



ANNUAL REPORT

2010-2011



CONTENTS	
President's Report	3
Treasurer's Report	8
Chief Executive Officer's Report	11
Electronic Communications Report	19
National Science Week Report	20
Primary Science Report	21
Science Talent Search (STS) Report	24
CONSTAWA Report	26
Curriculum Report	27
Publications Report	29
Auditor's Report	30

Presidents Report

Sue Doncon
STAWA President



STAWA has a relatively stable membership with a good representational spread across primary and secondary schools and within all jurisdictional sectors. We currently have 684 members and are continually striving to strengthen the membership base of the association.

Ways we endeavor to strengthen our membership base include:

- Producing and stocking student and teacher resources.
- Member discounts – members currently receive a 10% discount off the standard prices for most STAWA items.
- STAWA Conferences and Professional Development activities where significant price reductions are available for members.
- STAWA's targeted recruitment drives at the universities, through the WA Primary Principal's Association as well as at our conferences and all our other activities.

STAWA has had a very busy twelve months since the AGM in 2010. I think it appropriate that my report is written addressing each of STAWA's Mission and Goal Statements.

1. Advocate for members, teachers of science and science education.

It is important that science teachers maintain their sense of unity and professional standing. STAWA maintains an independent voice in representing teachers of science. The Association is continually involved with Government departments, tertiary institutions and other professional associations on matters related to science, science education and science teaching. STAWA members have a voice on Curriculum Council science committees through their STAWA representatives. Other organisations regularly approach STAWA for advice on teaching and curriculum issues.

The development of the Australian Curriculum in Science has significant ramifications for all teachers of Science across Western Australia. With this in mind, STAWA saw it as our obligation to set up a process whereby we could ascertain the views of WA teachers from all sectors regarding the Draft Australian Curriculum K – 10, Science, as well as the Draft Australian Curriculum – Senior Science. To this end we held review meetings where members met to discuss and comment on the draft curriculum. A number of STAWA members also attended sessions held by DET, AISWA and the Curriculum Council and they also provided feedback to the association. A small group then set about collating the comments to produce the STAWA responses that were subsequently sent to ACARA on behalf of all members. Recently ACARA funded four STAWA representatives to travel to Sydney to provide feedback to ACARA for each of the Senior Science subjects currently under refinement for the Australian Curriculum in Senior Science.

The STAWA response to the Draft Australian Curriculum K – 10, Science, and the general response to the Draft Australian Curriculum – Senior Science can be downloaded from the STAWA website, www.stawa.net.

I would like to thank all those who helped contribute to this process with special thanks to those who willingly gave of their time to collate and produce our final response documents. Without such feedback our ability to influence the direction the Australian Curriculum will take is significantly reduced.

Strengthen science and education and industry links

STAWA is seen as world-class providers and leaders in Science Education. This has clearly been demonstrated by the number of teachers who are STAWA members who have been involved in the formulation and consultation processes implemented by ACARA when developing the initial draft documents for the Australian Curriculum in Science. STAWA members have travelled interstate on a regular basis to provide input into the development and refinement of the Australian Curriculum in Science, both K – 10 and Senior Science.

As a significant part of our strategy to develop links with science, education and industry STAWA continues to work with:

- Mark Woffenden Executive Director, Resources & Chemistry Precinct; Professor Jo Ward, Dean, Faculty of Science, Curtin University; Mark Buntine, Head of Department, Department of Chemistry, Curtin University where we have our office space at the new Research & Chemistry Precinct along with access to the facilities available to Precinct occupants. This has raised our science profile, and gives us a prime position to continue to develop the links and partnerships we think are important.
- Membership of the Enriching Science Unlocking Resources group (ESUR), which has members from the CMEWA, Engineers Australia, Scitech, Parker Centre and many others.
- Membership on the Board of Earth Science WA and supports and partners ESWA wherever possible. ESWA has board members from Mining, Energy and Industry.
- We work with the ChemCentre and Parker Centre and utilise industry to provide conference workshops where appropriate and possible.
- The Primary Industry Centre for Science Education (PICSE). STAWA is represented on the State Advisory committee and have teamed up to value add their student science awards with STS, particularly in the regions.
- Goldfields Education Mining Industry Alliance (GEMIA) and support their Dust off program

Promote equitable access in science education

SCIOS, the Journal of the Science Teachers' Association of Western Australia is STAWA's own journal and produces four issues annually. It contains reports of STAWA activities, articles of interest to every teacher of science, teaching ideas along with book and software reviews. SCIOS aims to highlight science teaching as a profession and to strengthen science, education and industry links by providing our members with a forum for sharing their expertise.

Along with the journal is the STAWA web site. This is the gateway for members to find out what is happening within the association and through the Discussion Board members have a vehicle for holding conversations of a general nature or on more specific topics.

Catalist is a very popular list server that STAWA hosts to encourage and facilitate member discourse on a variety of topics. It is also a valuable tool for the dissemination of information to all members of upcoming events, which may be of interest.

The STAWA competitions Science Talent Search and ScienceIQ provide opportunities for all members, their colleagues and all science students across the state to participate in science activities. With the generous support of the Department of Commerce, STAWA has been able to offer classroom support to teachers in regional WA to establish STS within their schools. This money has also helped to develop community involvement in STS judging and with awards presentations.

Promote the importance of science education & Promote science teaching as a profession

The annual State Science Awards are a significant event in the WA science community's calendar. This event not only recognises the work that is being done within the state by our scientists but also the importance of Primary, Secondary and Tertiary science teachers and how they are instrumental in the development of our future scientists. STAWA continues to be involved in this award in two ways:

- By actively encouraging those teachers who deserve to be recognised for their hard work, dedication and outstanding skills in teaching science, and
- By participating in the selection process of the nominees.

Each year STAWA CEO, John Clarke, is invited by the major universities to talk to the under graduate students prior to their final practices. At these talks STAWA offers each student a 6 months free membership. John also talks to Chemistry graduate students through RACI about teaching as a career. John also attends the Scitech Regional Science Festivals where he promotes science and science teaching as a career path for students as well as delivering Saturday morning Teacher workshop following the Festivals.

STAWA continues to provide a wide range of student activities. These are critical in promoting the importance of science education to the wider community. Some of the activities include the Physics Day at Adventure World, Primary Science for Kids Day, Science IQ, the National Science Week Grants and Science Talent Search and all attract significant numbers of participants.

Due to our public profile, STAWA has regularly been approached by the media to comment on a number of issues of interest to the community in relation to the teaching of science, the most recent being the development of the Australian Curriculum in Science and the recent restructure of the Education Department. The STAWA Council also reviewed and provided feed back to Parliament on the Curriculum Council Amendment Bill 2011 via Ben Wyatt, MLA, Member for Victoria Park.

The STAWA Council considers it an obligation to provide a balanced and considered viewpoint reflective of member views with all feedback. This has, on occasions, meant a delayed response.

2. Provide professional learning for teachers of science.

As in previous years, STAWA held our annual Primary Science Conference, CONSTAWA and Future Science Conference. All conferences were of the usual high standard and each organizing committee needs to be commended for their hard work and dedication in putting on these events.

This year the Primary Science Conference returned to the original format back at the Vines Resort in the Swan Valley and, along with the residential option, day registrations were also available. The numbers were very pleasing and each day was well received by all who attended.

There were two significant changes to CONSTAWA 2011. The first was the move of venue to Fremantle and the second was the change of format. This year CONSTAWA started at Friday lunchtime with a half day program of excursions followed by a Welcome Reception, Keynote presentation and conference dinner on Friday evening. Saturday saw the University of Notre Dame playing host to the second Keynote presentation and workshop sessions with the conference concluding Saturday evening.



Future Science 2010, a one-day conference held in December, was again located at Murdoch University and was very successful. 2010 saw streams for Cutting Edge Science, Biology, Chemistry, Physics and Earth and Environmental Science. Sessions were selected to cover topics related to the 2010 Year of Biodiversity as well as looking forward to the 2011 Year of Chemistry and included a good selection of sessions dealing with Astronomy. Future Science 2011 will see a change of venue with the conference this year being held at UWA.

