FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

FUTURE KIT

SOLAR FAN
CODE 1001

LEVEL 1

This circuit is a device that converts sunlight energy into electrical energy. It is suitable for studying of energy conversion and substitution.

Technical specifications:

- Power supply from solar panel.
- Power of solar panel : 4VDC. 60mA.
- Solar panel dimensions : 6 x 6 cm.

How to work:

When solar panel is facing sunlight, it will convert sunlight energy into DC voltage. This DC voltage will be supplied to DC motor for turning fan and the motor speed depends upon the sunlight volume.

Testing:

Connect all components as shown in figure 2. Make sure that the red clip is connected to the positive pole and the black clip to the negative pole. Wrongly connected will reverse both motor turning and wind blade direction. The motor will turn faster with more sunlight volume and will slow down or not move with less or no sunlight.

Troubleshooting:

If DC motor does not turn, check electric wire, soldering joints, possibly they were not properly soldered. But if all soldering joints are in good order, may be DC motor or solar panel is out of order.

How to check solar panel:

Measuring the voltage at positive pole and negative pole of solar panel with voltmeter. And then turn the solar panel facing sunlight and look at the voltmeter for the voltage movement. Having any movement means the solar panel is normal and if it is out of order there is no movement.

How to check DC motor:

Connect 3VDC power supply to DC motor. DC motor will turn. If DC motor does not turn, it is out of order.

NOTE: The solar panel cannot change fluorescent light to DC voltage for turning motor.

CAUTION: Whenever using solar panel, be careful do not short circuit the positive and negative poles. The short circuit will damage the solar panel.

Figure 1. components

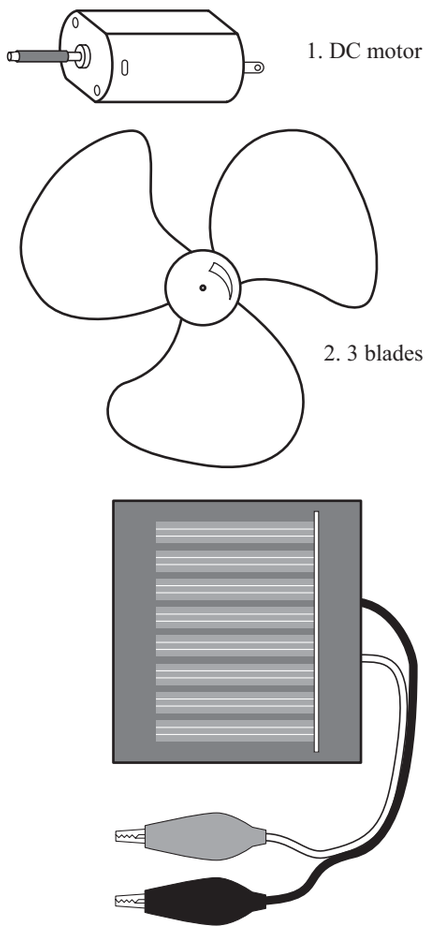

Figure 2. Circuit Connecting