INTERNATIONAL SCIENCE FAIR 2004 ADELAIDE SOUTH AUSTRALIA
Thank You to the following people whose help has been important to the successful organisation in the running of the ASMS International Science Fair:

**ASMS Staff:** Mr Jim Davies, Dr Neil Davis, Mr Eddie Fabijan, Mr Matthew Jamieson, Mr Ben Olijnyk, Ms Judy Sara, Mr Andrew Stone, Mr Vern Treilibs, Mr Peter Van der Zwaag, Mr Ian Sheppard, Mr Steve Nixon

**Flinders University Staff:**

- Dr Kathy Schuller, Dr Kenneth Pope, Dr Karen Reynolds, Professor Ian Gibbins

**Administrative Coordinator:** Ms Julie Cassidy

**ASMS International Science Fair Coordinator:** Mr Graeme Oliver

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**We would like to thank the following companies for their support in the running of the Fair:**

- KW Wholesale Stationers Pty Ltd
- RAM Paper and Office Products
International Participants in the ASMS International Science Fair 2004

RITSUMEIKAN JUNIOR and SENIOR HIGH SCHOOL

Mr Fumio Goto  Principal
Mr Hisashi Kuriki  Deputy Principal
Mr Hiroshi Tanaka  Teacher
Mami Abe
Yushi Ando
Ryota Matsuoka
Hajime Yabuno
Ayumi Kiyohara
Natsuki Kasamaki

WASEDA UNIVERSITY HONJO SENIOR HIGH SCHOOL

Ms Maho Mochizuki  Teacher
Mr Toru Kagemori  Teacher
Hiroki Sakamoto
Takahiro Akiyoshi
Tatsuya Koyama
Atsushi Nihei
Keigo Metsugi

MAHIDOL WITTAYANUSORN SCHOOL

Dr Thongchai Chewprecha  Principal
Dr Kosol Petchsuwan  School Board Member
Dr Busaba Kramer  National Science And Technology Development Agency Teacher
Miss Sataporn Wantanawijarn
Thiprampai Thamamonggood

THE SCIENCE SOCIETY OF THAILAND

Ms Orawan Rum-paneenil  Teacher
Duangkamon Sa-ngiamdee
Kanokwan Kok-ram
Mrs Narisara Prabnabk  Teacher
Weera Nakchttree
Piya Sanpradit
Panuwat Sucheep
Australian Science and Mathematics School Participants in the International Science Fair 2004:

### Presenters
- Fabian Karuga  
  Earth & Cosmos Inquiry – Power Point  
- Tristan Frank  
  Earth & Cosmos Inquiry – Website  
- Peter Frank  
  Earth & Cosmos Inquiry – Website  
- Jared Fallon  
  Earth & Cosmos Inquiry – Website  
- Bonnie Haselgrove  
  Earth & Cosmos Inquiry – Web Page  
- Emily Whitrod  
  Earth & Cosmos Inquiry – Web Page  
- Steph Johnson  
  Earth & Cosmos Inquiry – Website  
- Tara Lampe  
  Earth & Cosmos Inquiry – Website  
- Brad Hocking  
  Earth & Cosmos Inquiry – Website  
- Adham Davies  
  Earth & Cosmos Inquiry – Water quality with WMC  
- Jessica Guerriero  
  Navigation display with SA Maritime Museum  
- Stacey Huddleston  
  Navigation display with SA Maritime Museum  
- Hailey Robinson  
  Navigation display with SA Maritime Museum  
- Alex Britten-Jones  
  Nanotechnology product presentation  
- David Kemp  
  Nanotechnology – Microwave Imaging system  
- Nicole Slodki  
  Thinking Mathematically Project  
- Fabian Karuga  
  Thinking Mathematically Project  
- Richard Li  
  Thinking Mathematically Project  
- Leah Maxwell  
  Thinking Mathematically Project  
- Victoria Haar  
  Thinking Mathematically Project  
- Joyce Phan  
  Thinking Mathematically Project  
- Sarah Pilypas  
  Thinking Mathematically Project  
- Bonnie Haselgrove  
  Clipsal Robotics Projects  
- Raj Sekar  
  Clipsal Robotics Projects  
- Glyn Butler  
  Clipsal Robotics Projects  
- Tynan Brice  
  Clipsal Robotics Projects  
- Hugh Considine  
  Clipsal Robotics Projects  
- Scott Sleep  
  Clipsal Robotics Projects  
- Nick Drury  
  Forensic Anthropology Project  
- Chad O’Connor  
  Biotechnology Immersion Video  
- Mallory King  
  Biotechnology Immersion Video  
- Ben Finlay  
  Mars Rover Robot  
- Leigh Killmier  
  Mars Rover Robot  
- Liam Daly  
  Mars Rover Robot  
- Tegan Neville  
  ASMS School Promotion  
- Ashley Mann  
  ASMS School Promotion  
- Tanya Blazewicz  
  Daniella Kittel  
- Ashley Mann  
  Nicolette Thornton  
- Tegan Neville  
  Ashleigh Stedman  
- Leah Maxwell  
  Adham Davies  
- Kane Elson  
  Adham Davies  
- Nadia Palnok  
  Nadia Palnok  
- Ashley Mann  
  Ashley Mann  
- Kane Elson  
  Shanti Osborne  
- Ashleigh Stedman  
  Ashleigh Stedman  
- Nicolette Thornton  
  Tegan Neville  
- Tegan Neville  
  Leah Maxwell