In addition to our conferences, STAWA conducted a comprehensive Professional Development in-service program throughout the year. A range of sessions, including whole day, half day and evening meetings, were offered. Significant price reductions continue to be available to STAWA members. The Professional Development that we offer is regularly under review to ensure that what we are providing is current, topical and what is being requested by the membership.

3. Provide exemplary science learning and teaching resources.

STAWA continues to develop and offer a wide range of resources that support the teaching of science across all sectors and year levels. Some of these resources are produced within the association while others are commercial products that we supply for teachers to use with their classes.

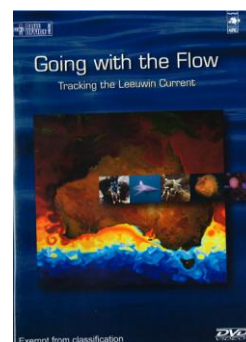
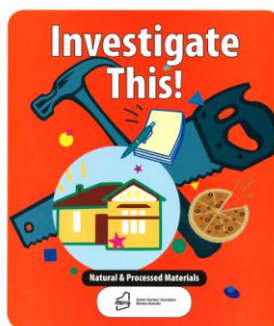
Each year the Primary Committee produces four issues of the Primary Science Pinups, a collection of activities based around a science idea or concept that can be used by teachers to develop into programs of work for their class for the term.

ScienceIQ is a series of separate online science competitions conducted by STAWA. The ScienceIQ quizzes test student knowledge, skills and understandings in most areas of Science such as astronomy, biology, chemistry, physics, biotechnology and science investigations. The quizzes run each term of the school year for students in Years 5 through to Year 10.

STAWA is continuing to update our resources for teachers of senior secondary: Exploring Human Biology Stages 1, 2 & 3, Exploring Chemistry Stages 2 & 3, Exploring Physics Stages 2 & 3 and the Earth & Environmental Science text. These are very popular and are continuing to sell well.

STAWA continues our partnership with both Rotary and the Water Corporation in the “Microscopes for Primary Schools” project. As part of the partnership we produced a collection of activities that primary teachers could engage in that developed skills in using microscopes correctly. There are currently over 1000 microscopes out in Primary schools and over microscopes 1000 still waiting to be presented.

The STAWA Shop also offers a range of commercially produced resources including Concept Cartoons and imports other Milhouse Publishing products, the electronic Brain Box, multimeters, microscopes etc.



4. Recognise quality teachers and students of science.

STAWA continues to award the De Laeter Medal at the Future Science Conference. Lance Taylor was the 2010 recipient. STAWA also support entries in to the BHP Billiton Science Awards. Our 2010 entry was Tracy Brothers from Albany Senior High School.

Regional Teacher scholarships have been made available for attendance at both the Primary Science Conference and CONSTAWA.

STAWA also promotes awards that recognise science students' achievements. The 2011 Science Talent Search was extended to include Regional judging and awards in both Albany and Kalgoorlie. The Albany Awards were a joint initiative with PICSE. Top entries are entered into the BHP Billiton Science Awards.

EcoScience The Professor Harry Messel International Science School for students again saw STAWA select the WA students. This was managed by Geoff Lewis.

5. Provide quality business management.

STAWA continues to maintain a strong and stable financial position. This has been achieved through a variety of strategies.

We actively seek sponsorship and apply for grants from government, industry and lotteries to support programs such as Science Talent Search, ScienceIQ, new initiatives and conferences. We have developed partnerships with other organisations such as Scitech to help our efforts in acquiring these grants and sponsorships.

Another factor in our financial stability is the wise investments that have been made of our funds in the financial marketplace. The advice and the contacts that have been given to us by our Treasurer, Colleen Bakker, has been invaluable in developing this aspect of the association.

Conclusion

I would now like to take the opportunity to thank all those STAWA members who have volunteered their time and expertise in a variety of ways. Their hard work and commitment is what makes this association as strong as it.

The success the association is enjoying is closely linked to our very competent staff. They are:

- Jude Martindale our wonderful Events and Marketing Manager,
- Vinda Susilo our very capable Finance Officer. Vinda has recently left us to further her career and we have recently secured the services of Carrie Low to take her place.
- Simmonetta Berry and Marly Walker who have provided office assistance; and
- John Clarke, our very proactive and dedicated CEO. I sincerely thank John, Jude, Vinda, Sim, Marly and Carrie for their work in making the association run so smoothly.

Finally, the STAWA Councilors are the glue that holds the association and all its activities together. I have been very fortunate to have such a wonderful team to work with. To those who are leaving the Council, thank you for your collegiate support and dedication to your role. I have enjoyed working with you. To those who are joining or remaining on council I look forward to continuing our work together as we strive to achieve our goals and move the association forward.

Treasurer's Report

Colleen Bakker
Treasurer

Audit

The annual general audit was undertaken by the appointed auditors Muntz & Partners and finalized on 23rd August 2011.

The financial reports have been prepared in accordance with the Accounting Standards and are based on the historical cost method.

The income tax expense is based on the profit from ordinary activities before income tax and is adjusted for any permanent differences.

Comment on Overall Position

The profit and loss statement for the financial year ending as at 30 June 2011 reflects a loss of \$167,361 compared to a reported profit of \$182,374 as at 30 June 2010. The loss has resulted from a combination of the reprinting of Exploring Physics Stage 3 and Exploring Chemistry Stage 2, along with the printing of the Earth and Environmental Science Stages 1, 2 and 3 text, the finish of the WestOne Grant and the closure of the Department of Commerce HECS scheme.

	2011	2010	Variance
Income	\$797,961	\$1,318,831	(520,870)
Cost of Goods Sold	\$495,048	\$700,401	\$205,353
GROSS PROFIT	\$302,912	\$618,429	\$315,517
Total Overhead Expenses	\$442,640	\$414,607	\$28,033
NET PROFIT/(LOSS)	(\$167,361)	\$183,559	

Reasons for Variances in position

Income

Income Type	2011	2010	Variance
Publications	\$398,415	\$511,826	Decrease \$113,411
Memberships	\$50,048	\$45,381	Increase \$4,667
Activities	\$123,645	\$104,191	Increase \$19,454
Rental	\$94,531	\$79,661	Increase \$14,870
Grants	\$90,249	\$517,978	Decrease \$427,729
Interest	\$0	\$12,309	Decrease \$12,309
Managed Funds	\$6,409	\$11,533	Decrease \$5,124
Advertising	\$11,208	\$7,157	Increase \$4,051
Science IQ	\$16,093	\$9,981	Increase \$6,112

1. Publication sales have not performed due to the hire and second hand market sales entering the arena.
2. Memberships have marginally increased due to a growth in member numbers
3. Activities revenue is up due to the increased participation levy in PD and conferences
4. Rental revenue increased due to the CPI percentage shift however the expected rental income will increase once unit 6 Hasler Road is leased again.
5. The reduction in the grants was due to the closure of the Department of Commerce HECS scheme and the conclusion of the WestOne grant. Grant income consisted of: \$75k Regional Science Talent Search, \$3.7k CSIRO Science Talent Search Grant, \$9.5k National Science Week.
6. The nil interest reported is due to the substantially reduced grant income.
7. The Share Market has weakened resulting in a reduced growth on the value of the Share Investments held in the Commonwealth Bank and BT Investments. These investments are reported at market value at balance date (30 June 2011). The worth of these investments is reviewed annually and until converted their values remain unrealised.

