zone Level Science Fair and National Event before and after. They were also featured in the social media in various blogs and Facebook pages.



3.5.1.2 Young Inventors Challenge

- In the beginning of 2014, the Young Inventors Challenge 2014 competition was promoted by sending out flyers to over 1000 schools in Malaysia.
- Dr. Mohamed Yunus attended BFM interview to promote the programme; whereas the Vizhutugal TV interview was attended by Mr. Anandan Shanmugam and Dr. Mohamed Yunus Yasin.
- Nearing to the Grand Finale date, ASTRO Vaanavil played an effective role in promoting the YIC by airing capsule and promotional videos on ASTRO Vaanavil for a month prior to the event.
- Close to the event day, Dr. Yunus and Dr. Ewe Chun Te were interviewed live on TRAXX FM where they talked about the event and the philosophy of the YIC.
- During the YIC 2014 Grand Finale, ASTRO 360 covered the full event which was also broadcast on ASTRO Vaanavil a week after. All the winning teams, parents, mentors, and organizers were also interviewed by ASTRO 360°.

3.5.2 Arivom Ariviyal



ASTI in collaboration with Malaysia Nanban are to release the newspaper articles once a week with the title of “AriyomAriviyal” (Understanding Science). Thus far, the articles have been written by Dr. Mohamed Yunus Yasin in English and have been translated into Tamil to be published. A total of 40 articles have been published as of 31 December 2014. The series is intended to help the community to understand science in a holistic manner and its relevance to one’s life.



3.6 ASTI Edu Tour (AET) Malaysia



3.6.1 Background

ATY Group is an established youth training centre in Asia and is one of the most respected ones in Vietnam. As an effort to cultivate leadership qualities among the younger generation, ATY together with ASTI collaborated for the first time to share their expertise and training experience by organizing People and Leadership Workshop (PaL) in Malaysia. The initiative marked a pilot programme for ASTI called the “ASTI Edu-tour” designed to inculcate leadership and learning by bringing young people to different locations across the country.

A group of 20 youths from Vietnam arrived in Kuala Lumpur, Malaysia to attend the “ASTI Edu-tour” from the 15th to 23rd of July 2014.

ASTI believes that this programme can be a good platform for the young leaders to develop their leadership capabilities, which will help them be an influential and effective leader within their own community and nation.

3.6.2 Objectives

- Provide leadership training and experiential learning for the younger generation who will be future leaders
- Experience Creative and Critical Thinking (CCT) workshop conducted by ASTI
- Create simulations which can explain and demonstrate how the correct form of leadership contributes towards achieving a common goal in any environment
- Share leadership ideas and experiences with Malaysian leaders and also Malaysian youth
- Explore places of interest in Malaysia
- Provide meaningful and positive memories of ASTI Edu Tour in Malaysia which will inspire others to take part or for ATY to participate again in the coming years

3.6.3 Target Group

The target group for the pilot programme was students from Vietnam who are members of the ATY. Their ages ranged from 12 to 20 years old. There was a total of 19 male and female students and 3 accompanying adults/facilitators.

3.6.4 Mode of Implementations

The implementation steps for the ASTI Edu Tour are as follows:

ASTI formed a working group to oversee and be responsible for the delivery of the expectations set by ATY Group. ASTI was responsible for the development of the overall workshop/programme.

The working group formed:

- Worked closely with the R&D department of ASTI and developed the content and modules for the programme
- Identified the venues, and determined and coordinated the logistics for AET
- Managed the entire event
- Conducted a post-mortem afterwards and identified areas requiring improvement, inclusion and exclusion

ASTI proposed :

- Training modules which are suitable for the ATY group; highlight the benefits of having future follow-up training sessions for the ATY group's programme, which would also be held in Malaysia
- To establish a long-term working relationship with ATY which would benefit both parties and also Malaysia in general through the exposure and foreign exchange of ideas and experience



3.6.5 Execution Flow

- ATY, Vietnam showed interest in conducting their summer holiday programme in Malaysia and invited ASTI to host their trip
- ASTI initiated ideas on how to run ASTI Edu Tour and identified suitable locations
- Quotations were collected from vendors of accommodations, third party trainers, team-building planners and so on
- Comparisons were made on all the quotations to identify the best options which would fit the project budget and ATY's basic requirements
- Proposals on ASTI Edu Tour were sent to ATY together with agenda details and costing
- ATY representatives visited some of the locations proposed for ASTI Edu Tour around Kuala Lumpur, Putrajaya and Kuala Selangor and provided feedbacks
- Final proposal was drafted based on all the requirements and feedback gathered from ATY
- Both ASTI and ATY agreed on the final proposal, detailed agenda and costing
- Contract between ASTI and ATY was signed and stamped
- ATY paid 50% out of ASTI Edu Tour total cost as a confirmation deposit
- ASTI paid deposits for all the selected vendors; at the same time negotiations on additional facilities like meeting rooms, catered food, clothes drying areas, coach type, tour guide, etc were on-going
- ASTI Edu Tour officially started when the ATY team arrived on the 15th of July 2014, received by Ms. Helen Ng and Ms. Umah Shankariah at the KLIA airport
- A total of 19 participants consisting of 11 female and 8 male students arrived. They were accompanied by 2 ATY trainers and 1 ATY photographer
- The 9-day event was executed as planned
- ATY departed from Changi Airport, Singapore on the 23rd of July 2014 back to Vietnam