### Support Teams
- Adrian Cameron  
- Kane Elson  
- Adham Davies  
- Nadia Palnok  
- Ashley Mann  
- Kane Elson  
- Shanti Osborne  
- Tanya Blazewicz  
- Daniella Kittel  
- Ashley Mann  
- Nicolette Thornton  
- Tegan Neville  
- Leah Maxwell
Australian Science and Mathematics School International Science Fair 2004 Programme

WEDNESDAY 1st DECEMBER

9.00am  Welcome to International guests by Associate Professor Jim Davies, Principal Australian Science and Mathematics School

9.15am  Official Opening by Professor Anne Edwards, Vice Chancellor, Flinders University

9.30am  Indigenous dance and music performance

9.45am  Launch of SciMatInternational

9.50am  Morning Tea

10.15am Displays open for guests and visitors to see

11.45am Keynote address by Professor Ian Gibbins, Flinders University School of Medicine

12.30pm Lunch (provided in Studio 1)

1.30pm  Student Presentations of Major Projects

3.30pm  Conclusion of day

Professor Ian Gibbins, Flinders University School of Medicine

- Head, Department of Anatomy & Histology
- Chief Investigator, Autonomic Neurotransmission Laboratory
- Convener Flinders Microscopy & Image Analysis Facility
- Associate Editor, Autonomic Neuroscience: Clinical (formerly the Journal of the Autonomic Nervous System)
- Member, Centre for Neuroscience
- Member, Flinders Medical Centre Library
- Council (NHMRC) Fellowship Panel
- Committee Member, National Health & Medical Research
- Member, International Union of Physiological Sciences Commission on the Autonomic Nervous System
Student Presentations of Major Projects

**Mami Abe (Ritsumeikan Junior and Senior High School)**
Presentation about Ritsumeikan School. Mami will present her own greeting and a movie about the school.

**Yushi Ando (Ritsumeikan Junior and Senior School)**
Verification of the Greenhouse effect. This presentation will explain why global warming is one of the biggest environmental problems on Earth. Yushi’s group have attempted to study the greenhouse effect under laboratory conditions. Their experiment has been able to confirm the characteristics of global warming. The group has started to create an experimental kit to demonstrate their findings.

**Thiprampai Thamamonggood (Mahidol Wittayanusorn School)**
Corresponding Factors for Increasing Pigments of Siam Fighting Fish. It has been found that fish-feed supplement especially Spirulina and Marigol, have an effect in increasing pigments of Siam Fighting Fish. The colour of fish also varies in accordance with light intensity. This study shows that switching between feed nutrition and the use of light intensity the tone and colour of fish can be controlled.