Cost of Goods Sold

Expense Type	2011	2010	Variance
Publications	\$222,330	\$216,039	Increase \$6,291
Memberships	\$42,697	\$33,866	Increase \$8,881
Activities	\$107,366	\$68,909	Increase \$38,457
Rental	\$147	\$3,545	Decrease \$3,401
Grants	\$27,872	\$401,044	Decrease \$373,172
HECS reimbursement	\$0	\$6,000	Decrease \$6,000
Other	\$94,634	\$24,049	Increase \$70,585

1. The publication cost shows an increase compared to same time last year. This is due to the reprinting of Exploring Physics Stage 3 and Exploring Chemistry Stage 2, along with the printing of the Earth and Environmental Science Stages 1, 2 and 3 text.
Exploring Chemistry Stage 3, Exploring Human Biology Stage 2 and Exploring Human Biology Stage 3 reprints will be undertaken in the 2011-2012 and 2012-2013 financial years dependent upon the volume of sales of each resource.
2. Membership expenses have increased due to the a rise in ASTA affiliation fees
3. Activity costs have risen because of the move of the STAWA Primary Science Conference from ECU back to the Vines Resort and CONSTAWA to the Esplanade Fremantle from Muresk.
4. Rental – reduction due to facilities at Curtin being made available
5. Grants – running of Regional Science Talent Search program and Goldfields mentoring program.
6. Closure of HECS
7. Catering for various Conferences and Functions throughout the year

Overhead Expenses

Expense Type	2011	2010	Variance
Council/Committee/Staff	\$20,959	\$11,305	increase \$9,654
Establishment Expenses	\$36,899	\$44,056	decrease \$7,157
Employee Expenses	\$265,175	\$253,762	increase \$11,413

Office Expenses	\$82,374	\$59,966	Increase \$22,408
Financial Expenses	\$45,072	\$40,159	Increase \$4,913

1. Council/Committee/Staff expenses relate to travel and accommodation, conferences and seminar attendances on behalf of STAWA
2. Establishment expenses relate to insurance, water electricity and strata fees
3. Employment expenses are wages and salaries
4. Office expenses relate to stationery, cleaning, website hosting and development, telephones and internet. Additional expenditure for Northside Logistics for the storing and distribution of resources offset by a cost saving in wages.
Advertising increases including Wappa Bronze Sponsorship, ASTA sponsorship (advertising and exhibition expenses) and the Regional Science Talent Search TV and other Advertising.
5. Financial expenses are other expenses such as audit and accounting, legal, advertising, bank charges and Sponsorship. STAWA sponsored the Primary Principles Conference in this financial year.

Balance Sheet

The Share Market has strengthened adding value to the Share Investments held in the Commonwealth Bank and BT Investments. These investments are valued at market value at balance date (30 June 2011). The worth of these investments are reviewed annually. The gain variance recorded against each of these investments is unrealized. Gains/Losses only become realized if the investment is redeemed.

Investment Type	2011 Value	2010 Value	Variance
BT Property Sec Fund 7119514	\$18,143	\$17,073	\$1,070
CBA Property Security Fund	\$24,639	\$21,275	\$3,364
BT Property Sec Fund 11531990	\$39,669	\$37,694	\$1,975

- Accrued liabilities of \$24,181 relate to Annual Leave Provision and PAYG tax withheld.

Other Matters

I would like to thank John Clarke, CEO and Vinda Susilo for their assistance throughout 2011/2012 and I look forward to working with the STAWA Council and staff in 2011/2012.

Motions

1. Accept the auditor's report for 2010/2011.
2. Reappoint Guy Lehman from Muntz and Partners as auditors for 2011/2012
3. Membership fees are to be increased according to CPI - 2011/2012 to 3.6% as per June 2011 Table 6401.1, % change of corresponding quarter of the previous years weighted average
4. The signatories on all accounts and investments are changed to reflect current Council and Office Incumbents

Chief Executive Officer's Report

John Clarke
STAWA CEO

Thank you to the STAWA Council, for the support that has been given to me in my role as CEO. We have had a productive and fruitful twelve months. It has been a pleasure working with all Councilors.

I would like to recognize the efforts of outgoing STAWA President Sue Doncon. Sue has provided strong leadership and has worked to keep matters of business at a strategic level. Her experience and understanding of the culture of the organization, together with the high regard that the teaching profession holds her, means that STAWA is always well represented in discussions and negotiations with government and scientific organizations. Together with President Elect Bernie Hunneybun they have been able to present a strong primary and secondary science advocacy and have teamed well when dealing with the media. The STAWA has again been in good hands throughout the 2010/11 year.

STAWA has a competent and experience Council. My job as CEO is wide-ranging and made all the more productive and successful in achieving the goals of the association through the efforts and support of all our council members. Office Staff, Jude Martindale and Vinda Susilo have been a great asset. Jude has ensured that all STAWA events have run smoothly and has coordinated sponsorship and membership as well as looking after ScienceIQ and the STAWA shop. Vinda provided high quality accounting services and ensured that our debtors paid on time, her work was praised by the Auditor. Vinda has left STAWA to pursue her accounting career and CPA qualifications. Carrie Low is Vinda's replacement. Carrie comes well credentialed with a Masters degree in accounting from UWA. Casual employees, Simmonetta Berry and Marly Walker have provided support to the ebbs and flows of the office workload. Ensuring that Jude and Vinda were able to deliver our services in a timely and efficient manner and to the highest of quality. This year we have also had the volunteer support of retired engineer Jeremy Wood.

The following report is structured on the strategic plan. It highlights activities and strategies undertaken to achieve the goals of the association. In some instances activities that will need to be implemented in the future have been identified.



1. Advocate for members, teachers of science and science education.

1.1. Review and develop existing communication policy/mechanisms.

1.1.1. Catalist, SCIOS, Web site, email, mail-outs, phone.

- Maintain existing effectiveness of catalist, SCIOS and mail communications and Primary Chat. The Chair of eCommunications, Mark Lehmann has been instrumental in keeping out digital communications operational and effective.
- Continuing work on new STAWA website with improved booking, purchasing and email procedures. Addition of Cvent to support PD when viable and all Conferences includes online registration, session bookings and email communications
- Database with email capacity, form letters enabling e-blasts to members, conference presenters etc. Unfortunately this is only as effective as the accuracy of the information provided by members and their use of email as a means of communication. This is slowly improving.
- Introduction and trialing of STAWA and ScienceIQ Twitter

1.2. Develop and implement strategies to strengthen our voice.

1.2.1. Continue to seek the views of our members on issues related to science education.

- Workshops for the coordinated response to curriculum and other national issues. 2010/11 Has continued to hold review meetings, Australian Curriculum K – 10, Science, as well as the Draft Australian Curriculum – Senior Science. A number of STAWA members have attended sessions held by DET, AISWA and the Curriculum Council. They have provided feedback to the association. STAWA responses have been sent to ACARA on behalf of all members. Recently ACARA funded four STAWA representatives to travel to Sydney to provide feedback to ACARA for each of the Senior Science subjects currently under refinement for the Australian Curriculum in Senior Science.
- The STAWA response to the Draft Australian Curriculum K – 10, Science, and the general response to the Draft Australian Curriculum – Senior Science can be downloaded from the STAWA website, www.stawa.net.
- Use of surveys and discussion board to seek member views

1.2.2. Develop position papers on science education issues. Document response to the National Science Curriculum K-10 and Senior School subjects are available on the website

1.2.3. Develop strategies to respond to immediate issues.

- Use of website discussion board & Catalist. Catalist is currently the preferred choice of members, for example the restructuring of DET. STAWA President and CEO took members concerns to the Director of Services for clarification of the future support of Science Teachers.
- Upgrade of database enables email blasts to members.
- Council and Executive are making use of a number of online tools to help facilitate meetings such as email discussion and the use of skype. This is planned for expanded use in 2011/12 with the trialing of other online meeting tools
- The use of online survey software for council voting when needed has again been used in 2011

1.3. Build and strengthen our relationships with stakeholders in science education.

I have established/built upon networks with:

- Chamber of Minerals and Energy WA (CMEWA), supporting projects etc, Enriching Science Unlocking Resources (ESUR) Working Group). Unfortunately CME frequent staff changes continue to disrupt the links.

