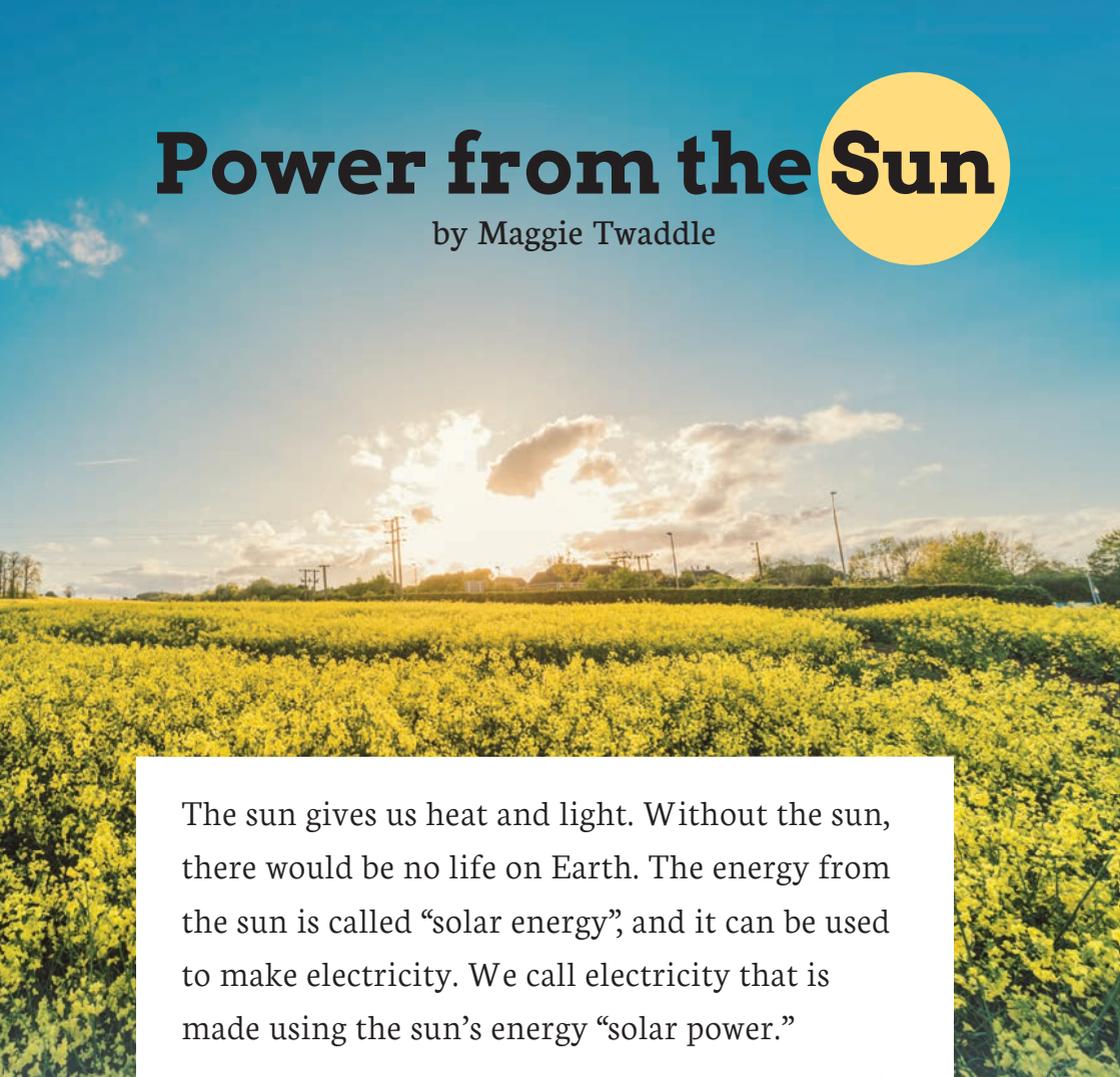


Power from the Sun

by Maggie Twaddle



The sun gives us heat and light. Without the sun, there would be no life on Earth. The energy from the sun is called “solar energy”, and it can be used to make electricity. We call electricity that is made using the sun’s energy “solar power.”

