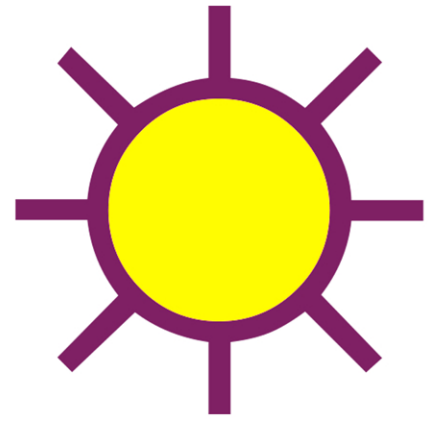


HOW TO MAKE A

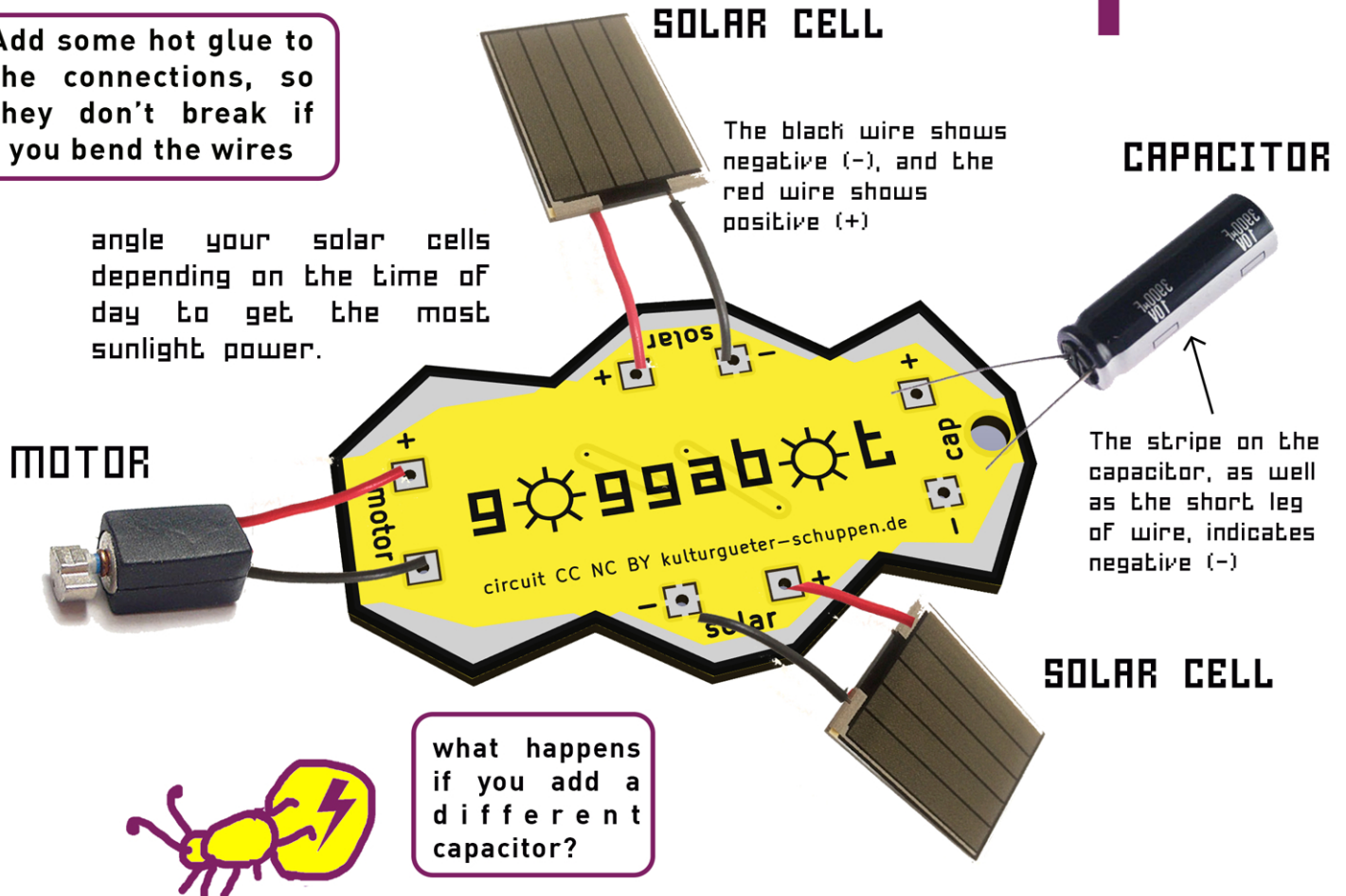
GOGGABOT

This Goggabot has a "solar engine" circuit that collects light until there is enough energy to start the motor.