- Curtin University of Technology through:
 - Provision of PD (Teaching Chemistry/Physics/Biology for understanding workshops)
 - Collaborative science project (early childhood);
 - Diagnostic tools and Delemas.net (Science and Mathematics Education Centre -SMEC)
 - Public Lectures
 - Planning for international Year of Chemistry 2011 with the Resources and Chemistry Precinct members.
 - Invitations to the Vice Chancellors dinner with an Astronaut
- Murdoch University through
 - Future Science 2010,
 - STAWA PD and
 - Physics Day @ Adventure World
- UWA through
 - STAWA PD
 - SPICE
 - Primary Industry Centre for Science Education (PICSE) on Advisory Pannel
 - Public lectures
 - Dip Ed Program
 - Physics Day @ Adventure World
 - Teachers breakfast and through member and personal contacts
 - International Centre for Radio Astronomy Research (ICRAR)
 - Future Science 2011
 - Tall Poppy Awards Judging
 - Mary Oliver - Teacher Mentor Program in the Goldfields and Thinking Science Albany proposal
- ECU through
 - 2011 Primary Conference at the Vines
 - Skids Day in September
 - Mark Hackling – PD for Teacher Mentor Program in the Goldfields
 - Dip Ed Program and through member and personal contacts
- Curriculum Council through participation on the Science advisory group, Chemistry CAC Panel, Small Group Moderation as well as a contact when STAWA Member opinion is sought and through member and personal contacts.
- DET through consultations and member and personal contacts. WAAPA Conference attendance as a stall holder
- Department of Commerce through support of Science Teacher Award programs, STS, Biogenous. Member of the Science Education Working Group (SEWG) for the Technology and Industry Advisory Council (TIAC)
- WA Chief Scientist, Professor Lyn Beazley. As a point of reference when she requires school student participation or teacher participation in events, referrals of others seeking contact with teachers of science.
- SCITECH through
 - STAWA PD,
 - support of and participation in Scitech run events (such as the annual Regional Science Awareness Festival, launches of new exhibitions),
 - advertising and SCIOS (Heads up on Science Science Network),
 - ScienceIQ
 - Golfield Mentoring Program
 - Primary PinUps and
 - through member and personal contacts
- Earth Science WA (ESWA) through
 - representation on their board,
 - attendance at their functions,

- support of PD
- through the Executive Officer
- publication of the Earth and Environmental Science (EES) Text Book.
- Department of Environment and Conservation – delivery of PD and conference workshops, sharing marketing networks etc.
- Water Authority and Rotary – development of resource book, trial and launch and support of Magnifying Microscope Project. Over 200 microscopes in primary schools across WA and beyond
- Other non-profit groups such as the Astronomy WA, Friends of Kings Park, Perth Zoo, Lions Eye Institute and the Tesla Forum with further work being done to broaden this contact such as participating in Not-for-profit Network PD and functions, seeking contributions for ScienceIQ question and PD workshops.
- BHP Billiton through support of their awards
- Gravity Discovery Center support for funding advocacy etc
- Kalgoorlie Mining Hall of Fame

1.4. Represent members on key committees and panels.

- Board Member – Earth Science WA (ESWA)
- Advisory Panel – WA Primary Industry Centre for Science Education (PICSE)
- Perth Observatory Strategic Planning Stakeholder Consultation
- Engineers Australia WA Division Education Subcommittee
- Science Education Working Group (SEWG) for the Technology and Industry Advisory Council (TIAC)
- ACARA Australian Curriculum Senior Secondary Science: Chemistry advisory panel
- Curriculum Council of WA:
 - Chemistry CAC Panel - Chairperson
 - Representative Australian Curriculum
- Selection Panels:
 - Tall Poppy Awards
 - WA Science Awards (Teacher)
 - PICSE Science Investigation Awards

1.5. Promote the profession to:

- 1.5.1. Students – Science competitions
- 1.5.2. Pre-service teachers and teacher training institutions.
 - Presentations to undergraduate Teachers ECU and UWA promotion of STAWA and Teaching
 - RACI Careers night
- 1.5.3. Government and systems.
 - DET/Department of Commerce/Water Corp/DEC
 - Support Curriculum Council, AISWA, CEO initiatives that benefit members and science teachers in general
- 1.5.4. Industry and commercial partners.
 - Enlisting their support at conferences as stall holders etc
 - Curriculum material development
 - Support initiatives such as Scitech’s Regional Science Festival and exhibit launches,
 - Science Talent Search sponsors
 - Rotary Microscope Project
 - Goldfield Dust-off
 - Regional STS Awards and Judging
 - Partnering with ESWA and Primary Industry Centre for Science Education (PICSE)
- 1.5.5. Broader community.

- Through advertising, 2011 STS regional TV news papers for such events as STS.
- Home Schooling Expo July 2009 - 2011
- Primary Principals Conference 2009 and 2011
- Through contacts and dealings with community groups and individuals such as Scitech, Tesla Forum, Engineers Australia, Mining Hall of Fame, Zoo, ECO Ed and Museum

2. Provide professional learning for teachers of science.

2.1. Identify professional learning needs.

- Through discussions with PD providers such as Scitech, Curtin University, SPICE, Pasco, Vernier, Nanotech, and teachers, response to email requests etc in order to identify and seek out PD workshops
- Evaluation forms
- Monitor trend and availability of experts

2.2. Conduct CONSTAWA, Primary Science Conference and Future Science.

- Primary Science Conference The Vines Resort, March
- 2011 CONSTAWA May
- Future Science 2010, December 3

2.3. Conduct professional learning to promote quality teaching of science and science content.

- 2010/11 PD offerings mainly from providers.
- Australian Curriculum consultation/workshops.
- Annual Laboratory Safety PD.
- Goldfield Mentor program in partnership with Scitech
- STS Regional Teacher Support
- Teacher PD days following Scitech Regional Science Awareness Festivals

2.4. Develop science, education and industry links for professional learning opportunities.

- Scitech
- CMEWA links are well established
- Resources and Chemistry Precinct, Curtin University of Technology, ChemCentre
- Centre for Sustainable Resource Processing (CSRP) and the Parker Centre
- Perth Zoo, Kings Park, The Naturaliste Marine Discovery Centre (NMDC), Fremantle TAFE,
- Eco Education
- UWA, ECU, Curtin, Murdoch
- RACI

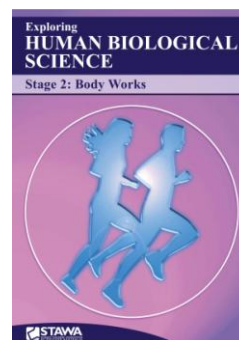
2.5. Develop relationships with organisations for credit and registration of teachers.

- WACOT
- WA Primary Principals Association, WAPPA

3. Provide exemplary science learning and teaching resources.

3.1. Identify resource needs.

- Primary PinUps – Planning stages for redevelopment for Australian Curriculum
- New resource – digital fully worked solutions for sale:
 - Exploring Chemistry Stage 2 (completed) and Stage 3 (yet to be completed)
 - Exploring Human Biology Stage 2 (completed) Stage 3 (completed)
 - Exploring Physics Stage 2 (completed) Stage 3 (completed)
- 2008 Launched the online science competition,



ScienceIQ.net. Currently we have 3387 up from 2367 2009 and 1206 registered teams in 2008. We have been undertaking a substantial marketing and an awareness program of the new initiative including adverts in our own and ASTA and other state journals, Conference inserts in most of the major state conferences, Exhibition Booths (CONASTA 2010, WA Primary Principals Association (WAPPA) Conference).

- Website of Diagnostic Test in collaboration with Curtin University of Technology (SMEC).