3.6.6 ASTI Edu Tour Highlights:

- Meeting with the Malaysian Education Deputy Minister, YB P. Kamalanathan at Prime Minister Office and with one of the youngest ADUN members of Tenggaroh/Mersing, YB Ravin Kumar Krishnasamy as part of meeting young leaders for the participants
- Creative and Critical Thinking Camp by CCT team to help the participants understand the importance of thinking when assuming leadership roles
- Homestay at Kampung Teminin Baru, Kota Tinggi where the students stayed with foster families and enjoyed the actual feel of breaking fast during the month of Ramadhan for the participants to understand the local culture
- Charity work of painting and cleaning a house of a poor family in Kampung Teminin, Kota Tinggi to encourage empathy among participants
- Educational nature exploration in Kuala Selangor Nature Park to understand the importance of the environment to the future of humanity
- Tour around interest spots in Kuala Lumpur, Batu Caves, KLCC & Twin Tower, Tasik Perdana
- Exploring activities at Eagle Ranch Resort, Port Dickson where the participants participated in many team-building activities
- Stay at Jonker Street to view and feel the atmosphere of historical Melaka and to showcase the importance of culture and identity among the participants
- Look and feel of Malaysian houses from all 14 states in Taman Mini ASEAN, Air Keroh, Melaka to help the young understand the importance of diversity amongst people
- Trip to Legoland, the first lego-based theme park in Asia for fun and recreation and to understand the balance of play and work.
- Final day stay at Singapore, and a visit to Singapore Science Center to showcase the importance of knowledge and technology for our shared future

- Amazing Race was held at 4 stages, whereby all 3 teams from 19 students would be given sets of questions to answer and the results were compiled before the closing ceremony of ASTI Edu Tour which was held at Kampung Teminin, Kota Tinggi. Teams were also given an egg each to which resembles "Team Life", and were asked to take care of this egg as part of their activity

3.6.7 ASTI Edu Tour Evaluation

The objective of AET for the trip is to help its students build capacity to lead, learn, discipline and adapt to foreign culture and a local way of living. Listed below are the ways these values are nurtured via AET:

- Opportunities to share ideas with local political leaders
- Fun and exciting classroom training sessions via CCT camp
- Homestay with the locals of Malaysia to understand typical way of lifestyle and to experience local food
- Hand washed laundry was requested by ATY in most accommodation for the 9-day stay has inculcated discipline and diligence
- Non-luxurious accommodation to expose students to basic style of living
- Mangrove tree planting for a forest reserve
- Charity work

3.6.8 Conclusion

In general, AET fulfilled all of the requirements as documented and agreed by both parties. ASTI can retain the objectives of AET and has incorporated its feedbacks for further improvements. Positive remarks from ATY indicate that they, especially the participants of AET, loved Malaysia and would consider participating again in the future. One of the feedbacks ASTI received was to rename this initiative and make it fully a camp for leadership training.



3.7 Science Film Festival-Creative



3.7.1 Introduction

International Science Film Festival (SFF) is organised across the globe by the Goethe-Institut in partnership with various local organisations. This year is the 4th edition of the Film Festival. More than 400,000 viewers had enjoyed the films presented last year. To make it a success in Malaysia, local partners were enlisted for this project, which include Malaysian Nature Society, the German Malaysian Institute, the Ministry of Education, Siemens and Mercedes-Benz. The Association of Science, Technology and Innovation (ASTI) is proud to be chosen as a partner this year.

The theme chosen for 2014 was FUTURE TECHNOLOGIES. FUTURE TECHNOLOGIES showcased films coming to screen across the world, depicting how the overall future of the world would look like. With time, more and more technologies would dominate our societies - films that show visions of the future were also chosen this year. The event showcased technology-based films that would have an immediate effect and impact on mankind. The films even emphasize the potential changes as well as opportunities available to mankind. Some technological concepts in some films might even be mindboggling to the viewers and helped foresee the coming world dominated by technological achievements. They also show the challenges that humanity would have to face in the future dominated by technology.

3.7.2 Science Film Festival 2014

The 2014 Science Film Festival takes us to the future showcasing the technological development that would shape tomorrow's world. It is quite obvious that the discovery and innovation of science and technology is gaining unprecedented velocity that had never been so in past decades. It is obvious from the media which has been injecting new words into our vocabulary such as gentech, nanotech, synthetic biology, graphene, algae fuel, quantum computers and other concepts, which used to be the domain of expert researchers but will soon have an impact on our daily lives and on the Earth we live. Future societies have to adjust swiftly with the outcome of technological development; otherwise they would be left behind.

In such rapidly changing tides, it can be a challenge to keep up with the electrifying scientific and technological developments. What promises and what dangers do these breakthroughs hold in store for us? How are we going to adjust our lifestyles, coping up with the envisioned roller-coaster future?

To help make sense of the impending changes in the next ten years and beyond, the Science Film Festival 2015 seeks to explore a broad spectrum of innovative technologies at the cutting edge of science through exemplary films and television contents from around the world. The SFF events, which bring together the world's technologies in a nutshell, are to be an arena where innovative minds find an opportunity to amaze and brainstorm in order to shape and adapt to the world that is to be.

3.7.3 Creative & Critical Thinking Camp, CCT Camp

Young people within the education system today are becoming spectators rather than participants in their own 'learning style'. In CCT, participants are introduced to creative & critical thinking, and logical & empirical reasoning to solve problems, using competitive & collaborative methods of producing outcome via fun activities in a "camp"-based environment. CCT hopes to transform the student into a true learner. It aims to give the responsibility of learning back to the learner.

The impending future as showcased by the themes of SFF this year, again, shows how important it is for the learner to take charge of his or her learning future. In a world where things can change very rapidly, rote learning has little to contribute to the young of today in order to be able to live in the envisioned future. Thus, it is important to inculcate the spirit of creative and critical thinking among the youth of today in order to face the perilous, yet exciting future.

