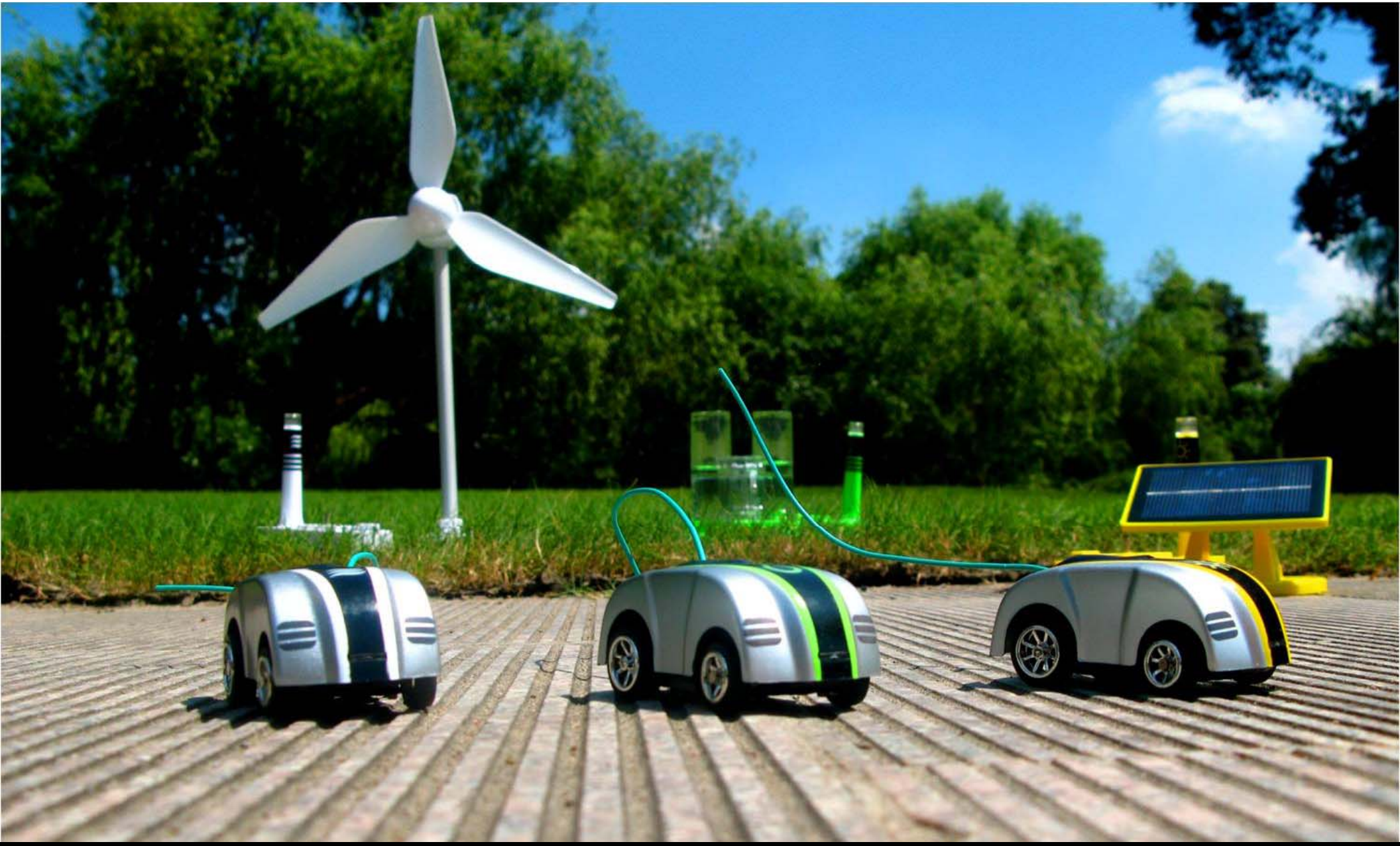

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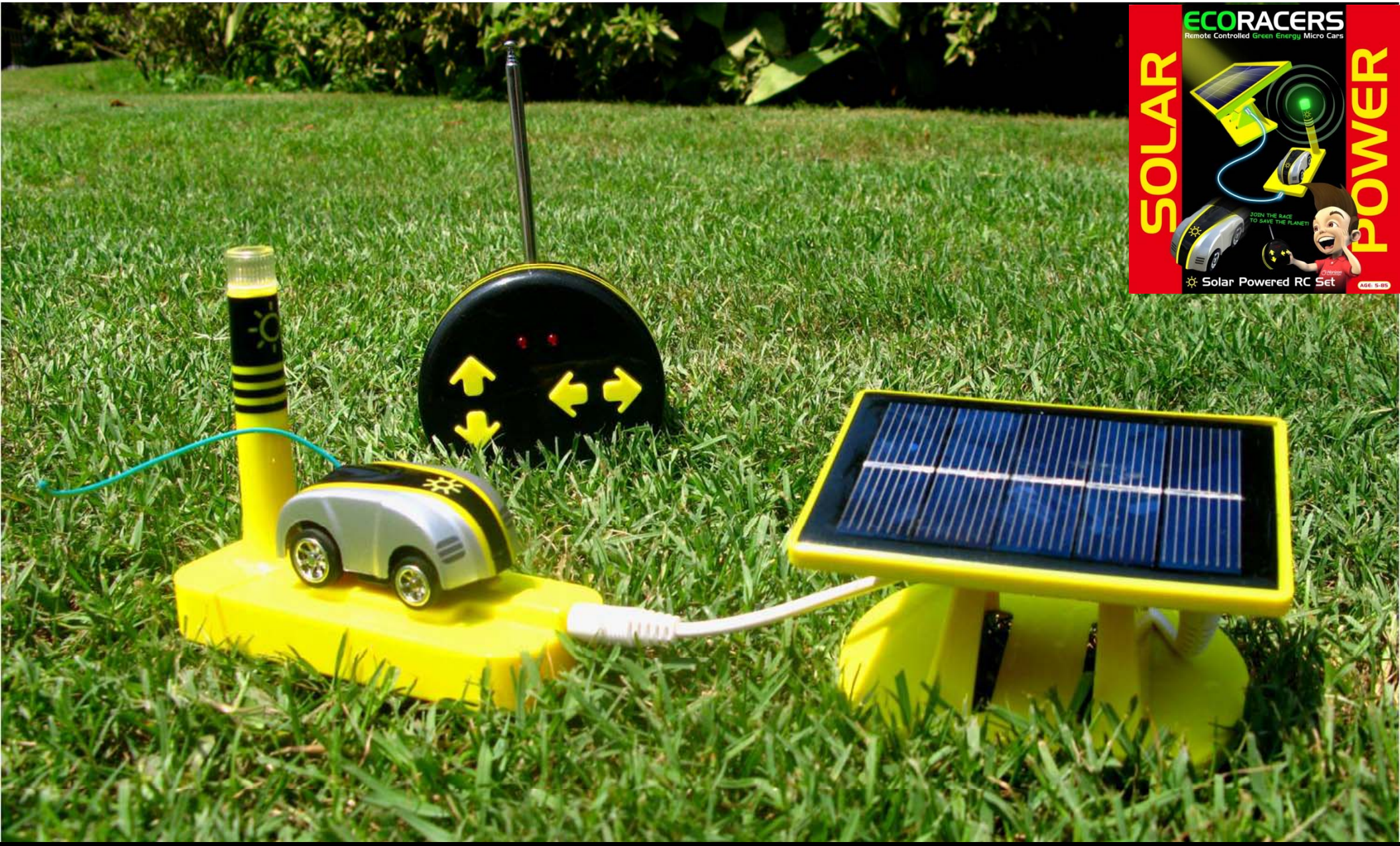
Remote Controlled Green Energy R/C Micro Cars



