Chisels
This worksheet is about chisels that you use to cut timber by chipping and shaving.

What you will learn
When you have finished this worksheet, you should be able to:

- Use a chisel correctly and safely.

Things you need before you start
Materials
You will need some scrap timber to work on.

Tools or equipment
A chisel
A mallet or hammer
A clamp or vice

Course resources
Course video. Video player
Introduction

Chisels are used to make small cuts and shapes in timber by chipping and shaving wood away.

They are made in lots of shapes and widths.

They must be sharp to work properly.

Use them with great care – it is easy to cut yourself.

What is a chisel?

A chisel is a cutting tool with a wooden or plastic handle and a steel blade that is sharp at one end.

The blades come in different shapes and sizes for different jobs.

- Narrow blades (10mm) are good for making square-shaped holes or grooves
- Wider blades (25mm upwards) are good for cutting out larger shapes and slices
- The ‘firmer’ chisel is stronger than the ‘bevelled’ design but it will not do such fine or accurate work.
- So firmer chisels are usually used for heavy jobs and bevelled for more difficult bits.
What is a chisel used for?

It is used to:

• cut unwanted wood from joints
• cut shapes in pieces of timber
• trim sawn timber to make a good fit.

A chisel can be used by

• pushing it into the timber by hand pressure
• hitting it with a mallet (like a hammer, but it has a large wooden head).

You can use a hammer instead of a mallet — but

• it is more difficult to hit the chisel with the small hammer head
  (you might hit your hand instead)

• the hammer can damage the chisel handle.
How do I use a chisel?

Step 1
Fasten the timber tightly in place with a clamp or a vice.

Hold the handle of the chisel with one hand, guide the blade of the chisel with your other hand.

Put the chisel edge on the timber at the angle you need.

Step 2
Put pressure on the blade as you push it forward.

Always push AWAY from you. NEVER pull towards you or push towards any part of your body. If the chisels slips you can hurt yourself very badly.

Keep your hands away from the cutting edge.

Cut off small bits of wood at a time, instead of large chunks.
Step 3
If you need to use more force,
• Hold the chisel handle in one hand,
• Place the chisel edge on the timber at the angle you need,
• Use the mallet like a hammer and hit the chisel squarely on the head.

Hit or tap gently.

This is a good way to remove lots of extra wood.

To cut out a shape
For example, to make a shape for a hinge or part of a joint

1. Mark the timber.

2. Cut down along the marks with the chisel
   Make your cut about 4mm deep.

   Cut in stages along the lines if you need to.
3. Cut small shavings along the grain,

OR — remove thicker pieces across the grain

4. Cut down again and repeat the steps if you need to go deeper.

If you are cutting a shape all the way across the timber, it is easier to saw down each side, then chisel out the waste in one piece.
Safety tips for chisels

• Think — if the chisel slips — where will it go?
• Make sure you are cutting away from your body
• Keep your fingers away from the cutting edge
• Hold the timber firmly in place — use a vice or a clamp.
• Push or tap the chisel firmly — but not too hard. Let the chisel do the work.
• Blunt chisels can be dangerous — they make you push too hard — and slip.
• If your chisel is blunt — don’t use it. Find someone who knows how to sharpen it.

Don’t use a chisel as a screwdriver — or for opening tins. It is dangerous and ruins the chisel.

Activity

1. Find out what chisels you have available. What sort of jobs can you do with them?

2. Practise cutting with hand pressure and then with a mallet:
   • downwards to trim a piece of timber
   • downwards to cut the outside marks for a joint or a hinge.

3. Practise cutting with hand pressure and then with a mallet to
   • cut out the wood for the joint or hinge
   • shaving along the grain
   • cutting from the side.

4. Chisel out the waste material between two saw cuts across a piece of timber to form a half joint.

5. Keep practising!