

The Home HANDYMAN

May/June 2020 • Vol 30 No 05



SA'S ORIGINAL
DIY
MAGAZINE



MAKE A PICNIC TABLE

What you need to know about windows

• Create the perfect dining room



WOODEN CUTLERY HOLDER

+plus

- Make an easy dog bed
- Hang frames like a pro
- Lighting tips for every room in your house
- Tough cleaning jobs made easy
- Kid's project: a clay leaf dish



Five woodworking projects inside!

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Power Planner



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(Plunge Type)



M3600B
Router



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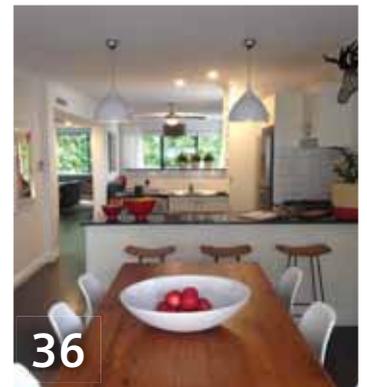
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The Home HANDYMAN



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FROM THE WORKBENCH

The dangers of dust

In December 2019, a pneumonia outbreak – a new strain of coronavirus – was reported in Wuhan, China. On 31 December 2019, the outbreak was traced. Named SARS-CoV-2, as of the beginning of April, when I was writing this, there had been over 70 000 confirmed deaths and more than one and a quarter million confirmed cases in the coronavirus pneumonia outbreak.



One of the recommended precautions against the virus is to wear a facemask, the sight of which took me back close to twenty years to my first visit to Germany just after taking over as editor of *The Home Handyman* for the first time. I was invited by Festool, along with journalists from around the world, to tour their German facilities and factories. Included in the tour were a number of visits to woodworkers in the area. Each of them, without exception, wore dust masks, and we were given new masks at each new workshop we visited.

Wood dust becomes a potential health problem when wood particles from processes such as sanding and cutting become airborne. Breathing these particles may cause allergic respiratory symptoms, mucosal and non-allergic respiratory symptoms, and cancer. The extent of these hazards and the associated wood types have not been clearly established, and because it is an 'unseen' hazard, unlike a spinning circular saw blade, it is often not given enough attention.

Unfortunately, the dangers associated with dust did not appear on anyone's radar until around 1985, but nowadays, there are multiple ways to go about protecting yourself from dust exposure while woodworking. The best way to protect your lungs is to collect the dust at the time it is created. This can be achieved by investing in a dust collector, an extraction system or an air filtration system. Also, please wear a mask to capture the dust particles before you are able to inhale them – we are far behind the Europeans and I don't often see South African woodworkers wearing masks. Make it part of your routine – this cheap addition to your 'wardrobe' can ensure that you enjoy your hobby for many more years.

Whether cutting, sanding, sawing or routing: dust is produced as part of day-to-day operations in workshops, on construction sites and at other mobile operating sites. However, a dust-free working environment is not just good for your health, it is also important in order to ensure that your work produces good results. If dust settles on the workpieces, this is guaranteed to impair quality. It has also been proven that tools from which dust is actively extracted have a significantly longer service life.

So try make your working environment as dust-free as possible – it makes a lot of sense...

Gregg

DIY fails



Table too low? 'A boer maak 'n plan'



Talk about upcycling



That looks like it is stable...



TV too big for your TV cabinet? No problem!



Duct tape – a million and one uses



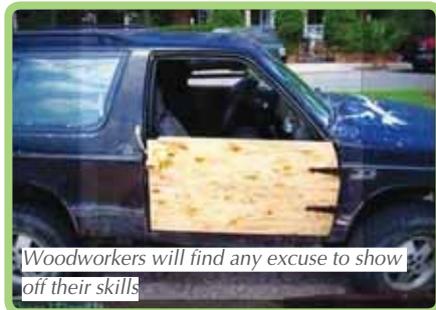
Taking space-saving a bit too far



You will need a 4X4 to get into this garage



Honey, is this straight?



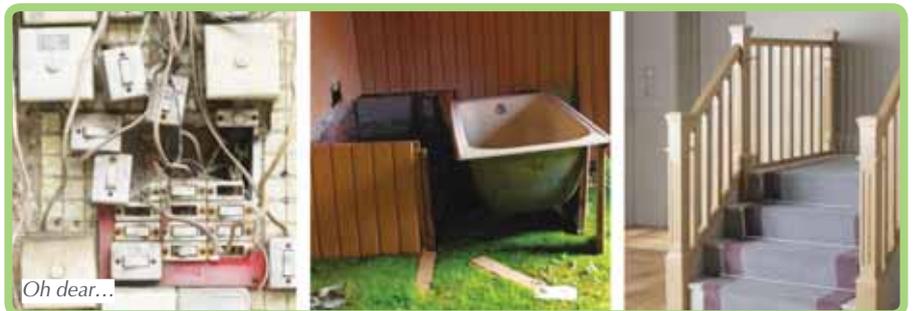
Woodworkers will find any excuse to show off their skills



Note to self: Watch out for speedbumps when driving with paint



Where to from here?



Oh dear...

OFF THE SHELF

Your guide to the latest products in the world of DIY

Compound mitre saw

The Makita MT range of Standard Duty Industrial Power Tool provides the quality you expect from Makita at an affordable price

The Makita MT Standard Duty Industrial Compound Mitre Saw M2300B is economical and durable with a 255mm diameter blade. It has a 1500W motor and a no-load speed of 4 200 rpm. It bevel cuts up to 45° and has a maximum cutting capacity of 75 x 90mm. At 0° the maximum cutting capacity is 75 x 130mm. This model is fitted with a dust bag but can also be connected to an industrial vacuum cleaner, for a cleaner more productive working environment. Stability is increased by the added tip-resistance with a stay plate on the rear of the base. The MT M2300B weighs 14.7kg and has a 2.5m power supply cord and is supplied with a Carbide-Tipped saw blade.

For more information, call on 011-878-2600 or visit www.makita.co.za



A new range of insect killers

LED camping mosquito killers for those who love the outdoors



We've all been there. You settle in for the night looking forward to a good sleep only to be awoken by a familiar buzzing sound. Despite spending most of the night trying to fend off mosquitoes you awaken the next morning exhausted and covered in itchy bites. Scenarios like this are common in South Africa, especially during the warmer summer months. Mosquitoes and other insects are annoying when they invade your space. Apart from being disruptive, they're also known to cause irritating bites and stings and even pose a hygiene risk.

Insect killers, or 'zappers' as they're sometimes known, are a convenient solution and help create a hygienic and pest-free environment. Eurolux Lighting has a range of insect killers that are safe, efficient, and cost-effective. They can be used inside and outdoors, making them a handy addition to any household. Use them in areas like the kitchen and bedroom or take them with you on your next camping adventure.

LED insect killers attract insects using the glow of an LED bulb. The insects then get caught inside a wire mesh where an electrical current electrocutes them. Eurolux has a wide range of insect killers to suit your needs. The LED models are energy-efficient options, while rechargeable models offer on-the-go convenience.