3.2. Build upon present resources to incorporate developments in science and science education.

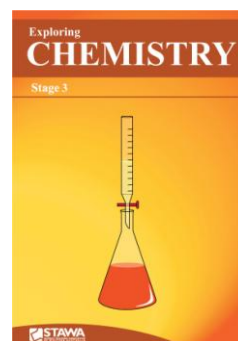
- Currently working on fully worked solutions for the new Physics and Chemistry laboratory and Problems books
- Continued success of the Heads up on Science - Science Network section in SCIOS
- Expanding online resources – Delemmas.net and Diagnostic tests.

3.3. Develop science, education and industry partnerships for developing resources.

- Initial development of a teacher resource for Horizon Power
- Centre for Sustainable Resource Processing (CSRP), Curtin University, Murdoch and UWA are contributing to the new Chemistry resources

3.4. Involve teachers in the planning and development of resources.

- Teachers have been contracted to write solutions for the new physics and chemistry resources



4. Recognise quality teachers and students of science.

4.1. Promote awards that recognise quality teachers of science.

- 4.1.1. Award the De Laeter Medal, scholarships and life memberships.
 - Processes/procedures in place for the continuation of these awards
- 4.1.2. 2010 WA Young Tall Poppy Science Awards – part of Judging panel.
- 4.1.3. 2010 WA Science Awards – Science Educator of the Year (Primary and Secondary)
 - provide advertising
 - part of judging panel attend presentations.

4.2. Promote awards that recognise science students' achievements.

- 4.2.1. Conduct Science Talent Search and support entries in to the BHP Billiton Science Awards.
 - STS and Student Activities Committees see their reports
- 4.2.2 EcoScience The Professor Harry Messel International Science School for students
- 4.2.3 BioGeneus (DEC) – promotion of and attendance at awards presentation

4.3. Develop policy to guide our involvement in programs offered by others.

- Enriching Science Unlocking Resources forum a partnership of interested groups such as CMEWA, Scitech, universities, Parker Centre, Zoo, Museum, Resources and Chemistry Centre and others.

4.4. Identify and build partnerships with science, education and industry groups that recognise teachers and students of science.

- BHP Billiton Science student and teacher awards
- Engineers Australia Science Teacher Award
- Premier's Science prizes – on judging panel
- Priminister's Science prizes
- EcoScience The Professor Harry Messel International Science School for students
- BioGeneus (DEC)

5. Provide quality business management.

5.1. Involve and engage members in the business of the association.

- Encourage committee membership
- Contracting members for curriculum development tasks,
- Engaging members as representatives on reference and syllabus groups
- Engaging members through catalist and the website through news items etc
- Seeking member advice and opinion on various issues
- Seeking member participation in the delivery of workshops PD delivery
- Engaging members in consultation on National curriculum and Standards through the provision of forums/workshops

5.2. Develop an integrated information management system.

- The ongoing development of the STAWA website, database and online registrations etc is seeing a greater integration of member information, communication and financial transactions
- Database developments are ensuring smoother running of STAWA events and minimizing risk resulting from staff turnover and loss of knowledgebase. This has been complemented with comprehensive procedural documents and running sheets for events.

5.3. Strengthen the membership base of the Association.

Infrastructure.

- Website that helps promote STAWA and provides members with easily accessible news and information, forms and purchasing
- Data base that allows rapid e-communications
- Catalist and Primary Science Chat
- ScienceIQ
- STAWA e-newsletter
- Online registrations for PD and Conferences

It is now time for a comprehensive marketing program for membership growth. Some strategies are in place but others need to be developed and implemented

- Regular contacts with graduating classes of science teachers through their universities
- Develop strategies to meet with / visit and survey science teachers with the purposes of recruiting, providing support and identifying PD/resources needs



5.4. Develop and market the Association's publications and services.

- Employment of Relationships Officer Jude Martindale. Yet to realize her skills as other staff losses have meant consolidation of every day activities have taken priority over this area. Membership marketing and growth is planned for 2010/11.
- An active marketing component is now in place on the website and included banners that highlight key events such as conferences, changing images of resources available through the STAWA online shop etc.
- Develop strategies to identifying resources needs of science teachers
- Develop resources to match science teacher needs

5.5. Explore alternative income sources.

- ScienceIQ.net an online science quiz/competition Launched 2008
- New resources such as elementaurs card game, resources for national

- curriculum, biology resources
- Work on repackaging Primary Science Pinups
- 5.6. Maintain sound budgeting and financial practices.
 - Replaced Minh Dang with new Accounts Officer Vinda Susil both well qualified in accounting procedures etc.
 - Provide support and checks and balances for Accounts Officer through use of regular book keeper and Auditor communications
 - Continue to access PD opportunities to up-skill staff in areas of MYOB, Taxation law and not-for-profit accounting procedures
- 5.7. Maintain the financial strength of the Association.
 - 2009/10 represents another sound year for STAWA particularly with the realization of profit from the new Stage 2 resources.
- 5.8. Examine present/past practices to minimize costs and maximize productivity.
 - Evaluation of CVent for online PD/conference registrations
 - Conference call for papers using online tool Wufoo
 - Constantly monitor the STAWA Website with particular attention to news, PD, advertising, STS registrations and membership renewals etc
 - Continue to monitor postage and packaging to reduce costs – build use of the e-newsletter (using mail chimp)
 - Exploring distribution of STAWA publications with Northside logistics
- 5.9. Develop and protect the intellectual property of the Association.
 - Writer contracts
 - Access PD opportunities to up-skill staff in IP procedures and copyright laws etc
- 5.10. Develop and implement human resources policies and practices.
 - Continue to access PD opportunities to up-skill staff in this area
 - Performance review of self and staff
 - Refinement of procedures for events
 - Nomination procedures for Curriculum Council committees such as CAC.

FREE Regional Support

STAWA Teacher assistance for member schools and individual members in regional areas with Science and Science Talent Search in your school

Thinking of entering students into Science Talent Search 2011? Then this is for you. Through Science Talent Search 2011 STAWA can:

- Motivate your staff and students to do science
- Assist you to enter students into Science Talent Search
- Offer professional learning to teachers
- Assist in classrooms in the preparation of entries
- Help with the pre-judging of entries
- Organise regional awards presentations
- Help during school hours, evenings and even weekends


Why Science Talent Search?
STS promotes science teaching and learning through creative project work using science to enhance student literacy and numeracy skills.

To take this opportunity

- Make sure your school is a STAWA Member
- Contact Penny Kelliher to organise dates and the type of science support wanted


Introducing Penny Kelliher - Teacher support

Penny is an active member of the STAWA Primary Science Committee, an organiser of the annual STAWA Primary Science Conference, a regular presenter and a Science Talent Search Judge. Penny is a primary teacher of many years experience having taught in the Wheat-belt, Pilbara, South West and Metropolitan schools. The Premiers Award for Excellence in Science Teaching (2007) and WAs nomination for the BHP Billiton Primary Science Teacher Award highlight her talent. WACOT ID 32043120; WWC 5332209



Contact details:
H: 9332 0308
M: 0429 024 894
Email: penny.kelliher@iinet.net.au

Supported by:



Electronic Communications Report

Mark Lehmann

Chair eCommunications

Aims

The Electronic Communications Committee (ECC) serves to address the STAWA goals and objectives involved with representation, equitable access, professional development, teacher support, strengthening membership base, and enhancing communication.

The Electronic Communications Committee is involved in 4 main areas:

- The STAWA website
- Catalist
- The Teachers' Survival Kit website
- Science IQ competition



Highlights

STAWA.net is growing and is now one of the main means of keeping the membership up to date with developments, news, professional development, support and much more. Websmart who develop the website have continued to provide good support and advice. Changes have been made to the website to assist in ease of use.

Development of the website to support the Association has developed into a useful tool. It now incorporates a number of other STAWA supported sites: ScienceIQ, Dilemmas and Triple S. This has been seen with the continued and increasing use of Cvent registration for conference and PD enrolments, which is continuing to develop as an important tool.

General

The website has continued to be used a lot. Modifications have, and will continue to, make this a useful tool. The website is the main avenue of electronic support for members.

