## Timbers

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| Natural \& Manufactured Timbers |  |  | 8 | Larch | Larch is a darker shade with brown grain. It is more expensive than other softwoods. <br> Uses: for exterior cladding and boats, Properties: water resistant and durable. |
| 1 | Harwoods | This wood comes from trees that lose their leaves during autumn and are known as deciduous trees. They are slow-growing and therefore less amounts are available, which makes it more expensive. | 9 | Manufactured Boards | They are made from wood fibres, normally collected from recycled wooden materials, bonded together with resins to form sheets. |
| 2 | Oak | Oak is a moderate brown colour with close, straight grain. Properties: tough and durable. <br> Uses: for high quality furniture, doors, skirting and staircases. | 10 | MDF | MDF is made from small fibres which are mixed with a wax and resin, then heated and compressed into the desired thickness. <br> Properties: no grain, and is easy to work. <br> Uses: interior DIY furniture |
| 3 | Beech | Beech is a pink-tinted, closely grained hardwood. <br> Properties: very tough and durable material and is smooth to finish. <br> Uses: It is popular with products that require a hardwearing and robust material. | 11 | Chipboard | Chipboard is made from small 'chips' of timber bonded together to produce a dense sheet. <br> Uses: Kitchen worktops can be made using chipboard. |
| 4 | Mahogany | Mahogany is a dark red/brown hardwood with very close grain. <br> Properties: It cuts and polishes easily, and gives a deep finish. <br> Uses: popular for furniture and cabinet making. | 12 | Plywood | Plywood is made from layers of wood, bonded together at an angle of 90 degrees to increase strength and rigidity. Sometimes, the facing layers can be high quality, e.g. birch, to provide a better aesthetic finish. |
| 5 | Softwoods | This wood comes from trees that are evergreen, possibly bearing pinecones and needles, not leaves and are known as coniferous trees. Softwood trees grow quicker and in more locations. They are readily available and less expensive. |  |  | Wood Joining |
| 6 | Pine | Pine is a pale-yellow coloured wood with darker brown grain. Properties: It is lightweight, easy to work. Uses: construction and furniture products. | 13 | Butt Joint | A simple (but weak) join where the edges of the two pieces are glued together. |
| 7 | Cedar | Cedar is pale and more expensive than pine but not as strong. <br> Properties: Lightweight, pale with even texture, strong. Uses: Good for outdoor use, fencing, decking and shed construction. | 14 | Housing Joint | One edge slots into a groove or slot cut in the other. |


| 15 | Lap Joint | A stronger joint where one piece fits into an L-shaped shoulder cut in the other. | Applying Finishes to Timber |  |  |
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| 16 | DoveTail Joint | Very strong and looks good. A flared 'finger' fits into the same shape removed from the other piece. This is complex to achieve | 27 | Painting | Painting provides a colourful finish but also protects the timber. Glossy, matt or silk paints can be applied with a brush, roller or sprayer. Some include a primer too. |
| 17 | Comb Joint | Also known as a finger joint, where straight lengths on one piece slot into gaps on the other piece. | 28 | Wood Stain | Wood stain is applied to enhance the appearance of the wood. Stains can also provide some protection but normally a coat of varnish is used to seal the stain. |
| 18 | Dowel Joint | A short length of round board inserted into holes in both pieces to reinforce joints. | 29 | Oil and Wax | Oil and wax soak into the timber and can enhance its appearance, whilst repelling moisture and water |
| 19 | Mortise \& Tenon | A very strong joint, a square 'lug' slots into a square channel and is glued. | 30 | Varnish | Varnish provides a shiny coat, usually applied in layers to make it more durable. Glossy and matt style varnishes are common. |
| 20 | Mitre | Two 45-degree angle cuts are made to form a 90-degree angle corner. | 31 | Dip-treating | Dip-treating timber protects the surface of the material, but outdoor timber fences tend to be made from pressure treated timber, which is far more long-lasting |
| Knockdown Fittings/Standard Components |  |  | Wastage \& Addition |  |  |
| 21 | Screws | A short, slender, sharp-pointed metal pin with a raised helical thread running round it and a slotted head, used to join things together by being rotated so that it pierces wood or other material and is held tightly in place | 32 | Wastage | Cutting and removing material from stock forms, such as a sheet, is called wastage. |
| 22 | Nails | A small metal spike with a broadened flat head, driven into wood to join things together | 33 | Addition | Additive processes, like 3D printing, build up the desired shape from an additional source without waste. |
| 23 | Hinges | A hinge is a piece of metal, wood, or plastic that is used to join a door to its frame or to join two things together so that one of them can swing freely. |  |  |  |
| 24 | Handles | A part of an object designed for holding, moving, or carrying the object easily. |  |  |  |
| 25 | Cam Locks | A cam lock is a type of fastener that is often used in cabinet construction. Cam locks allow the cabinets to be held securely together without affecting the outward appearance. |  |  |  |
| 26 | Dowels | A dowel is a short thin piece of wood which is used for joining larger pieces of wood together. |  |  |  |