For more information, visit www.eurolux.co.za



Wedgit Hose and Connectors outperform competitors in Accelerated Life Tests

A range of hoses and connectors were put through strenuous trials by a test team of homeowners, gardeners and builders over a twelve-month period

A wide selection of garden hoses and connectors, including the Wedgit range, were put to the test by a team of heavy-handed workers under real life conditions. The products were exposed to conditions that would generally be viewed as abnormally abusive, but which is not uncommon to the typical South African conditions, and garden environments. Hoses were not put away after use but were left outside in the sun, exposed to considerable temperature fluctuations; they were driven over, parked on and underwent abusive pulling and tugging. Pressure tests were performed using electrical pumps to achieve pressures much higher than normal municipal water pressure. Even the fittings underwent drive-over tests to determine whether any would survive such harsh treatment. Testing continued over a twelve-month period on Wedgit and competing fittings and hoses, with Wedgit connectors fitted on both Wedgit hoses and competing hoses. All the Wedgit hoses remained supple and leak-free and continued to offer more resistance to kinking than any other hose and are still in place today eight months later.

Wedgit offers a complete hose solution with 12mm (1/2") garden hoses (offered in 20m, 50m and 100m lengths) boasting burst pressure ratings of 35 bar, and 19mm (3/4") hoses offering burst pressure of 28 bar. The latter is available in 25m, 50m, and 100m lengths. The complete connector range includes Quick Connect fittings for both hose diameters, tap connectors for all four tap sizes found in Southern Africa, as well as hose-to-hose, hose repair, three-way t-piece and accessory adaptors. The range, which includes value for money starter set combos, is rounded off with a durable adjustable nozzle and the newly launched Wedgit Soft Spray, a quality zinc-alloy adjustable soft spray suitable for roses and finer seedlings that require a gentle watering solution.

For more information, call 011-314-7711 or visit www.vermontsales.co.za



New product design

Bosch power tools move from a functional, technical design to a modern, user-friendly look

All Bosch products will share unique characteristics: Their design will be clear, surprisingly simple and feature precise details. The round shape, modern colours and simple operation make DIY work even more fun. A reduced number of operating elements featuring a very simple design make working with the tools intuitive and user-friendly. All new products will be released with the new design.

For more information, visit www.bosch-do-it.com/za



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Gabieb Allie

wins a Makita MT M8100B Impact Drill

Prizes are not exchangeable

Grandfather clock tales



Imagine my pleasure and delight on opening the January/February edition of one of my favourite magazines, *The Home Handyman*. I am referring to the letter on clock making by Jim Evans.

It was exciting for me because at the time that the article appeared in the magazine, I was busy restoring two old clocks that were given to me after being found in a backyard in Retreat in Cape Town.

The first clock is a Grand Daughter Clock with its original coronet mechanical movement, while the second is a Grand Father Clock with the hood missing. I am busy making up a new hood. Unfortunately I have not been able to find a mechanical movement to fit and had to settle for a digital movement from Cape Watchmaker Suppliers in Cape Town.

I have included pictures of the boxes as they were when I found them and how I would like to see them finished. I also include a photograph of a Vienna Regulator Clock which was a previous project.

Readers interested in clock making should refer to pages 8-12 in the April 2002 edition of *The Home Handyman*. For those in the Plumstead area who might need clocks serviced or repaired, you can contact Gordon Venter on 073 532 8819.

Thanks for the awesome magazine and keep the clocks ticking.

Gabieb Allie, Athlone



Lockdown thoughts

When the lockdown was announced, I thought: 'Right, don't panic. It's fine. You can use this time to do something fun, like painting!' I had it all planned out: I was going to do a floral-themed painting for our bedroom. Hey, I thought, I could even use that glue gun I bought back in 2005 to give it a 3D effect – yeah, that would be really arty! So I dug out a blank, thin canvas and placed it on a flat surface to draw something onto it. And nothing happened. I stared at that blank canvas in a weird stupor – productivity paralysis? – for some time before slowly placing it back in a drawer. And thus ended my stint as a master artist. Fortunately we did use the time to make our garden look at least a hundred times better. Working in the garden is great for the soul!

Ursula Leighton, Roodepoort

I like to define myself as 'not mucky, but untidy'. There's definitely room to improve though, so I first thought all this time at home would be a chance to develop good habits and keep our place spotless. A week in, however, and I realised that meant cleaning up our bedroom twice a day, the kitchen three times a day, all while doing my day job. And really, even now, who has the time for that? I'd rather spend quality time at home, rest properly and zone out from the crisis, than trap myself in an interminable cleaning cycle. However, it had to be done and an article on spring cleaning tips in a recent issue of *The Home Handyman* did help to give us a kickstart!

Deana Singer, by email

Reader's projects



The Home HANDYMAN

www.homehandyman.co.za

Willing to share your latest project with our readers? Send a step-by-step write up of how to make the project, along with step-by-step photographs (at least 300kb) and a picture of the finished product.

Email projects and photographs to:

editorial@homehandyman.co.za

What do I make? What do I sell?

I make woodwork as a hobby and to earn a bit of an income on the side. People often ask me which items make the most profit for me, in other words what wood projects will sell the most. There may or may not be an easy answer to this. If you already have a woodworking craft you are passionate about, then that's great. All you need to do is a little market research to figure out whether others love it as much as you do.

Anyway, there are three types of projects that I generally make more than others, the first being children's toys. There was a time when toys made out of wood were the common thing. These days in most markets they have become a novelty. You only have to ask around to realise the premium, crazy prices being charged by stores for wooden toys for children. They are considered a novelty, safer than toys made from other

materials and they usually last a very long time. The result is that parents and everybody is ready to pay top dollar to buy even the simplest of wooden toys as long as they are well made from quality wood. Since this is an item for children, you should take extra care to make them safe, sturdy and durable. Do not compromise on the materials you use. Use only the best.

A baby cradle is just one example in what is a very popular woodworking category i.e. baby and children furniture. Parents often like to get special furniture for their children. Most of the times they need it. Babies and children need tables, chairs, storage cupboards, beds and an assortment of other items. A wooden crib is a classic woodworking product that is always in high demand. Parents will usually spare no expense in picking up the best cradle they can afford to buy. Once more, pay

extra attention to the safety and quality of the product and use only the very best materials.

Finally, you may be well aware of the fact that items for the household are always popular. This is an example of a really simple woodworking project that sells very well. While making fruit bowls, the important thing to keep in mind is your design and finish. Because a fruit bowl is a common item, it sells a lot. However, because of the same reason there are lots of them available. The good news is that it is not difficult to make unique wooden fruit bowls that will stand out among the competition. A little bit of ingenuity produces great results.

I hope this helps fellow woodtrepreneurs (my own term) to make some extra cash on the side doing something they love.

Okert Venter, by email

Tips on building a container home

Container homes take simplistic living, creative design and affordable building to the next level. It is not surprising then that the trend for modular houses is booming; before launching headlong into your own container build some preparation is required. Here are the top tips for every stage of building your dream container home.

Get council approval

Most councils are open to innovative types of building and recognise that alternative housing adds diversity to their town. Do thorough research on property restrictions before you buy the land. Have detailed plans drawn up professionally and develop a good relationship with your council; this will save you time and help you to deal with any hiccups along the way.

