



fresh perspectives



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# Defining the future



Our past defines who we are and sets out the path to where we want to be. We continue to reinvent ourselves to stay relevant and exciting to the new generation. Under the leadership of our new Chairman, we boldly stride forward with fresh initiatives to nurture and inspire the next generation of scientifically savvy Singaporeans.

“And in today already walks tomorrow.”  
~ Samuel Taylor Coleridge, 18th Century English Poet & Philosopher





# Chairman's Review

## A VISION FOR THE FUTURE

It is my pleasure to present this year's report on the Science Centre's achievements and plans as its new Chairman.

Over the past year, the Board and the Science Centre management team have been rigorously formulating and molding a vision for its future so as to lay the foundation for more significant collaborations.

We embark on a path of reinvention with the aim to position the Centre as an edutainment champion and the preferred partner for everything to do with science. Being able to swiftly adapt to changing conditions, identify emerging opportunities and collaborate to innovate will be critical measures of success for us going forward.

Globally, we seek to bring in impactful international conferences and events, including the Asia Pacific Network of Science & Technology Centres (ASPAC) Annual Conference and Tradeshow in April 2012. Locally, we aim to add a fresh perspective to our signature events and engage external and global partners on several collaborative fronts.

## MILESTONES AND AWARDS

In FY2011 the Science Centre drew in over 1 million visitors with all three attractions, achieving a total visitorship of 1.46 million.

As testament to the quality of our programmes and service, we received two international awards during the year. The first was the Giant Screen Cinema Association (GSCA) Award for Best Educational Programme for Sea Rex: Journey to a Prehistoric World IMAX Movie.

The second was the Roy L. Shafer Leading Edge Award for Experienced Leadership in the Field, presented by the Association of Science - Technology Centers (ASTC) to Clarence Sirisena, the Centre's Assistant Chief Executive of Projects and Exhibitions, for his outstanding leadership and contributions towards the learning of science. On behalf of the Board, I extend our congratulations to him.

## COLLABORATIONS AND COMMUNITY ENGAGEMENT

Engaging partners and members of the community in what we do has always been important in ensuring the success of our programmes and activities. In the year, we collaborated with 38 educational institutions and 23 ministries and statutory boards on various events, programmes and activities. We also counted 68 community engagements in total.

These collaborations included a partnership with the International Rice Research Institution (IRRI) on rice education, a Teachers' Workshop on Genome with the Academy of Singapore Teachers, a Biotech Fair with Ngee Ann Polytechnic, a Toy Carnival with Punggol Primary School and other north cluster schools, and the IgNITE competition with the Institute of Technical Education (ITE), which aims to enthuse secondary school students to take up science in their next phase of education through DIY science workshops and other activities.

## NEW INITIATIVES

In line with our commitment to inspire and foster the learning of science among youths and the public, we launched a slew of new initiatives during the year.

In April, we established a first-of-its-kind Singapore Academy of Young Engineers & Scientists (SAYES). SAYES opens the door to secondary and tertiary level students, empowering them in their own learning and leading others in finding creative means to further increase their passion for science and technology in Singapore. It is part of our Youth Science Movement to nurture future scientists and engineers as wealth creators.

The idea was first seeded with long-time partner, the Agency for Science, Technology and Research (A\*STAR), with the support of the Ministry of Education (MOE), without which SAYES would not have been a possibility.

Another new initiative in progress is the Centre for Research and Applied Learning in Science (CRADL<sup>SM</sup>). A collaboration with A\*STAR and DSO National Laboratories with the support of MOE, this open learning and research lab will allow upper secondary and junior college students to explore experimental ideas and develop their own research programmes. Several core programmes were piloted in January 2012.

Additionally, the Centre introduced a series of new enrichment programmes for preschoolers and family workshops for young children and parents.

FY2011 also saw the establishment of a dedicated Science Show Unit to promote interest in science and enhance its learning among children and the public through innovative science shows. The team was even invited to give performances in Bangkok, Beijing, and Jakarta.

Looking forward, visitors can expect a new Children Science Centre at the Omni-Theatre in the near future. The facility will be a stepping stone in Singapore's educational history as it aims to stimulate an interest in science among young children during their formative years.



