# Solar Power



Zac Streatfield, Chelsea Brown, Jasper Howie and Holly Lyons

Uranquinty Public School



#### **Creative Catchment Kids**

Creative Catchment Kids is an initiative of Wirraminna Environmental Education Centre. It aims to improve engagement between our funding partners and school students by providing opportunities for positive and authentic ventures that encourage students to develop creative solutions to agriculture and natural resource management issues.

www.wirraminna.org/creative-catchment-kids/

#### Wirraminna Environmental Education Centre

The Wirraminna Environmental Education Centre is located in Burrumbuttock, north of Albury in southern NSW. Since 1995, the centre, which is adjacent to Burrumbuttock Public School, has provided opportunities for discovery and learning about the natural environment, the ecology of the local woodlands and the beauty of native plants.

#### www.wirraminna.org

#### **Enviro-Stories**

Enviro-Stories is an innovative literacy education program that inspires learning about natural resource and catchment management issues. Developed by PeeKdesigns, this program provides students with an opportunity to publish their own stories that have been written for other kids to support learning about their local area.

#### www.envirostories.com.au

## Solar Power

Authors: Zac Streatfield, Chelsea Brown, Jasper Howie and Holly Lyons Teacher: Jessica Fuller School: Uranguinty Public School

This book has been published as part of the 2015 Creative Catchment Kids program and associated with Enviro-Stories, a PeeKdesigns education program. For more information about sustainable energy use, head to the Wirraminna website for your copy of the Energy and Water Saving Education Kit for Schools.

#### Energy and Water Saving Education Kit

The Energy and Water Saving Education Kit for schools is designed for Stage 2 and 3 students to help them understand how energy use and water used can impact on climate change. The kit contains teacher notes and lessons on sources of energy and energy saving, electricity consumption and saving water.

www.wirraminna.org/sustainability-trailer/



© 2015 Wirraminna Environmental Education Centre, www.wirraminna.org Design by PeeKdesigns, www.peekdesigns.com.au

## Types of solar energy

Solar energy can be used in two different ways: as a heat source (solar thermal) and as an electricity source (photovoltaic).

Solar thermal energy – uses lenses and reflector to concentrate the sun power to generate energy, which is then used to heat fluid usually water or oil. The steam produced is used to drive a turbine.



A house with a solar panel

## Renewable energy

Renewable energy is energy which can be obtained from natural resources that can be constantly replenished including

- Bioenergy
- Geothermal energy
- Hydro energy
- Hybrid
- Ocean energy
- Solar energy
- Wind energy



Energy being renewed



#### What country uses the most solar energy?

Germany uses the most solar energy in the world. Australia is the 9th largest solar energy user.

### What is solar power?

Sunlight is absorbed by solar panels. The silicon wafers and the conductor's (metal strips) convert the sunlight into electricity.



A solar panel.

#### Solar water

Water heating is responsible for 25% of the energy used in an average home. Installing an energy and fitment solo hot water system can saves a family \$300 to \$700 off electricity bits.

A solar water device.





#### Solar Power facts

- 1. Solar energy is obtained from sunlight
- 2. Solar energy has been used by humans for a long time for users such as heating, cooking food, removing salt from salt water and drying clothes.
- 3. Solar cells convert light energy into electricity.
- 4. Solar cells are also called photovoltaic cells.
- 5. The largest solar power plant in the world is found in the Mojave Desert, USA.

Learn how solar power enters our houses through solar panels!

Get the energy to the houses! Draw three lines out of the sun to the solar panels. At each panel, split the line into three! Get those lines to the circles!

8



Back: Holly Lyons and Chelsea Brown Front: Jasper Howie and Zac Streatfield

2015 Year 4 and 5, Uranquinty Public School

#### CONGRATULATIONS

Wirraminna Environmental Education Centre and the Creative Catchment Kids Program won the 2015 NSW Junior Landcare Team Award and will be competing in the 2016 National Landcare Awards.





orı