



<http://www.perthsunfair.com.au/toys/index.htm>

Jonathon Thwaites phone 0419 924 355

jthwaites@admin.uwa.edu.au

Sustainable Interactive Toys

These toys are made by Jonathon Thwaites to demonstrate renewable energy and sustainable concepts. These toys were originally made for the Perth Sun Fair so that kids and adults at the Fair could have some fun and interact with the Fair in a tangible and physical way. They have been out to dozens of events, to schools and various workshops over the past 7 years, running up more than 1000 hours of time.

Recycled materials - reduce, reuse, recycle

These toys were built where ever possible from recycled household equipment and machinery. Most of the materials come from solid waste disposal days in the suburbs. The main component of cost in their manufacture is in my time. Material costs are for paint (which is often also recycled), welding rods, electricity and occasionally replacement of tools. Many of them use Fisher and Pykel washing machine motors as generators. The Toys are a direct example of “reduce, recycle and reuse philosophy.

Personalised interactive experience

By personalising the experience at your event they make the event memorable in the minds of the participants. It is the personalising of the physical interaction experience with the Toys that gives the greatest benefit, positive memory and fun to the individuals at an event.

Non-profit

I make no profit from them and they cost a significant amount of time to manufacture - one exercise bike would typically take 16 hours to find the bits and put together.

Hire

The toys are available for hire - at recovery of expenses cost for transport, insurance etc for non-profit groups – and a bit more than that for events run by “financial” organisations - negotiable. Typically between \$200 to \$500 for an event but is dependent on time and distance.

Events

They have been taken to:

- Fairs and festivals: Perth Sun Fair - WA
- Concerts: South Bound Concert - WA, Womad - SA,
- Solar Cities Opening in Perth
- Lighting shows at Circular Key in Sydney
- Shopping centres
- Schools and local community events.

Products

Using Fisher and Pykel washing machine motors:

- Exercise bike generators
- Wind turbine generators
- Scale electric set generators
- Computer games running off exercise bikes - your choice of game on PC
- TV running off exercise bikes - hard work - slim those kids down

Solar power devices:

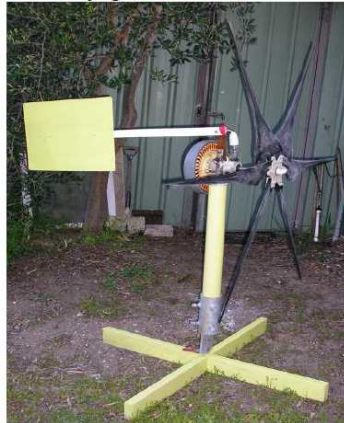
- Solar electric model train set
- Solar water pumping display



Run your event on renewable energy

Electricity generator sets running on renewable energy (biodiesel)

- 5 kWatt silenced diesel genset with RCD protection, single phase (enough to run a medium sized sound system and some stage lighting / 500 x 10 Watt fluoros / 3 electric urns)
- 250 Watt solar power station (enough to run a PA, small stage / 25 x 10 Watt fluoros)



5 kW Diesel generator running on biodiesel

Past Events

[Perth Sun Fair](#) - University of Western Australia 2004, 2005, 2006, 2007, 2008

[Womad](#) - Adelaide March 2008

[Perth Love Earth Gathering](#) - Perth WA, 4 Oct 2008

[Shopping Centre](#) Interactive Sustainable Living Displays

2004

Perth Sun Fair Stall, 21 March 2004

2005

Perth Sun Fair Stall, 3 April 2005

Molecular and Chemical Sciences, University of WA - Crawley WA, 14 Aug 2005

Molecular and Chemical Sciences, University of WA - Crawley WA, 27 Nov 2005

2006

Toodyay Sustainable living festville WA 2006

Molecular and Chemical Sciences, University of WA - Crawley WA, 12 Mar 2006

Perth Sun Fair Stall, 9 April 2006

Energy efficiency workshop for bilingual workers, Metropolitan Migrant Resource Centre, 27 JULY 2006

