

## Manufacturing



### Joining materials

#### Wood joints

Joining timber using components

### Industrial production techniques

Scales of production

### The environment

Environmental issues

Renewable energy

## Useful web links



### Finger joints

More about finger joints from the technology student website.

[View the finger joints page >>](#)

### BBC Bitesize

Revise more about wood joints at the BBC bitesize site.

[View the bitesize joints page >>](#)

### Relevant DT links

Need to learn more about woods? Then try these links below.

[Softwoods >>](#)

[Hardwoods >>](#)

[Manufactured boards >>](#)

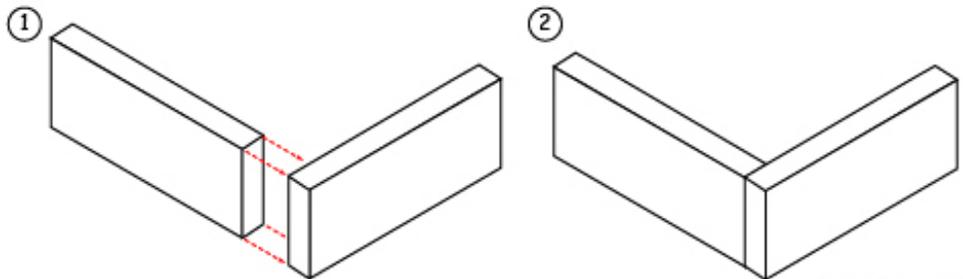
## Wood joints



There are many wood joints available to make, joints are used to build strength into products. The joints below are the joints that are commonly used in schools. Note only glue is used to join these joints together.

### 1. Butt joint

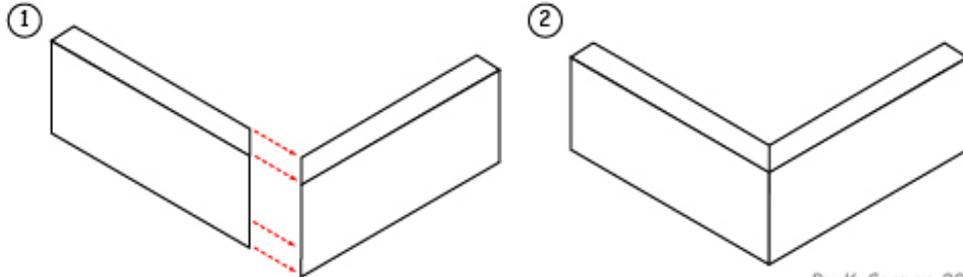
A very simple joint but it is also very weak. They tend to be used for making picture frames, corner pieces and nails are often used to strengthen the joint.



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### 2. Mitre joint

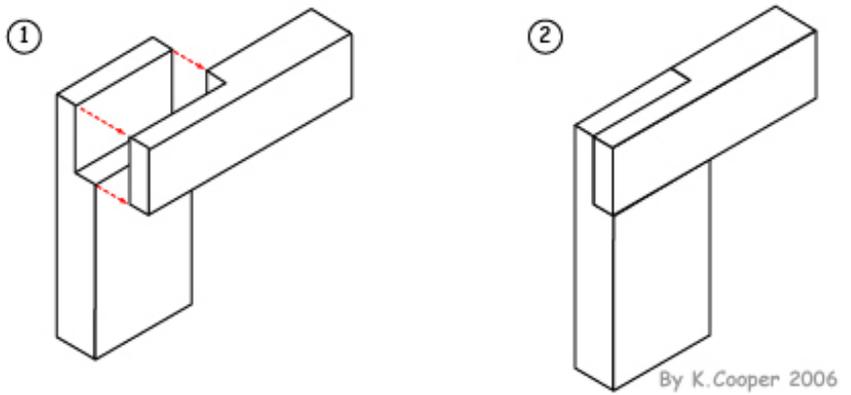
Mitre joints are often used to produce the corners of picture frames and boxes. The mitre needs to be cut at a 45 degree angle, this is often used with a mitre saw that can cut at many different angles.



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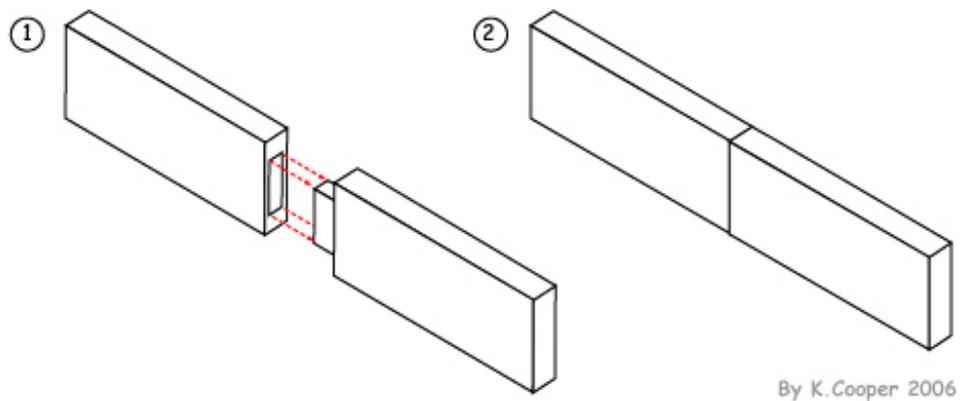
### 3. Halving joint

There are many versions of the halving joint but they all involve removing half of the wood from each piece using a saw or a chisel. This joint is often strengthened with dowel.