TSK has a lot of traffic, with many people accessing this every day. TSK is still only available for members. We are always welcome of new additions. Thanks to Mr Michael McGarry for his many additions which are viewed by many members.

Catalist has continued to be a useful communication tool. 531 members of catalist and 85 members for Primary Science Chat. We are investigating alternative methods with facebook and twitter being put in place as the report was being written.

John Clarke (CEO) and the developers from Websmart continue to run the revenue source and tool for science teachers through the development of ScienceIQ. Provision of questions for this has been met by employing writers, which will be repaid as revenue from the registrations grows.

Concluding Remarks

I wish to thank our Chief Executive Officer and Jude Martindale for their work in the management of the STAWA websites and a thorough approach to updating and improving the online capacity of STAWA. Jude Martindale and Vinda Susilo need to be congratulated for their persistence in using the technologies.

I look forward to another year that should see a growth in the success of the electronic communications of STAWA, with a fuller committee planned to manage emerging and emerged technologies such as electronic meetings and facebook and twitter integration.

National Science Week School Grants 2011

Lauren Clarke
Secretary



National Science Week 2011 was celebrated around Australia on the week of the 13-21 August. There were more than 1000 events spreads across every state and territory as well as fascinating scientists giving talks all over the country on National Tour. National Science Week encourages everyone to participate in an array of inspiring activities, as we celebrate science and innovation in Australia.

To help Australian schools celebrate National Science Week, the Australian Science Teachers Association (ASTA) with the administrative assistance of the Science Teachers Association of WA (STAWA) provides funding for school-initiated National Science Week projects in schools. A total of \$8 000 is made available to all schools in WA in the form of small grants to enable schools to conduct science activities/events during National Science Week.

In 2011, schools can apply for two types of grants:

A. Seed grants of \$1000.

A limited number of seed grants are available for schools that wish to conduct a National Science Week activity/event for their school, with significant community involvement. Applicants must seek community partnerships with local councils, industry and business, community organisations, environmental groups, local universities/TAFEs and/or other schools to be considered for a seed grant. Further funding or in-kind contributions from such organizations is required.

In 2011, only one School stood out as an eligible applicant, Jurien Bay DHS who had the theme "Chemistry along the Coral Coast". They had involved not only numerous community partnerships, but a range of neighbouring Primary Schools that could also get involved.

B. School grants up to \$500

The remainder of the grant money was distributed to schools of amounts of \$200-\$500 upon their budgeting request.

In 2011 STAWA received 33 grant applications: 6 seed grant applications and 27 school grants applications requesting \$19 250.00 worth of funding. The \$8 000.00 funding allocation went to the following successful school applicants:

2011 Successful National Science Week Grants STAWA

WA Seed Grant Schools 2011

- Jurien Bay District High School

School Grant 2011

- Al-Hidayah Islamic School
- Aranmore Catholic Primary School
- Ashdale Secondary College
- Bullsbrook District High School
- Bunbury Cathedral Grammar Primary School
- Cooloongup Primary School

- Cue Primary School
- Greenwood Senior High School
- John Curtin College of the Arts
- Madeley Primary School
- Padbury Primary School
- Peter Moyes Anglican Community School
- Sacred Heart College
- Woodvale Secondary College

The majority of grant applications had met the criteria. The 2010 grant applicants requested \$33 210.00. In 2011 \$19 250.00 was requested. It is hoped that the National Science Week grants will continue in the future, but with the change in government, the grants future is unknown at this point in time.

I would like to thank and acknowledge the hard work and dedication of Delese Brewster and the other STA representatives for assisting me in my first year of coordinating the school grant process for Western Australia.

Primary Science Committee Report

Natalie Birrell

Chair: Primary Science Committee

The purpose of the Primary Science Committee is to provide professional support and resource initiatives to the STAWA Council and the wider primary science education community of Western Australia.

Members

Natalie Birrell
Helen Cotter
Sue Doncon
Ed Blaker
Juanita Herbert
Rachel Sheffield

Penny Kelliher
Julie Belohlawek
Mady Colquhoun
Christine Howitt
Jude Martindale



Primary Science Conference 2011

The Primary Science Conference has been running annually for 31 years and successfully provides professional support for primary science educators. Across those 31 years, the conference continues to provide a relaxed and encouraging forum for primary science educators to exchange ideas, share resources, innovative techniques and experiences.

The 31st Primary Science Conference was deemed a great success and took place on the weekend of the 19th & 20th March 2011 at the picturesque resort of the Novotel Vines Resort. Returning to the popular format of a residential conference, registrations quickly filled up, with over 100 delegates attending from both metropolitan and regional schools. The theme of the conference year was 'Attract, React and Create: The Chemistry of Science Teaching'. A stimulating activity trail kicked off the start of the workshops on Saturday, an instant icebreaker for all and provided many entertaining challenges for each group to solve. Over the course of the weekend primary educators

had the opportunity to participate in a wide range of practical, hands on workshops and everyone enjoyed many social and networking opportunities.

Key Note Speaker, Dr Simon Lewis; Associate Professor of Forensic and Analytical Chemistry, opened Sunday's proceedings with his engaging and informative presentation 'Every Contact Leaves a Trace', which positioned the theme of the conference in the International Year of Chemistry 2011.

The conference was supported by over 20 different presenters, 16 different sponsors and exhibitors. The Primary Science Committee and STAWA office staff worked energetically in all aspects of the conference organisation. The very positive feedback from participants reflected this.

In 2012, the Primary Science Conference will have a strong focus on the new 'Australian Curriculum' and theme of 'Sustainability'. This theme reflects the fact that 2012 will be the International Year of sustainable energy for all. Planning for the conference is well underway and will steadily increase during the remainder of 2011 through to early 2012.

PRISCI PIN-UPS

This STAWA publication is produced for Primary Science teachers as a science activity idea sheet. It is produced four times a year by members of the Primary Science Committee.

This resource initiative celebrates its 20th year. Themes for this year's issues centred around Chemistry and included

- Classroom Chemistry
- Chemistry- Tabloid activity ideas
- Bush Science
- Get a buzz out of electricity

We are now in the early stages of planning a new publication for Primary science teachers using collections of past Pin-ups ideas linked to the Australian Curriculum as a resource book.

I wish to thank the committee members who continue to contribute and support this valuable primary science resource and our valued partnership with SCITECH coordinated by committee member Juanita Herbert.

PRISCI Pin-Ups 2011
 - Top Tips for Primary Science - Issue 001
 A publication of the Primary Science Committee of STAWA

Welcome to PRISCI PIN-UPS, an activity based idea sheet for teachers of primary science. PRISCI PIN-UPS is a joint project of the Primary Science Committee of the Science Teachers' Association of Western Australia and Scitech.

Classroom Chemistry

- Classroom chemistry safety
- Chemistry words
- Investigating dissolving
- Evaporation
- Layers of liquid
- Change of state
- Turning a solid into a liquid
- Colourful chromatography
- Growing crystals using sugar
- Want more?

(Growing crystals using sugar)
 Teacher to judge whether themselves or students make this solution, as it requires the solution to be boiled on a stove. Pour three cups of water into a saucepan and heat it until it boils. Turn off the burner and slowly add 1 cup of sugar. Keep stirring, adding more sugar until you can see tiny pieces of sugar suspended in the water. (This means that the water is a supersaturated solution, it will not hold any more sugar.)
 While the mixture is cooling, tie one end of a cotton string to a pop stick or pencil. Suspend the pop stick/pencil over a tall, narrow glass jar. Use a pair of scissors to cut the string where it would touch the bottom of the jar. (You can tie a knot at the bottom of the string to help it hang straight.)
 When the mixture is cool, pour it into the jar. Dip the string into the solution and then into some dry sugar. Now, drop the string into the jar. Put the jar in a safe, quiet spot. Check it after 2 weeks. What do you notice happen?
 Try shining a torch through the jar onto the crystals to see them glitter. When you see rice-sized crystals on the string, remove the string and break off a crystal. Look at it under a magnifying glass.
 What happened? When sugar dissolves in the water, it doesn't really disappear. It breaks up into tiny sugar molecules that are too small for your eyes. Hot water holds more sugar than cold water. So when the sugar water cools, it can't hold as much sugar as hot water, and some of the sugar forms crystals on the string.

