

**Pearson Edexcel Principal Learning**

# **Engineering**

**Level 2**

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

Pre Release Material

May 2014

Paper Reference

**EG208/01**

**You do not need any other materials.**

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

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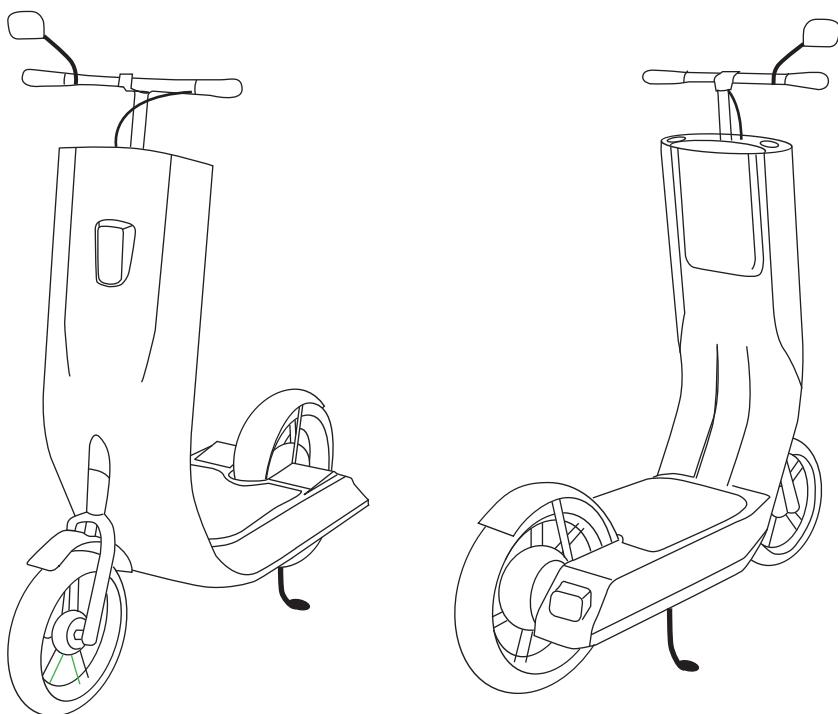
## Case Study – Hydrogen Powered Scooter

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

The new product is called the KX2 which is a scooter powered by a hydrogen fuel cell and a body made from a composite material.

The scooter is designed to be environmentally friendly and provide transport over short distances. This is ideal for college campuses, sports villages or busy cities where quick and easy transport is required.

KleenXtreme wants the KX2 to be manufactured using high volume production processes, including those used for manufacturing the aluminium alloy wheels.



### Instructions

You are to investigate the viability of the KX2 product. Your study should identify the steps KleenXtreme will need to undertake if the product is to be a success.

Your study should investigate the following areas:

- intellectual property
- research and development activities
- financial review
- a range of materials, their properties and forms of supply
- potential impact of hydrogen fuel cells on a range of environments
- high volume production processes (wheels, the body and handlebars)
- sustainability of resources and social impact.