3.7.4 The Collaboration

In conjunction with the Science Film Festival Malaysia 2014, ASTI was involved in 3 different initiatives: two organized by the Goethe-Institut and one by ASTI. The 3 events were the Opening Ceremony, Distribution of SFF School Packs, and the Science Film Festival Creative & Critical Thinking (SFF-CCT) Workshops.

SFF-MALAYSIA 2014 prepared about 700 packs which were then distributed to schools and learning institutions across the country. The packs were made up of 4 DVDs containing 30 films for all ages (including children). The packs also contained other 'goodies' such as T-shirt, SFF 2014 Booklet, writing/scribbling pads, etc. ASTI's President was one of the pre-jury team members, who helped select the films for Malaysia SFF 2014. The 30 films were selected from a list of over 80 pre-selected films.

3.7.5 Objectives SFF-CCT

The objectives of SFF-CCT include:

1. To introduce young people to Science and Technology
2. To help young people develop creative and critical thinking capabilities
3. To develop modules and content for SFF-CCT which are effective on delivering the above



3.7.6 The Science Film Festival Creative And Critical Thinking, SFF-CCT Workshops

ASTI held two separate types of SFF-CCT workshops: the first for selected students of KDU PJ Campus and the second for secondary school students. Two different types of workshops were developed to appeal to the different audiences.

SFF-CCT WORKSHOP – IN KDU

The half-day workshop was held on 29 October at the KDU Campus in Petaling Jaya. The focus of the workshop centred on an award-winning film on “Logical Thinking” with the title “The Joy of Logic” by BBC, aimed at introducing people to “logical thinking” and its relevance to day-to-day life. The workshop was interactive and included activities related to logic. The participants were Year-1 and Year-2 law students. The workshop focused on raising awareness and introducing logical thinking method and how it is used in their daily lives and in their future careers as lawyers.

SFF-CCT WORKSHOP GRAND PACIFIC and KHAZANAH

The second type of workshop was conducted for secondary school students. The first was held on 8 November 2014 at the Grand Pacific Hotel in Kuala Lumpur for 42 secondary school participants. The majority of the students came from various schools in the Klang Valley area, with a small group coming from Johor. The workshop went on for the whole day.

A total of 4+1 films of various lengths and with different themes were shown. After the introduction and ice-breaking activities, the students were given a 90-minute seminar introducing them to science and technology. This was to help them get into the right frame of mind before watching the films. Various activities and experiments were designed to help them understand science and technology better using the ‘hands-on’ method. The films were chosen based on the story told and the lessons delivered, from basic intermediary technologies to advance future technologies. After each of the films, we organized short presentations, discussions and activities.

The second event was in Khazanah Nasional and was held at their office at Level 33, Petronas Twin Towers where the same workshop was repeated.

For both programmes, ASTI was honoured to host a distinguished professional with avid experience in the oil and gas industry from the Sultanate of Oman, Mr Mohamed Al-Harthy, who was an amazing motivation speaker, presenting his speech at the end of the event instilling greater confidence into the participants so that they would continue their learning of Science and Technology for the benefit of humanity.

3.7.7 Conclusions

Based on the survey result, we noticed the objectives of SFF-CCT were clearly met, with a large majority saying that they were able to think more creatively and critically and were able to understand science and technology better after the workshop. However, we did notice that there were a number of participants who had problems with the English language. Yet, they were able to follow and grasp the central idea of the event due to the interactive and cohesive nature of the programme. The participants were overwhelmingly happy with the unique presentation and chain of activities of the workshop.

The trainers were also deemed to be excellent by the participants and were seen as facilitators in their own learning. We feel that the programme was a success and achieved its objectives and hope to organise more in the future.

The collaboration of the Goethe Institut and ASTI has been seen as a big success, and we hope for better cooperation in the future. Considering the limited time frame, ASTI was able to develop modules based on the films received. The event can be labelled an innovative programme and a tool to educate young minds. Turning young people more towards science and technology is sure a sign of progress and net worth for the nation, and can be said a part of nation-building through fine-tuning the younger generation. Being the pillars of the nation in the future, the younger generation well deserves good activities that will sharpen their brains more scientifically in order to be more productive.

Kindly refer to CD for full report on Science Film Festival - Creative and Critical Thinking Workshop.



3.8 ASTI Leadership Programme / Internship

3.8.1 SFYC Alumni

The participants of Science Fair for Young Children (SFYC) have been invited to be an Alumni Member of Science Fair for Young Children. Science Fair for Young Children started as a pilot in 2007 in Selangor and Wilayah Persekutuan. In 2008, we were able to conduct the project throughout the nation on 2 levels, regional and national. Almost 180 schools participated in the first National Science Fair. Since then we have introduced School Level Science Fair and our participants have reached more than 80,000 students per year.

However much as we wanted to, we have not been able to keep in touch with the students who participated in SFYC. With this objective in mind, we have decided to start up an alumni group for all those who were part of SFYC in the past.

By becoming a member of SFYC Alumni, we will keep the participants updated with all the latest developments in SFYC as well as interesting news and developments in Science, Technology and Innovation.

3.8.2 Volunteering with ASTI

We are a group of volunteer science enthusiasts, who are trying, through our Association, to bring the excitement of Science, Technology and Innovation to a wider public. In doing so, we require a number of like-minded volunteers to help us with our task. It can be on an ad-hoc or more permanent basis.

The Association has a range of volunteering opportunities available which is explained below:

Professionals

- Speaker – Public Lectures, University Campus, Multinational
- Companies - who are able to lend their support via their respective capabilities
- Training - to teach new knowledge and innovative methods
- Demonstrations – During road shows and training
- Writing – website articles, newspaper columns, proposals, etc.
- Fund raising / Finance - to help keep our projects running
- Mentoring - to help some of our participants reach greater heights
- General Volunteer - to help with various tasks and initiatives.