Purchase your container

Buy your container through a reputable company. They will help you choose the right kind of container for your needs, as well as ensure the container is structurally sound, waterproof and has not transported anything dangerous. There are two types of shipping containers: one that has reinforced square tubing side top rails and one that has flat bar side rails. Buying the reinforced side railed container will ensure that your home is better structurally sound, and you don't have to pay extra building costs to reinforce the container sides later. Building with a refrigerated container is ideal as they already have insulation but comes with different challenges.

Design your home

To achieve amazing things with your modular build, simplicity and great design is key. The more ambitious the designs are, the more time and resource-intensive it will be to build. When deciding on how many containers to use make sure you have considered how much space you need to live comfortably on a daily basis. Many holiday homes make use of only one container; however, you may need more space for daily living. Get a professional to draw your design in 3D. It will give you and your builder a better feel for the space. A professional

designer will be able to arrange your living space in the best possible way for your needs.

Plan your construction

As many container homes are built on vacant land you need to install infrastructure – such as foundations, running water, power and sewerage – before you start your build. Luckily container homes can be built off-site while you lay the infrastructure. This off-site building method is ideal for remote builds or smaller urban plots where neighbours are close by – building a container home generates twice the amount of noise as a normal building. The South African building industry is relatively new to handling modular framed structures and it may be challenging at first to find an experienced container home builder that will quote a fixed price.

Budget your build

Your budget should include the cost of the container being transported to site which will require a crane, labour, materials, equipment hire etc. The average cost of a simple high-end container home is between R825 000 to R1 million – as with any build it is wise to include a contingency budget of about 13%. This is for any unexpected items or finishings that you may need once you occupy the space.

For more information, visit www.citcontainer.com



How to fight the climate crisis with your garden



It can be overwhelming to think of how to deal with climate change, and its impacts on our world. Where does one begin? While it may seem futile, one person can make a difference with something they may already enjoy doing, and that's gardening! Here's how you can fight the climate crisis with your garden.

Plant native species

Whether you have an existing garden space or are looking to start one, focus on growing native species. These are the types of plants

that will naturally grow and thrive in the conditions of your specific region. Try letting your garden grow what it wants to.

Lure pollinators

A third of our food is dependent on pollinators like hummingbirds, moths, butterflies, bats, flies, and bees. They also support and balance ecosystems, which is essential to fighting climate change through a healthy and vibrant environment. Fill your garden with plants that will draw these hard-working creatures and provide them with food sources. Sunflowers

Vermont Sales celebrates third year of supporting the UJ Young Designers Challenge at Homemakers Expo

When people collaborate, amazing things happen. For the last couple of years, Vermont Sales and the University of Johannesburg have collaborated with Homemakers for the inventive Young Designers Challenge.

This year the ideas generated behind the theme was to design products that change and improve people's lifestyles. Top products were on display at the Expo where the winning design was chosen. Visitors could view all these innovations around smart water tanks, tech-savvy kitchen sinks and taps, home organisers and AI assistants, smart kitchenware and smart tools.

Prizes were awarded by Vermont Sales to the first three overall winners from some of their leading international brands. First place went to Katlego Madumo for his V56 Smart Hedge Trimmer, he was presented with the Tork Craft Tool Trolley complete with a full set of tools. Second place was Loubser Meyer for his Triton mt101 smart combination saw who received a Festool C18 cordless drill set. Natalie Selibas took third place for her BinList receiving the latest Worx Pegasus multi-function worktable.

The UJ Young Designers Challenge is an opportunity for students to link with industry partners to develop smart products which illustrate how they see these future products making people's lives easier and better. The result was a collection of novel and interesting concept products which illustrate local South African Industrial Design talent. Kitchen appliances that think for you, workshop tools that are safer to use, and garden products saving water.

For more information, visit www.vermontsales.co.za



and cup plants are tall, beautifully flowering plants that lure bees and provide water and food sources.

Don't cut back until early winter

Leaving seeds, stems, and grasses for birds and other species to feed on and use as shelter can be essential to their sustainability. 'Bird-friendly' plants will give them material to use in the colder months, and some bee species also hibernate in protected garden areas.

Use environmentally friendly practices

Switch from electricity-powered mowers

to hand pushed ones. Ditch the chemical fertilizers and use organic ones instead – or start composting. Make your own biodegradable weed-killing spray out of vinegar and water, or insecticidal soap with dish soap, oil, and water.

Don't use pesticides

Pesticides seep into the ground and end up contaminating our water systems, in turn, harming wildlife, fish, and insects that we rely on for food growth. Try natural alternatives like using other 'pests' to kill the unwanted ones. Plant companion species or ones that will

deter unwanted bugs. Remember, not all bugs are bad! Most of them are essential to your garden and are entitled to their space.

Implement smart watering practices

Start using the motto, 'water smarter, not harder' by deploying systems to collect rainwater like rain barrels, rain gardens, and other smart water harvesting techniques. If you do need to supplement during dry periods with hose water, do so in the early morning or evening, otherwise most of the water will evaporate in the hot, midday sun.



A window to your world

New windows can breathe fresh life into an older home, and they are one of the deciding factors in the longevity of any new structure.

Successful window installation is possible even for beginner DIYers, but the approach you take depends on whether you are replacing old windows in an existing structure or installing windows in a new building.

The time it takes to install a window depends on its size. Start with smaller windows; they are easier to install. Excluding the time taken to remove an old window, which can vary widely, installation takes two to four hours for someone with no previous experience.

Out with the old

Replacement windows are designed to slip within existing window jambs (the framed opening of a window) after the old sashes (the frame that holds the glass pane or panes of a window) have been removed. This is the simplest way to upgrade your windows, and you won't

have to add new trim or flashing because they were installed with the old window.

Start by measuring the width and height of your window opening, and then subtract an allowance for the gap required to let the new window fit easily and receive caulking. How much gap is enough? That depends; use a level to determine if the top and bottom of your existing window opening are plumb and level.

If the opening is square and true, then a centimetre or so gap on all four sides will do nicely. But if your window opening has a bowed side or an area that's not level or plumb, then give the gaps a larger width. Few things are more discouraging than suddenly discovering that your brand-new windows are too big to fit into the openings. If you think you'll have trouble like this, order replacement windows that are slightly shorter and narrower than the opening.



TOP TIP!

As added insurance, cut some rigid cardboard or thin plywood to the size you think your replacement windows should be. Try them in the opening and see how well they fit before you order new windows.

Do you have a few windows that should be the same size on the same wall? Size them all to fit the smallest opening – that way you'll maintain a consistent look and avoid the confusion of having many different window sizes to sort out on installation day. For your first window installation, choose an area that is not a prominent location in the house.

Start by removing the old window frame. There are infinite numbers of possible removal methods, but taking them out won't be difficult; the idea is to create a clear path for your new window. You'll

probably need to pry off strips of wood or metal that previously guided the old sash. A thin-bladed pry bar is the ideal tool for demolition operations like this. A wire cutter and a putty knife are handy for pulling out old nails. Grab the nail with the cutter, place the putty knife underneath the jaws to protect the wood and then lever the cutter up, bringing the nail with it.

