

THE STORY FROM TREE TO TABLE

1. Today most tree felling is mechanised and is done by machines known as Harvesters. The machine here is felling a Scots Pine.



The tree that our table is made from is called a Douglas Fir and has been felled by hand using a chainsaw.

2. We have to think carefully about where to put the first cuts in the tree so it falls in a safe way and exactly where we want it to land.



3. We make special cuts to make a hinge- (like a hinge on a door) to control the direction in which the tree will fall.



4. The branches were then removed. This is known as 'Snedding', you are left with a sawlog.



5. The sawlog was then 'Crosscut' into smaller pieces. One piece would be used to make our table.



6. A machine known as a 'Forwarder' was used to carry our sawlog and others out of the forest.

It placed them onto a lorry to be transported to the sawmill.



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7. Once at the sawmill, the sawlog is put onto a special bench with moving rollers.



8. It is carefully positioned and then the curved edge of the log is cut on one side to leave a straight vertical (upright) edge.



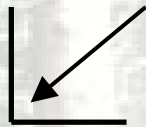
9. The log is then turned onto this flat surface and another straight cut is made.



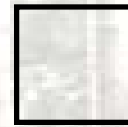
10. This is repeated until all the straight edges have been formed. A long cuboid of wood is left with a square face at each end.



A 'right angle' or 'square angle' is also known as 90°



A square has four sides of equal length.



It also has four right angle corners.

11. The cuboid of wood is then cut lengthwise to form several long thin boards. These will be used to make the table top.



12. Not all the wood is used to make boards. What is left is used to make battens. Battens are thicker pieces of wood which will be used to make the table legs.



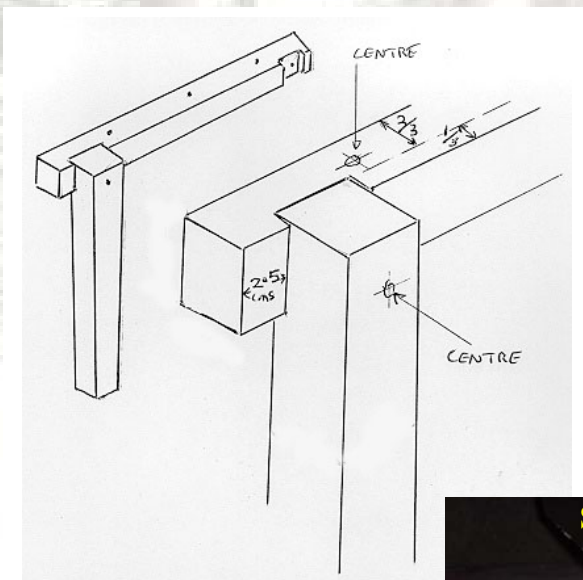
A batten is a sawn strip of wood.

A board is a long wide, flat and relatively thin piece of wood.

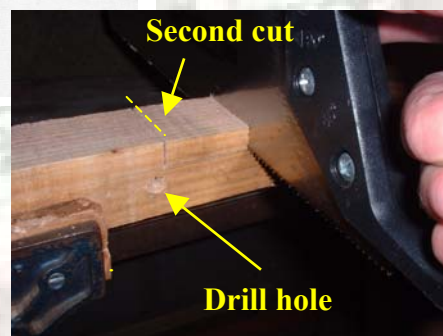
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The carpenter or joiner now has the boards and battens to build our table.

He needs to plan how to cut up the boards to the right lengths to make the table top and he must cut a special piece of wood called the 'crosspiece'. This will be used to join the boards together. The battens must then be cut up into 4 equal length pieces to make the legs. The carpenter must also measure carefully and mark where the bolt holes will go. The bolts will be used to hold the table top together and to keep the legs in place.



Below you can see a section of the crosspiece being sawn and chiselled to fit the table legs.



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Follow up activity

A suggested activity has been included with this resource to help assess how much the children have understood of the process that takes place to produce a table from a tree. Sentences that explain the process have been written but their sequential order jumbled up. Differentiated tasks are outlined below;

- Children write the sentences in the correct order onto an A3 page leaving room next to each sentence(s) to illustrate their work.
- Children cut and paste the sentences in the correct order after discussion with their teacher.
- Poor artists can download the pictures from the 'Story from Tree to Table' information sheets and then cut and paste them to illustrate their work.

