

Edexcel Principal Learning

Engineering

Level 2

**Unit 8: Exploring Engineering Innovation,
Enterprise and Technological Advancements**

Pre Release Material
January 2011

Paper Reference
EG208/01

You do not need any other materials.

You are not allowed to take your pre release work into the examination.

Turn over ►

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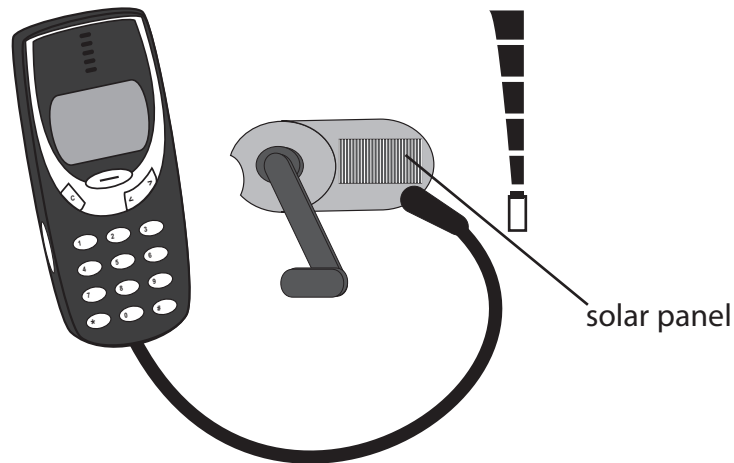
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Case Study – Eco-phone-charger

ECOWynd is an eco-friendly company that has designed a new product. Although the idea is not new, the design and look of the product are their own.

The new product is called the *Eco-phone-charger* and is designed to charge mobile phones in the outdoors or in areas without access to mains electricity.

The charger should be environmentally friendly and provide enough power to charge mobile phones from either a solar panel (photovoltaic cells) when light is available or by winding it up using a crank arm.



Instructions

You are required to investigate the viability of the *Eco-phone-charger*. Your study should identify the steps ECOWynd will need to undertake if the product is to be a success. Your study should include investigating the following areas.

- Intellectual property
- Research and development including prototyping
- Financial support available
- Modern and Smart materials
- Photovoltaic cells
- Processes used in the manufacture of the product (mass-produced casing and winder, automated circuit board production)
- Potential impact on the home, workplace and built environment
- Social and environmental impact