Add some hot glue to the connections, so they don't break if you bend the wires

angle your solar cells depending on the time of day to get the most sunlight power.



what happens if you add a different capacitor?

If you have a vibration motor, stick on some brush bristles or thin wire legs with some hot glue. If you have a regular motor, try make a body with wire and/or wheels. Balance and weight distribution is very important for how your robot will move (and not fall over)

Solar energy is a renewable energy source. When we use it, we save non-renewable sources, such as oil or coal, and don't pollute the environment.

IMPORTANT: Your goggabot must not be thrown into the regular trash but must be recycled as E-waste.

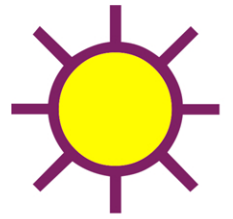
Find out more at

FREE.SUNSHINE.ORG

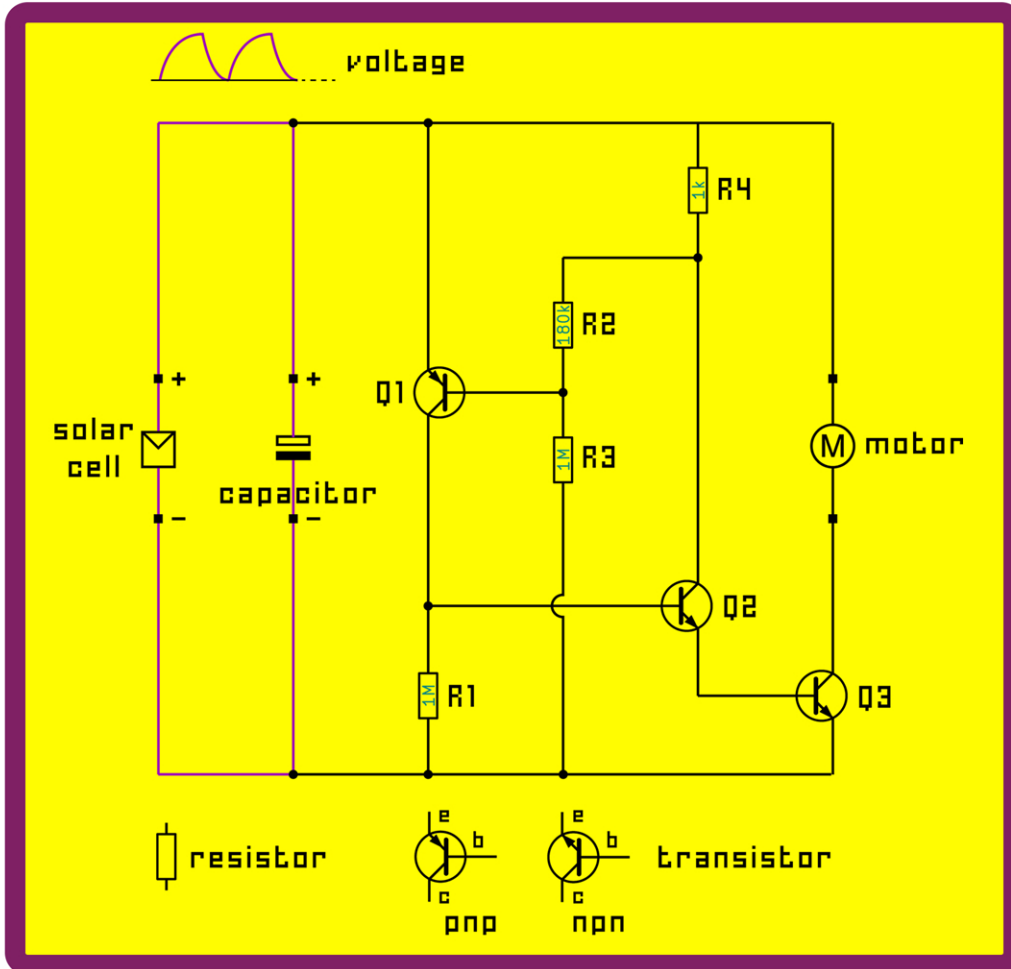


HOW THE CIRCUIT WORKS FOR THE

G G G A B B T



The gggabbbt consists of a solar cell, a capacitor, a control circuit (on the yellow board) and a motor. The circuit is made up of four resistors (R1-R4), and three transistors (Q1-Q3). This is what the schematic diagram looks like:



The solar cell converts light energy from the sun into electrical energy (about 3V max). This charges the capacitor so that the voltage at the "solar" terminals rises.

When it has reached a certain value (about 0.5V at resistor R2), the transistors start to conduct and the motor turns.

The transistors stop conducting when the voltage has fallen to the threshold value, and the process can start again.

