

Core Technical Principles (Key words)

Mechanism

Pivot (Fulcrum)

Axle

Wheel

Cam

- Eccentric
- Snail
- Pear

Lever

Health and Safety

PPE – Personal protection equipment

Goggles

Apron

Hair tie

Extension: ACCESSFMM

Key words:

- Aesthetics
- Environmental
- Function
- Cost
- Safety
- Materials
- Customer
- Sizes
- Manufacturing

Year 7 Design and Technology 'Knowledge' Map 1

Design and Technology

Health and Safety

This is an integral part of designing a product. A risk assessment should be carried out to identify and help reduce the risk of a hazard occurring.

Identifying and reducing the risks

A designer needs to consider health and safety throughout the designing process.

Safety during the making of the product

The designer must make sure that the materials and process used to make the product will not cause harm to the maker.

Safety of the product when it is used

To ensure safety of the product when it is used, the designer needs to check that:

- the product is strong enough to support the loads involved.
- the materials are suitable for the purpose and have no adverse effects.
- all hazards are sufficiently guarded (electrical insulation, moving parts, folding components, etc).

Specialist Technical Principles (Key words)

Mechanical

Input

Process

Output

Motion

Rotary

Reciprocating

Oscillating

Linear

Measuring and Marking – Quality Control

Marking out means the transfer of shapes and lines onto the material, as guides for cutting, bending or shaping them. Accurate marking out is essential if the different parts of the product are to fit together properly.



Cutting and shaping

Understand that materials (wood) can be cut using the tenon saw (used for straight lines) and the coping saw (used for curved lines).

Holes can be made in wood by the use of the pillar drill.

Wood can be finished by using the disc sander or by hand using sand paper.