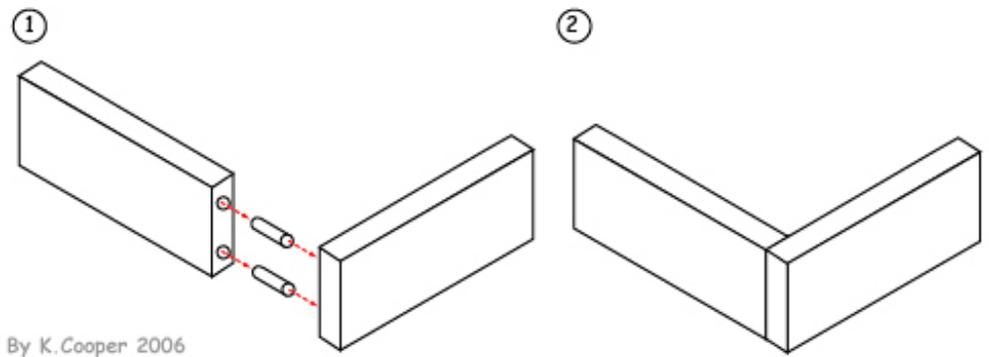
#### 4. Mortise and Tenon

This is a very strong joint. The joint is split into two parts one part is the tenon named after the tenon saw, the other part is the mortise which is named after the mortise chisel. Within industry the joint is milled using a milling machine.



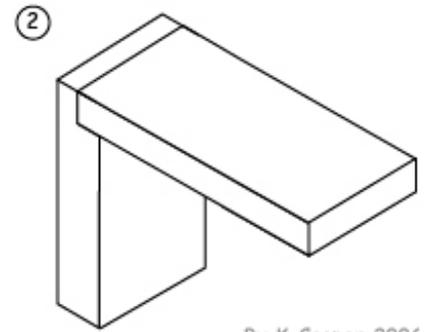
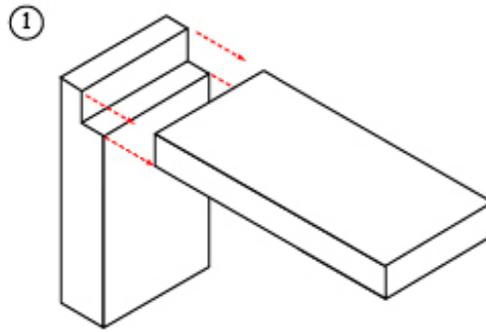
#### 5. Dowel joint

This joint is quite easy to make, it consists of drilling accurate holes in both sections of wood and joining them with dowel pegs. Within in industry this is often used to construct flat pack furniture.



#### 6. Lap joint

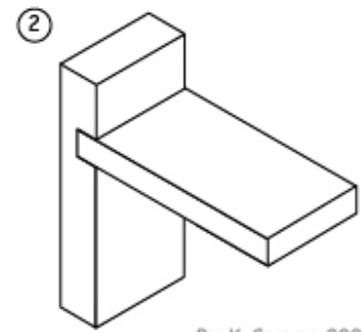
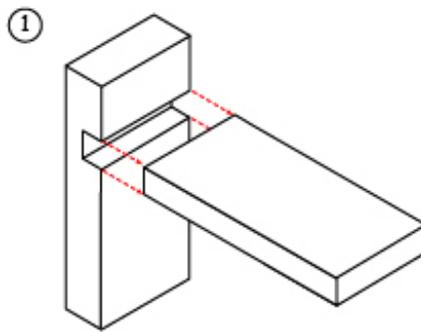
This joint is only slightly stronger than the butt joint. There is however a bigger surface area for gluing. This joint is often strengthened with nails.



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### 7.Housing joints

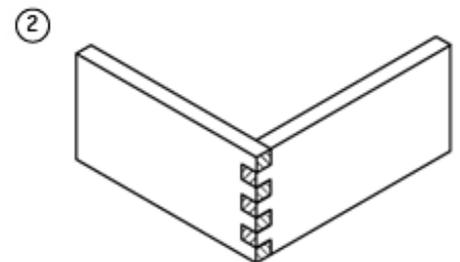
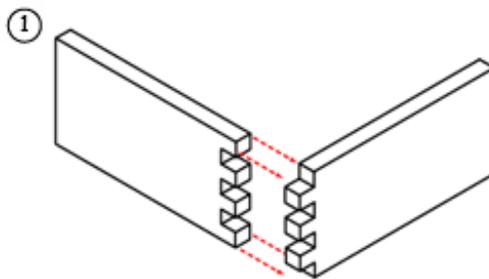
This is just a simple slot cut into one piece of wood to increase the glue area. This is often done with a router and works very well in MDF.



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### 8.Finger joint

This is the strongest joint on this page, the only joint that is stronger is the dovetail joint. The finger joint can be difficult to make but looks very good. It has a lot of surface area to glue together.



By K.Cooper 2006



Quiz time!

Mr DT says 'Read the text above and then answer these questions below'. Write your answers on a sheet of paper, dont forget to write your name on the sheet!:-

- 1.) Draw two joints from above on a seperate sheet of paper, and make notes.
- 2.) Which is the weakest joint?
- 3.) Which is the strongest joint?
- 4.) What is a mitre saw?
- 5.) What two tools are used to make a mortise and tenon joint?