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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? |