# Solution sheet model 2 – Solar energy

## Topic task

* Turn off the light when it is not in use
* Use energy saving bulbs
* Avoid standby usage: turn electrical devices all the way off
* Do not run computers and printers unnecessarily
* Close the refrigerator door quickly
* Replace old appliances for new, energy-saving ones

## Experimental task 1

1. The indicator stops turning, although only one solar module is covered and not the other. If one solar module fails, then the entire solar system can no longer generate electricity.
2. With series wiring, the voltages of the solar modules are added. Since the speed of a motor is voltage-dependent, the motor can turn faster.

## Experimental task 2

1. The indicator turns slower but does not stop turning, even if one solar module is covered and not the other. With parallel wiring, the solar system continues to produce electricity even in bad weather when there is little sunlight. In contrast to series wiring, with parallel wiring the voltage is the same everywhere as amperage increases.
2. The rotational speed of the indicator is faster with series wiring in contrast to parallel wiring, since the speed of the motor is voltage-dependent.