

Name _____

Class _____

Date _____

By the end of this worksheet I can...

- ☐ describe mortise and tenon, lap, rub, halving, dowel, rebate and housing joints and where they are used
- ☐ choose between PVA and epoxy resin, screws, nails, nuts and bolts, pop rivets and welding
- ☐ describe how to prepare and apply each surface finish: sanding, polishing, varnish, oil, stain, wax, paint, dip coating
- ☐ describe how to finish the edges of acrylic

I DO**Worked example** Read how a full-mark answer is built

A clear acrylic phone stand has been cut out with a coping saw.

1 Describe how the edges of the acrylic would be finished to a high quality. (3 marks)**Full-mark answer** each ✓ is one mark

Draw file the edge to remove the saw marks, keeping the file flat ✓. Rub down with wet and dry paper, moving through finer grades ✓. Polish the edge with acrylic polish and a soft cloth to a clear finish ✓.

Why marks are not awarded

"File it, then sand it with sandpaper, then use steel wool."

1 mark: filing scores, but sandpaper and steel wool are both abrasives and count as one at best; glass paper is not suitable for acrylic.

WE DO**Guided practice** Use the starters and word bank to help you

Holes are drilled in the acrylic before it is bent.

2 Explain why the holes are drilled before bending. (1 mark)**Sentence starters**

One reason is ... because ...

Another reason is ... so ...

Word bank

chance · cracking · support · position ·
accurately · easier · Acrylic

Tip: 1 marks = 1 separate, developed points.

YOU DO

On your own No notes. Check your answers afterwards.

3 Quick check: tick one box for each.

- a) Which joint is best for fixing shelves into the sides of a bookcase?
☐ Housing ☐ Halving ☐ Mortise and tenon ☐ Lap
- b) Why are knock-down fittings used in flat-pack furniture?
☐ They are permanent, so the product can't be taken apart ☐ Product can be packed flat and assembled at home ☐ They are stronger than any traditional wood joint ☐ They hide every screw, so the product looks seamless
- c) What is the purpose of a pilot hole for a screw?
☐ To guide the screw and stop the wood splitting ☐ To let the screw head sit below the surface ☐ To make the screw easy to remove later ☐ To hold extra glue around the screw
- d) Before varnishing wood you should...
☐ Sand across the grain with a coarse paper first ☐ Wet the surface and varnish while it is still damp ☐ Apply a coat of oil to seal the grain beforehand ☐ Sand with the grain through finer grades and remove dust

4 Key terms: write the letter of the matching description next to each term.

1. Mortise and tenon	_____	A Two-part adhesive that joins different materials.
2. Housing joint	_____	B Carcase joint for shelves in bookcases and cabinets.
3. Knock-down fitting	_____	C Non-permanent fitting for flat-pack furniture.
4. Epoxy resin	_____	D Strong frame joint for tables, chairs and doors.
5. Pop rivet	_____	E Hot metal dipped in plastic powder: protective, coloured, grippy finish.
6. Dip coating	_____	F Joins thin sheet from one side only.

A copper key fob is joined to a beech handle.

5 Name a suitable adhesive and explain why it is suitable. (2 marks)

The acrylic phone stand needs a single 60° bend.

6 Describe how the acrylic would be bent accurately. (3 marks)

An oak coffee table is to be finished with varnish.

7 Describe how a high quality brushed varnish finish would be achieved. (3 marks)

Check and reflect

Mark your answers with the answer sheet. Go back to the checklist on the site and re-rate each “I can” statement above. Which one still needs work?
