

# Solar Grasshopper

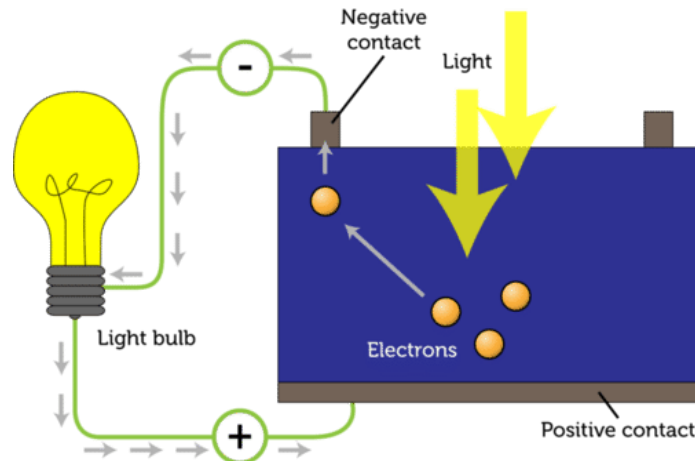
## Try It Out

Hold a grasshopper and tilt it so the sun shines on its back. If the sun is bright enough, the grasshopper will vibrate. No luck with the sun? Try again tomorrow!

## What's going on?

This grasshopper has a **photovoltaic (PV) cell** on its back, which converts sunlight into electricity. Photons (bits of light) enter the cell and the energy knocks electrons loose. Solar cells have positive and negative contacts, like the terminals in batteries. If the contacts are connected with wire, the loose electrons flow from the negative to positive contact, creating electric current.

### How a PV Cell Works



(Image: CK-12)

## What's the Big Deal?

In the 60s, space travel popularized solar power and made PV cells much more efficient. Today, costs continue to fall, and solar is becoming a bigger part of an eco-friendly U.S. energy plan. Nice!

## Wonder While You Walk...

Why does the grasshopper work better when tilted toward the sun? What direction should solar panels on a house face to work best?