Sugar (Sucrose) molecule
 Legend: Carbon (grey), Oxygen (red), Hydrogen (white)
 Glucose ring, Fructose

(Want more?)
 For more chemistry activities see:
 • The Primary Connections units titled "What's it made of?" (Pre-Primary), "Spot the Difference" (Year 1), "Material World" and "Package it Better" (Year 4), and "Package it Better" (Year 6).
 • 2011 is the International Year of Chemistry so check out this website for teachers and students, it has lots of good ideas regarding chemistry - <http://iyc2011.org.au/for-teachers.html>.

This PRISCI Pinups was developed by Julie Belohlavek.

STAWA, the Science Teachers' Association of WA, offers many services to members including our journals, Teaching Science and SCiOs, and discounts to attend professional development sessions including science teachers' conferences. Primary members also receive personal copies of Pin-Ups mailed to their address.
 Contact STAWA for the membership form. Don't forget to ask about the Primary Science Conference and Skids Day.
 Ph: (08) 9244 1987 Fax: (08) 9244 2601 Web: www.stawa.net

STAWA BY WESTERN AUSTRALIA
scitech

SKIDS (Science for Kids Day 2010)

In its sixth year SKIDS Day is growing in popularity. Held at Edith Cowan University's Mount Lawley Campus on Saturday 9th October 2010 in partnership with Scitech and STAWA, over 160 primary school children participated in four different engaging hands-on science workshops over the course of the day. 40 parents and other community members attended the official opening. It was an honour to have Western Australia's Chief Scientist and S-KIDS' Patron Professor Lyn Beazley open the day. Over the past six years more than 960 children have attended.

The S-KIDS project has continued to motivate many primary children and parents regarding the importance of scientific literacy within our community. The support of Primary and Secondary Science teachers and guest presenters such as Roger Harris from the Gould League, Brad Whittaker and Peter Wallis from the Gravity Centre and Richard Rennie from the Light and Sound Discovery Centre made the day a wonderful success. It also inspires many of the pre-service teachers, who volunteer on the day, to carry positive experiences into their teaching careers. Scitech Road show entertained and educated the children on the many uses of liquid nitrogen while they enjoyed lunch and the presenters and pre-service teachers had a well earned rest.

A new inclusion to the program in 2010 was a talk about promoting science at home especially tailored for parents, provided by Professor Mark Hackling (Associate Dean Research & Higher Degrees) and Lyn Beazley (Chief Scientist of WA). Juanita Herbert from Scitech also spoke about the role of Scitech and CSIRO Double Helix Club in engaging children in science outside the school environment

SKIDS Day is held on the last Saturday of the October school holidays and 2010 saw an increase in country students. There was a big contingent from Donnybrook and there were also students from Margaret River which shows that the popularity of the day is spreading further a field.

Now in its seventh year, the committee is well under way planning this year's event for Saturday 15th Oct 2011. Jan Mitchell and her committee are currently working to organise and provide another successful, engaging science experience for WA primary school children and pre-service teachers.

Summary

It has been another busy year for the Primary Science Committee. They have enjoyed the challenges of 2010/11 and can be very satisfied with their valued efforts.

I would like to sincerely thank all the Primary Science Committee members for their valuable contribution of time, support and enthusiasm over 2010-2011. In addition I would like to thank all Council and Executive members, John Clarke and Jude Martindale for their continued support and efforts at STAWA.

Details of the day

Date: Saturday,
October 9th 2010
Time: 9 a.m. - 3 p.m.
Place: Edith Cowan University
Mt Lawley Campus
Bradford St
Mt Lawley
Lecture Theatre 17.157

Cost: \$20
Please fill in a registration form.
NO REGISTRATION ON THE DAY

Clothing: casual dress, a hat and closed shoes.

Please **DO NOT** bring a back pack.

For more information please visit our website
www.stawa.net

What is S-kids all about?

S-KIDS is a great day where students from years 1-7 are involved in challenging, interactive and fun science activities. The day will be closely supervised and is a joint project between Edith Cowan University, Science Teachers Association WA and Scitech to promote Science Education.

Come and be part of this fun filled science day!!!



Science Talent Search (STS) Report

Julie Weber

Chair: Science Talent Search

The STS and competitions into which STS finalists are entered conclude after the AGM, therefore the STS report each year will report on the previous year's competition.

Changes were made to categories in 2010, including entry requirements, age groupings and the assessment criteria for judging. These changes were made due to feedback received in the past, alignment with Australian Curriculum age groupings for Science Inquiry Skills and to ensure entries being passed on to other competitions aren't disadvantaged. An STS booklet wasn't published in 2010 although all the information was available online. However, in response to feedback from participants a booklet has been produced for 2011.

In 2010 there 825 students from 29 schools participated in 52nd Science Talent Search. Entries from 268 of these students were sent in for final judging. Approximately 4% of these students were from rural schools. These final entries fell into the following categories.

Category	No registered
Research Investigations	481
Inventions	54
Scientific Communication	36

Each year an overall Primary and Secondary student and school winners are selected from entries received. The 2010 winners were:

Primary student: Maya Barnett (Richmond PS)

Secondary student: Ashkan Moradi Zaniani (Shenton College)

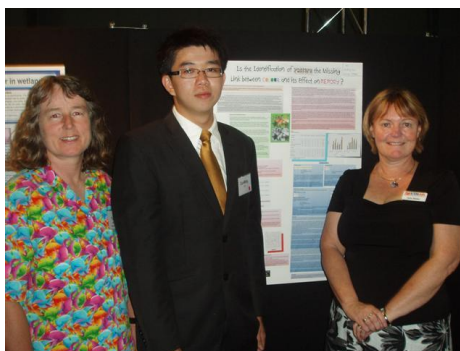
Primary School: Woodlands Primary School

Secondary School: Willeton Senior High School

BHP Billiton Science Awards

All place-getters in the Research Investigation category were entered into the 2011 the BHP Billiton Science Awards. These awards are sponsored by BHP Billiton and CSIRO, and are endorsed by ASTA. The BHP Billiton Science Awards present a considerable number of significant cash prizes to primary and secondary students. The overall winner and runner-up of the BHP Billiton Science Awards is given the opportunity to compete at the Intel International Science and Engineering Fair in the USA. All primary finalists received prizes and one secondary entry, ZunMing Lin from Canning College, was selected as a finalist in the BHP Billiton Science Awards.

Each year STAWA nominates a teacher for the BHP Billiton Science Teacher Award. The nominee for 2011 was Tracy Brothers from Albany Senior High School. Each state nominee was invited to Melbourne in early February to attend the judging of the teacher award and the BHP Billiton Awards ceremony.



Tracy Brothers, ZunMing Lim and Julie Weber at BHP Billiton Science Awards

Each year STAs receive funding from BHP Billiton/CSIRO. This amount of funding is determined by CSIRO based on number of entries into STS Research Investigation category. This year STAWA received \$4095.90.

Name of STA	Total N ^o of students	Total N ^o of entries	Total N ^o of students in research section	Total N ^o of entries in research section	GST Inc
STAQ	551	545	275	275	\$4,192.26
STANT	133	89	43	30	\$1,241.34
STAWA	825	572	694	267	\$4,095.90
SASTA	2232	1949	167	157	\$2,771.00
STAV	2392	1689	481	380	\$5,456.94
STAT	1148	799	247	156	\$2,758.95
SEA*ACT	954	200	954	200	\$3,288.91
STANSW	797	599	797	599	\$8,094.70

WA Innovator of the Year Schools Competition

A new category, Inventions, was added to STS 2010. The introduction of this category enabled six entries to be selected as finalists in the WA Innovator of the Year Schools Competition. Each of these finalists received \$300.00 for entry into the competition, with winner receiving an extra \$1000.00 and runner up \$500.00. The WA Innovator of the Year Schools Competition 2010 was run by the Department of Commerce and aimed to promote a culture of innovation and creativity within Western Australian schools.