For young students at various levels, we provide training and opportunities to volunteers in:

University Level Science Students

- Organizing events
- Producing and realizing innovative ideas
- Ability to do demonstrations
- The discipline needed for administration
- Event participation / support
- IT / Website / Social Media expertise
- Mentoring ability
- The adaptability of a General Volunteer

School Level Science Students

- IT / Website / Social Media
- Organizing events
- Innovative ideas
- Organizing science week
- Starting a science club
- Event participation /support

3.8.3 Internship with ASTI

There is no doubt that interns will reap tremendous benefits during their time with ASTI. Skills cultivated during their training such as leadership, organizational management, interpersonal communication, self-confidence, team work and work ethics rank as equally important as academic credentials and will go a long way to help in their personal and career aims while simultaneously being of great service to their respective universities or organizations.

Objectives of The Internship

1. Enhance students' educational experience through practical hands-on experience and involvement in projects associated with science, technology and innovation
2. Provide students with supervised practical experience
3. Expose students to the working environment of an NGO focused on science, technology and innovation and
4. A better understanding of ASTI's aims and objectives

Functions / Duties and Output Expectations

Under the direct supervision of the relevant ASTI staff or Committee Member, the intern is expected to perform the following tasks:

1. Complete a written paper on suggestions to improve the day-to-day working of ASTI
2. Provide support to the ASTI committee during seminars, workshops, conferences, and/or any other ASTI-related events where applicable
3. Provide daily updates through social media on experience of interning at ASTI and/or on a specific programme they are assigned to

At the end of the internship, the following outputs will be expected:

1. A final report detailing the intern's experience and work assigned in the different ASTI focus areas
2. A report detailing the outcome of the various seminars, workshops or conferences organized or attended (where applicable)

In 2014, ASTI received three internship students, two from Winfield International College and one from UNISEL.



3.9 Websites and Facebook

ASTI continuously updates its websites and Facebook to give real-time information about all of its on-going events and projects. ASTI's websites and Facebook have been promoted heavily since they are used as a means to disseminate information and stay connected with ASTI's various stakeholders.



3.10 Newsletter

ASTI continues its effort to produce one-page monthly newsletter in order to update its members, stakeholders and friends with recent activities and projects' progress. The newsletter is designed to be read in less than 5 minutes, taking into consideration the busy schedule people lead these days. As of 31 December 2014, ASTI has published 12 newsletters. All the newsletters were emailed to ASTI's contact list and uploaded in ASTI's website and Facebook.



3.11 Library and Documentation

Since 2012, the library has expanded in terms of ArivomAriviyal newspaper cuttings, books related to science, technology and innovation, project annual reports, science magazines and project files.



4

RESEARCH AND DEVELOPMENT

ASTI Research and Development Department is headed by Dr. Mohamed Yunus Yasin. This year, the Research and Development Department has successfully prepared the following documents:

1) YIC 2014

- YIC 2014 Students Manual
- YIC 2014 Mentor Manual
- YIC 2014 Training Presentations

2) CCTC 2014

- Module on Ice-Breaking
- Module on 5 Reasons Why Humans Are Capable of Genius
- Module on Healthy Body and Healthy Mind
- Module on Boosting Your 5 Senses
- Module on Problem-Solving (CSI)
- Module on The Croods Movie and Review
- Module on Speed Reading
- Module on Mind Mapping
- Module on Relaxation
- Module on Concentration
- Module on Creativity
- Module on WHO AM I (Understanding Yourself - Empathy for Others)
- Module on Boosting Your 10 Intelligences
- Module on Lateral Thinking
- Module on Expressing Your Creativity
- Module on Brainstorming
- Module on Short-Term Memory Tips
- Module on Living Earth
- Module on Discover Yourself
- Module on Critical Thinking in Conversation
- Module for Secondary and University Levels (In the preparation process)

3) SFF-CCT

- Module on Why and How We Think?

4) ASTI Edu Tour

- CCTC Modules
- SOP of Conducting ASTI-Edu Tour

5) Various Reports of ASTI which include:

- Science Fair for Young Children Report 2014
- Science Film Festival Report 2014
- Young Invention Challenge 2014
- Creative and Critical Thinking Camp 2014
- ASTI Annual Report 2014
- ASTI-Edu Tour Report 2014
- Science Fair for Young Children Research and Development Report 2014 Phases 1-3

6) Various Publicity Materials

- Monthly Newsletter
- Science Fair For Young Children Capsules

5

ACCOMPLISHMENTS

In 2014, ASTI successfully organized three major projects which were Science Fair for Young Children, Young Inventors Challenge, and Creative & Critical Thinking Camp.

Besides that, ASTI collaborated with two new organizations to conduct new projects called ASTI Edu Tour and Science Film Festival-Creative and Critical Thinking Workshop. First, ASTI collaborated with ATY Group, establishing youth training centre in Asia for ASTI Edu Tour project, and second, with the Goethe-Institut, a German cultural centre, to organize Science Film Festival-Creative and Critical Thinking Workshop.

Furthermore, ASTI was engaged with the public through the Outreach Programme, Media Engagement Programme, and writing articles for Malaysian Nanban and ThinaKural newspapers.

ASTI has also been collaborating with various Non-Governmental Organizations in order to successfully run its projects.

The overall participations of schools in Science Fair for Young Children and Young Inventors Challenge have shown continuous growth and more students are benefitting from these events.

The winners of Science Fair for Young Children and Young Inventors Challenge have then participated in various National and International Competitions and won prizes.