Another exciting development is the integral Singapore Science Festival which will extend into an international edition, with the Centre & A\*STAR working with local and international partners, including the Singapore Tourism Board, ArtScience Museum, Urban Redevelopment Authority, National Environment Agency, Wildlife Reserves Singapore, and Resorts World Sentosa among many others, to expand the Festival's reach and influence.

### SUPPORT AND APPRECIATION

As another year came to a close, we take the time to acknowledge and appreciate the many partners and sponsors who have lent us support over the years and helped us scale greater heights with fresh and impactful programmes every year.

I would like to thank the Board for their continued commitment and support and the management and staff of the Science Centre for their enduring spirit in meeting challenges head on. Let us keep our imagination and sense of innovation alive as we strive to strengthen the position of the Centre as an Edutainment champion for lifelong learning.

On behalf of the Board and the management team, I would also like to express our utmost appreciation to Mr Wee Heng Tin, past Chairman of the Science Centre Board, for his unwavering guidance and immeasurable contributions these past four years. Mr Wee has contributed significantly to the advancement of education in Singapore over the past 40 years, including playing key roles in the formulation of the "Thinking Schools, Learning Nation" vision, the introduction of National Education in schools and the enhancement of teaching using IT through the Masterplan for IT in Education. Under Mr Wee's leadership, the Centre had received numerous accolades and accomplishments, including record visitorship. We wish him every success with his future endeavours.

As the Centre gears up for its 35th Anniversary in the later part of 2012, we look back with appreciation at all that have been achieved and with eagerness at what can be achieved. The possibilities are endless and we invite everyone to be a part of our exciting journey into a future made better with science and technology.

Ms Tan Yen Yen  
Chairman  
Science Centre Board

# Board Members



**MS TAN YEN YEN**  
Chairman



**MR QUEK GIM PEW**  
Deputy Chairman



**MR CHIA MIA CHIANG**



**DR GOH CHONG CHIA**



**DR TAN HAI MENG**



**MR PHILLIP TAN**



**MR LEE ARK BOON**



**MR HOWARD SHAW**





**MR ALEX SIOW**



**PROF ANDREW WEE**



**MRS TAN MUI HWOON**



**MR MARTIJN VAN KOTEN**



**MS ANG EE LUANG**



**PROF PAUL TENG**



**A/PROF ASHRAF ALI**



**MR SIN KIM HO**

# Management Team

## Senior Management



*FROM LEFT TO RIGHT*

**1** **MR CLARENCE SIRISENA**  
ASSISTANT CHIEF EXECUTIVE  
PROJECTS & EXHIBITIONS

**2** **A/PROF LIM TIT MENG**  
CHIEF EXECUTIVE

**3** **MRS ANNE DHANARAJ**  
SENIOR DIRECTOR  
EDUCATION PROGRAMMES

## Corporate Services



FROM LEFT TO RIGHT

**1 A/PROF LIM TIT MENG**  
CHIEF EXECUTIVE

**2 MS WENDY CHEONG**  
DIRECTOR  
HUMAN RESOURCES

**3 MRS VERONICA HENG**  
DIRECTOR  
OPERATIONS

**4 MR MICHAEL CHAY**  
DIRECTOR  
MARKETING & COMMUNICATIONS

**5 MS CHAM LEE FIN**  
DIRECTOR  
FINANCE & ADMINISTRATION

**6 DR ANDREW D GIGER**  
DIRECTOR  
RESEARCH & WEB OUTREACH

# Management Team

## Projects & Exhibitions



FROM LEFT TO RIGHT

**1** **MR DANIEL TAN**  
DIRECTOR  
EXHIBITIONS

**2** **MR ANDREW OH BOON KENG**  
DIRECTOR  
SPECIAL PROJECTS

**3** **MS ANNA TAN**  
DEPUTY DIRECTOR  
TRAVELLING EXHIBITIONS

**4** **MR CLARENCE SIRISENA**  
ASSISTANT CHIEF EXECUTIVE  
PROJECTS & EXHIBITIONS

## Education Programmes



*FROM LEFT TO RIGHT*

**1 DR LEE SONG CHOON**  
ASSISTANT DIRECTOR  
LIFE SCIENCES

**2 MS KAMARIA BTE ABDUL GHANI**  
DIRECTOR  
SCIENCE UPSTREAM

**3 MRS ONG ME LAN**  
DIRECTOR  
PHYSICAL SCIENCES

**4 DR TAN EI-LEEN**  
ASSISTANT DIRECTOR  
TECHNOLOGY & CREATIVITY

**5 MRS ANNE DHANARAJ**  
SENIOR DIRECTOR  
EDUCATION PROGRAMMES

# fuelling dreams



Big dreams fuel big ideas and lay the foundation for creativity and innovation. We aspire to dream big and plant the seeds of inspiration for a future made better by science and technology. Our dreams for a new Digital Planetarium, Children Science Centre and the Singapore Science Festival will forge the future for us.

