

THE JUNIOR HACKSAW has slipped into primary classrooms under false pretences. It was never intended to be a woodworking tool - it was designed for trimming the ends off small bolts, cutting small bore pipes, etc. - it rightly belongs in the metalworker's toolbox. It certainly never belonged anywhere near a bench hook (*see opposite*). Still, they work well together, although there are niggling minor incompatibilities. To equip a class with them costs very little.

All junior hacksaws use the same blades. The best is the simplest. The ends of the frame are set slightly further apart than the length of the blade, so you have to press the end of the saw against a firm surface to fit or remove a blade.



If the floor is carpeted I tend to push against the floor, a bench hook works well but for real security press into a wall/worktop corner.

The top three saws on the left are all junior hacksaws. **A** is a basic saw which is very cheap and almost certainly the best kind to buy for your classroom.

B is equipped with a lever to make fitting the blade easier. We would question the wisdom of using these in school. You will find that as soon as the children discover how easy it is to remove the blades and then replace them you will be constantly turning blades the right way round! One or two would be useful though - they illustrate a very practical use of a second class lever.

C is probably the best for doing the job the junior hacksaw was designed for - but the worst for primary school use. It is just too difficult to control with the 'in-line' handle.

Illustrated are three other forms of saw that you might come across.

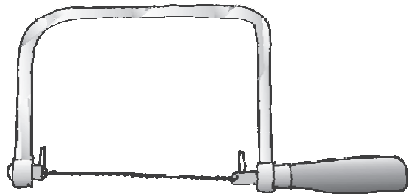
The Gents Saw. A stiffened wide blade means that this saw should be perfect for cutting straight and 'square'. The ones that are available are very disappointing - the handles are clumsy and the teeth are too big.

The Coping Saw. Necessary if you wish to cut curves. You may, for example, want to cut a circular hole in a piece of board - you need a coping saw. *In the many years we have taught primary school technology we have never used a coping saw in a class. You have to ask yourself, "Do I really need a circular hole cut in a board?"*

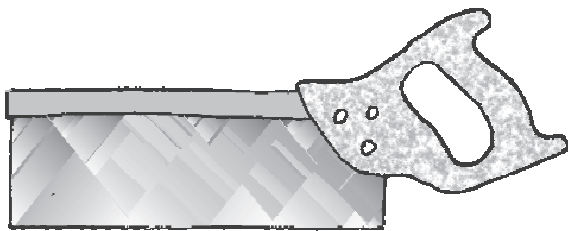
The Tenon Saw. An aristocrat among saws. The tool of cabinet makers. Unnecessary in the classroom unless you work with larger section wood. If you are using 25 x 50mm timber for instance, the junior hacksaw is useless. You need a tenon saw.



gents saw

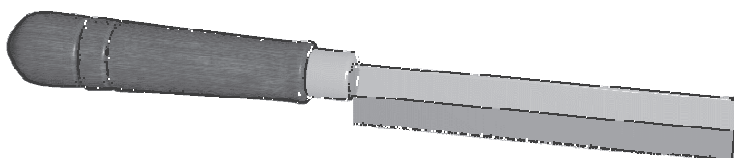


coping saw



tenon saw

Most saw blades are designed to cut one way only. That is usually when the saw is being pushed. There are exceptions to this rule (see below). Some log saws cut in both directions and a couple of traditional saws, the fretsaw (for wood) and the piercing saw (for metal), cut on the downstroke, when they are being pulled. Hacksaw blades cut when they are pushed. They should be fitted into the hacksaw so that the tiny teeth point forward. You will need to hold the blade against the light, (and put your specs on), to see which way they point.



This is a delightful little saw. Called a **modelling saw** in at least one catalogue the blade is only 1cm deep and it's very sharp. More risk to the user, perhaps, but for older children who want a perfectly square cut across thin section wood, this is the tool. Take care - the thin blade could be damaged by careless handling. The only unusual thing about it is that it cuts on the PULL stroke!