\$WaP promotion stall at Student Guild Fair day, ECU Churchlands, 31 July 2006

Energy Efficiency display at Student Guild Fair Day, ECU Mt Lawley, 3 AUGUST 2006

Presentation to staff on \$WaP program, Ruah Centre Northbridge, 7 August 2006

Energy Efficiency stall, University of Western Australia Guild Enviro Week, 23 August 2006

Permaculture Association of WA - Subiaco WA, 4 Oct 2006

Presentation to community workers re \$WaP program, The Gowrie Belmont, 11 October 2006

\$WaP workshop: 28 adults with 2 interpreters (Arabic, Farsi), 13 October 2006

\$WaP workshop: 14 Iranian/Afghan women (interpreter: Farsi/Dari), 17 October 2006

\$WaP workshop: 11 Kurdish & Sudanese women (Arabic interpreter), 19 October 2006

Energy Efficiency stall REFUGEE WEEK, Mirrabooka Community Centre WA, 5 November 2006

Energy Efficiency display BELMONT CITY FAIR, Faulkner Pk Cloverdale WA, 12 November 2006

2007

Energy Efficiency display at 'Finding the Energy' EXPO, Sustainable Living Centre Denmark WA, 26-27 January 2007

Energy Efficiency workshop at Adult Migrant Education class, Perth TAFE, 19 February 2007

Kalamunda University of the 3rd Age - Kalamunda WA, 20 Feb 2007

Molecular and Chemical Sciences, University of WA - Crawley WA, 25 Mar 2007

Centacare Midland Adult Literacy class at EH: Energy efficiency & compost workshops, 8 March 2007

EE workshop for new arrivals from Rwanda Burundi Congo, Centacare's Parish Hall Hay St East with interpreter (Swahili), 13 March 2007

Energy Efficiency workshop for ESL class, Centacare Gosnells, 14 March 2007

Energy efficiency display and stall Town of Cambridge Sustainable Living Festival, 18 March 2007

Energy Efficiency presentation Maylands Library, 29 March 2007

Energy efficiency display and stall at Men of the Trees Festival, 31 March 2007

Perth Sun Fair Stall, 1 April 2007

Rob energy workshop Carlisle TAFE, 27 April 2007

Albany for energy efficiency workshops, audits & audit training, 5 - 8 July 2007

Albany Migrant Support Centre & Neighbourhood Centre (combined), 5 July 2007

Albany TAFE for Adult Literacy and migrant English students, 7 July 2007

Energy efficiency presentation for Salvation Army welfare workers, Salvo's HQ Perth, 11 July 2007

Schoolkids (aged 9-12) energy 'playshop', here at EH, 12 11 July 2007

Energy efficiency on a budget presentation at Sudanese Christian church, Mirrabooka, 15 July 2007

Energy efficiency education display at Education Expo, Claremont Showgrounds

Energy Efficiency for WA Naturalists Society, Nedlands, 3 August 2007

Practical responses to global warming at Catholic Ed. Heads of Dept Prof Dev. Day, 13 August 2007

Hills sustainability group in Kalamunda - Kalamunda WA, 17 Aug 2007

Migrant students, Adult Migrant Education Program, 20 August 2007

Energy Efficiency workshop for adults with intellectual disabilities via City of Bayswater community Dev't, 24 August 2007

Energy Efficiency presentation to staff and clients with disabilities at Rocky Bay village, 24 August 2007

Bokashi composting workshop for Ruah staff at staff meeting, 28 August 2007

Bull Creek Library - Bull Creek WA, 1 Sept 2007

Energy efficiency presentation at Guildford Grammar School for Year 9's, 3 September 2007