As Eleanor Roosevelt, former US First Lady (1933 - 1945) once said, "The future belongs to those who believe in the beauty of their dreams."





# Highlights 2011/12



## AMAZING EXHIBITIONS

Planet Shark: Predator or Prey and Dinosaurs-Live! drew over 183,000 visitors with fascinating artifact collections and multimedia presentations that brought the exhibits alive.



## OUR SCIENCE SHOW UNIT ENTERTAINS!

2011 was an exciting year for our newly formalised Science Show Unit as the team was invited to perform their winning science shows regionally at the Bangkok Science Festival, Beijing International Science Festival and Jakarta Junior Science Fair. Locally, we reached 14,406 students and public members with our shows this year.



## THE REWARDS OF MAKING SCIENCE FUN!

In October 2011, Clarence Sirisena, the Science Centre's Assistant Chief Executive of Projects and Exhibitions, became the first Asian recipient of the Roy L. Shafer Leading Edge Award, presented by the Association of Science – Technology Centers (ASTC). The award recognises the accomplishments of field professionals in enhancing the science experience at various institutions, science and technology centres and museums around the world.





## YOUTHS SAYES!

Launched in April, the Singapore Academy of Young Engineers and Scientists (SAYES) provides secondary and tertiary students opportunities to explore the world of Science, Technology, Engineering and Mathematics (STEM).

Students will get to learn more about various STEM topics through activities such as peer learning, project work and mentoring.



## CRADLΣ: A NEW WAY OF LEARNING SCIENCE

With the opening of the new, innovative Centre for Research and Applied Learning in Science (CRADLΣ), an open learning and research lab at the Science Centre, upper secondary and junior college students can now explore and experience science by pursuing their own experimental ideas.

Also available are workshops that inspire teachers to incorporate more hands-on activities and projects in school.

## RED MOON SPECTACLE: A TOTAL LUNAR ECLIPSE

A crowd of 2,836 keen moon-gazers filled The Lakeside at Science Centre's Omni-Theatre on 15 June for a "once in a red moon" chance to witness the first total lunar eclipse phenomenon in 10 years.

Visitors were entertained with outdoor movies as they awaited the beginning of the eclipse at 2.30am. The event ended on a high note at 6am.





# Awards 2011/2012

## **Roy L. Shafer Leading Edge Award 2011**

by the Association of Science – Technology Centers

Experienced Leadership in the Field Award Winner  
Mr Clarence Sirisena,  
Assistant Chief Executive, Projects & Exhibitions  
Science Centre Singapore

## **Giant Screen Cinema Association Award 2011**

Best Educational Programme  
(Sea Rex: Journey to a Prehistoric World IMAX Movie Programme)

## **Singapore Experience Awards 2011**

by Singapore Tourism Board

Best Enrichment Experience (Science Enrichment Programmes)  
Most Innovative Marketing Initiative (CSI: The Experience Exhibition)

## **Museum Roundtable Awards 2011**

by National Heritage Board

Best in Education and Outreach (CSI: The Experience Exhibition)

## **Total Defence Award 2011**

by Ministry of Defence

3rd Tier Meritorious Defence Partner

## **HRM Awards 2012**

by Key Media

Robert Walters Best HR Leader Award Finalist  
Ms Wendy Cheong  
Director, Human Resources  
Science Centre Singapore

Champion of HR Award Finalist  
A/Prof Lim Tit Meng  
Chief Executive  
Science Centre Singapore

Best Work-Life Harmony Award Finalist

# Key Statistics

Number of visitors to Science Centre



YR 2009	YR 2010	YR 2011
1,142,827	1,113,905	1,025,299

No. of students who attended science enrichment programmes



YR 2009	YR 2010	YR 2011
211,539	231,689	213,000

No. of visitors to Omni-Theatre



YR 2009	YR 2010	YR 2011
288,526	216,117	255,692

Visitor Experience Index



YR 2009	YR 2010	YR 2011
4.22/5	4/5	4/5

# engaging minds



The world is an amazing place and we hope to share its many wonders through fascinating facets of science. And so we engage, excite and energise, through world-class exhibitions and stimulating educational and outreach programmes.