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Remote Controlled Green Energy R/C Micro Cars

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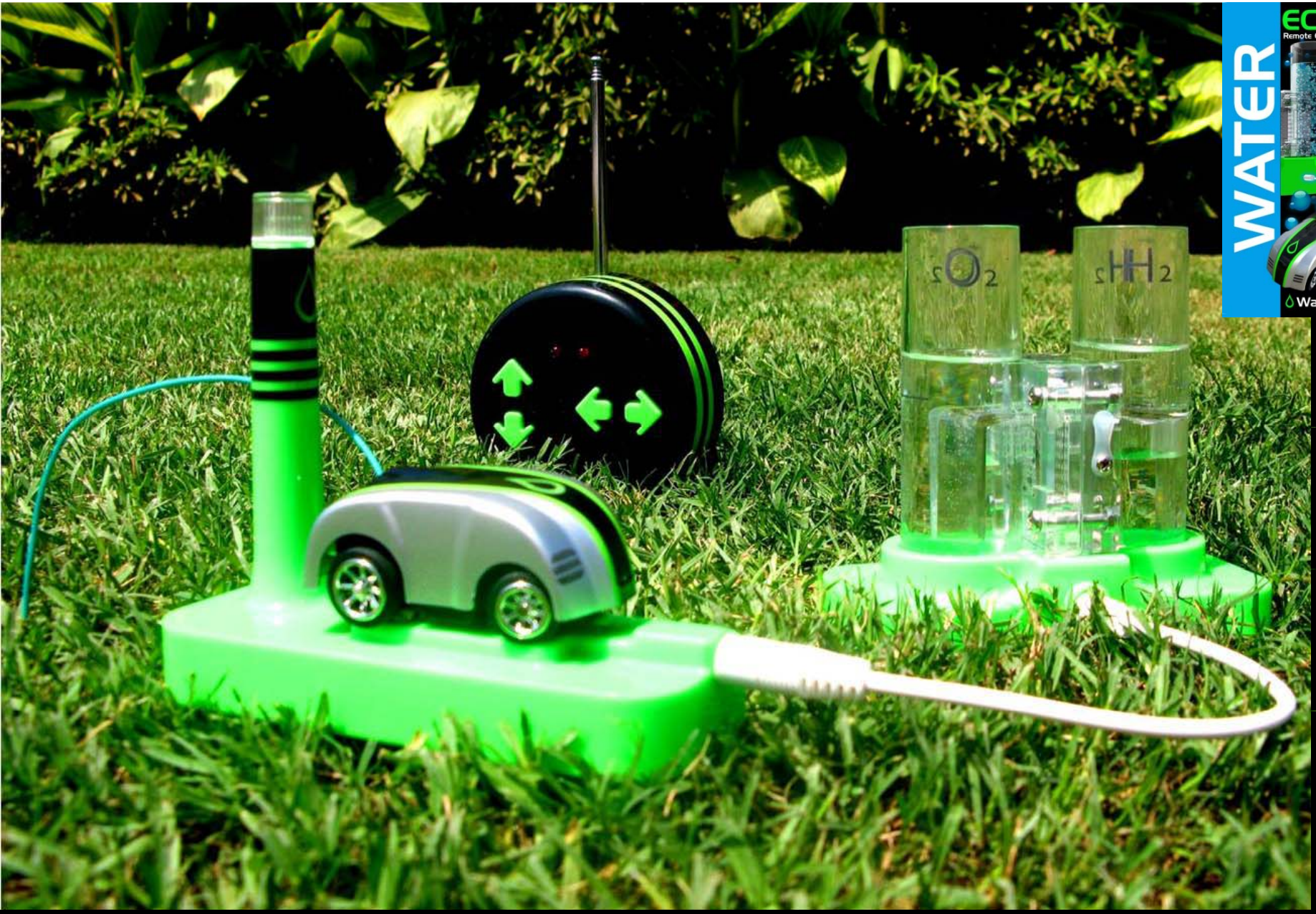

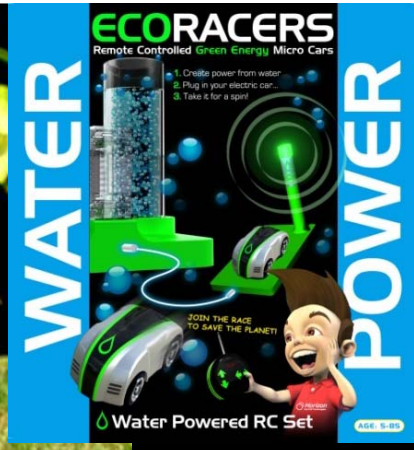

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Remote Controlled Green Energy R/C Micro Cars