**Hiroki Sakamoto (Waseda University Honjo High School)**
The Industrialization of the sediment which Iron Bacteria Produce. When walking through his school campus, Hiroki found a reddish-brown stream. Having investigated the phenomenon, he concluded that it was resulted from organisms called iron bacteria: they produce the sediment of iron-trihydroxide, and make the stream red. His study refers to how to obtain iron from the sediment.

**Duangkamon Sangiamdee (The Science Society of Thailand)**
Increasing the quality of Organic silk Dye To increase the quality of silk dying by using the natural products, the hard woo of jack-fruit tree and the insect’s product called "Krang". Two methods are introduced. The first method of dying used the solutions of both natural products with 1 and 3 concentrations. The last one used their powders. The silk properties, ie. The stain, the soften and the lighten are studied.

**Weera Nachttree (The Science Society of Thailand)**
The MUS (Multi- Useful Sprayer) is a special; machine made by the three students in grade 12 from Ratchadapisake School, Chumphon, Thailand. It is used on farms, to spray chemical solution to kill weeds and insects. It can be used to spray the ground or in the air for up to 5 metres. The MUS is easy to use manually. It works by pushing the gear wheel. It is not necessary to carry the barrel of solution because the MUS has great volume capacity.

**Nicole Slodki, Richard Li and Fabian Karuga (ASMS)**
The ASMS Mathematics and Abstract Thinking curriculum has some special thematic components, MATSAT and EnviroMAT, as well as some interesting features of it’s own. Nicole - Richard and Fabian will illustrate the nature of these studies with their favourite examples.
Australian Science and Mathematics School, Mahidol Wittayanusorn School and Ritsumeikan Junior and Senior High School agree to work to establish a network partnership between all the schools. The network will be called SciMatInternational.

The SciMatInternational network will have the mission of promoting the pursuit of excellence in science and mathematics education amongst its member schools. The network will facilitate shared programmes between its member schools such as teacher and student exchanges, co-operative student and teacher work on joint projects, exchange of curriculum materials, shared curriculum delivery and teacher professional development activities.

SciMatInternational will establish its own website to allow for the most effective sharing and interaction between its members on a global basis.

www.SciMatInternational.org

SciMat International – connecting students and teachers of science and mathematics around the world.
THURSDAY – 2ND DECEMBER

8.45am Maths Challenge Quiz
   Vern Treilibs
   Neil Davis

10.00am Students will be organised in mixed school teams
       (students choose 1)

- Robotics
  Dr Kenneth Pope
  Eddie Fabijan
  Steve Nixon

- Forensic Science
  Andy Stone
  Judy Sara

- Rogaining and Human Performance Monitoring
  Dr Karen Reynolds
  Matt Jamieson
  Vern Treilibs
  Peter Van der Zwaag

12.30pm Lunch (provided in Studio 1)

1.30pm Visit to the Flinders University Aquaculture Laboratories

2.30pm Discussion Groups
       What is the most important thing scientists can do to help the world of
       the future?
       Discussion group leaders – Leigh Killmier, Tegan Neville, Liam Daly,
       Leah Maxwell, Shanti Osborne

3.30pm Closing Assembly
FRIDAY - 3rd December

Full Day Outing to

Urrbrae Wetlands – Agricultural Science Study
400 Olympic swimming pools worth of water go down the drain from here and out to sea each year. It’s cleaned up but it is still bad for the gulf. We are still learning, and that is very much what the wetland is all about. Explore the wetlands and do your own analysis of water quality in the area.

OR
Temptations Dolphin Cruise

AND

Cleland National Park

Cleland Wildlife Park is a must-see attraction and photo opportunity for visitors from all over the world. Here you come face-to-face and hands-on with Australia’s unique wildlife and can join animal attendants on the animal feed runs from 10:00 am to 3:00 pm daily or discover the world of nocturnal animals on a guided nightwalk. Bookings (61 8) 8339 2444 are essential for the nightwalks. The Yurridla Trail, offers a chance to hear Aboriginal guides bring to life their Dreaming stories and explain the inseparable relationship between Aboriginal culture and Australian wildlife. The Kaurna Aboriginal people of the Adelaide Plains know the area as Yurridla. Their Dreaming stories tell of Yurrebilla, the creator ancestor of the Kaurna people. His fallen body forms the Mt Lofty Ranges, with his ears being the twin peaks of Mt Lofty and Mt Bonython. Today, the spirit of Yurrebilla looks down from the hills and protects all forms of life along the plains.