The correct sequence

1. Coniferous trees like Scots Pine and Douglas Fir grow in forests called "plantations". The wood from these trees can be used to make all kinds of things from furniture to paper.
2. Some trees are felled by big machines called harvesters and some are cut by hand using chain saws.
3. The branches are cut off the trees and the sawlogs are cut into smaller lengths.
4. The sawlogs are carried out of the forest by a machine called a "Forwarder".
5. The logs are loaded onto a lorry and taken to the sawmill.
6. The logs are put on a special bench with moving rollers and the curved edges are removed to leave a long cuboid shape. One of these logs will be used to make our sawlog table.
7. The cuboid log is cut into thin boards and battens.
8. The battens are cut to make 4 table legs and the boards are cut to make the pieces for the table top.
9. The boards are bolted onto a crosspiece to make the table top and the battens are screwed in place to make the legs.

The table is now complete.

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Douglas Fir *Pseudotsuga menziesii*



David Douglas
1799 - 1834

In 1792, Archibald Menzies, from Aberfeldy, Perthshire, became the first European to find a new species of fir tree (on Vancouver Island in Canada). The tree's scientific name is *Pseudotsuga menziesii*, but its seed was brought back to Scotland by David Douglas and the tree is known today as the Douglas fir.

Some of the original trees planted by Douglas in the 1820s are still growing, at Scone and Lynedoch in Perthshire, and Dawick, near Peebles. It was also on this north west American coast that Douglas found the Sitka spruce, which he immediately identified as an excellent tree that would grow rapidly in Scotland's climate and soil type.



Female flowers



Young cone



Scattered seed

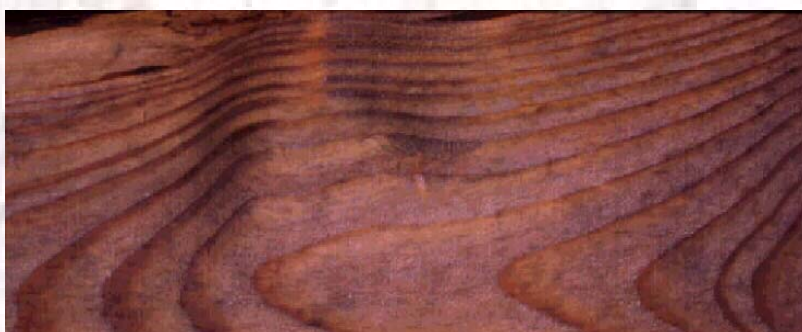


Individual seed, scaled
against 20 pence



Ripe cones

Conifer seed develops from the pollinated female flowers which develop into cones. As the cones develop their scales become tightly shut to protect the seed within. Once the seed ripens the cone scales open in dry weather and the winged seed can be blown away by the wind.



Polished plank showing attractive grain detail



INSTRUCTIONS FOR BUILDING THE TABLE

The Log



The Sawn Log viewed from above



The completed Table



THE PARTS NEEDED:

3 boards



2 crosspieces



4 legs



10 bolts (80mm X 6mm)



10 washers



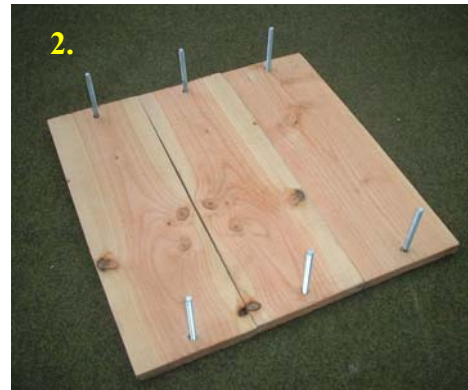
10 wing nuts



Lay out the boards with the best sides facing downwards on a clean, smooth surface. This is because you are making the table upside down.



Put the bolts through the boards sticking upwards through the holes.



A space called a recess has been cut for each leg.



Position the crosspiece on to the bolts with the recess facing inwards. Fit a washer and then a wing nut onto each bolt and tighten until secure.

Fit the legs in to the recesses. Attach with bolts and tighten with washer and wing nuts.



Note that the position of the wing nut on the crosspiece may need to be slightly adjusted to allow the leg to be positioned correctly.