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Remote Controlled Green Energy R/C Micro Cars

Wind Powered R/C Set

Solar Powered R/C Set

Water Powered R/C Set

Horizon
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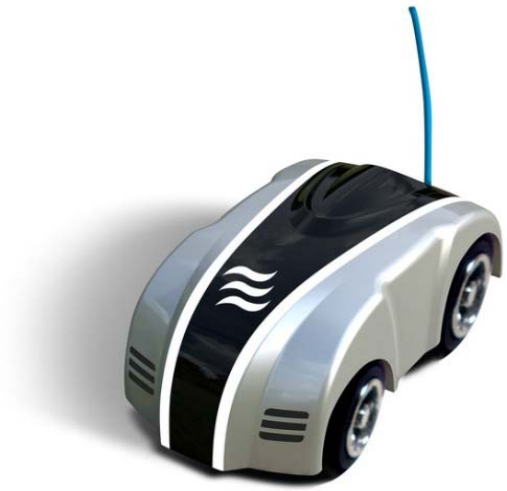
Remote Controlled Green Energy R/C Micro Cars

Water R/C Microcar



Wind R/C Microcar

Solar R/C Microcar

*Introducing a brand new line of fast/fun RC micro-cars that run on **clean energy!***

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Fuel Cell Technologies

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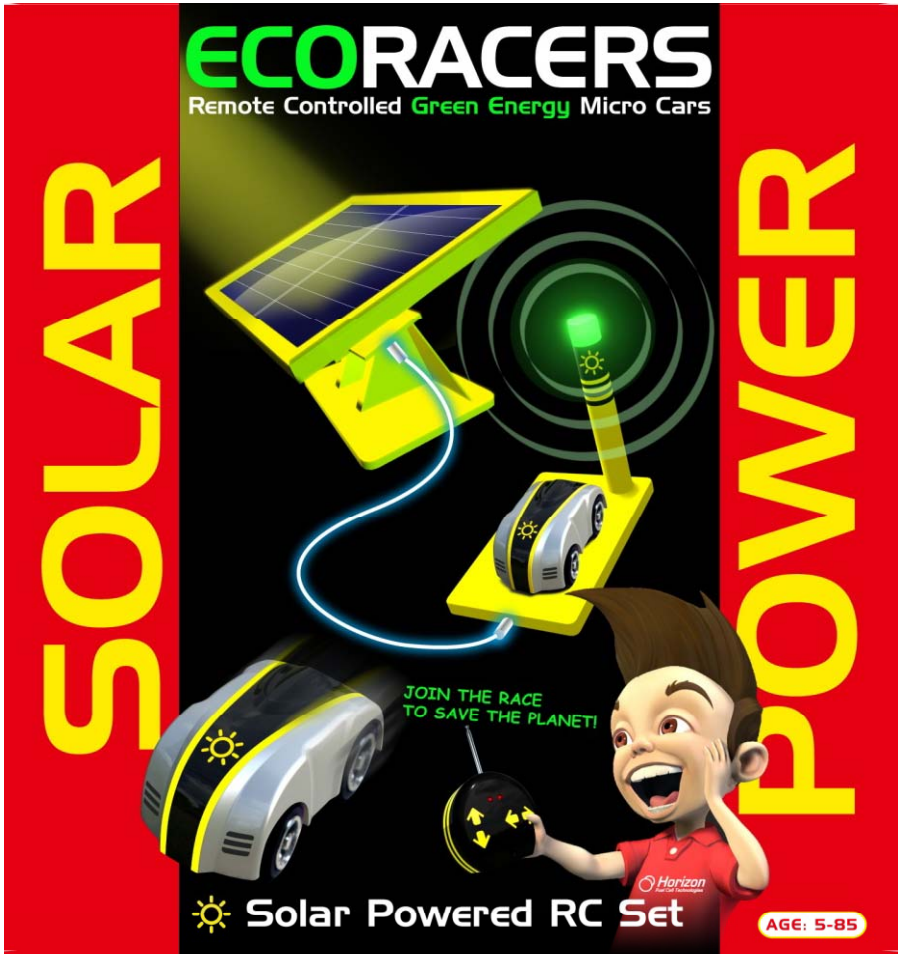
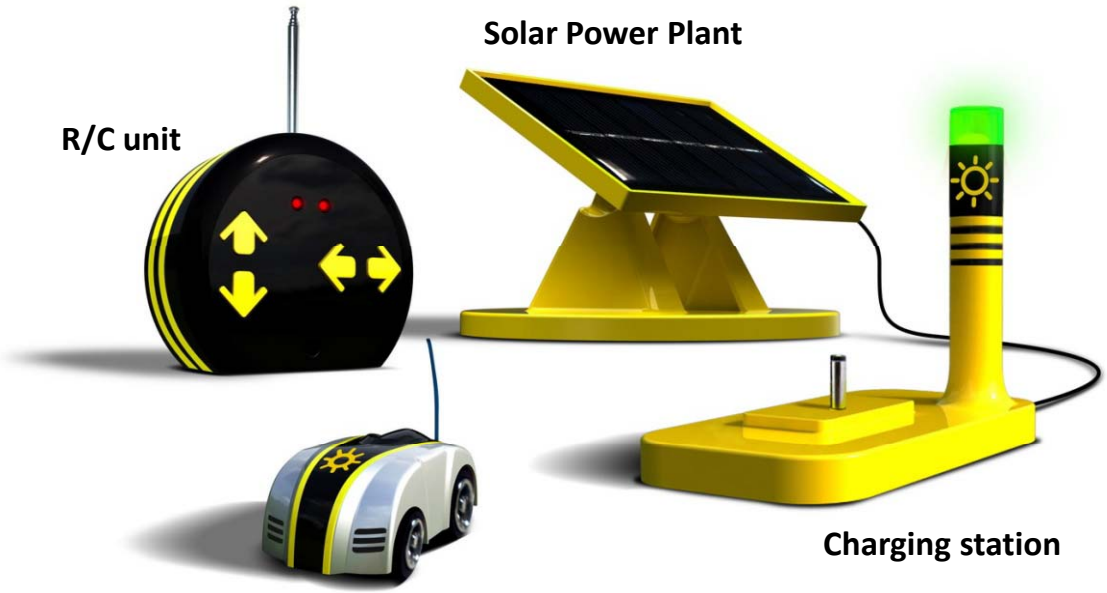
Remote Controlled Green Energy R/C Micro Cars





