

# Design & Technology; Resistant Materials

Topic: Container Project

Year Group: 8



### 1. Process; Tools & Equipment Hand held tool used to cut Coping Saw intricate shapes in woodworking Used to cut straight lines in Tenon Saw wood, but not deep cuts due to the 'back' on the top of the blade. A piece of machinery used to Hegner Saw cut intricate curves and joints 3 Try Square Used to check and mark right angles in constructional work 4 Hardened steel in the form of a File bar or rod with many small cutting edges raised on its surfaces; used for smoothing or shaping objects. Manufactured from Steel Rule stainless steel and features metric or imperial (or both) 6 scales along its length. One end is usually flat whilst the other end is usually round. A vertical bandfacer used for Bandfacer =

sanding, finishing & linishing

tasks. (making surfaces flat).

2. Wood Joints				
1	Comb	Consists of a series of alternate notches and square pins of the same width which are subsequently glued.		
2	Dovetail Joint	Consists of TAILS & PINS which when connected can only be removed in one direction.		
3	Butt Joint	Coming together of two edges or faces which are glued together.		
4	Dowel Joint	Used to reinforce Butt Joints by drilling holes and inserting round lengths of wood.		
5	Screw Joint	A type of joint that is fastened by means of a threaded metal rod and a screwdriver.		
5. Materials; Softwoods				
A collective term for the wood which is produced by coniferous trees, almost all of which are evergreen and cone-bearing trees can take up to 20 years before these trees can be used.				
1	Pine	Furniture		
2	Spruce	Roofing		
3	Cedar	Cladding		

Furniture & flooring

3. Process; CADCAM				
1	Laser Cutter	Works by directing the output of a high-power <b>laser</b> through lenses onto a material. Typically woods or plastics		
2	Computer- aided Design (CAD)	The use of computers to aid in the creation or modification of a design idea. 2D Design / SketchUp.		
3	Computer Aided Manufacturing (CAM)	The use of software and computer-controlled machinery to automate a manufacturing process. Laser cutter, CNC Lathe, A3 Router.		

## 4. Materials; Hardwoods

Hardwoods are usually have broad leaves, come from deciduous or broad-leafed trees and take many years to grow to maturity before they can be used (100 Yrs)

1	Teak	Exterior furniture
2	Oąk	Interior furniture / Beams in old cottages
3	Mahogany	Furniture & musical instruments
4	Maple	High end furniture and flooring in bowling alleys and for bowling pins
5	Beech	Kitchen items & musical instruments.

☐ Sand down all wood (P80,P120,P240,P320,P400)

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☐ Apply Danish Oil / Teak Oil first followed by wax to seal the wood. Enhance its appearance & protect it.

Fir

☐ A standard component is usually an individual part or component, manufactured in thousands or millions, to the same specification (such as size, weight, material etc...). Screws, Hinges and Latches are examples of these.

### Across

- 1. Used for sanding, finishing & linishing tasks
- 3. Round lengths of wood.
- 6. These are usually have broad leaves and come from deciduous trees.
- 8. The simplest of wood joints which requires gluing but is not very strong.
- 10. A wood joint which consists of TAILS & PINS
- 12. Standard components used for pivoting joints.
- 15. Hand held tool used to cut intricate shapes in woodworking.
- 16. A piece of machinery used to cut intricate curves and joints.

#### Down

- 1. A hardwood used in kitchen utensils.
- 2. Collective term for the wood which is produced by coniferous trees.
- 4. A type of finish for wood.
- 5. A wood joint which consists of a series of alternate notches and square pins of the same width.
- 7. Manufactured from stainless steel and features metric or imperial measurements.
- 9. Used to check and mark right angles in constructional work.
- 11. Used to cut straight lines in wood, but not deep cuts due to the 'back' on the top of the blade.
- 13. A temporary joint which can be taken apart using a screwdriver.
- 14. A type of softwood used for making furniture.