In with the new

You're now ready to set the window in place from inside your house. Be careful – there's nothing to stop the window from tumbling right out and onto the ground, so it's wise to have someone outside to help with alignment. Also, keep the window closed as you work so the frame retains its shape. The goal at this stage is simple: Position the window so it's plumb both front to back and side to side, with an equal gap around the perimeter. To make this happen, you'll need wooden wedges to fill the space between the new window and the old opening.

Install a pair of wedges under each bottom corner of the window, one driven in from the outside and another from inside. Window wedges are always permanent parts of the installation and

are used in opposing pairs like this so they create support across the entire width of the unit. Adjust each pair of wedges so the sides of the replacement window are plumb. When everything looks good, install another pair of wedges along the side of the top corners of the window. Don't tap them in too hard, but just enough so they take up the space.

With the window stabilised, you need to adjust its location so the window is right where you want it front to back in the opening. Aim to hide any evidence of the old sash and guide strips you removed earlier, while leaving enough room to install quarter-round trim around the interior perimeter of the window. Depending on your window size, you may need to install more wedge pairs at locations along the sides, top and bottom.

You've now come to the point where some careful adjustment is necessary. Use your level to examine all sides of the new window frame – they have to be plumb and square. To get the best results, tap each wedge pair in or out as needed and then check the movement of the window sash. When everything looks good and the sash opens nicely, you're all set to lock the window in place permanently.



The anatomy of a window

A brief comparison between aluminium and wood windows

Are you looking to replace the windows in your home or business? Deciding which framing material you want is an important decision you shouldn't take lightly. Your selection will impact the installation's cost, durability, energy efficiency, maintenance requirements and more. Compare wood windows and aluminium-clad wood windows, two popular material choices, to see which one suits you best.

Aluminium vs. wood windows:

Durability

Aluminium-clad windows offer exceptional strength for long-lasting durability. Take good care of your aluminium-clad window frames and you can expect them to last for decades. Wood windows, on the other hand, are prone to warping, contracting, and expanding as temperatures and humidity levels change throughout the year. If the window seal is damaged and the wood frame gets soaked, it may require a replacement.

Winner: Aluminium

Aluminium vs. wood windows:

Home value

A highly sought-after feature for many homebuyers, aluminium-clad windows add more value to your home than vinyl or all-aluminium windows. Due to their beautiful aesthetic, wood windows increase home value as well. Both are excellent choices if your goal is to sell your home at a higher price after making the upgrade.

Winner: Tie

Aluminium vs. wood windows: Cost

While the final cost of any window replacement project relies heavily on how many windows you are replacing and what style you choose, aluminium tends to be much less expensive than wood.

Winner: Aluminium

Aluminium vs. wood windows: Maintenance

As an organic material, wood is prone to warping when it comes in contact with moisture. However, wood does not attract condensation. It requires a little more upkeep, especially in humid climates, but as long as you have a quality window installed, water damage shouldn't be an issue.

With that said, you never have to worry about warping from aluminium windows. The metal withstands exposure to all types of weather and climates without any extra maintenance on your part. Just remember, the style of window you choose impacts maintenance requirements as well. For example, sliding windows are easier to clean and less likely to have a malfunction than single- or double-hung windows.

Winner: Aluminium

Aluminium vs. wood windows: Colours and finishes

Aluminium-clad windows offer the ultimate flexibility in terms of colours, finishes and wood types. The same goes for wood window where many species and colour finish selections let you customise the look any way you want.

Winner: Tie



The time it takes to install a window depends on its size

Ideally, you'll want to drive screws or nails through some hidden area of the replacement window frame so they penetrate the wedges and sink into the old frame without being seen. You need to put these fasteners where they're not seen, and that depends on the window design. Some replacement windows include removable sash tracks that you can lift out, drive screws into and then cover again. With others, you may have to sink finishing nails into a corner formed by the window frame and some trim. Some windows make it easy to hide fasteners, and others demand imagination.

At this stage, you have a nice, new replacement window in place, though you can still see daylight shining in through gaps around the perimeter.

This is where expanding polyurethane foam can help; you want to use a low-expansion formulation to seal the gaps. Make sure you do a good job sealing all the openings because failure to do so could compromise your new window's overall energy efficiency. As added insurance against the nightmare of a window frame bowed by pressure from the expanding foam, cut wood braces that fit within the window frame and stay there by friction, positioning them against the inward pressure of the expanding foam. You'll be fine if you place braces between wedge locations.

Before you spray the foam, weatherproof the outside joint around the perimeter of the new window. The best option is to stuff lengths of a cylindrical foam packing material called 'backer rod' into

the gap between window and frame. Choose backer rod with a diameter which is twice as wide as the gap, and then push it in to a depth that's equal to the gap width. This creates a square groove that is perfect for caulking. One length of masking tape laid down on each side of the outside joint is the easiest way to achieve neat caulking results. Pump the caulking in, smooth it with your fingertip and then immediately peel off the tape.

Next, inject foam as deeply as you can within the gap along all interior edges and don't worry about excess ooze. Just let the foam completely harden (at least six hours) and then trim off the excess with a hacksaw blade. This kind of blade is flexible enough that you can bend it flush with the surface as you cut, giving you exceptionally clean results.

The final interior step is the installation of wooden trim to cover the foamed gap and joints between the replacement window and the old window frame – this way, you'll get some practice with the miter joints. Standard quarter-round wood trim is perfect for this job, but it is not the only choice. You can use any trim that fits within the 90-degree corner formed where the replacement window meets the old jamb. If you are using hardwood, pre-drill holes for the finishing nails to prevent splits.

Putting windows in new buildings

The process of installing windows in new buildings is similar to replacement work, but with two key differences. Most modern window designs include an exterior mounting flange that reduces or eliminates the need for wedges. Also, you'll need to pay much more attention to weatherproofing windows in new construction than with replacement work. There's more to it than just applying caulk; new windows need to be incorporated into the exterior wall treatment of the building as it is raised.

These days, most window manufacturers are able to supply any size window for

no more cost than relatively standard dimensions. This means you're free to plan new window openings at any size or shape you want. Specify that your windows be a few centimetres shorter and narrower than the rough openings. This gives you a generous half to three-fourths inch of wedge space on all sides for windows that require them.

Windows with mounting flanges require that you set them in place from the outside. The flanges also should have caulking applied to them before the windows go in. For added protection, line the rough window opening perimeter with a plastic sill protector and flashing. In the event that water penetrates the area around the window, these extras keep moisture from getting to the wood. Most windows have screw holes in the flanges for mounting purposes. For a secure installation, two pairs of wedges supporting the bottom of new-construction windows are often enough. As added insurance, install

factory-finished aluminium flashing over the top of the window and under the exterior wall treatment.

That's all it takes to upgrade your home's windows. Making the investment in energy-efficient windows is not cheap, but installing them yourself can save you considerable cash over the long term and put you one step closer to self-reliance.

Success with Polyurethane Foam

Professional foam guns are the most economical way to apply expanding poly foam, but here's a trick that can help you get the foam deep into small cracks. Most foam guns include a nipple on the end of the applicator tip that's designed to accept lengths of small plastic tubing or a drinking straw. Slip a piece of tubing over the end, secure it with electrical tape to hold it under application pressure and then get to work. There is no neater way to apply foam in tight spaces.