Also includes:

- Easy-Assembly Guide
- Educational Poster

Horizon Fuel Cell Technologies

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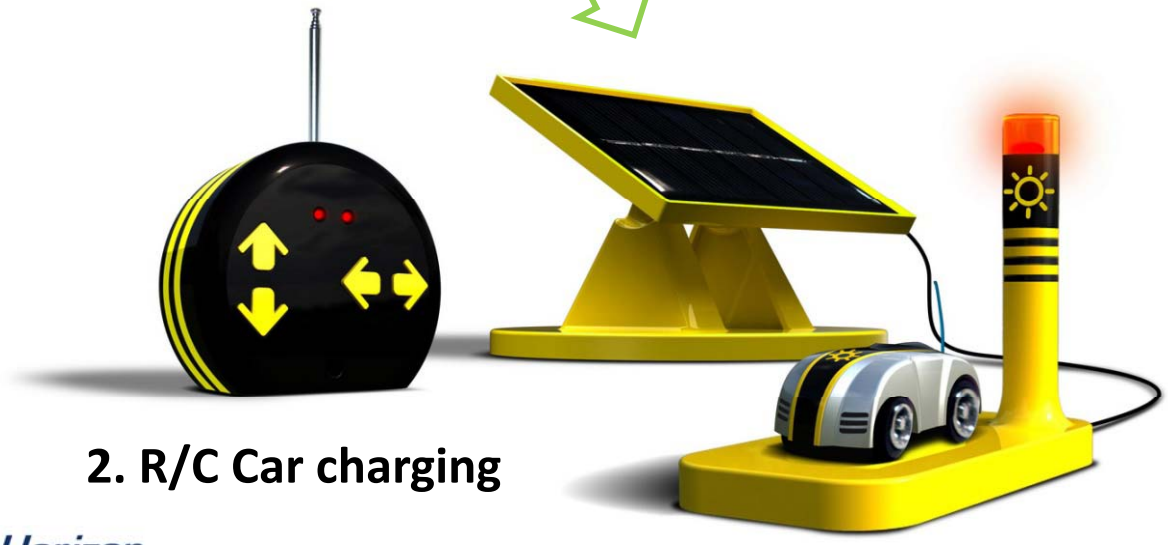
Remote Controlled Green Energy R/C Micro Cars

1. Solar Power Experiment:
Generate power from the sun's rays!



2. R/C Car charging

Solar Power

Power

3. Drive Your R/C car!

Horizon Fuel Cell Technologies

(car can also charge from R/C uni

"HOW IT WORKS" FREE poster inside!

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Remote Controlled Green Energy R/C Micro Cars

solar power

The sun is like a gigantic ball of fire that produces energy in the form of light, which is essential to life on Earth.

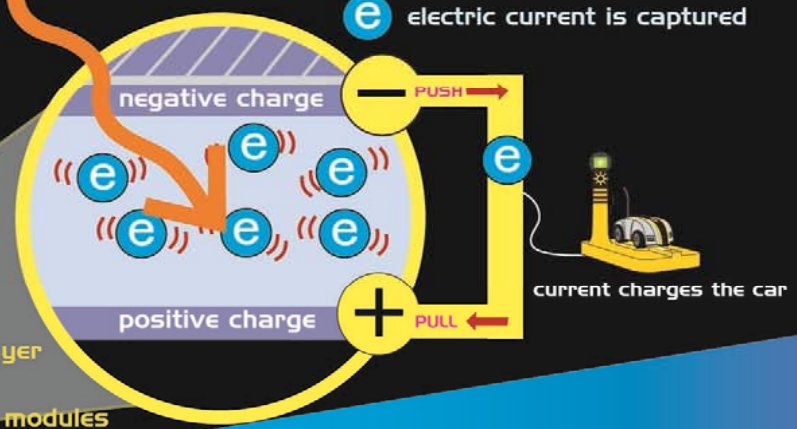
In just one hour, more energy from the sun hits our planet than the whole world needs in an entire year!

Energy from the sun (solar energy) reaches the Earth as sunrays, and sunrays can be converted into other forms of practical energy, without any air pollution and no greenhouse gases. Scientists all over the world are looking for ways to make the most of this free supply of clean energy. One solution involves turning sunlight directly into electricity using "***photovoltaic cells***".

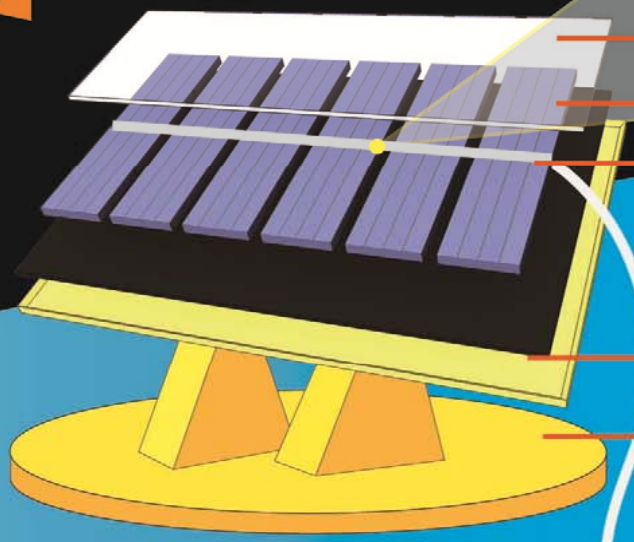
SUNRAYS

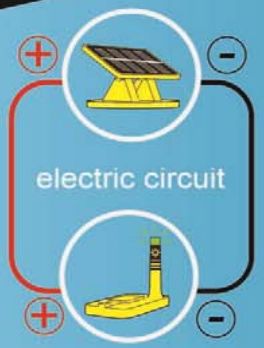
SUN RAY

Energy from sunlight knocks electrons loose and allows them to move around , creating a current. When many electrons, each carrying a negative charge, travel toward the front surface of the cell, the resulting imbalance of charge between the cell's front and back surfaces creates a voltage potential, like the negative and positive terminals of a battery.