5.1 Accomplishments of Science Fair for Young Children

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

Year	Zone	No. of Schools Participated in SLSF	No. of Schools Participated in ZLSF	No. of Schools Participated in NSFYC
2007	Selangor and Wilayah Persekutuan Only	None	44	None
2008	National Level (6 Zones)	None	180	60
2009	National Level (6 Zones)	Pilot in Johor	188	60
2010	National Level (9 Zones)	82	263	60
2011	National Level (9 Zones)	256	274	60
2012	National Level (9 Zones)	365	269	60
2013	National Level (9 Zones)	423	282	60
2014	National Level (9 Zones)	338	261	54

Table 1: Progress of the Science Fair over the Last 8 Years

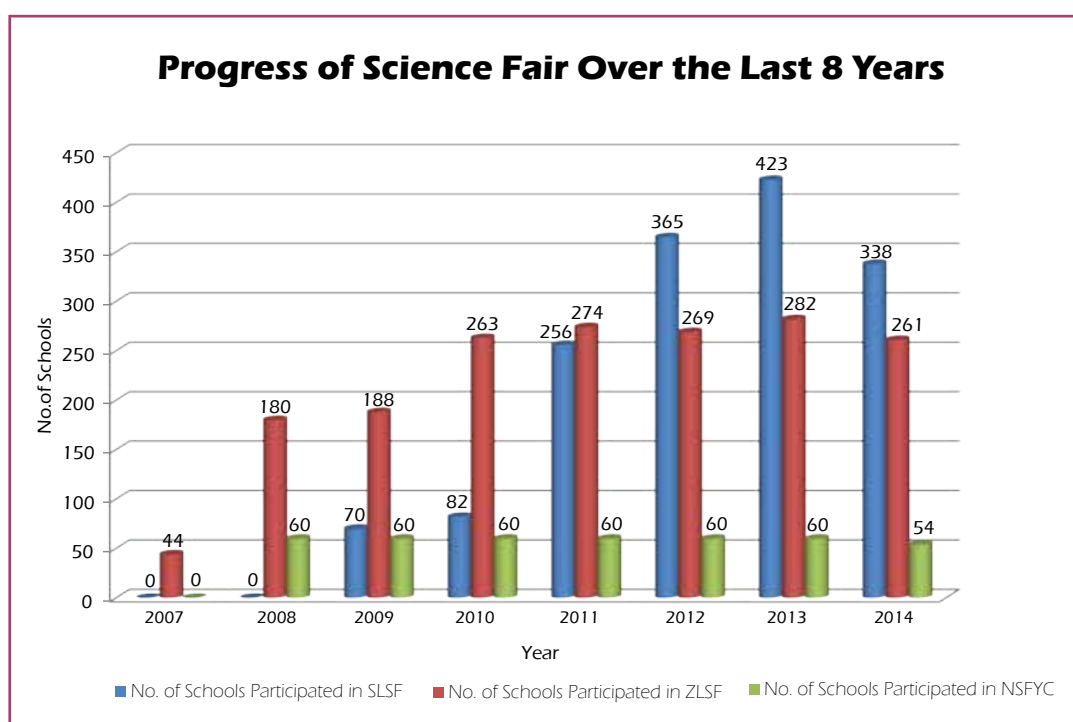


Figure 1: Progress of the Science Fair over the Last 8 Years

In addition to the above, the winners of National Level Science Fair for Young Children have participated in various competitions and shown tremendous presentation during their participation.

Below are the competitions in which they have participated:

Competition	Winning Title	School	Invention
Genius Olympiad 2012 International High School Project Fair on Environment, New York.	Bronze Medal	SJKT Kulim	Neighbors Wonder, an alarm system
Invention, Innovation & Design, Johor	Gold Medal	SJKT Kangkar Pulai	Invents Water Recycle
Pertandingan Inovasi Sempena Hari Guru Peringkat Negeri	Silver Medal	SJKT Kangkar Pulai	Invents Water Recycle
Pertandingan Inovatif Zon Timur, Kementerian Sains, Teknologi dan Inovatif (MOSTI)	Overall Category Winner	SJKT Mentakab	Missiles Launcher (Newton's Third Law)
Asian Young Inventors Exhibition (AYIE)	Gold Medal	SJKT Ramakrishna	Eco-friendly Thermo Container
Asian Young Inventors Exhibition (AYIE)	Silver Medal	SJKT Jalan Yahya Awal	Twin Aquest Bottle
Malaysia Young Inventors Exhibition (MYIE)	Gold Medal	SJKT Ramakrishna	Eco-friendly Thermo Container
Malaysia Young Inventors Competition (MYIC)	Champion Award (Primary Level)	SJKT Ramakrishna	Eco-friendly Thermo Container
Malaysia Young Inventors Competition (MYIC)	Gold Medal	SJKT Jalan Yahya Awal	Twin Aquest Bottle
International Invention, Innovation and Design, UITM Johor	Silver Medal	SJKT Kangkar Pulai	Bio-Organic Fertilizer
Science Innovative Camp, USM Penang	Champion Award (Primary & Secondary school category, State Level)	SJKT Ramakrishna	Noise Reducer
E-scosa Competition, USM Penang	Best Post Award (Secondary school category, State Level)	SJKT Ramakrishna	Eco-friendly Thermo Container
International Convention and Innovation (UTM)	Bronze Medal & Silver Medal	SJKT Kangkar Pulai	Bio-Organic Fertilizer & Robotic Football Player
British Invention Show (BIS) 2014, London	Double Gold Award	SJKT Kulim	Energy-Saving Machine Dispensing Drinks
International Science Olympiad Exam	Bronze Medal & Merit Award	SJKT Kangkar Pulai	
Johor Biotech Innovation	Participation Award	SJKT Kangkar Pulai	

