



**Task 5 -
Extension
Answer Sheet**

What do you need to do?

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Task A – Solar Cell Applications

Solar cells are commonly used for jobs that are low-maintenance and require little power. Match the applications on the left with the correct description on the right.

Power source for a satellite in space

Emergency telephone on a motorway

Electricity generation for a remote farm

Solar Powered Calculator

Solar panels on the roof of a house

In this everyday device, solar cells are a convenient alternative to using rechargeable batteries or mains electricity supply

For this application, reliability is more important than cost – when it is in orbit, it is very difficult to carry out any required fixes.

These devices are a long way from a normal electricity plug socket – a small panel of solar cells is a convenient power source.

These panels cost a lot of money to buy, but allow money saving in the long term.

This can provide a cheaper method of generating electricity, because it avoids paying lay cables to the electricity grid.



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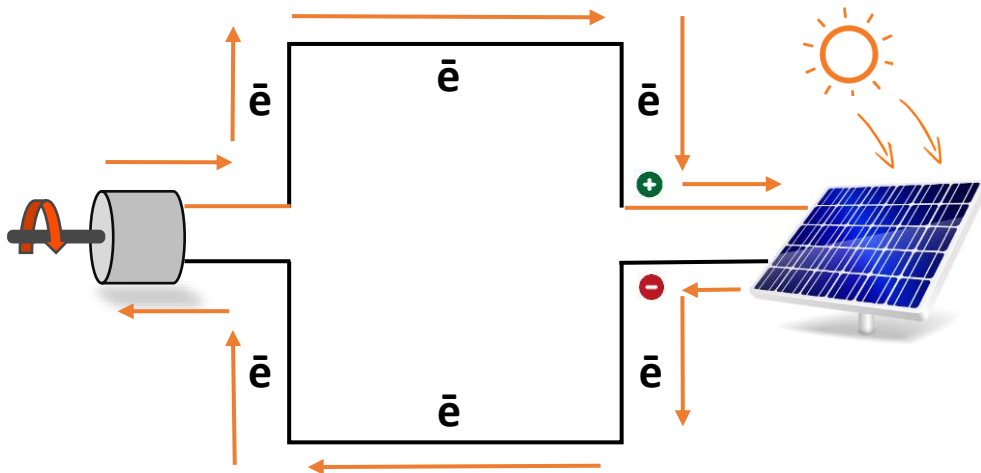


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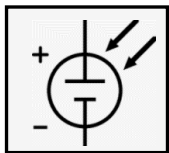
Task B – Solar Cell Circuit Board

A solar or **photovoltaic** cell is a device that produces an **electrical current** when exposed to a source of light. **Electrons** (e^-) are negatively charged (-) and flow round a circuit to carry electricity.

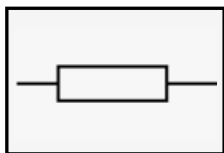
Add arrows to the below diagram to show the path an electron would take around the circuit.



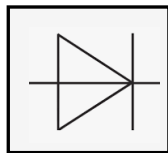
Can you label the circuit symbols below with their correct names?



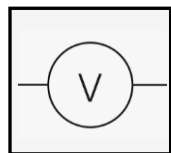
Solar Cell



Resistor



Diode



Voltmeter