A photovoltaic cell (solar cell) converts solar energy directly into electrical power. Solar panels are composed of many photovoltaic cells placed together side by side. When sunlight hits a solar panel, electrons inside its material start to get agitated and start to move. The electrons flow through wires built into the solar panel - this flow is called current, it's also "electricity" we can use.





Electricity collected from the solar panel's current collectors travels through the white wire and into the car's charging station. This electricity powers the light. When the eco-racer is docked to its charging station, the electricity also charges the car's battery so it can drive.

electricity makes the light flash!

Your ECORACER *is* SOLAR POWERED!

electricity charges the car's battery!

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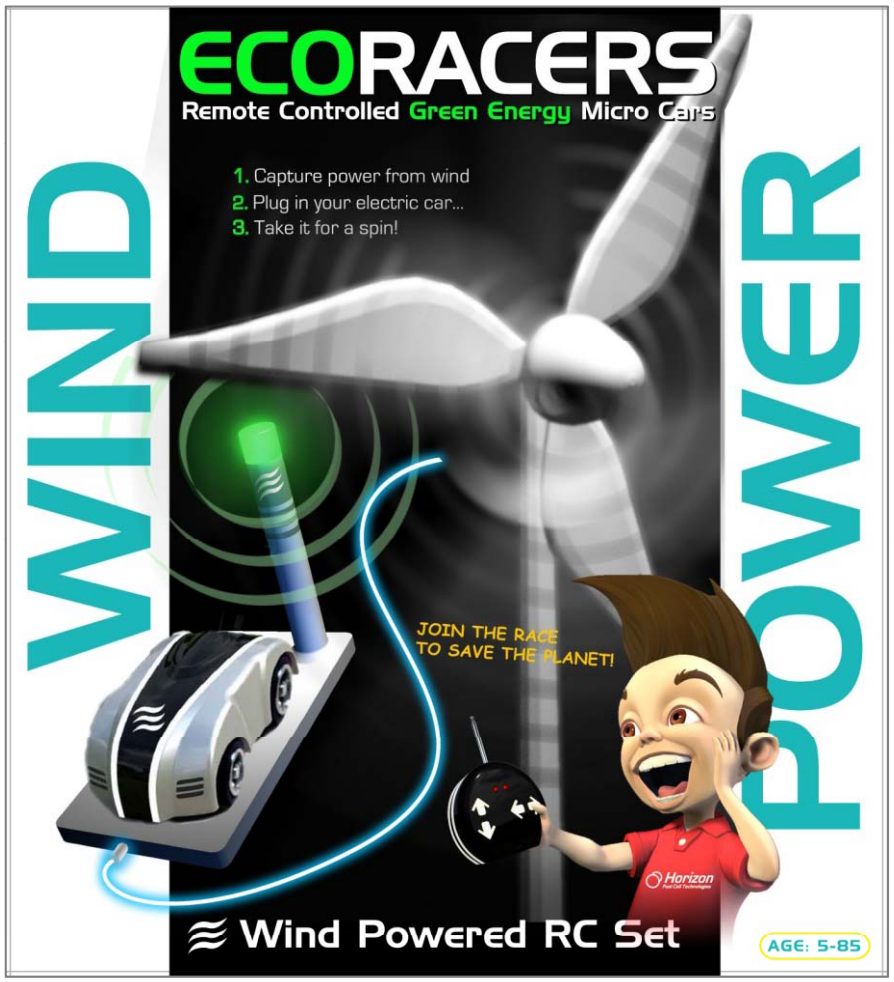
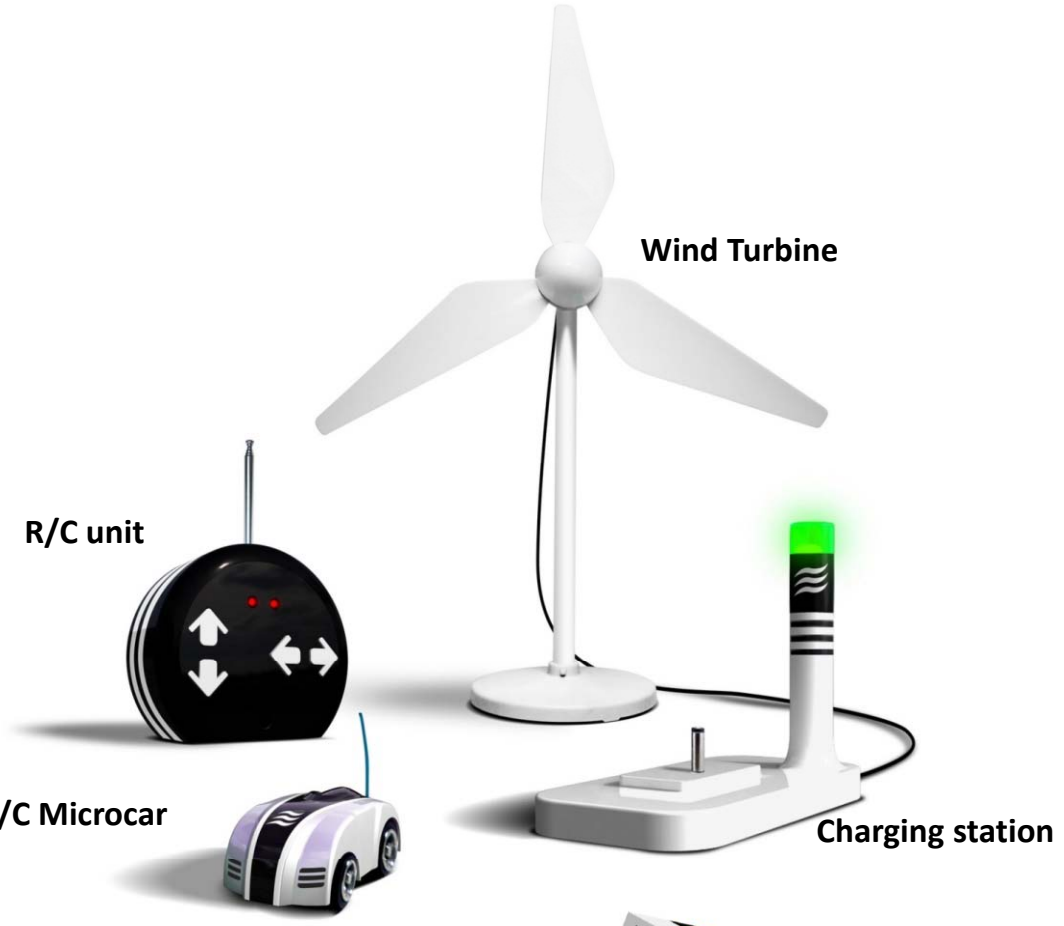
Remote Controlled Green Energy R/C Micro Cars