Have we inspired you lately?





# Events Timeline

A\*STAR Talent Search

Launch of Hubble IMAX Movie



APRIL 2011



Launch of Planet Shark: Predator or Prey Exhibition

34th Shell Singapore Youth Science Festival

Tan Kah Kee Young Inventors' Award

MAY 2011

RoboCup

Science in the Mall: X-ploring Robot Zoo!

Lunar Eclipse Event at Omni-Theatre



JUNE 2011

JULY 2011



Singapore Science Festival

Sony Creative Science Award

GeneFest

Launch of National Science Challenge

Kids Science Fest

AUGUST 2011

Singapore Amazing Machine Competition

National Infocomm X-Site Challenge

Launch of Born to be Wild IMAX Movie



Geniuses at work at the Amazing Science-X Challenge.

SEPTEMBER 2011



Amazing Science-X Challenge

National Junior Robotics Competition

Science Buskers Festival



Launch of Dinosaurs-Live! Exhibition

Launch of 9 Billion Mouths to Feed Exhibition

OCTOBER 2011



Launch of Uniquely You Exhibition

Science in the Mall: X-ploring Tech Fun!

First Tech Challenge Singapore

Scinematation



NOVEMBER 2011



Launch of House of Blood Exhibition

Launch of Journey into Amazing Caves IMAX Movie

JANUARY 2012

FEBRUARY 2012

Launch of Earth: Our Untamed Planet Exhibition



MARCH 2012



*Flying high at the Singapore Amazing Flying Machine Competition*

MindFest

Singapore Amazing Flying Machine Competition

Singapore Science & Engineering Fair

Launch of Coral Reef Adventure IMAX Movie

# Exhibitions & Shows



## DINOSAURS – LIVE!

**More than 140,000 visitors travelled 250 million years back in time to a dramatic jungle-like empire housing the largest showcase ever of animatronic dinosaurs at the Science Centre Singapore.**

Stomping into the Science Centre in October, Dinosaurs-Live! offered a spectacle of unprecedented magnitude and quality to enthrall both the young and old. Highly interactive and educational, the exhibition showcased dinosaurs from all prehistoric periods and illustrated current scientific evidence of these massive creatures and their environments.

Through a showcase of more than 50 life-sized animatronic dinosaurs, Dinosaurs-Live! featured the evolution of these prehistoric creatures by unveiling the truth behind their existence, dominance and extinction.







## PLANET SHARK – PREDATOR OR PREY

Providing a rare insight into all things about the shark, from its evolution to biology to the animal's portrayal in popular culture to its importance in the ocean's ecosystem – Science Centre presented Planet Shark: Predator or Prey

Making a splash with its 'out-of-water' shark experience at the Science Centre in April, Planet Shark – Predator or Prey took visitors through the fascinating myths and facts that have surrounded sharks for centuries.

The world's only comprehensive and unique travelling shark exhibition, Planet Shark offered a razor-sharp view of sharks through life-sized displays, including a 5.5-metre Great White, a vast collection of fossils dating back 380 million years and intriguing artifacts from the 1975 thriller movie, Jaws.

# Exhibitions & Shows



## EARTH – OUR UNTAMED PLANET

A collaboration between the Earth Observatory of Singapore (EOS) and Science Centre, this brand new permanent exhibition provides insights into natural disasters that take place on our planet today.

Visitors are taken on an informative and interactive tour of the earth's natural forces of destruction. These include experiencing an earthquake and tornado through advanced simulations, and entering the belly of a mini replica of one of the most active volcanoes in the world to watch the fiery mountain erupt. A display of rare and unique geologic samples, including a collection of rocks that make up Singapore is also showcased in the exhibition.



## UNIQUELY YOU

Uniquely You got down to the characteristics that make each of us different in our own special way. Visitors will discover how the mix of genetic inheritance, personality and our environment helps to shape each and every one of us in a unique way.

