

Dancing with Science

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The science fair "was fantastic"...

I enjoyed "everything: fun with physics, birds, reptiles".

Introduction

A Dance of Science was a four-hour science fair that engaged the general public in learning about aspects of 'movement' in science. The event was held at the Canning River Eco Education Centre (CREEC), located on the Canning River in Wilson. The planning, implementation and evaluation of the fair was achieved through a successful partnership between National Science Week, the Australian Association for Environmental Education - WA Chapter (AAEE-WA), City of Canning, CREEC and the South East Regional Centre for Urban Landcare (SERCUL).

AAEE-WA was awarded a 2010 National Science Week grant to conduct *A Dance of Science* community fair. This funding was supplemented by funds and in-kind support from the other major partners. Numerous smaller sponsors also supported the event.

The fair was conducted during National Science Week, on Sunday 15 August 2010, 10:00am-2:00pm. Over 1000 people attended, representing a wide cross section of the community. Furthermore, 69% of the fair attendees who completed the feedback survey had not previously attended any National Science Week events.

Project Purpose

The overarching aim of the science fair was to showcase contemporary science and Indigenous perspectives. This incorporated:

- Providing an opportunity for the general public to participate in an event that showcased science, technology and innovation; highlighting contemporary science's explorations and concerns as interesting, challenging, important, and of direct relevance to daily life, the well being of society and environmental sustainability.
- Promoting science careers.
- Fostering awareness of Indigenous perspectives.
- Fostering partnerships between the community, education/ research organisations, local and state government, business and industry.

A Dance of Science Program

Prior to the fair children were invited to design art works related to the fair theme. Over two hundred entries were received. The winning entry, by a 12 year old student, was featured on the fair banner.



2010 Science fair banner featuring the winning artwork. Photo courtesy Elaine Lewis.

The fair commenced with 'welcome to country' by a local Indigenous elder. This was followed with a performance by the Madjitil Moorna choir celebrating Aboriginal culture, and a swirling Terra Amare dancer interacting with the audience.



Terra Amare dancer. Photo courtesy Elaine Lewis.

Participants then engaged in a range of hands-on interactive experiences: microscope exploration of biological specimens; contemporary and Indigenous perspectives on fire management in bush environments; professional assistance in plant selection for soil type of home gardens; traditional Indigenous storytelling and rock art to pass on knowledge; and Terra Amare dancing workshops that focused on the dance of life and love of the earth.



Water testing activity. Photo courtesy Elaine Lewis.

Numerous displays were featured, for example, information from Perth Urban Bushland Fungi, Bush Fire Management, frogs of the Perth region, and local conservation groups.

To complement the activities and displays there were formal talks. An Indigenous Eco Education Officer engaged the audience with Indigenous knowledge through stories about how to use bush knowledge and to live well in a changing climate.

Birds Australia representatives presented a 'talk and walk' on bird species found along the Canning River system. The annual migration of different bird species, including the latest evidence on the movement of species in response to climate change, was addressed. These talks engaged participants' visual, auditory and movement senses.

Outcomes

Three key outcomes of *A Dance of Science* may be identified: Development of an innovative model, improved awareness of Indigenous knowledge, the enhancement of community partnerships for the promotion of science.

Innovative Model

A Dance of Science represents an innovative model for conducting engaging science events that showcase science, technology and innovation. The model integrated modern and Indigenous science knowledge. Evaluation findings indicated enhanced science appreciation and increased community understanding of the vital role of science in exploring and addressing environmental issues. Evidence was obtained from participant's questions to presenters, reactions to displays and surveys. For example, typical survey responses stated favourite activities were the "animals ... activities for children ... dancing" and least favourite activities "nothing ... finished too early". In brief, respondents were enthusiastic about the science event.

Another component of the innovative model was targeted wastewise measures. Survey forms were printed on the back of the fair program so that only one page was required, with forms being returned to organisers so that they did not become rubbish. Keep Australia Beautiful supplied bins for the event.

Additional bin labelling and reminder signs were provided. Other strategies employed to promote wastewise understandings were, for example, 'welcome table' and 'bin monitor' officers reminding patrons to be wastewise and the involvement of Remida, an organisation that recycles industrial waste. At the end of the event all waste was weighed. Only 11.6kg of compostable materials and 3.86kg of recyclables were generated by the event, with less than 1kg of waste contaminants (plastic plates and cups etc.) in the compostable bins. Clearly, organisers sought to 'walk the talk' in terms of waste management.

The fair model was adapted for use by Coolbinia Primary School and utilised during National Science Week. Amongst various science promotion strategies employed at the school, a science tabloid day was held. Students from Coolbinia Primary and Sir David Brand Schools danced and weaved their way through a series of science investigations, enjoying the *Fungi Fandango... and other Dances of Science*.



Students yandying at Coolbinia Primary School. Photo courtesy Elaine Lewis.

Awareness of Indigenous Perspectives and Knowledge

Improved community awareness of Indigenous knowledge was achieved. The young and not so young were entranced by Indigenous stories. Evidence indicating improved awareness and appreciation of Indigenous knowledge about bush plants and care



of the environment was documented on survey forms. Survey respondents indicated they enjoyed the Aboriginal displays, talks and rock art sessions. Overall, participants expressed improved awareness of Indigenous perspectives in science.



Indigenous Eco Education Officer sharing knowledge. Photo courtesy Elaine Lewis.

Enhanced Partnerships

The third major outcome of the science fair was enhanced partnerships, of existing partnerships and the establishment of new partnerships for the promotion of science. Partnerships not only developed between the main organising bodies - National Science Week, AAEE-WA, City of Canning, CREEC and

SERCUL - but with many other groups as well. These included the Madjitiil Moorna choir; Scitech; Department for Environment and Conservation; Swan River Trust; Edith Cowan University Australia, Murdoch University; Keep Australia Beautiful Council; Remida; and numerous volunteer groups, such as Bush Rangers WA, Birds Australia and the Canning River Regional Park Volunteers.

A wide variety of strategies were utilised to promote the event. These ranged from the distribution of leaflets through the CREEC, SERCUL, local schools and libraries; advertisements and publicity in local newspapers; and internet science and education websites and newsletters. Another promotional strategy employed was a design competition, inviting children to create artworks for the science fair banner. This not only promoted the event but also engaged children in investigations of 'movement' in science.

Conclusion

A Dance of Science was effective in promoting science to all age groups in the community. As one survey respondent stated, "everything was fantastic". Evidence obtained indicated the model for incorporating contemporary science and Indigenous perspectives was successful. Evidence also showed enthusiastic engagement in science activities and enhanced community partnerships for the promotion of science. In conclusion, *A Dance of Science* community fair provided engaging hands-on activities that resulted in a rich and enjoyable learning experience that enhanced science appreciation and understandings.

Special thanks to the other 'A Dance of Science' team members, Tanya Porter from CREEC and Amy Krupa from SERCUL, to our many volunteers and the fair patrons.



NOTICE OF STAWA ANNUAL GENERAL MEETING

You are invited to attend

the

STAWA AGM

on

Friday 2 September 2011

Exhibition Space, Resources and Chemistry Precinct, Curtin University of Technology Building 500
Enter off Manning Road, Bentley Campus

The meeting will start at 5:00pm and will be followed by drinks and finger food

Please RSVP to Vinda at STAWA on 9244 1987