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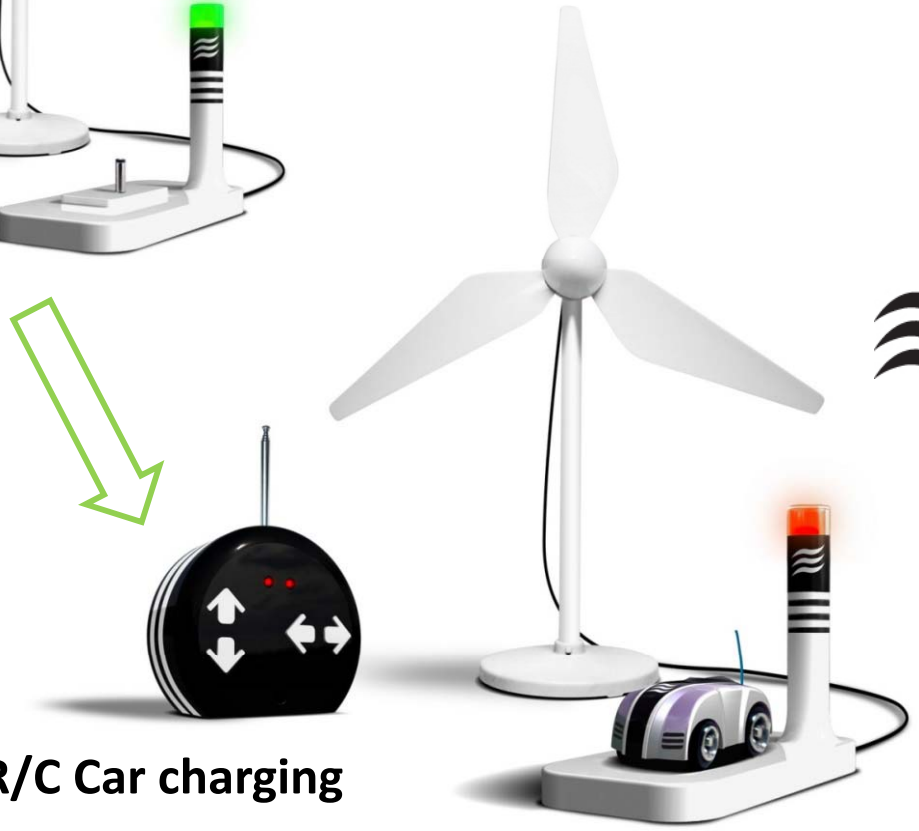
Wind Power Experiment:

- Green Light= demonstrate power from wind



2. R/C Car charging

Power

3. Drive Your R/C car!

(car can also charge from R/C uni

"HOW IT WORKS" FREE poster inside!

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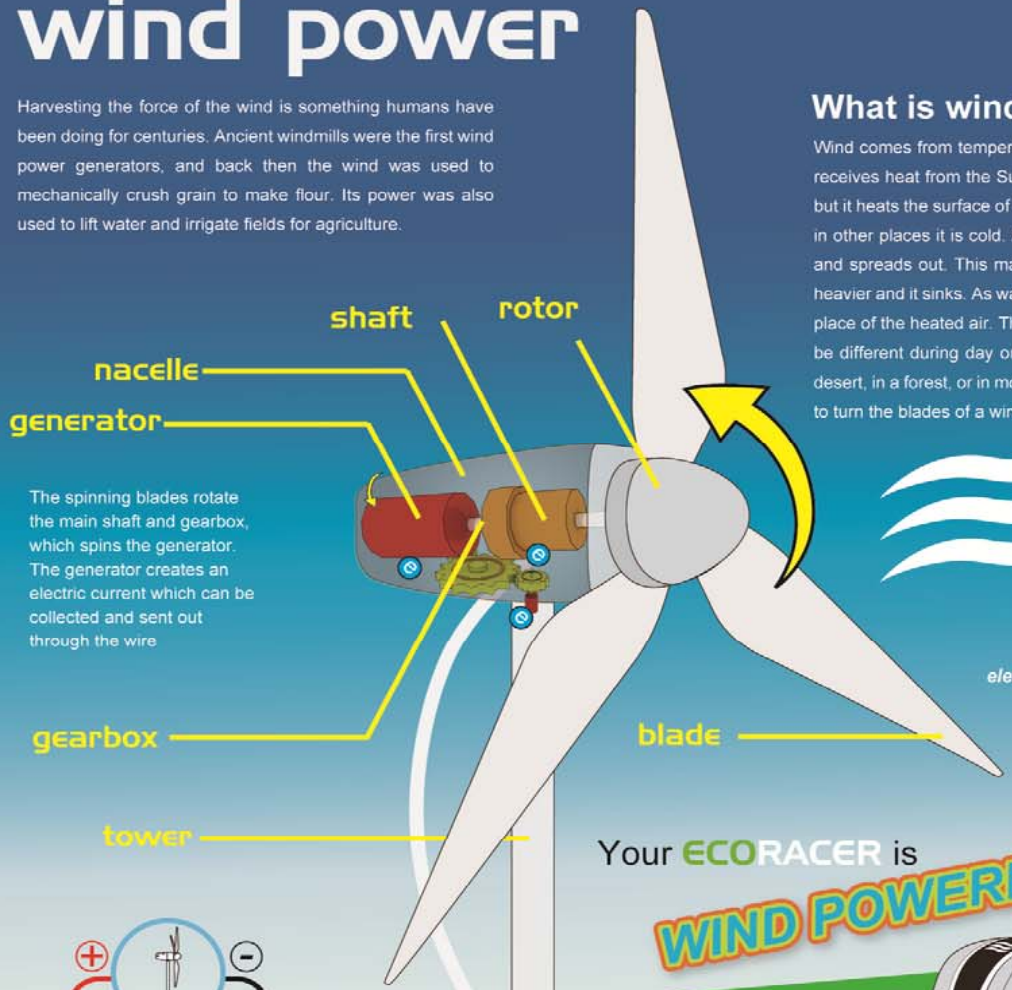
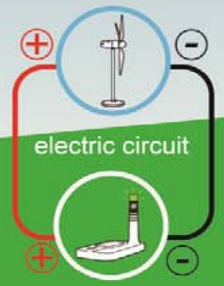
Remote Controlled Green Energy R/C Micro Cars

