

Welcome to Wood School, where beginners will learn new skills, discover what they need to equip their workshop, and how to get the best out of tools and kit. Meet our resident student, Simon, and pick up tips to make more of your precious time woodworking

THE INSTANT EXPERT

## No.1 Spinning Cramps

If you want to look Premier League when you're only really Vauxhall Conference, learn how to spin G-cramps. It's not, actually, much of a trick, but it looks as though you've given it some thought, and above all it opens or closes G-cramps much more quickly.

Hold the cramp by the screw and rotate your hand in a circle. Once you get it right the cramp will spin with ease, but there is a knack to it.



NEXT ISSUE! Find out how to twist and fold a bandsaw blade so that it can fit in a bag, without cutting yourself

# Planing as trees grow

To attempt any woodworking task you have to understand grain, and to do that it's best to remind oneself how wood grows

Trees do their growing, as one might expect, in spring and summer. The initial growth spurt adds a layer of softer, more porous material through which water can travel from the roots to the new leaves. By summertime the growth slows to produce denser 'wood' that's designed to support the tree. This latewood is usually darker and harder, and it is the difference between the two growths that lets us count the rings of a tree to determine its age. By looking at a cross-section through a tree you can identify years of exceptional growth, usually linked to climatic conditions.

Both types of growth comprise cells, which are in principle aligned up the tree. The cell walls are made from cellulose, and how they are laid down determines the look and feel of a species, and how easy or challenging it is to work. The alignment of the cell structure comes to be known as the grain, just as, to a far lesser extent, there's grain in a piece of rolled steel. It is that alignment, the shape of the

cells, and the difference in their construction during the growing season that establishes the suitability of a species for any particular woodworking task.

The two most basic skills for a novice woodworker are planing to width/thickness and cutting to length. The grain of a board has a greater impact upon planing than sawing. The cells are designed for the carriage of moisture upwards in spring, and, to a lesser extent, nutrients downwards from the photosynthesising leaves later in the year. They are arranged just like a block of drinking straws, glued together in layers. If you cut through the straws at an angle you reveal the open ends as ellipses. Now imagine running



**Shavings** You can tell a lot about the grain and texture of a species by its shavings. The ash piece here has a wavy grain, around the knot you wouldn't know which way to plane. The elm has a coarser texture, and often a wavy grain, but it is very even and has produced unbroken shavings from the edge



**Tearout** If you were looking only at the top face of this piece of softwood 2x1 you wouldn't know which way to plane, but look at the edge and you can see that you must be working from left to right, as the grain is angled upwards that way. You might be able to see that planing this piece from right to left has torn the grain

your hand across this surface, as if you were stroking fur. One way, obviously, is easier going than the other. That's exactly what happens when you plane 'with' or 'against' the grain. That the 'straws' in wood are of inconsistent density exacerbates the problem.

The best way to plane is along the cells' axis. The fibres are longest that way, and less likely to break away, just as the walls of the straws will flap around when you rub your fingers across the block.

There will be times when you

have to plane 'across the grain', but those are relatively rare. When it comes to planing 'along the grain' you want to be working downhill. If you don't the fibres are likely to tear or chip (see above). Tearing, when fibres are pulled from the face of the board, leaves an ugly gash that has to be planed away. Chips tend to be shorter, and break away more often when you are using machines or power tools, but the consequences are the same in that you have to sand or plane back the timber to produce a defect-free surface. Tearing and chipping can happen at any time, depending on factors often beyond our control, but planing 'with the grain' will certainly improve your chances of a successful result.

Fortunately you can use the annual rings to indicate the grain direction, like contours on a map. Sometimes you can tell by the arrow-like markings on the surface you are planing to judge the direction (whether you are going down a valley or up a hill) but more often you look at the surface at 90° to tell which way to plane for a perfect, satisfyingly smooth result!

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# Who said planing is easy?

Woodworking rookie Simon Burwell reports on his first few days in the *British Woodworking* workshop



**Platform** Simon is hampered at home by the lack of rigidity in his Workmate and finds planing at the *British Woodworking* bench far easier. He also learnt how to move his bodyweight around, and why over-extending your arms is a problem



long time since I have had to learn a completely new skill. As Nick put it: "You're delightfully raw." I don't know if he was expecting such a novice.

## Practising works

The only way to progress is to practise, to force your muscles to learn this new skill, so at home in the garage I put in a couple of hours one afternoon. After the first hour, I was really beginning to tire. My arm was killing me, but the progress was



Headquarters, Nick instantly sussed where I was going wrong. I was attempting to plane without putting my bodyweight behind the action. I was keeping my body still, only using my arms, as they stretched I was losing control. Transferring the weight from my back foot to my front foot, following the motion of the plane, I found my planing rhythm again. So Nick set me some homework, giving me a rough-cut piece of timber, with the brief to bring it back planed and square.

