Year 7 Knowledge organiser MYP- Product Design

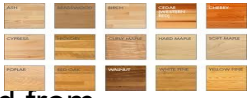
Wilmington Academy

Section 1:1 - Key vocabulary - Related concepts

Function - How does the product work?
Form - What does your product look like?
Aesthetics - What embellishments will be added to your product?
Innovation - How creative/unique is your work/product
Evaluation - How do we reflect on our progress?
Target Market - Who are you designing your product for
Ergonomics - How is the product user friendly?
Adaptation - How does the product change depending on different contexts?
Balanced, Open-minded, Risk-Takers, Principled

Section 1:2 - Woods

Hardwoods -Hardwoods are timber produced from deciduous trees that have broad leaves. **For example - Beech, Oak, Balsa and Jelutong.**



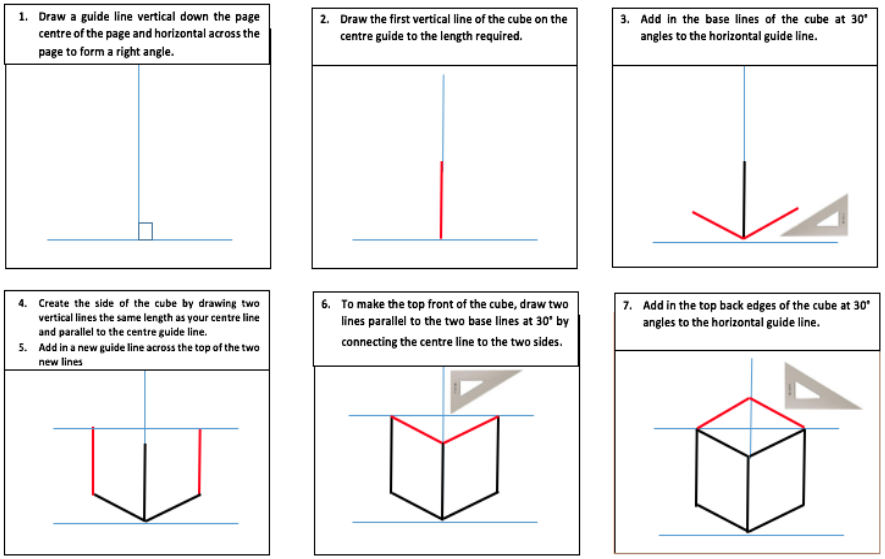
Softwoods - Softwoods are timber produced from coniferous trees that have needle-like leaves. **For example - Scotts Pine, Parana Pine and Western Red Cedar**

Manufactured boards - are sheets of woo such as **medium density fibreboard** (MDF) made from processed timber. Boards are made from a variety of materials such as bonded fine wood dust as in **MDF,** bonded larger wood chips as in chipboard, bonded veneers as in **plywood** and a bonded composite of battens and veneers as in **blockboard**. The advantage of manufactured boards over timber planks is that they are produced in large boards of even thicknesses.

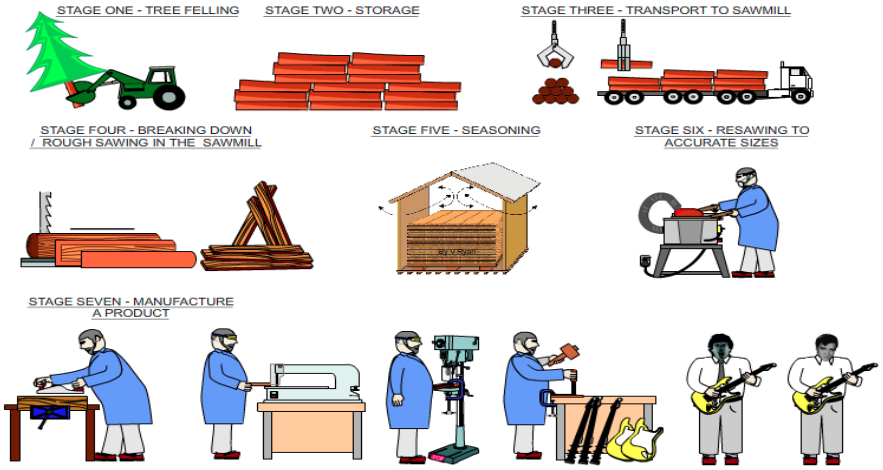
Section 1:3 - Isometric drawing

Isometric Projection

Key words: parallel right angle vertical horizontal diagonal equal isometric edge



Section 1:4 - Raw material to a product



Year 7 Knowledge organiser 1.0 MYP- Product Design

Section 1:5 Tools and processes

Coping Saw

Bandfacer

Sand paper

Try-square

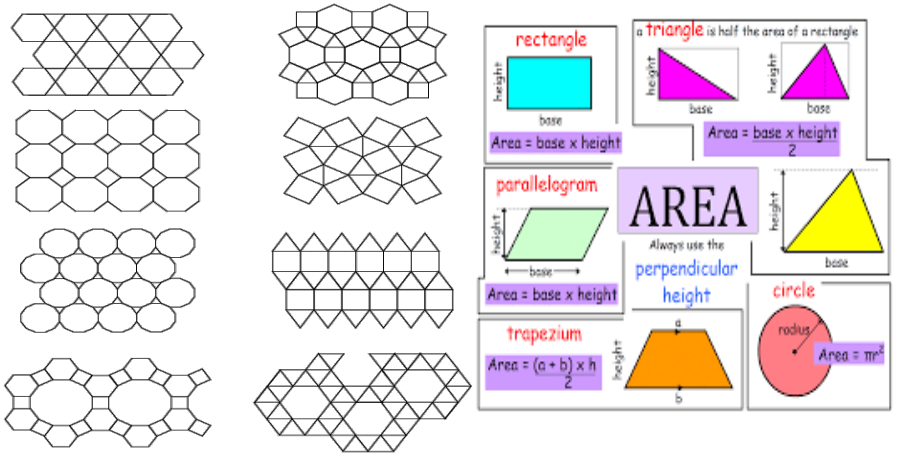
Tenon Saw

File

Pillar Drill

What does each tool do?
What are the H&S rules?

Section 1:6 -Tessellation/ Area



Area: The **area** of a flat, or plane figure is the number of unit squares that can be contained within it. The unit square is usually some standard unit, like a square meter, a square foot, or a square inch.

Tessellation: an arrangement of shapes closely fitted together, especially of polygons in a repeated pattern without gaps or overlapping.

Section 1:7 - Testing my product

Waterproofing test - how can we ensure our products are waterproof? How will this differ between industry and a school setting?

Scratch resistance test - how can we ensure our products are scratch resistant? How will this differ between industry and a school setting?

Drop test - how can we ensure our products are durable? How will this differ between industry and a school setting?

How did this link to real life manufacture?

Section 1:8 - Finishing techniques

Finishing Natural Timbers

Timbers can be treated with a number of surface finishes these include **Paint, Stain, Wax & Varnish.**

Applying these finishes can:

- Seal the wood to protect the surface from heat and water
- Enhance the grain & surface
- To colour the surface
- To give a specific aesthetic appeal.