wind power

Harvesting the force of the wind is something humans have been doing for centuries. Ancient windmills were the first wind power generators, and back then the wind was used to mechanically crush grain to make flour. Its power was also used to lift water and irrigate fields for agriculture.





What is wind?

Wind comes from temperature differences created on the Earth's surface, as it receives heat from the Sun. The sun shines on our atmosphere all of the time, but it heats the surface of the Earth unevenly, so in some places it is warm while in other places it is cold. As the air in the atmosphere gets warmer, it expands and spreads out. This makes the air light, so it rises. As air cools, it becomes heavier and it sinks. As warm air rises, air from cooler areas rushes in to take the place of the heated air. This movement of air is what we feel as wind. Wind can be different during day or night, summer or winter, and whether at sea, in the desert, in a forest, or in mountains. When the wind blows, its energy can be used to turn the blades of a wind turbine.

What are wind farms?

Since the wind is available naturally and freely, more and more people are considering using the wind as a way to produce much larger quantities of electricity. Many wind turbines can be placed together in one area where the wind blows strongest, creating a wind farm. Wind farms can power entire cities and reduce our dependence on burning oil or coal to produce electricity.

Creating Electricity from Wind Energy:

Today's windmills use advanced lightweight materials and highly efficient gears and generators, to create electric power that we can use for our everyday needs. Your ECORACER is using a wind turbine to create electricity that travels out of the turbine through wires to light up the light on the docking station, and charge up the small electric car. Imagine if that was a real-size electric car: no more air pollution! The electricity that is used to run the car comes from a natural source of energy, instead of a coal-fired power plant.

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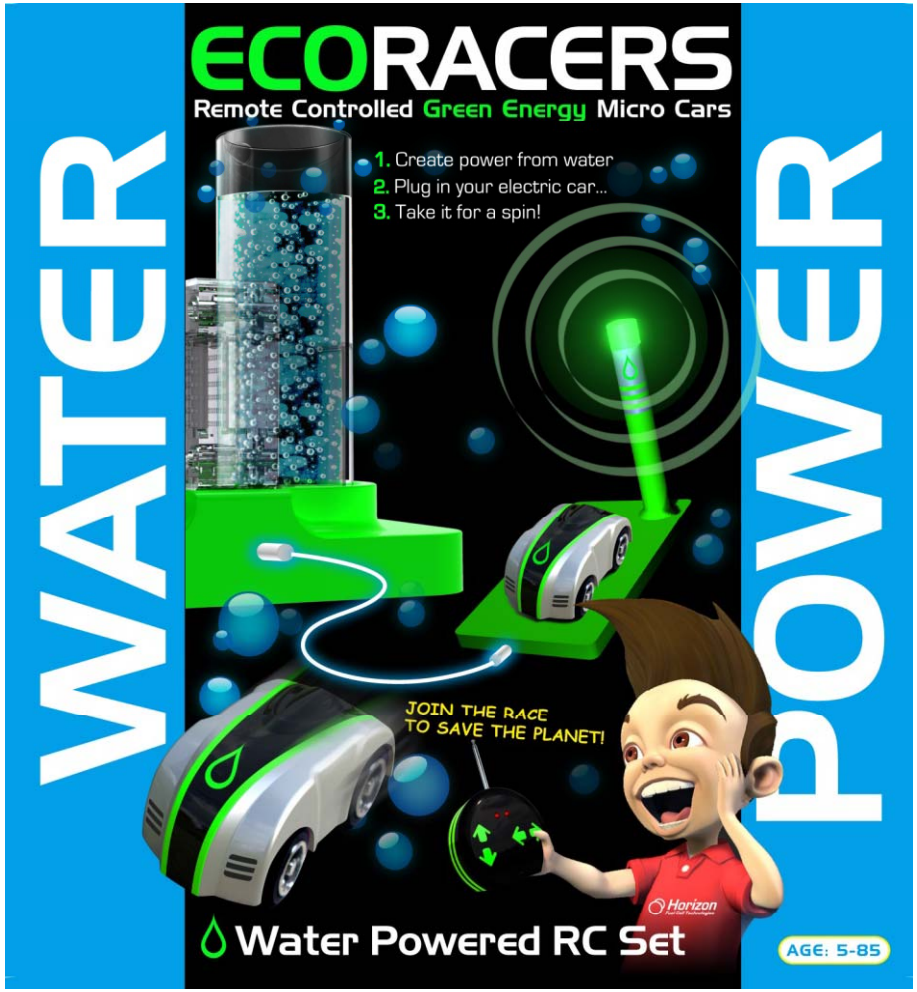
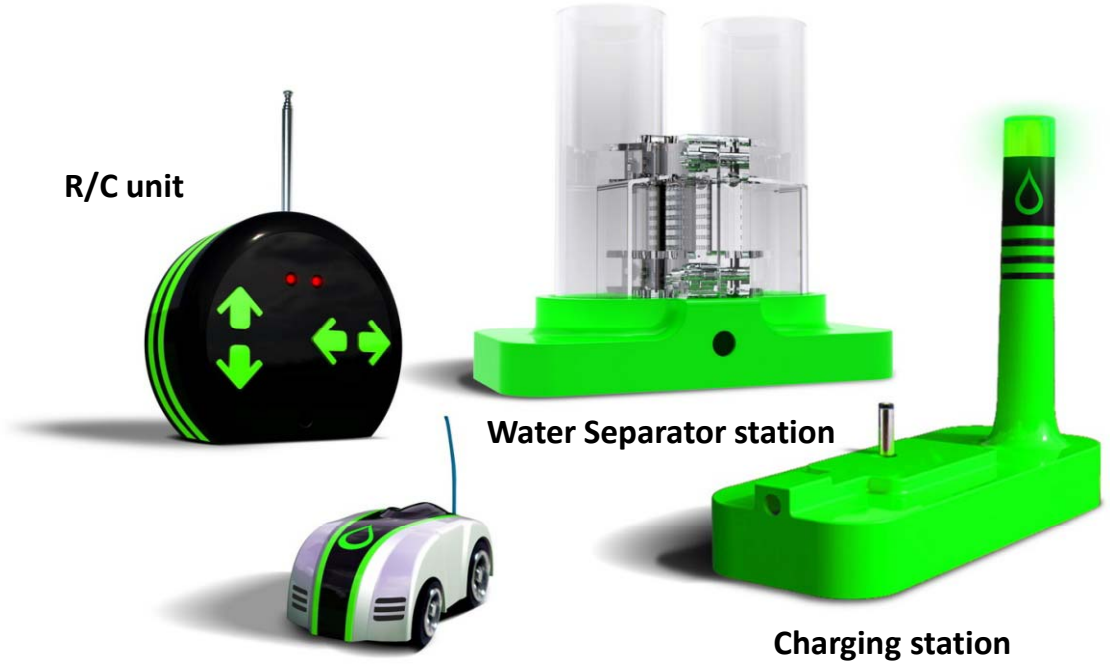
Remote Controlled Green Energy R/C Micro Cars

