

# Y9 DTE

## KNOWLEDGE ORGANISER

### HT1 – STORAGE PROJECT

#### Technological development

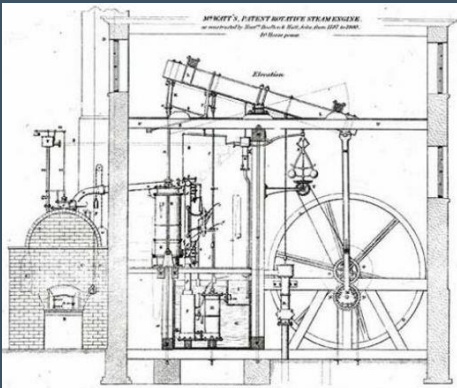
Technologies are continuously being developed.



#### The industrial revolution c.1780

The late 1700s saw the invention of steam powered machines and early automation

This improved living standards for the masses



#### **AUTOMATION**

Robotic automation - greater consistency, accuracy, reliability and productivity than human workers



#### **CO-OPERATIVES**

Co-operatives are organisations or businesses that are owned and run by its members

#### **FAIRTRADE**

Fairtrade is about better prices, decent working conditions and fair terms of trade for farmers and workers in LDCs



#### **Technology push**

- New technologies or technological advancements inspire the creation of new products or drive changes in existing products



#### **Market pull**

Means creating new products or innovations based on what consumers want or need, rather than just introducing technology for its own sake

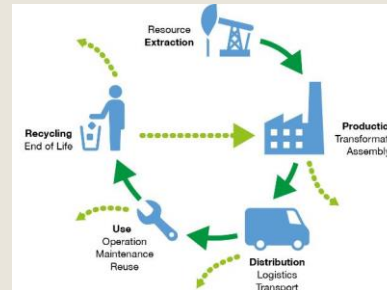
Discuss products that may fit this description

#### **Renewable Energy**

Wind, wave, solar, geothermal, tidal and biomass

#### **Life cycle Assessment**

Conducting an LCA will evaluate the environmental impact on a product



#### **Continuous Improvement**

A Japanese approach called 'Kaizen' (Change for better) rewards employees who suggest and develop improvements, regardless of how small they may seem

# 改善

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#### Cultural Design

Japanese culture is to sit on the floor at mealtimes



#### Society

Societies all over the world perceive language, actions and products differently  
In one country, a product may be very popular, in another, it may not be so well received



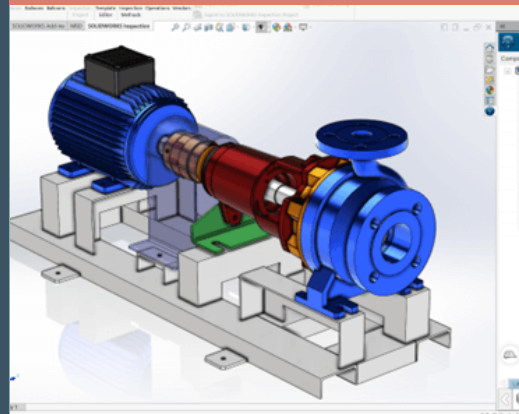
## COMPUTER AIDED MANUFACTURE

Automated machinery is controlled by software to manufacture physical parts  
CAM uses Computer Numerical Control (CNC) and CAD files to generate 3D tool paths for the machinery to follow



## COMPUTER AIDED DESIGN

Computer-aided design is the use of computers to aid in the creation, modification, analysis, or optimisation of a design. This software is used to increase the productivity of the designer, improve the quality of design, improve communications through documentation, and to create a database for manufacturing



## ISLAMIC ARCHITECTURE

Islamic architecture is an ancient style found primarily in Arab states, Muslim-majority countries, and European countries with Arab or Islamic histories, such as Spain and Portugal. Key elements include geometric designs, pointed arches, domes, and decorative artwork, such as calligraphy.



#### Mimar Sinan

Mimar Sinan travelled around the world to places like Baghdad, Persia, Damascus, and Egypt. In 1538 he was given a position as the head architect of the Sultan's government, and he became known as Sinan the Architect due to his beautiful and magnificent designs and buildings.



#### Ustad Ahmad Lahori

Ustad Ahmad Lahori ( c. 1580–1649) also known as Ahmad Ma'mar Lahori was the chief Mughal architect and engineer during the reign of emperor Shah Jahan. He was responsible for the construction of several Mughal monuments, including the Taj Mahal in Agra the Red fort and the Jama Mosque in Delhi;