Table 2: List of competitions participated by SFYC participants



- Science Fair for Young Children in Year Four (4) Bahasa Malaysia Text Book & Year Three (3) Bahasa Tamil Text Book.
- A special invitation to SJKT Kangkar Pulai to showcase the experiment during the UNITEN's annual event.
- Encouraging Ms. Gomathy, teacher from SJKT Kangkar Pulai, to further her studies, Master/PhD in Science field.
- Increment of 92% in UPSR science results in Kedah mentioned by PST Kedah, Mr. Ramakrishnan Tharumaini during ZLSF 2013.
- Increment by state for UPSR in 2013.
- A special invitation to go to Beijing was sent to SJKT Ramakrishna which would be organized next year.
- A special invitation to participate in the Champion of NSFYC 2014 so as to showcase their experiment to the Prime Minister during the MyNadi Foundation's 5th year anniversary celebration.
- A special publication about the Winning Team of NSFYC 2014 by Thumbi Magazine.



5.2 Accomplishments for Young Inventors Challenge

YIC has seen a phenomenal growth in the last 2 years of operation. The growth of YIC is shown in the table and graphs below:

No	State	YIC 2013				YIC 2014			
		Applications Received	Proposals Received	Final Participants	Short-listed Teams	Applications Received	Proposals Received	Final Participants	Short-listed Teams
1	Kedah	0	0	0	0	4	4	0	0
2	Penang	3	3	3	2	13	11	7	5
3	Perak	1	0	0	0	2	3	1	1
4	Selangor	4	3	3	3	40	32	21	19
5	Negeri Sembilan	1	1	1	1	2	2	2	2
6	Melaka	0	0	0	0	1	1	0	0
7	Johor	8	7	7	6	38	23	6	6
8	Pahang	1	0	0	0	29	16	5	5
9	Kelantan	0	0	0	0	2	2	2	1
10	W.P. Putrajaya	0	0	0	0	2	2	1	1
11	W.P. Labuan	0	0	0	0	4	1	1	1
12	Sabah	0	0	0	0	6	4	3	3
13	Sarawak	0	0	0	0	13	10	7	5
Total		18	14	14	12	156	111	56	49