Visitors also learn about the four pillars of medicine through the 'Revolutionising Medicine' exhibit and share their opinions on the implications of future medical treatments in the 'Biomedical Dilemmas' exhibit.



## 9 BILLION MOUTHS TO FEED

In conjunction with World Food Day, this exhibition explored safety issues regarding our food supplies today. Students and visitors also had the chance at hands-on laboratory activities that provided them further insights into our staple food needs.



## HOUSE OF BLOOD

This exhibition reveals everything about one of the most important components in our lives and bodies: our blood. Through a cartoon vampire mascot, The Count, visitors are taken on a tour of his 'mansion' to find out the facts and functions of this life-sustaining body fluid.



## Reel Screenings

Capturing the vibrant action and adventure of movies across different genres, the newly upgraded Omni-Theatre provides visitors an immersive and seamless movie experience found nowhere else in Singapore.

**Born to be Wild** documented the journey of world-renowned conservationists in their efforts to rescue, rehabilitate and return orphaned orang utans and elephants back to the wild.

**Coral Reef Adventure** brought viewers up-close to some of the most striking corals that can be found on the islands and sun-drenched waters of the South Pacific. Viewers learnt about protecting our planet's coral reefs too.

**Hubble** took viewers on an outer space journey through the lenses of a telescope. Viewers got up-close to prominent constellations such as Orion and travelled past stars and embryonic solar systems.

**Journey into Amazing Caves** plunged deep into some of the most amazing caves in the world to uncover important clues about the Earth's past, and the microorganisms that inhabit its most extreme environments.

# igniting innovation



Theodore Levitt, American Economist and Harvard Business School Professor defined innovation as the vital spark of all human change, improvement and progress. Indeed, the world turns on gears of innovation. And so we challenge mindsets and groom new generations of scientists, technologists and researchers through science competitions and outreach activities.

Together, let's embrace creativity to inspire innovation.





# Science Outreach & Competitions

To inspire students to take their passion for science further, we collaborated with partners such as the Ministry of Education, A\*STAR, Sony, Shell and Tan Kah Kee Foundation in a series of science outreach programmes and competitions throughout the year.



## SINGAPORE SCIENCE AND ENGINEERING FAIR

From a record 584 entries, four participants were selected to represent Singapore at the Intel International Science & Engineering Fair in USA. Ananya Kumar and Ang Yan Sheng from NUS High School of Mathematics and Science and Low Kay Yi from Raffles Institution made Singapore proud when they won second prize in the Computer Science category and third prize in the Medicine and Health Sciences category respectively.

## A\*STAR TALENT SEARCH

Top science students vied once again for the top spot in the A\*STAR Talent Search with eight out of 178 research projects qualifying for the finals. Cheng Heng Yi from NUS High School of Mathematics & Science came out tops for his research in using origami to fold three-dimensional solids. The event also saw the launch of a first-of-its-kind initiative, the Singapore Academy of Young Engineers and Scientists (SAYES), a collaboration between A\*STAR and the Science Centre.



## SHELL SINGAPORE YOUTH SCIENCE FESTIVAL

With 2011 being the International Year of Chemistry, the 34<sup>th</sup> Shell Singapore Youth Science Festival focused on inspiring youths to explore the world of chemistry. The Shell Science Fair, one of the anchor events, was graced by then President S R Nathan.

Another highlight of the Festival was a gigantic 30m x 36m 3D Periodic Table, the "Tapestry of Chemistry", brought together through the joint efforts of over 100 students and teachers from different schools and backgrounds across Singapore. They creatively constructed 3D models representing 28 elements out of the 118 in the Periodic Table.



**SCIENCE BUSKERS FESTIVAL**

Audiences were all agog as 28 top teams staged creative show-and-tell science performances at the Science Buskers Festival. Participants even had the chance to perform for public votes during a busking round at Plaza Singapura. Participation rose to 119 teams from just 70 the previous year.

**SCIENCE IN THE MALL**

To make science accessible to all, two events, X-ploring Robot Zoo! and X-ploring Tech Fun! were held at Plaza Singapura and Funan DigitalLife Mall in June and November respectively. Participants explored exhibits, had fun with hands-on activities and enjoyed various science shows.