You may have to replace a window frame due to rotting

The dining room should be very well illuminated so that people can comfortably eat and converse

DINING ROOM DO'S AND DON'TS

Do you want your dining room to look like it was just removed from a magazine page? If you follow the rules presented in this article, that task will become much easier.



Stark white walls in a dining room can be livened up with art or family photographs

DON'T

Don't use busy patterns and unusual details

You should also try to avoid fussy furnishings in the dining room. These will date quickly and create a cluttered and claustrophobic environment. Instead, look to colours and prints that are more classic and timeless, such as florals, checks and stripes. By choosing more simple, understated prints, it will also be easier to update your dining room in the future.

Don't use rugs that are too small for your space

This is the most common mistake that people make when decorating a room. Your rug needs to be bigger than the area that you are trying to cover, that way it gives the appearance of a very thought about space. Don't keep the floor plain either. In a dining room, there isn't much furniture involved. You have your dining room set, sometimes a china cabinet or a built-in, and your light fixtures. Adding a rug is a great way to finish a space. It makes the room look less empty and can add lots of fun colour and patterns at the same time!

DON'T

Don't push all the furniture against the walls

By pulling the furniture away from the walls, it's possible to create intimate conversation areas, which are important when organising a dinner party or a friend's gathering.

Don't ignore storage

Even though you want the dining room to look stylish and polished, you can't forget the functionality of the space, because, although, you want it to look like a magazine page, you can't forget that you have actual stuff to store and organise. Some clean shelves and cabinets are a great option.

Don't use a table that is too big or too small

Depending on the size of your dining room you will need a certain table size. It's not a one-size-fits-all situation. Avoid common mistakes: make sure you have plenty of room on all walls while the chairs are in use to ensure proper movement around the table. Don't have something very tall if your ceilings are set at a regular height. Don't use furniture that is too small or the large room will drown out the table. Most people regularly need more room, so we suggest getting something that seats six or more.

DO

Do add some excitement on the walls

Usually people prefer to use family pictures, children's drawings and other decors like these to put in their households, and the dining room is no different. The background for such pieces does not have very strict conditions. It can be a plain white wall, while dark and bold colours are also an option. The only condition is that the art pieces have a contrasted frame which doesn't blend with the background.

Art pieces as a part of a dining room design are a good addition, however, you should be careful when choosing them. The message or image portrayed on the piece should reflect your interests and passions. Otherwise, you will get tired of it very soon...

DO

Do make a statement

Most people only use their dining rooms for special occasions and large dinners, and because of that you may as well have it stand out for those occasions! Stick with a simpler set up for your everyday food bar, and play around with colours, patterns, textures, and light fixtures for an over-the-top statement room. This way you won't get sick of the room you're using every day. Dining rooms are also a space you can make a statement on a budget. There is nothing too fancy involved, no need to deal with plumbers, or countertops and cabinets which can elevate the budget in seconds!

Do use colour

The colours matter more in your dining room design than any other room. Yellow and orange hues are some of the two best tones for the dining room. They're warm and energetic, encouraging conversation whilst also complimenting the colour of food. So, take that into account when choosing the colour scheme.

Do choose your most expensive or favourite item and decorate around it

Sometimes when we fall in love with a piece, it means that it's meant to be. So if there's a particular piece that you adore, decorate the room around it.

Do use comfortable chairs

You should use comfortable chairs so that diners take their time to eat, digest well and communicate with one another. Ideally, chairs should have good back rests and arms.

Do mix lighting

The dining room should be very well illuminated so that people can comfortably eat and converse. Use table lamps, floor lamps, sconces – whatever you like. Just be sure to use a mix. Having a beautiful chandelier or really intricate lighting fixture is equivalent to adding another piece of art to your room. It creates a wonderful centrepiece, so if you splurge on one item, have it be your lighting! Also remember to use something that brings in a lot of light, walking into a dark room to eat is no fun.



Smaller spaces simply require smaller furniture, such as this dining area which adjoins the kitchen

The unused dining room dilemma

Dealing with an unused dining room? There are better ways to use this space because everyone wants more storage, a quiet retreat, a bedroom for guests or a hobby room. So maybe it's time to rethink how you are using your dining room...

You needn't preserve this space for the rare occasion when you might use it for a family meal. It's in a handy spot, and it's usually large enough to entertain several ideas. If you already use the dining room for a different purpose, such as a makeshift home office, you already have an angle. If not, think about all the ways you can use this room to improve your quality of life.

You can even keep the dining room for meals. It's not difficult to partition part of a dining room for a sitting area, or if the room is large enough, a tiny guest bedroom.

Turn an unused dining room into a home office

Many dining rooms have at least one large window, so natural light is a big plus. You might not want to take over the whole dining room if you only work at home once in a while, but if you telecommute, or regularly work from home, you'll have a roomy, comfortable space to stay focused.

A full home office transformation can give you lots of space to spread out. There might even be enough room for a comfy chair when you want to get away from your desk to relax or think through a problem or business opportunity. But if you'd rather contain the office in part of the room and leave the rest for a small dining table, glass panel walls can make a small office space feel roomier and bright.

Create a playroom from your unused dining room

Because of the location of most dining rooms, they're great candidates for a playroom conversion. Kids can play with toys and games, watch movies, and have pillow fights, all near enough for you to keep an eye on them.

You don't have to paint the walls in a bright, colourful shade to make the space inviting; splashes of colour can be found in the rug, pillows, and other easily changeable elements. With a bench, and a kid-size entertainment centre, you can make sure that there is plenty of storage to keep the room tidy.

Free your creativity with a craft and hobby room

Every crafter knows that a dedicated hobby room is a dream come true. Replace carpeting with an easy-to-clean, hard-surface floor, add some storage and workstations, and bring in a sturdy table and seating. Don't forget to upgrade the lighting.