The day will conclude with a social evening at the ASMS
Sports Activities – Tennis, volleyball, soccer, table tennis
BBQ tea provided
Family and Friends Welcome
Quick Facts about Flinders University
Research has always been a core activity at Flinders, and is a founding member of the Innovative Research Universities – Australia group. We believe investigation and enquiry are essential to an academic institution and Flinders consistently ranks among Australia’s top universities on a per capita basis for research spending and for the citation of our work in professional journals.

**Current Snapshot (24 Nov 2004)**
**Campus Size:** 180 hectares (half the size of the Adelaide CBD)
**On Campus Accommodation for 550 students**
**Total Number of Students:** 16,000*
  - Male: 5,767, Female: 10,233
**Exchange students:** 71
**Students in Undergraduate courses:** 12,228
**Students in Postgraduate courses:** 3,772

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<th>International Students: 2,489</th>
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<td>Japanese Students: 92</td>
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  - Male: 33, Female: 59
| Japanese Undergraduate Students: 69 |
| Japanese Postgraduate Students: 23 |
| Thai Students: 34 |
  - Male: 23, Female: 11
| Thai Undergraduate Students: 6 |
| Thai Postgraduate Students: 26 |

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<td>School of Humanities: Archaeology, Cultural Studies, Drama, English, Languages, Philosophy, Screen Studies</td>
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<td>Web: <a href="http://euhl.finders.edu.au/">http://euhl.finders.edu.au/</a></td>
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<td>School of Chemistry, Physics &amp; Earth Sciences</td>
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<td>School of Informatics &amp; Engineering</td>
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<td>Population &amp; Environmental Management</td>
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<td>Department of Women’s Studies</td>
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<td>Flinders Institute of Public Policy &amp; Management</td>
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<td>National Institute of Labour Studies</td>
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Fax: +61 8 8201 3177
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[www.finders.edu.au](http://www.finders.edu.au)

CRICOS: Registered Provider The Flinders University of South Australia, CRICOS Provider Code: 00114A
State Flag of South Australia

The State Flag, which is flown from Government buildings and vessels, was authorised by Proclamation on 13th January, 1904, and comprises the Blue Ensign with the State Badge in the fly. In a 1829 mm x 914 mm flag the Badge is 406 mm in diameter and is located in the centre of the fly half of the flag.

The State Badge is described as "the Rising Sun, Or, with thereon an Australian Piping Shrike displayed Proper, and standing on a staff of gumtree raguly, gules and vert".

Hairy Nosed Wombat

The Hairy-Nosed or Plains Wombat (Lasiorhinus latifrons) was adopted by the Government as the faunal emblem of South Australia on 27 August 1970.

It is a marsupial mammal indigenous to Australia and totally protected in South Australia. The generic name, Lasiorhinus, means hairy-nosed and the specific name, latifrons, means broad-fronted.

The Hairy-Nosed Wombat is a thick-set powerful mammal with a broad blunt head, small pointed ears, short muscular legs, strongly clawed feet and a rudimentary tail. It has soft grey-brown silky fur.

Opal - South Australia's Gemstone

Opal was adopted by the Government as the gemstone emblem of South Australia on 15th August 1985. Precious opal ranks with diamond, emerald, ruby and sapphire as one of the most valuable of gemstones. South Australia is the world's most important source of this uniquely beautiful gem.

The State's three major opal fields - Coober Pedy, Mintabie, and Andamooka supply an estimated eighty per cent of total world production. Continued production of high quality precious opal at present levels seems assured while the potential for future discoveries is high.
FRIENDSHIP PAGE

Collect autographs, addresses and contact details of new friends so you can keep in touch.
contact information

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