**SONY CREATIVE SCIENCE AWARD**

An exciting, highly charged toy-making competition for primary level students came to an end with two finalists tying at first place in this year's Sony Creative Science Award. The award-winning toys were selected from a pool of over 4,000 fun and creative toys incorporating kitchen utensils.

**TAN KAH KEE YOUNG INVENTORS' AWARD**

An automated live mobile device forensic system, a glow-in-the-dark key guide and a super cake cutting plate were just some of the top inventions this year. Over the past 25 years, almost 1,000 inventions out of 9,000 have been awarded prizes.



## Science Outreach & Competitions



### SINGAPORE SCIENCE FESTIVAL

The Singapore Science Festival launched with a big bang this year at Suntec Convention Centre. Themed “Why Not?”, the Festival aimed to inculcate the spirit of inquiry in our youths from an early age. A record 23 exhibitors showcased their research and innovations at the launch event, X-periment! Participants were given the rare opportunity to see what has been billed as “the world’s first air-purifying dress”, a remarkable innovation that mixes high fashion and cutting-edge science to address environmental concerns.

The inaugural STAR Lecture, modelled after Britain’s famous Royal Institution Christmas Lectures, was also introduced this year. Professor Anthony Ryan took audiences back six billion years to witness how complex scientific theories have shaped life on earth, and how breakthrough research today could address the most pressing problems of the future.

Rounding up the highlights were the popular annual events, Gene Fest and Kids Science Fest.



The Science Centre joined forces with DSO National Laboratories to provide young minds a platform to showcase their scientific innovations through the DSO Amazing Series of Competitions.



**THE SINGAPORE AMAZING FLYING MACHINE COMPETITION**

Over 380 teams and 1,400 participants competed in the nation's biggest flying competition to showcase their creativity by building the most innovative flying machine. The competition saw flying machines in all shapes and sizes, including a flying trishaw!

Notable top performers included the category B champions from Si Ling Secondary School, who also bagged the Gold Award for Best Range, and open category champion, team DNJ, who also bagged the Gold Award for Best Performance.

**THE SINGAPORE AMAZING MACHINE COMPETITION**

Over 250 students from 22 schools took up the challenge of designing and building a machine incorporating as many steps as possible to sharpen a pencil. Participants came up with some 60 different ways to do so! Mr Lawrence Wong, Minister of State for Defence and Education presented the awards to the winners.



**THE AMAZING SCIENCE-X CHALLENGE**

More than 140 student teams from 63 schools and institutions set out to prove they had the X-Factor in this year's competition. Top honours for Category A went to Rulang Primary School for their 'Image Manipulation' exhibit while Damai Secondary School won first prize for Category B with their '3D in HD' exhibit.



## Science Outreach & Competitions

### NATIONAL JUNIOR ROBOTICS COMPETITION

Singapore's oldest robotics competition pulled in 722 teams of robot inventors, including for the first time, regional participants from India. Themed 'Domestic-Bots', participants built robots made from Lego to perform tasks like cleaning, taking care of the elderly and sieving out recyclable wastes in an effort to create an eco-friendly society. More than half of last year's participants returned to compete with fellow robot enthusiasts this year too.



A series of action-packed competitions was organised as part of the annual Singapore RoboTrek to provide aspiring inventors and robot fanatics a chance to explore their interest in and learn all about robotics.



### ROBOCUP 2011

Jointly organised with Singapore Polytechnic, the RoboCup Singapore Open saw some of the best robotic creations put together by 87 student teams. The winning teams were given the opportunity to represent Singapore in the RoboCup 2011 competition in Istanbul, Turkey.

### FIRST TECH CHALLENGE SINGAPORE

In November, the Science Centre and A\*STAR launched a first-of-its-kind robotics competition that encourages cooperation, professionalism, graciousness and respect among participants while competing and contending against each other.

Designed as an intermediate level robotics competition, it is set to further enhance the experience of students in the robotics field. In its inaugural launch, 32 teams of students aged 14 to 18 designed and programmed robots based on sound engineering principles. The First Tech Challenge is an integral and final part of the Singapore RoboTrek.



