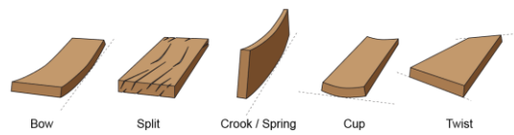
TIMBER

UNIT 5B: TIMBER

SOURCES AND ORIGINS

Environmental impacts
Traditional paints and finishes can have harmful effects on the environment. Oil or solvent based products offer long lasting finishes, but contain high levels of VOCs – Volatile Organic Compounds

Faults


Thinning forests
Managed forests contain trees of different ages
When trees are finally felled they are replaced with new seedlings. Young trees are thinned at around five years old

Timber Provenance
Timber provenance is regulated by bodies such as:
FSC® (Forest Stewardship Council®)
PEFC™ (Programme for the Endorsement of Forest Certification)

Felling
A tree is 'felled' when it is cut down. Traditionally this was done using a hand axe or long saw. Modern felling is done using a chainsaw or agricultural logging machinery that can fell a tree, de-branch it and cut

Manufactured boards
Manufactured boards come in large sheets, often made from waste or recycled wood and adhesives. Manufactured boards are usually produced using lamination or compression techniques

Product Mileage
How much mileage might wood take from tree to end user

Laminated boards
Lamination is the technique of layering materials using heat, pressure and adhesives
Veneers (thin layers) are layered with the grain direction of each layer at 90° to each other

Timber Conversion
Felled trees are cut into manageable lengths to be converted into timber planks and boards. Timber is supplied in two main finishes: rough sawn or planed all round (PAR)

Compression
Compression uses adhesives, heat and pressure to combine shreds, chips or pulp to produce a larger board

Green Timber
Newly felled unseasoned trees are known as 'green'. Green timber is very wet, with more than 50% moisture content. Green timber can be more difficult to work with for interior applications

Rotational Veneer production
Veneer can be made by rotating a tree trunk on a large industrial machine similar to a wood lathe

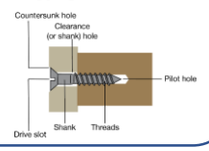
Seasoning
Seasoning timber reduces its moisture content
The two methods of seasoning are **air** or **kiln** drying

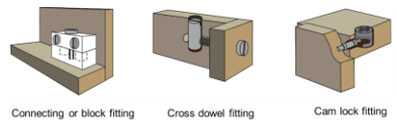
WORKING WITH TIMBERS

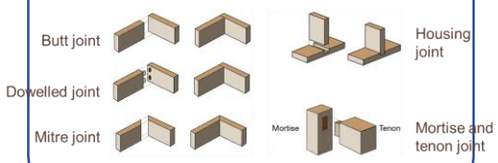
PAR and Rough Sawn
Planks and boards are stocked with different finishes: planed all round, and rough sawn

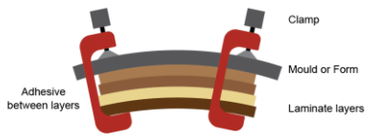
Moulding
Mouldings are decorative timber components with a shaped profile

Wood Fixing and Components
Screws and nails
Dowel rods
Hinges



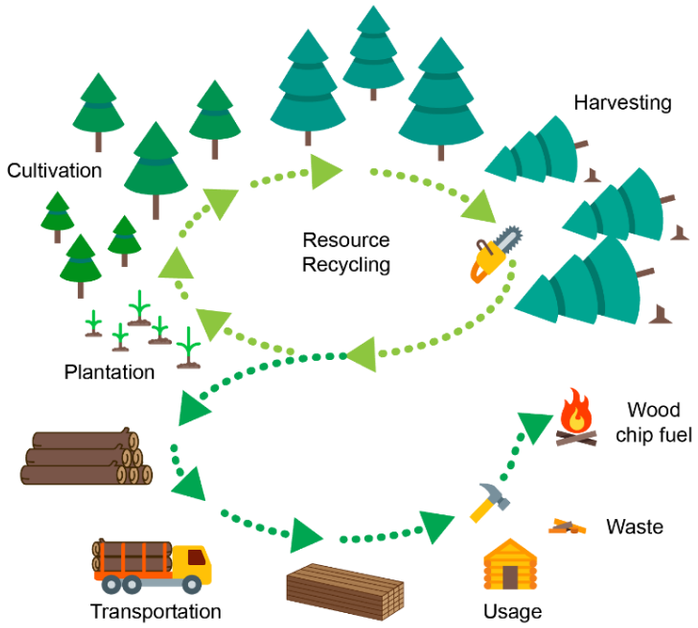
Knock down fittings


Wood Joints


Lamination


Bending
Solid wood can be bent into various shapes by increasing its moisture content

Forestry Management



Using Manufactured Boards

Advantages	Disadvantages
Available in large sheets with few faults or defects	Adhesives used in manufacture can be hazardous when inhaled
Aesthetic flaws like knots can be eliminated, boards require very little finishing	Adhesives used in manufacture can also blunt tools quickly
Made of wood that might otherwise go to landfill	Many traditional woodworking joints cannot be used and the edges are hard to finish
Available in a vast range of surface finishes	Boards are prone to absorbing moisture

Tanalising