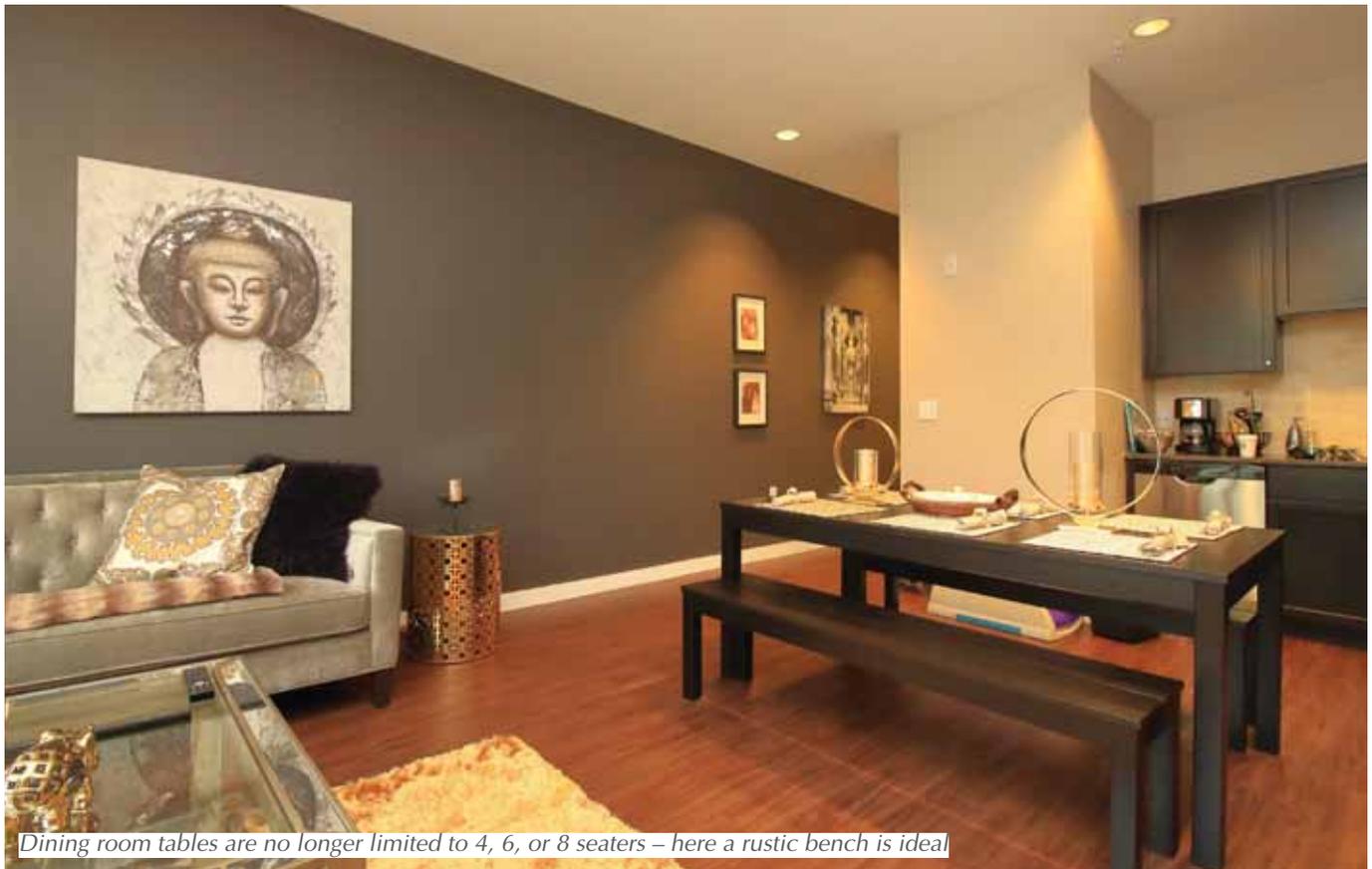
A library or quiet room gives you a place to relax

Looking for a little peace and relaxation? Why not convert your unused dining room to a small library and quiet room? You might consider adding a door to the room, so reading is less apt to be interrupted.

With oversize, comfy chairs, you can also use the room for entertaining a friend. Minimising seating to one or two chairs will discourage large, noisy gatherings in your 'quiet place.' Think of the square footage you'll gain by repurposing an unused dining room, in whole or in part, for something different. If you've ever thought, "I'd love to have..." but didn't follow through for lack of space, this room might be exactly where you'll find the extra space you want.



Make a statement in your dining area, as in this example's sandstone feature wall



Dining room tables are no longer limited to 4, 6, or 8 seaters – here a rustic bench is ideal

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Hang in there! It's not too tough to hang picture frames – follow our guide below

HOW TO HANG FRAMES LIKE A PRO

There are a few technical and aesthetic things to consider before you hang a picture

Tools

- Hammer
- Pencil
- Level
- Measuring tape
- Wall hooks
- Painter's tape
- Drill

The rise in popularity of digital photography in recent years has radically changed the way we interact with photographs. Much of this change can be attributed to the transformation of photos from physical objects to pieces of data. Envelopes and shoeboxes have been replaced by hard drives and, more recently, 'cloud' systems, as preferred methods of image storage. Likewise, computer and phone screens have ousted photo albums as

the dominant means of sharing family memories and artistic creations alike. Yet, for many, the barrage of images on touchscreens and monitors has led to a newfound appreciation for photographs that you can physically touch and hang on the wall.

So now you have the perfect picture frame, and you've placed your art or photograph in it, and it looks amazing. But it won't serve much of a purpose unless you get it displayed up on the wall.

There are a few technical and aesthetic things to consider before you hang a picture, so if you're having trouble, consider the following tips.

Make sure you have the proper hanging hardware

Not all hanging hardware is created equal, especially given all the different shapes and sizes picture frames have

these days. For example, a large wood frame shouldn't have the same hardware as a small metal frame. Ideally, any picture frame you purchase will come with the proper hanging hardware needed for that particular frame.

Consider spacing

You have to be able to see your art or photographs to enjoy it, and if it is too high, too low, too close, or too far, it can be difficult to view. Especially if you're creating a gallery wall with multiple frames, hanging everything too close together can make it look busy, just as making everything too far apart can make it look disconnected.

While it ultimately comes down to personal preference, plan for picture frames to be hung at least 3-5cm apart from each other, and if you're framing above furniture, make it at least 20-20cm above it.



Brown paper can be used to plan where to hang your frames

Make sure your picture frame is level

The “Did you plug it in?” equivalent of framing, this is perhaps the simplest yet most important thing you can do when hanging a frame. Whatever hardware you use or how well-spaced it is, you’ll likely be dissatisfied if your picture frame is crooked. A way to make sure you always have level frames is to equally distribute the weight between both sides if you are using a hook and nail to hang your frame.

A good way to see if there is even distribution of weight between both sides of your frame is to use a ruler – measure to see that your nail will be as close to the centre of the frame as possible.

Using a level is also the easiest way to see if your frame is straight, and if you have a smartphone there are often apps to use (iOS smartphones even have a level built in).

Measuring is key

To make sure your frame hangs exactly where you want it to go, measuring the distance between the top of your frame and the hanging wire/bracket is important. (If, for example, you expect wherever you hammer in your nail to be where the top of the frame will be, you could end up being off by a number of centimetres).

Another good tip is to make sure you pull the hanging wire up toward the top of

the frame before measuring, as this will help mimic the ‘give’ it will have once the frame’s own weight pulls on the wire and nail. Wherever your nail will hook onto your frame, that’s the distance you want to make sure you’ve got nailed.

Use painter’s tape as your secret picture framing weapon

Because of its versatility, painter’s tape is our favourite tool to keep in our home decor arsenal. From measuring to blocking, it can be used in a variety of ways to turn you into a picture hanging hero.

If you don’t have a measuring tape or don’t trust your eye when it comes to such things, you can always use painter’s tape to measure your art.

Essentially, you just take a piece of painter’s tape, put it on the back of your frame and use that as a measurement to see how far the D-Rings are from each other. Then, simply place the tape on the wall, and hammer the nails in correspondingly. You can also use painter’s tape to block out or plan where to hang your frames.

So there you have it. Not too scary now is it? Artwork and photographs can do amazing things to rooms and imagine how excited your children would be to see their art framed and hung like a professional!