**2011 also saw the launch of several new programmes and initiatives by the Science Centre to take the learning of science to greater heights.**

### ENRICHMENT PROGRAMMES FOR EARLY LEARNERS

A series of enrichment programmes for pre-schoolers was launched for the first time at the Science Centre in early 2011. These programmes help stimulate little minds through interesting exhibitions and workshops. Kindergarten students are introduced to basic science in areas such as their five senses, plants and animals, water and energy, astronomy and robotics.



A series of new family programmes was also launched, including Dragon Lantern Making, Chocolates from the Heart and From Yolk to Chicken workshops, as well as a host of activities for Mind Fest. At Snow City, enrichment programmes were conducted for children about the basics of heat transfer and its effects and properties in different temperatures.

Additionally, the Centre collaborated with Make\*Believe LLP, a company specialising in enrichment programmes for young children, to roll out a series of themed mathematics, science and arts hands-on programmes for children 18 months to 6 years old.

### OBSERVATORY SESSIONS

A total of 51 stargazing sessions were organised this year and enthusiastically attended by 6,767 students, families and public members. Complementing these sessions were highlight events including a lecture titled 'Why is Uranus upside down' held in August by guest speaker, Professor Fred Watson, author and astronomer at the Australian Astronomical Observatory; and the Hubble lecture series conducted over the June school holidays in collaboration with The Astronomical Society of Singapore (TASOS).



### SCIENCE SHOW UNIT

Formed in July, the Centre's Science Show Unit is a new, dedicated unit focusing on developing and performing science shows. The Science Show Unit's aim is to promote entertaining and relevant science discoveries to visitors through creative demonstrations.

While most of the science shows were staged to enthusiastic crowds at the Centre over the past year, the team was also invited to perform at regional festivals, hitting countries like China, Indonesia and Thailand.

### SINGAPORE ACADEMY OF YOUNG ENGINEERS & SCIENTISTS (SAYES)

In a marriage of minds and mission, the Science Centre and A\*STAR, with the support of the Ministry of Education, established the Singapore Academy of Young Engineers & Scientists (SAYES) in April. SAYES aims to inspire and provide resources to youths aged 15 to 19 who are passionate about science and technology. Through SAYES, students will be able to develop their skills and widen their knowledge in STEM through a broad range of programmes and activities.

SAYES member, Bradford Loh, from NUS High School of Mathematics and Science shared, "SAYES allows for self-initiated scientific ideas to be materialised while providing professional guidance and support where required. It has provided numerous avenues for me to mature as a leader and budding scientist and serves as an ideal platform for me to communicate and share scientific knowledge with my peers."



# Community & Support

## Volunteer Programme

The Science Centre's volunteer management system went online this year, allowing volunteers to sign up online with their preferred dates, time and activities. This greatly improved work flow and allowed the Centre to accommodate more volunteers. As a result, the number of volunteers increased to 3,562 this year from 3,320 a year before. Approximately 13,931 volunteer hours were clocked in, with half of the team of volunteers contributing more than 20 hours each.

A senior volunteer programme was also organised in collaboration with RSVP where 216 senior volunteers contributed a total of 2,112 hours. Training for senior volunteers was carried out for various programmes and exhibitions including the Uniquely You exhibition.

Additionally, a Science Communication Workshop was developed in-house by the Centre for 26 students from Singapore Chinese Girls School. During the workshop, participants were taught the basics of explaining Science Centre exhibits to visitors based on the Climate Change, Earth - Our Untamed Planet, Marine Alcove, and Uniquely You exhibitions.



## CORPORATE SOCIAL RESPONSIBILITY (CSR)

This year, the Science Centre partnered with the National Environment Agency (NEA) and the South West CDC to organise a Clean & Green Carnival. Held at the Centre in November, staff members were encouraged to give of their time to assist in the Carnival activities including a Water Quality Programme and Environmazing Race.

Additionally, the Centre adopted Metta School, a special education school for children 7-18 years with mild intellectual disability or autism spectrum disorders. Collections from our Gravity Well and Mind's Eye exhibits were donated to the school and a 2-day science camp was specially organised for about 80 students during the June school holiday too.