Energy workshop with Duncraig Cubs, 4 September 2007

Glyde In Community Fremantle - Fremantle WA, 4 Sept 2007

**SUSTAINABLE
INTERACTIVE TOYS** 
Positively Empowering People

Energy Efficiency display and stall at Earth Solutions Expo Toodyay, 16 September 2007
 Energy efficiency presentation John XXIII College year 8, 19 September 2007
 Display on energy efficiency in the home at Royal Show, 19 Sept - 6 Oct 2009
 Professional Development 2hr session here at EH, energy and waste, Neerabup Primary staff, 15 October 2007
 Rob guest speaker on energy efficiency at Quinn's Rock Environment Group, Merriwa, 17 October 2007
 Energy activity station at Enviro Fest, Cannington Special (high) School, 30 October 2007
 Energy efficiency presentation at Inglewood Library, invited by City of Stirling, 7 November 2007
 Energy efficiency presentation at Osborne Library, 15 November 2007
 Energy efficiency presentation to migrant abattoir workers, Katanning, followed by home audits, 16 November 2007

2008

Adult Migrant Education Program, Energy efficiency presentation, Hay St Perth, 18 February 2008
 Morley Seniors Group @ Olive Tree House, Energy efficiency presentation, 27 February 2008
 Earth Day Primary school enviro activities on energy theme, ECU, 4 April 2008
 Perth Sun Fair, University of Western Australia, 6 April 2008
 Children's environmental activities at Midland Gate for City of Swan, 15 - 18 April 2008
 Energy efficiency workshop for Quinns Rock Environment Group, Clarkson Library, 17 April 2008
 Western Power staff on home energy efficiency, 24 April 2008
 Energy and water efficiency presentation for people with disabilities, WorkAbility, East Perth, 8 May 2008
 Compost workshop at EH and Organic Growers' Ass'n, 10 May 2008
 Stall at Energy Efficiency Expo at Greenwood SHS, 10 May 2008
 Green Skills in the newly accredited 'Course in Home Sustainability Audits', 15 - 16 May 2008
 Eco-products and information stall (4 days) at Conscious Living Expo, 4 - 7 September 2008
 Foodscraps to Fertiliser workshop, 13 September 2008
 Home Sustainability Assessment, 18,19,20 August 2008
 Home Sustainability Assessment, Green Skills, at Denmark 4/5 & 18/19 Sept 2008
 Energy efficiency education display at Sustainable Practitioners Association event, Fremantle, 10 July 2008
 Energy Efficiency workshop - Sustainability Street course, Ellenbrook, 28 July 2008
 Energy & water efficiency workshop at The Gowrie, for African refugees, with two interpreters, 3 October 2008
 Melville Senior High School - Melville WA, 2008
 Perth Love Earth Gathering - Perth WA, 4 Oct 2008
 Great Food Gdns workshop, Carlisle, 8 October 2008
 Town of Cambridge Sustainable Lifestyles Festival, Floreat, 12 October 2008
 Energy efficiency stall with children's EE educational activities Coolbinia Primary School community market day, 1 November 2008
 Energy efficiency stall and display at Wanneroo Agricultural Show, 28 - 29 November 2008
 Energy efficiency stall at Town of Vincent's Cappuccino Festival, Angove St, North Perth, 30 November 2008

2009

Wagin Woolarama, Wagin, 6 and 7 March 2009
 Northeam Sustainability Day, Northam, 29 March 2009
 Perth Sun Fair, University of Western Australia, 5 April 2009
 Smart Light Show, Circular Key, Sydney, 26 May 2009 to 14 June 2009 <http://www.smartlightsydney.com/program>
 Childrens Festville, City of Fremantle, Fremantle, 17 August 2009
 Whiteman Park, Discovery Centre, 20 August 2009 to 5 November 2009
 Mosman Shire Sydney NSW Sustainability Day, September 2009
 Willoby Shire NSW Sustainability Day, September 2009
 Painted Fish Street Party, Fremantle 20 September 2009
 Perth Royal Show, Claremont, 20 Spetember 2009 – 10 October 2009
 Solar Cities Opening, Midland, 5 November 2009