After the workshop, my garage was a whole new ballgame. Suddenly life was a lot more tricky. I have a Workmate-type bench, which is so very different to the solid, immovable bench at the workshop. As soon as I tried to plane on this, the timber was jumping all over the place, the Workmate relying on weight from your foot to keep it stable. Keeping my weight on the back foot as I started to plane meant that the bench was unstable just as the blade hit the timber. I spent an awful lot of time chasing my tail, trying to get everything square. I got the job done eventually, but not as accurately as I would have liked. I have decided that the first thing I need to make is a bench.

obvious. I was now getting a nice, smooth action and the shavings were coming off evenly in a very pleasing manner. As I continued, things started to worsen, so I gave it a rest until the following day.

When I returned, I couldn't seem to make any progress. The plane was chattering and my nice smooth action had gone to pot. Very dispiriting. I decided to call a halt and wait for the expert's opinion.

Back at *British Woodworking*

# Nine tips to start planing

## 1 Keep it solid

As Simon has found out, you can't get very far if you don't have a solid platform with which to work. If that's a Workmate, then sling some sandbags over the bottom rails. If it ever stops raining there might be some going free! Make sure there isn't any give or flutter in whatever holding device you are using.

## 2 Start simple

Don't start by trying to plane a wide piece of oak. It's hard work for anyone. Far better to buy a piece of 2x1 or 2x2 from a local B&Q and practise planing along the edge. If the wood is too narrow you'll have difficulty keeping the plane flat; if it's too wide the friction will be too great and you'll be fighting the wood. Something about 1-1/2in wide is perfect to get going.

## 3 Choose your wood

Once you decide to move on from B&Q softwood make sure your leap is to Grand Canyonese. Poplar is a good species to try next, if you can get hold of it. It doesn't work that well by machine, but hand planes beautifully. Pallets are often made from poplar if you want to find a cheap source. Other soft hardwoods with even texture and straight grain include sycamore, lime and elm, though the latter can be quite wavy.

## 4 Get your posture right

Plane with your weight behind the tool. Your left foot (if you're right-handed) should be pointed forwards, and your right foot is likely to be slightly splayed outwards, a bit like a snooker player.

## 5 Don't be rigid

You need to be flexible to plane well. Use the bend of your knees so that your body moves as you move along the board. Try not to over-extend your arms as the tip of the plane is likely to rise near the end of the stroke.

## 6 Feel for the sole

The aim is to keep the sole of the plane in constant contact with the surface of the wood. That means putting some weight on the front handle at the start of the stroke and then gradually transferring the pressure along the plane so that by the end of the stroke you have your weight over the back.



## 7 Find something flat

Don't try to straighten bent wood when you are learning. That requires experience and a good feel for both your tools and the wood. Instead start with something that's flat already and try to keep it that way. Don't worry if the edge you produce isn't square to the sides: that will come. For the moment you just want to develop a good action and a confident stroke.

## 8 Keep it horizontal

Even if you can't plane an edge quite flat yet, it's a good idea to get into the discipline of making sure the wood itself is horizontal to the ground. This helps you build up a muscle memory.

## 9 Use our Sharpening Voucher!

Pretty soon your tools will lose their sharpness. Learning to sharpen them is as time-consuming as building your planing skills. Soon you'll be fighting a dull edge, wondering why it's chattering. Find a woodworking friend or local pro and ask them to sharpen your plane blade. It should only take them a minute. Take this article with you: we'll send a free copy of *British Woodworking* to anyone who helps out a beginner!

When Nick asked me to become the resident novice at *British Woodworking*, I jumped at the chance. I'm not sure what qualifications I need for this; perhaps a lack of qualifications. These I have in abundance. I'm quite happy to knock a simple bookshelf together out of MDF or make a linen cupboard out of 2x1, but when it comes to working with the real stuff, I haven't got a clue. I love the feel of wood and am fascinated by the infinite variety in colour, pattern and texture that is waiting to be discovered in a piece of timber. I have always been intrigued by the process of turning this raw material into quality pieces, whether it be furniture or fruit bowls. I couldn't wait to get stuck in.

This was my first visit to a woodworking workshop. It felt like a homely place, somewhere I could happily spend a lot of

my time. It wasn't like my first time in a music studio when I started work as a recording engineer. Then the massed ranks of machines and flashing lights had been both intimidating and awesome. The machines in the workshop seem more recognisable and friendly, more tactile and with an obvious function.

A very basic skill for any woodworker is planing. This is where we decided to start. It looked very simple really. You just make sure the sole of the plane is lying flat against the edge, keeping the pressure on the front of the plane to begin with, then transfer the pressure to the back as you go along the piece of wood.

Of course, it's not as easy as it sounds. My main mistake was not maintaining the downward pressure on the plane through the whole movement – I tended to lift off at the end. I found this quite frustrating. It is a