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**Knowledge Rich Curriculum Plan**

GCSE Design Core

Core Technical Principles - 1.2 Energy generation and storage



| **GCSE Design Core** | **Core Technical Principles**  **1.2 Energy generation and storage** |  |  |  |
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| **Lesson/Learning Sequence** | **Intended Knowledge:**  *Students will know that…* | **Tiered Vocabulary** | **Prior Knowledge:**  *In order to know this students, need to already know that…* | **Assessment** |
| **Lesson:**  **Fossil Fuels** | * Students will know types of fossil fuels * Students will know that Fossil fuels are non-renewable sources of energy extracting from the earth * Students will know how industry uses fossil fuels to generate power * Students will know the advantages and disadvantages of fossil fuels * Advantages: Produce power, can burn hot producing long lasting power, Easy to get * Disadvantages: Will run out, non-renewable, bad for the environment | Advantage: a condition or circumstance that puts one in a favourable or superior position.  Disadvantage: an unfavourable circumstance or condition that reduces the chances of success or effectiveness.  Fossil fuel: a natural fuel such as coal or gas, formed in the geological past from the remains of living organisms. | * ***Students need to already know about fossil fuels*** * ***Students need to already know the term non-renewable*** | How is the use of fossil fuels affecting the environment?  Can there be a link between product manufacture and fossil fuel? |
| **Lesson:**  **Renewable** | * Students will know renewable energy sources * Students will know that renewable means to be able to be reused again and again * Students will know how renewable energy sources are used * Students will know the advantages and disadvantages of renewable energy sources * Advantages: Cleaner, Renewable, Safer for the environment * Disadvantages: Slower, not reliable, Takes up space | Renewable: not depleted when used.  Deplete: diminish in number or quantity. | * ***Students need to already know the term renewable*** * ***Students need to already know the term non-renewable*** * ***Students need to already know the term finite*** * ***Students need to already know the term non-finite*** | Compare the use of fossil fuel and renewable, what are the main differences?  How does the understanding of renewable resources affect the products manufacture? |