Table 3: YIC 2013 and YIC 2014 Growth

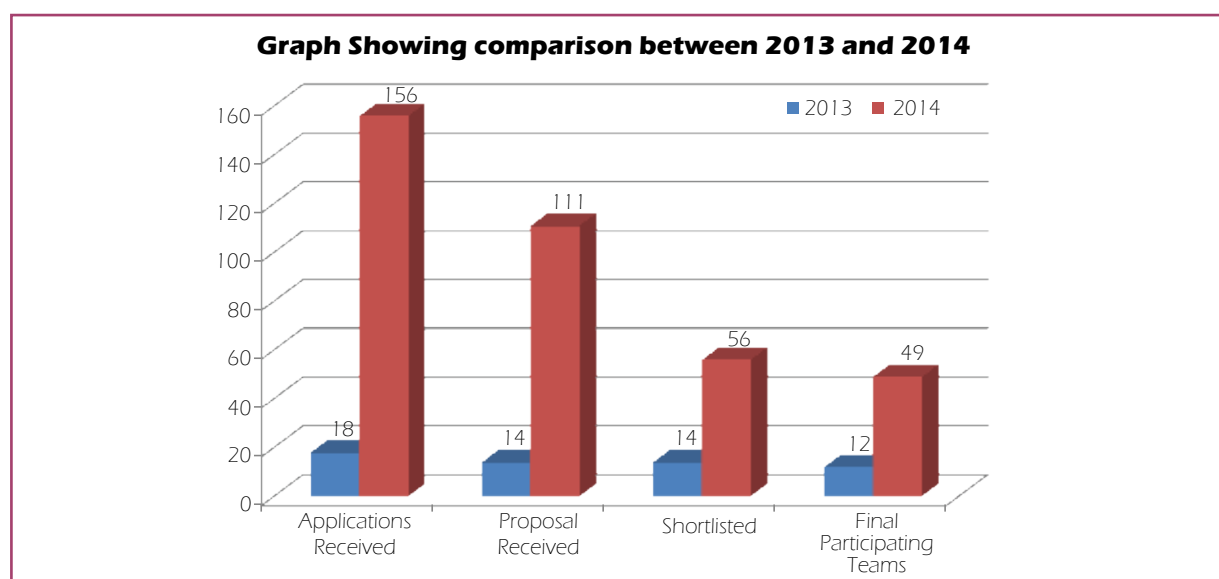


Figure 2 : Comparison between YIC 2013 and YIC 2014



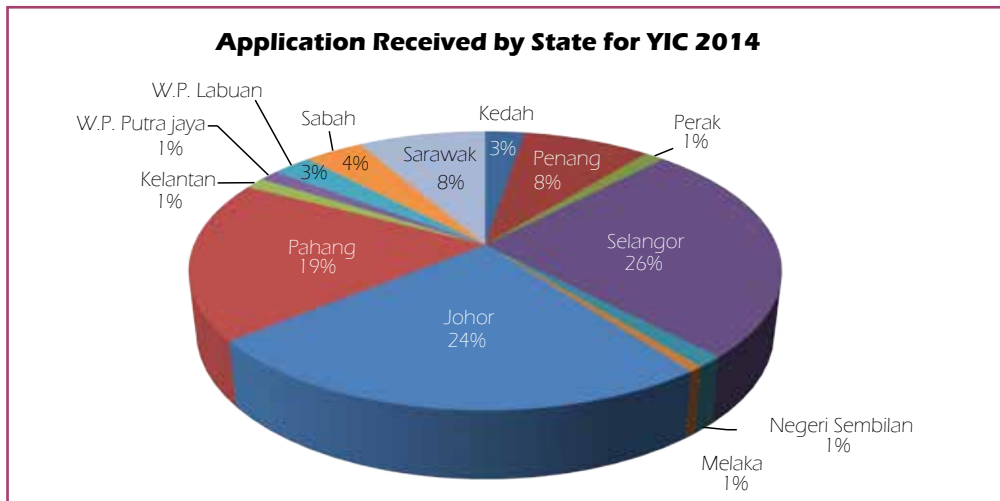


Figure 3: Application received by State for YIC 2014

Moreover, the 2nd place winner of Young Inventors Challenge 2013 has participated in International Invention, Innovation and Technology Exhibition (ITEX) and has won Silver Medal in both Malaysia Young Inventors Competition (MYIC) and Asian Young Inventors Exhibition (AYIE).

5.3 Accomplishments for Creative and Critical Thinking Camp

Last year, participants of Creative and Critical Thinking Camp have successfully participated in National Level Science Fair for Young Children and won the 1st Prize. This was a great success for Creative and Critical Thinking Camp as it has initiated creative and critical thinking among the participants with its various activities.





6

ADMINISTRATION AND FINANCE

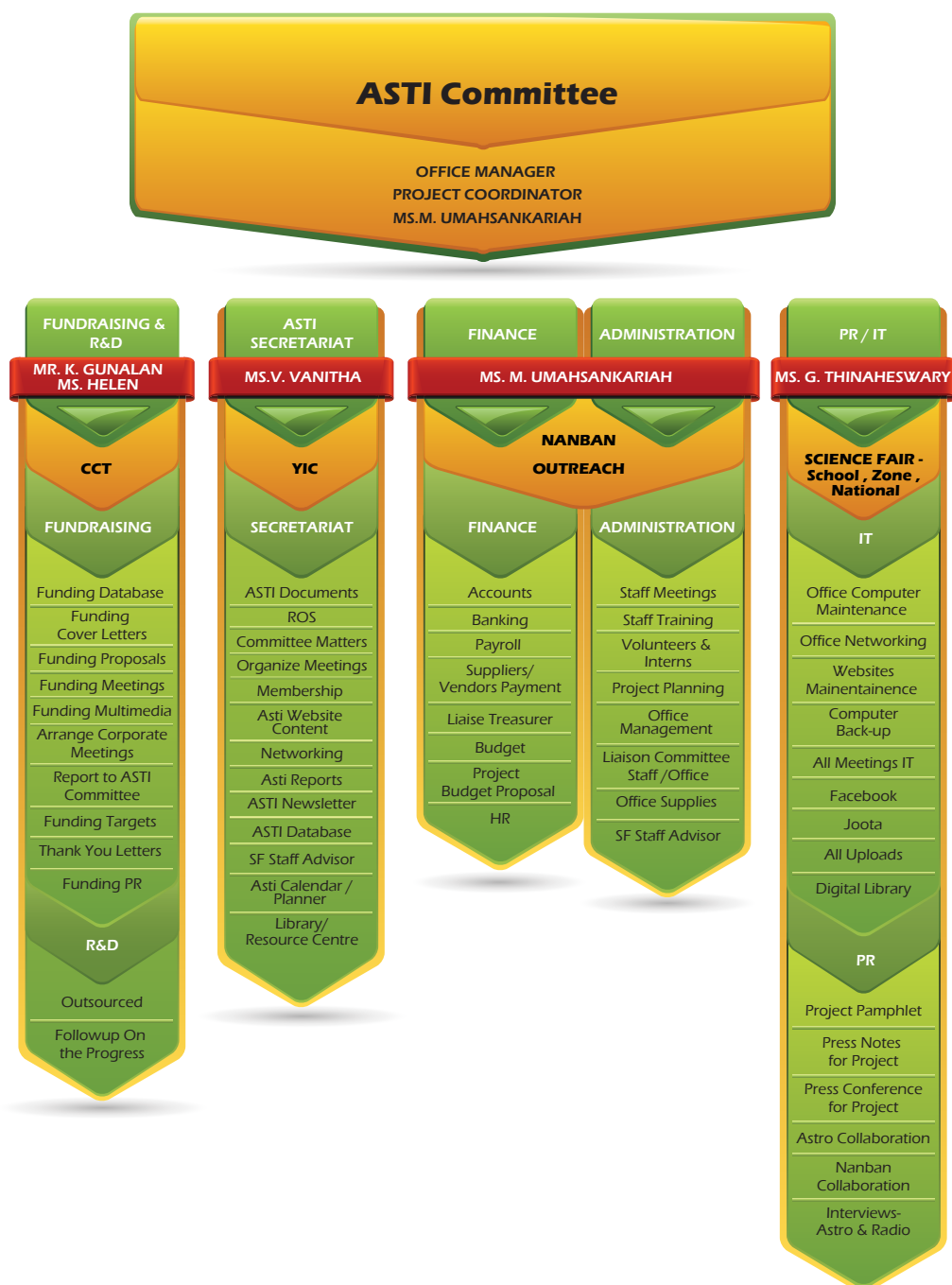
6.1 Administration

6.1.1 Premises

The office is located at No 16A, Jalan 21/12, Sea Park, 46300 Petaling Jaya, Selangor Darul Ehsan. ASTI rents the premises on a monthly basis, renewable yearly. To insure ASTI has a fixed place of business, the rental is usually paid one (1) year in advance. This also enables us to have a good relationship with the landlord. In addition, ASTI has to pay the utility bills monthly. All repairs are paid for by the landlord.