A few points to consider when hanging pictures

- In general, frames should be hung so that the centre point of the painting is at about eye level for the ‘average’ height person. Of course, there are exceptions and breaking the rules can be allowed – but, only once you know the ‘rules’ of course.
- Be sure to decide on the general desired effect of the display and try to arrange the pictures as a group, to give a sense of continuity to the arrangement. Try to keep the arrangement within a general guideline and try to keep some kind of symmetry to them. Either work from the centre outwards, or create a boundary and arrange from the outside in.
- Picture montages look fun and funky with a variety of frame designs, shapes and weights, but try to pick your selection of frames with the same colour, style or era.
- It is important to balance your montage so that it isn’t top, bottom or side heavy. It is best to place the larger pictures on the outside and the smaller within.
- Odd numbers look best but once again it depends on the space. Play with your arrangement on the floor first and transfer it to your wall when you’re happy.
- A level frame is a happy one. Make sure it’s not tilted.
- You can use painter’s tape to either measure or plan how you’re going to display your frames.
- Make sure you’re using the proper hardware.
- Don’t make everything too close or too far apart.
- Always use brackets or picture hooks – don’t just hammer nails into the wall.
- Use hardware that will support your artwork.
- Check the manufacturer’s recommendation on the package to make sure it will support more weight, never less than your frame weighs.
- Always check the hardware to make sure it is firmly secured with screws to the back of the frame/artwork.

Learn how to
make your own
cutlery holder

CREATE A CUTLERY HOLDER

>> Jeff Hollingdale

Tools

- Hand saw – often referred to as Backsaw
- Steel rule and metal tape measure
- Marking gauge
- Adjustable square
- Clamps; frame clamps
- Electric drill plus drill assortment
- 20mm Forstner or auger bit
- Nail set punch
- Light hammer
- Half-round wood rasp.
- Jig saw or Fret saw

Additional items

- Sanding block; 180 grit sandpaper
- 20mm x 2mm headless brads
- PVC wood glue
- Woodoc 5 Polywood Sealer
- 25mm varnish brush

This simple, but elegant cutlery holder is adapted from Ejner Handberg's "Shop Drawings for Shaker Furniture" and is an ideal project for beginners using a minimum of power tools and yet practicing some techniques useful in many projects where accuracy

of measurement and cutting needs to be done to achieve the finished project.

The wood can be any scraps of hardwood. A rummage in a wood merchant's scrap bin will often yield a number of pieces which can be glued together to make a bigger piece; pieces which are from veneered MDF. In this case I used 10mm thick offcuts of Meranti for the box and handle and 6mm veneered MDF for the base.

Step-by-step guide

Step 1:

Cut the sides and ends to size, sand them so they're ready for finishing. (see Fig. 1).

With glue and two bar clamps, glue the ends between the sides using PVC wood glue. Additionally, I used 90 degree frame clamps to ensure the sides were at right angles to each other. Check the box is 'square' by measuring from corner to corner. Release clamps slightly and push corners to offset until when clamping the box is 'square'. Set aside for an hour or so and give the glue time to cure.

Step 2:

Get set to reinforce each corner with

20mm cut headless brads. First, using the marking gauge lightly scribe a line across that's 5mm from the sides (this is dependent on the wood thickness you use). This is the line for your brads. Now drill a set of three equally spaced pilot holes 1.5mm diameter. Drive a cut headless brad into each pilot hole. Angle the nails a bit to wedge the side piece against the ends. Countersink the nails below the surface of the wood with a nail set punch and a couple of hammer taps.

Step 3:

See (Fig. 2). Cut the handle piece to length to fit between the ends. You want this joint to be tight so cut as close to the marking lines for width and finish with a wood file, test fitting from time to time until it's a tight fit inside the box. Mark out the curves from a template to ensure the left and right sides are the same. (I made a paper template divided up into 10mm squares and the base of pill containers to create the curves needed). Cut the curves on the sides using a jig saw or a fret saw. Clean-up the saw marks first with a half-round rasp and then a file. I had a spindle sanding set which made the job very easy. Mark out the centres of the 20mm holes to form the handle grip. Bore out as much of the waste in the handle hole with an auger or Forstner bit.

Complete the shaping with a half-round rasp and finish by sanding with 180 grit sandpaper wrapped around a short piece of broom handle.

Step 4:

Place the completed box of the side pieces on the piece to be used as the base. Draw a pencil line around the outside. Cut the base piece to size leaving a small margin of excess material so that after gluing on the base it can be trimmed exactly to size. Sand the inside surface of the base piece with 180 grit paper; the outside surface can be sanded after assembly of the box piece is glued to the base.

Mark with a pencil the centre point on each short side and lightly carry

the pencil line down the side. About 20mm up from the base and top, drill pilot holes for the brads to secure the handle piece. Run a bead of glue down the edges of the handle piece. Ease the handle piece into position, check its alignment square to the base.

Knock in the brads securing the handle. Again, countersink the brads below the surface of the wood with a nail set and a couple of hammer taps.

Trim the bottom piece level with the side pieces. Finish sand. Break all the sharp edges with sandpaper. Apply Woodoc 5 Polywood Sealer.

This is a good project on which a beginner can use hand woodworking tools and complete a project which looks good in the home.

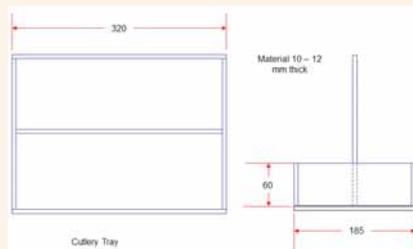


Fig. 1. Frame dimensions

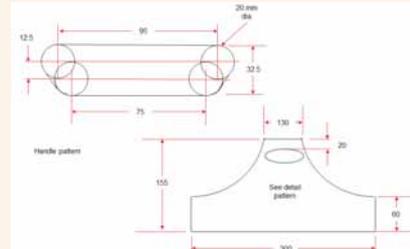


Fig. 2. Marking-out the handle

What is Shaker furniture?

Shaker furniture is a distinctive style of furniture developed by the United Society of Believers in Christ's Second Appearing, commonly known as Shakers, a religious sect that had guiding principles of simplicity, utility and honesty. Their beliefs were reflected in the well-made furniture of minimalist designs.

Shaker furniture is widely admired for its simplicity, innovative joinery, quality, and functionality. Shaker designs were inspired by the ascetic religious beliefs of the Society. Shakers made furniture for their own use, as well as for sale to the general public.

Furniture was made thoughtfully, with functional form and proportion. Rather than using ornamentation – such as inlays, carvings, metal pulls, or veneers – which was seen as prideful or deceitful, they developed “creative solutions such as asymmetrical drawer arrangements and multipurpose forms to add visual interest.” Furniture was made of cherry, maple or pine lumber, which was generally stained or painted with one of the colours which were dictated by the sect, typically blue, red, yellow or green. Drawer pulls for dressers or other furniture were made of wood.