## LIST OF SPONSORS 2011-12

- Agency for Science, Technology and Research (A\*STAR)
- Defence Science Technology Agency (DSTA)
- DSO National Laboratories
- DuPont Company (Singapore) Pte Ltd
- Earth Observatory of Singapore (EOS)
- Economic Development Board (EDB)
- Infocomm Development Authority (IDA)
- Lee Foundation
- Mead Johnson Nutrition (S) Pte Ltd
- Media Development Authority (MDA)
- National Instruments Singapore (Pte) Ltd
- P'art 1 Design Pte Ltd
- Shell Eastern Petroleum Pte Ltd
- Singapore Totalisator Board
- Sony Electronics Asia Pacific Pte Ltd
- Singapore Technologies Aerospace Ltd
- Workforce Development Agency (WDA)
- Public Utilities Board (PUB)
- Accuron Technologies Ltd
- Ten & Han Trading Pte Ltd

# Distinguished Visitors

We were pleased to receive numerous distinguished guests to the Science Centre in the last year.

## ■ APRIL 2011

Dr Chu Duc Trinh, Vice Dean, Faculty of Electronics and Telecommunications, University of Engineering and Technology, Vietnam National University, Hanoi

Prof Rudolph Marcus, 1992 Nobel Prize Winner in Chemistry

## ■ MAY 2011

Delegation from Commonwealth Association of Museums (CAM) Triennial Conference

## ■ JUNE 2011

Dr Un Woo Lee, President (Assistant Minister), National Science Museum, Ministry of Education, Science and Technology, Korea

Delegation from Thai Museum

## ■ JULY 2011

Mr Hawazi Daipi, Senior Parliamentary Secretary, Ministry of Education and Ministry of Manpower

Mr Lawrence Wong, Minister of State, Ministry of Defence and Ministry of Education

## ■ AUGUST 2011

Mr Xie Lin Cheng, Vice President of Guangxi Association for Science and Technology, China and delegation

## ■ SEPTEMBER 2011

Mr Vikram Nair, MP for Sembawang GRC and member of GPC, Ministry of Community Development, Youth and Sports

Mdm Halimah Yacob, Minister of State, Ministry of Community Development, Youth & Sports

Delegation from Shanghai Science & Technology Museum, China

## ■ OCTOBER 2011

Mr Jae Ryong Yoo, Director General of Industry & Economy Planning Bureau, Korea

Delegation from FIRJAN, Brazil

Delegation from Embassy of Brazil

## ■ NOVEMBER 2011

Dr Raj Thampuran, Executive Director SERC, A\*STAR

## ■ DECEMBER 2011

Delegation from Petrosains, Kuala Lumpur, Malaysia

Delegation from National Museum of Natural Science, Taiwan

Mr Goh Chok Tong, Emeritus Senior Minister, Member of Parliament

## ■ JANUARY 2012

Mr Lim Chuan Poh, Chairman, A\*STAR

## ■ FEBRUARY 2012

Mrs Tan Ching Yee, Permanent Secretary, Ministry of Education

# Sub-Board Committees

## Executive Committee

Chairman	Ms Tan Yen Yen
Members	Mr Quek Gim Pew Dr Goh Chong Chia Mr Phillip Tan Dr Tan Hai Meng Mr Chia Mia Chiang Mr Sin Kim Ho

## Staff & Establishment Committee

Chairman	Dr Goh Chong Chia
Members	Mr Chia Mia Chiang Mr Lee Ark Boon Mrs Tan Mui Hwoon

## Finance & Investment Committee

Chairman	Mr Quek Gim Pew
Members	Mr Martijn van Koten Mr Alex Siow Mr Howard Shaw

## Audit Committee

Chairman	Mr Phillip Tan
Members	Prof Andrew Wee Ms Ang Ee Luang Mrs Tan Mui Hwoon

## Education Development Committee

Chairman	Dr Tan Hai Meng
Members	A/Prof Ashraf Ali bin Mohamed Kassim Prof Paul Teng Mr Sin Kim Ho



# Project Committees

We sincerely thank all steering and working committee members for their continued dedication, commitment and hard work during the year to make science interesting, relevant and accessible to students and the public. We look forward to more fulfilling partnerships with all in the years to come.

- A\*STAR Talent Search 2011  
Steering Committee
- Singapore Science & Engineering Fair 2011  
Working Committee
- Singapore Science Festival 2011  
Steering Committee
- Science Buskers Festival 2011  
Advisory Committee
- National Science Challenge 2011  
Steering Committee
- Sony Creative Science Award 2011  
Organising Committee
- Shell Singapore Youth Science Festival 2011  
Organising Committee





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