6.1.2 Staff

In 2014, there were three full-time staff who worked on various projects such as Science Fair for Young Children, Young Inventors Challenge, Creative and Critical Thinking Camp, ASTI Edu Tour, ASTI Media Engagement Programme, Science Film Festival, and many more. During the same year, we hired three internship students, two from Winfield International College and another from UNISEL Selangor. The interns helped the full-time staff in projects and event implementation. ASTI restructured the Secretariat in November 2014 as per the chart below:



6.2 Finance

The financial statements have been prepared in accordance with the historical cost convention and comply with applicable approved accounting standards in Malaysia.

Balance Sheet as at 31st October, 2014			
Assets	Notes	2014 (RM)	2013 (RM)
Non- current assets			
Property, Plant and Equipment	3 (e) & 4	5,399.20	1,280.00
Current assets			
Other Receivables	5	7,136.47	7,136.47
Deposits & Prepayments		300.00	-
Cash and Bank Balance	3(d)	14,992.79	181,777.73
		<u>22,429.26</u>	<u>188,914.20</u>
Total assets		<u>27,828.46</u>	<u>190,194.20</u>
Represented by:			
Accumulated Funds			
Accumulated Funds b/f		51,377.07	-
(Deficit) / Surplus For the Year		<u>(250,861.83)</u>	<u>51,377.07</u>
Accumulated Funds c/f		<u>(199,484.76)</u>	<u>51,377.07</u>
Current liabilities			
Other Payables	3(c)	3,900.00	3,265.10
Amount due to NSFYC		<u>223,413.22</u>	<u>135,552.03</u>
		<u>227,313.22</u>	<u>138,817.13</u>
Total liabilities		<u>227,313.22</u>	<u>138,817.13</u>
Total Funds and Liabilities		<u>27,828.46</u>	<u>190,194.20</u>

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



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

INCOME	Notes	2014 (RM)	2013 (RM)
Income	3(a) & 6	449,940.00	849,351.00
Add: Other Income - Rental Received		-	300.00
TOTAL INCOME		380,980.00	604,530.00
LESS : EXPENDITURE			
Accounting Fee		2,400.00	3,460.00
Article Translation		3,617.60	3,752.40
Accommodation		12,745.45	-
Design		29,248.60	1,380.00
Website		1,180.00	1,870.00
Audit Fee		1,500.00	1,200.00
Bank Charges		100	82.5
Booth Set Up		12,650.00	1,127.84
Car Rental		150	150
Cleaning Services		2,300.00	2,750.00
Depreciation		2,679.80	320
Donation		-	3,000.00
Electricity and Water	4	4,239.02	5,156.29
EPF & SOCSO		30,955.00	19,223.00
Launching & Fund Raising		3,555.00	3,190.00
Insurance		7,236.00	2,310.00
Internet Charges		3,600.00	3,480.77
Honorarium Expenses		4,970.00	11,800.00
Volunteer Appreciation		3,445.00	395.54
Event Venue Rental		20,439.00	-
Photography and Video		1600	-
Scholarship		1800	-
Printing & Stationery		18,755.00	3,518.00
Staff Salaries and Allowance		114,045.96	102,965.30
NSFYC Project Expenses		280,980.00	581,530.00
YIC Project Expenses		61,970.00	41,482.54
Prizes & Souvenirs		12,985.00	-
Rental		18,000.00	-
Training		16,910.60	-
Upkeep of Computer		7,590.00	-
Telephone		5,650.00	2,824.75
Travelling & Transportation		13,504.80	1,315.00
TOTAL EXPENDITURE		700,801.83	798,273.93
EXCESS OF (EXPENDITURE) / INCOME		(250,861.83)	51,377.07
INCOME AND EXPENDITURE ACCOUNT			
Total Income		449,940.00	849,651.00
Total Expenditure		700,801.83	798,273.93
(Deficit) / Surplus		(250,861.83)	51,377.07

The annexed notes form an integral part on the Accounts.

7

FUTURE PROJECTS

Besides continuous improvement and expansion of its current projects, ASTI hopes:

- to partner with more organizations in order to develop more innovative projects for young kids



8

APPRECIATION

Finally, the ASTI Committee expresses its profound gratitude to everyone who has contributed in different ways towards the success of ASTI and its projects. We hope to continue to work with all relevant stakeholders to achieve our aims and objectives.

Our Sponsors

National Land Finance Co-operative Society Limited
Embassy of United States of America
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My Skill Foundation
MKR Resources Sdn Bhd
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Knowledgecom Corporation Sdn Bhd
Malaysian Communication and Multimedia Commission

Dr. Tun Dr. Mahathir
Dr. Tun Dr. Siti Hasmah
Datuk Selvarajah

Datuk Sahadevan

Pelan Tindakan Masa Depan Sekolah-sekolah Tamil
HAY GROUP

Vijayaratnam Foundation
MyNadi Foundation
K-Pintar Sdn Bhd

IS - Seraya AVS Sdn Bhd
SMR HR Group Sdn Bhd

Malaysian Tamil Education Research and Development Foundation
YB Raven Kumar Krishnasamy

DHRAA Malaysia
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Asia Pacific Talent Youth Training Joint Stock Co.
ASTRO Vaanavil

Malaysian Community Education Foundation
Malaysia Nanban
ECM Libra Foundation

CIMB Foundation-CIMB Community Link

Association of Science, Technology & Innovation (ASTI)

No.16A, Jalan 21/12, Sea Park, 46300 Petaling Jaya,
Selangor Darul Ehsan.

Tel: 603 - 7877 8571 / 603 - 7865 5557

Fax: 603-78778571

Email: asti2510@gmail.com

www.asti.org.my