Winner: Abigail Ashford (Year 5 Quintilian School) - Cutting assistant taco

Runner-up: Sonali Fernando, Rickeeta Walley and Imogen Charles (Year 9 Willetton SHS) - Easily cleanable fridge cooler bag

Science Talent Search 2011

In 2011 changes were made to the Scientific Communication category. The Photography and Multimedia sections were removed and replaced with Science Videos. The judging criteria were modified based on feedback from 2010 judges.

The WA Innovator of the Year Schools Competition didn't go ahead in the same form this year. The Inventions category for STS was introduced to cater for this competition. This category will be re-evaluated at the completion of the competition.

I would like to congratulate all students who participated in the 2010 STS competition and their teachers for supporting and encouraging them. A special thank you goes to the judges of the competition as well as John, Vinda and Jude.

CONSTAWA 2011

Jodi Rybicki
CONSTAWA Convener



2010 AGM (L-R): Jodie Rybicki (CONSTAWA),
Bernie Hunneybun (President Elect), Sue Doncon (President)

CONSTAWA 2011 was the start of a new era. The conference was held in Fremantle at the Esplanade Hotel and Notre Dame University. The conference began at a new time; Friday lunchtime where delegates had the opportunity to participate in a variety of excursions showcasing the Fremantle area and the science around it. Teachers were then invited to a welcome reception at the Esplanade Hotel. The welcome was followed by the Friday night keynote address by Professor Lyn Beazley, WA Chief Scientist. Lyn amused and impressed us with her personal scientific journey and depth of knowledge of WA science. The conference then moved upstairs to the conference dinner. For the first time conference dinner was held in conjunction with the Jeff Cahill STAWA volunteer's dinner. This enable conference delegates to network with the hard working STAWA committee volunteers and life members.

Saturday morning began at Notre Dame University with a short keynote from Geoffrey Quinton, Australian Curriculum Cross Sectoral Co-ordinator, about Australian Curriculum. The day's program then followed a more traditional format with a variety of concurrent workshop/seminar sessions on offer.

Conference numbers were slightly higher than in 2010 – however, there appeared to be a “changing of the guard”. Many long time attendees were not present, but a number of first-timers were present. The move to a more metropolitan location had both positive and negative aspects, however attendees reported that they enjoyed the conference.

In 2012, the committee has taken the huge step to move to another location. CONSTAWA 2012 will be held in Margaret River, at the Curtin University Margaret River campus, with resort style at a nearby Resort/conference centre.

Annually I have the opportunity to thank those who make this conference happen. I have the honour of being the convener of an amazing committee; Mal, John S, Geoff, Alex, Lance, Vick, Mark, Bernie, Diana, Lauren along with John Clarke, Jude and the STAWA office staff who make this a reality. Again I say thank you.

Curriculum

Geoff Lewis
Vice President

STAWA Representatives on Curriculum Council Curriculum Assessment Committees

Biological Science CAC: Jane Brandenburg

Psychology CAC: Christine Froud

Earth and Environmental Science CAC: Coral Pepper – Resigned position is now vacant. Thank you for the years of service that you have made to this role Coral.

Human Biological Science CAC: Pauline Charman

Physics CAC: Jason Edmunds

Engineering Studies CAC: Geoff Lewis

Integrated Science CAC: Greg Munyard

Chemistry CAC: Bernie Hunneybun – Bernie has just been added to this role to replace Geoff Quinton. Thanks Geoff for your work and Bernie for the work yet to be done.

Marine and Maritime Studies CAC: Mark Lehmann

Human Biological Science CAC: Pauline Charman

The Human Biological Science Curriculum Advisory Committee has met 6 times since its commencement in February 2010. These meetings have been of 2 hours in duration and are held at the Curriculum Council in Osborne Park.

I have been in attendance at four of the six meetings and in my opinion the meetings have been arranged, conducted and recorded accurately by the Executive officer, Nolene Harris. Chairperson, Kim Rosenthal executes the meeting's agendas in a professional manner, adhering to protocol at all times. Minutes of the meetings are emailed to members within a day of the meeting and are made available in hard copy at the following meeting.

The purpose of this committee has been to monitor and address issues surrounding the teaching of the new syllabus. Nolene Harris has been presenting feedback and questions from teachers at most meetings for the committee to discuss. She has then actioned these with the committee's decision by feeding back to the teachers via phone or email.

In 2010, Standards packages were prepared and made available via the CC website. Also prepared were 'Suggested activities and discussion points' documents for Stage 2 and 3 – also made available on the CC website. Updates on Australian Curriculum have also been addressed at each meeting.

A significant outcome of the committee has been the preparation of suggested minor changes to the syllabus that were presented to the SSEC and the Council to be included for 2011. All but one of the proposed changes were passed and accepted by the Council. Moderation and consensus meetings have been held throughout 2011.

Stage 2 and Stage 3 Exam design briefs have had minor changes but there has been a unanimous acceptance that examinations have been prepared and administered professionally given the slightly altered format to this subject's papers which have had a standard format for many years.

In summary, I believe the HBS Curriculum Advisory committee has been a cohesive and effective group supporting the needs of teachers of the subject in the early phase of the WACE course.

Physics CAC: Jason Edmunds

The Physics Course Advisory Committee has met several times over the last year to discuss certain issues pertaining to the Physics Courses. Large changes were made in 2010 for implementation in 2011, while only a few changes occurred this year ready for 2012. These were mostly wording issues with some formulas removed and the Formula and Constants Sheet modified slightly.

Instructions to Candidates on the Physics WACE Exam were also changed to reflect the need to have students show working where this was ambiguous before.

Grade Descriptors have been changed and reviewed, the 2010 Physics WACE Exam was endorsed as fair and valid and other discussions around statistics, grades and standards were fed back to the Curriculum Council for consideration. Representation has occurred at the Senior Secondary National Physics Subject meetings held by ACARA. The feedback has been that the National Physics Subject will not look too different from what we are teaching at the moment in WA, which is good for us, and the Curriculum Council will be in charge of assessing the subject. At the last meeting (Aug 2011), there was overwhelming support for the way that ACARA and the writers had taken feedback from the previous consultation meetings and rewritten the courses accordingly.

Engineering Studies CAC: Geoff Lewis

I took up the position as STAWA representative on the Engineering Studies CAC late last year and since then there has been seven meetings of which I have attended six. The main thrust of this committee is to make major changes to the Syllabus for all three levels of study – 1 A/B, 2 A/B and 3 A/B.

This syllabus, and hence it's exam, has two parts, a common core for all areas of engineering and a content area specific to each of the three optional areas of study – Electrical/Electronic, Mechanical and Control Systems. It was thought that the common area had content that, whilst general in engineering terms, favoured one or other of the specialized areas of study and needed to be changed to eliminate this problem. This area is used to moderate all students sitting the exam and any favouritism to one option over another in the core could cause an imbalance in comparability. There are two more meetings planned for September and October and all changes will need to be finalized by then so that implementation can occur in 2012.

Integrated Science CAC: Greg Munyard

Four meetings were held between March 2010 and August 2011. The topics covered included the number of students doing the subject, Examiners reports, National Curriculum, lack of resources and the need for syllabus review. In 2010 discussions were held on the syllabus at that time in regard to the lack of specificity in its content resulting in it being too open ended and lacking in guidance to teachers. As a result changes to be implemented in 2011 were made. In 2011 some of these changes were updated and refined as the committee was generally happy with the result of the work in 2010. There is no text book for this subject so lack of resources and the sharing of resources was a major topic at the last meeting.