"Water power" is technically wrong but this is a marketing issue:
Solar, wind, water – go together as a family… and there is a "discovery" to be made. The Posters explain it properly but the packaging has no time nor space to do that. Plus we want to remove some of the heavy science at the onset.





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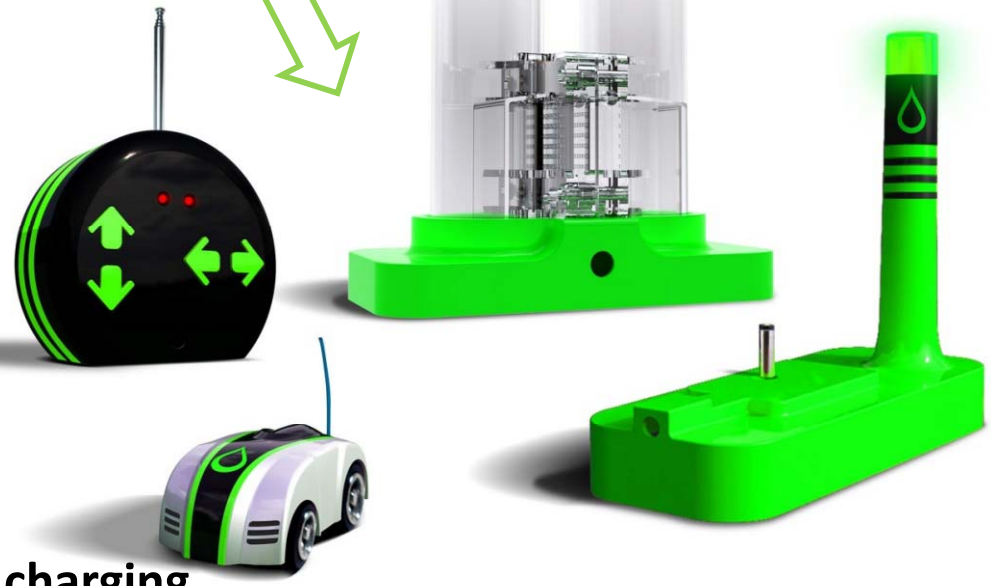
Remote Controlled Green Energy R/C Micro Cars

1. Water Power Experiment:
Generate power from water's basic elements!

Water



Water Power

Power

3. Drive Your R/C car!

2. R/C Car charging

(car can also charge from R/C uni

"HOW IT WORKS" FREE poster inside!

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Remote Controlled Green Energy R/C Micro Cars

hydrogen power (using water)

STEP 1: HYDROGEN IS MADE BY SPLITTING WATER INTO ITS BASIC ELEMENTS

Hydrogen is formed

Water (H_2O) is added

cathode | air | anode

+ ions

Oxygen is formed

Electricity produced from solar or wind energy (or any other energy) can be used to separate hydrogen from water.

electricity power the light...

STEP 2: FUEL CELL CREATES ELECTRICITY BY COMBINING HYDROGEN AND OXYGEN

Hydrogen is added

anode | cathode

H+ H+

+ ions

Water (H_2O) is formed

Oxygen (from the air) is added

electric current

Hydrogen storage tank

Oxygen storage tank

H_2 O_2

REVERSIBLE FUEL CELL

electric circuit

electricity charges the car's battery...

In the ECORACERs, the electricity used to separate hydrogen from oxygen in water comes from a small battery box.

Hydrogen fuel cells have been used by astronauts and spacecraft since the 1960s. Hydrogen batteries, called fuel cells, power the space shuttle's electrical systems.
The only by-product is pure water, which astronauts use for drinking.

Your ECORACER is an electric car that recharges using electricity from a fuel cell, or the same basic principles as the special batteries found on board the space shuttle!

Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but the lowest energy content by volume (about four times less than gasoline). Fuel cells are a new technology that could make many electric devices run for a much longer time, like a very long-lasting battery.

Imagine the refueling stations of the future!

wind farm

H_2 FUEL STATION

The energy used to separate out hydrogen from water can come from solar, wind or other sources. Hydrogen can become an electricity storage solution for later use, such as when the wind doesn't blow, or the sun doesn't shine.

Since fuel cells do not create air-pollution, hydrogen fuel cells could become part of new power systems inside electric cars, making them go longer distances and recharge faster.

solar farm

Horizon Fuel Cell Technologies

ECORACERS

Remote Controlled Green Energy R/C Micro Cars