Sol, the sun god

The word “solar” comes from the name of the Roman sun god, Sol. In very early times, people from many cultures worshipped the sun.



A statue of the Roman sun god, Sol

Making solar power

A solar panel



Electricity from the sun can be made by using solar panels. Solar panels are flat pieces of silicon (a dark grey substance) covered with glass. The panels have wires inside them that are connected to a power system.

The panels are usually placed on the roofs of buildings. When the sun shines on the solar panels, the sunlight makes electricity inside the panels. This electricity then travels through wires to where it can be used to power things such as lights, ovens, fridges, and televisions.



The sun shines on the solar panels, and the sunlight makes electricity inside the panels.

The electricity travels through wires inside the walls to where it is needed.

Using solar energy at school

More and more schools in New Zealand are putting solar panels on their roofs. Solar panels are ideal for schools because schools are open (and using electricity) in the daytime when the sun is shining.

Bayswater School in Auckland got solar panels in June 2008. The panels are arranged in groups called arrays.



Solar panels on the roof of Bayswater School



Our school has two solar arrays. The more panels we have, the more electricity we can make.



One of our solar arrays has 12 panels and the other has 16 panels. Together, they make 6 kilowatts of electricity per hour.

Kilowatts

A kilowatt is a measure of power. One kilowatt equals one thousand watts. A small long-life light bulb uses between 14 and 16 watts an hour.



The students at Bayswater School have been learning a lot about solar energy.



Our solar panels work best on a sunny day, but they still make electricity on a cloudy day. They even work when it's raining.

We've learnt that solar energy is a type of renewable energy. That means it will never run out, no matter how much people use. Wind power and hydro-electric power also use renewable energy.



The panels only make some of the electricity the school uses, so we work hard to save power.



Saving energy

The students have been working hard to make sure that electricity isn't wasted. Every year, about ten students are chosen to be "energy detectives".

They check that the lights are switched off in the corridors and the hall when nobody is using them. In winter, they make sure that the classroom doors are closed at morning tea and lunchtime so that the heat stays in the classrooms. In summer, they open the doors and windows so that the air in the classrooms is cooler.



Every class also has an energy monitor. They check that the lights, the computers, and other things that use electricity are switched off when everyone leaves the classroom.



A group of approximately 15 children of various ages are posing on the wooden steps of a school building. They are all smiling and have their arms raised in a celebratory gesture. The building behind them has large windows and a white corrugated metal roof with several blue solar panels installed. The scene is brightly lit, suggesting a sunny day.

Energy for the future

The students of Bayswater School are proud of having solar panels at their school. They know the panels will continue to make electricity for many years to come.

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The Ministry of Education and Lift Education would like to thank the students of Bayswater School, Auckland for sharing their experiences of using solar energy.

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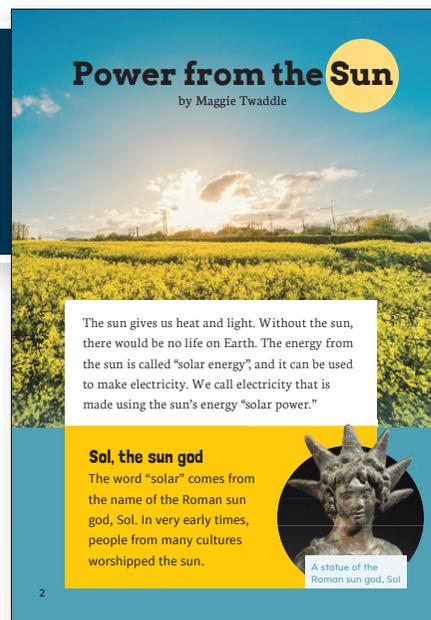
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