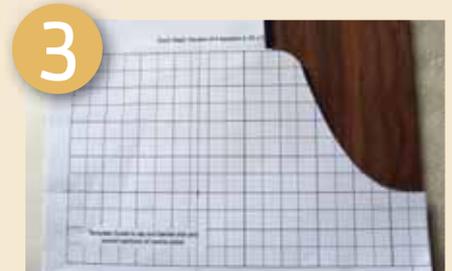
Many examples of Shaker furniture survive and are preserved today, including such popular forms as Shaker tables, chairs, rocking chairs (made in several sizes), cabinets. Collections of Shaker furniture are maintained by many art and historical museums in the United States and England, as well as in numerous private collections. The underlying principles of Shaker design have given inspiration to some of the finest designers of modern furniture.



Clamping the box frame



Checking that everything is square



Using a paper template to mark the handle shape



Sanding the profile

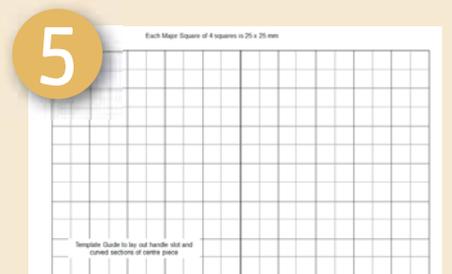


Fig. 3. The template guide

Get ready for warm weather with this picnic table



MAKE A PICNIC TABLE

Prepare for the warmer weather with this DIY picnic table

Tools and materials

- Drill/driver
- Kreg jig
- Miter saw
- Sander
- Tape measure
- Framing square

Hardware & supplies

- 2 x 100-count box of 32mm Kreg Blue-Kote Pocket-Hole Screws
- 1 x 250-count box of 64mm Kreg Blue-Kote Pocket-Hole Screws
- Exterior wood glue

Cutting list

- 12 x 19mm x 140mm x 2400mm board
- 7 x 38mm x 89mm x 2400mm board
- 3 x 38mm x 140mm x 2400mm board
- 2 x 89mm x 89mm x 2400mm board

This outdoor picnic table is a package deal. Benches on each side connect to the table legs to create a solid, stable footprint in any yard or patio. Seat the family around this spacious table and enjoy meals [outdoor] in style for years to come. Kreg show you how you to make your own step-by-step.

PARTS LIST

QTY	NAME	MATERIAL
(4)	Leg	89mm x 89mm x 743mm
(2)	Side Rail	38mm x 89mm x 1372mm
(2)	End Rail	38mm x 89mm x 651mm
(2)	Centre Rail	38mm x 89mm x 702mm
(6)	Top Boards	19mm x 140mm x 1575mm
(8)	Long Bench Leg	38mm x 140mm x 471mm
(8)	Short Bench Leg	38mm x 140mm x 256mm
(8)	Bench Support	38mm x 89mm x 651mm
(8)	Short Bench Rail	38mm x 89mm x 575mm
(8)	Long Bench Rail	38mm x 89mm x 1295mm
(4)	Short Bench Slat	19mm x 140mm x 829mm
(4)	Long Bench Slat	19mm x 140mm x 1549mm

Step-by-step guide

Step 1: Cut two End Rails to length from a 38mm x 89mm board, as shown in the cutting diagram. With your Kreg Pocket-Hole Jig set up for 19mm-thick material, drill pocket holes along one edge of the End Rails at the locations shown. Then, set your Pocket-Hole Jig and drill bit for 38mm-thick material, and drill holes in the ends of End Rails. Sand the pieces smooth.

Step 2: Cut two Side Rails and two Centre Rails to length from 38mm x 89mm stock, as shown in the cutting diagram. With your Pocket-Hole Jig set up for 19mm-thick material, drill pocket holes in the edge of the Side Rails and Centre Rails in the locations shown. Then, set your jig and drill bit for 38mm-thick material and drill holes in the ends of the End Rails. Sand the pieces smooth.

Step 3: Cut four Legs to length from 89mm x 89mm boards, as shown in the cutting diagram. Use a sander to ease the edges of each leg, and to smooth the faces.

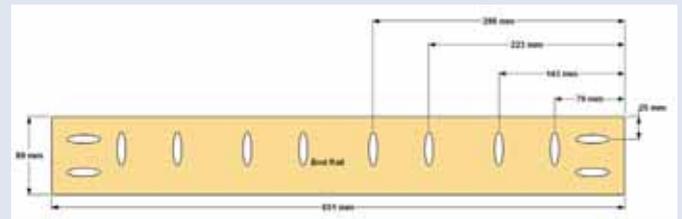
Step 4: Secure the End Rails to the Legs with exterior wood glue and 64mm Kreg Blue-Kote Pocket-Hole Screws as shown. Repeat the process for the other End assembly.

Step 5: Lay the Leg Assembly flat on a work surface then secure the first Side Rail to the Legs, glue and secure the parts together with 64mm Blue-Kote pocket-hole screws, as shown. Position the Centre Rails on the Side Rail where shown and secure them in the same way.

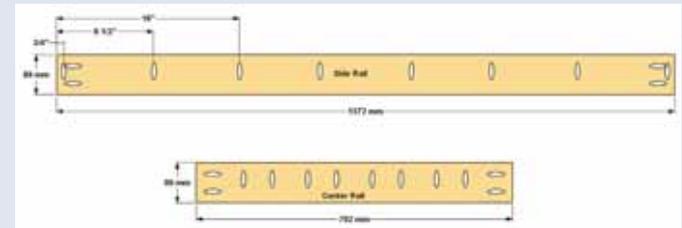
Step 6: Attach the second Side Rail with glue and 64mm Blue-Kote pocket-hole screws to complete the base.

Step 7: Cut eight Long and eight Short Bench Legs from 38mm x 140mm boards as shown in the cutting diagram. Then you can drill pocket holes where shown. Be sure to note that there are four 'left' and four 'right' sides to each Leg so that the pocket holes on each assembled Leg will face inward. Make sure to orient the braces so they mirror one another as you drill the pocket holes. Set the Pocket-Hole Jig for 38mm-thick material, and then drill pocket holes on the parts where shown. Sand the pieces smooth.

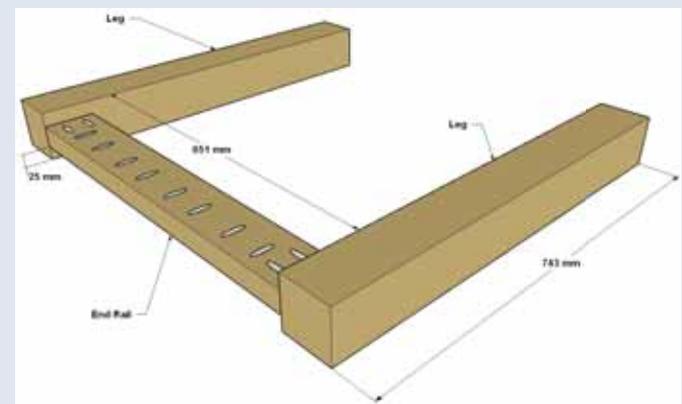
Step 8: On a flat work surface, position a Short Bench Leg and a Long Bench Leg as shown. Use a framing square to help align the parts, apply glue at each part connection, and secure the leg assembly together with 64mm coarse-thread Blue-Kote screws. Repeat this process with mirrored parts for the other side of the Bench. Then, repeat this step for the other six Bench Legs.



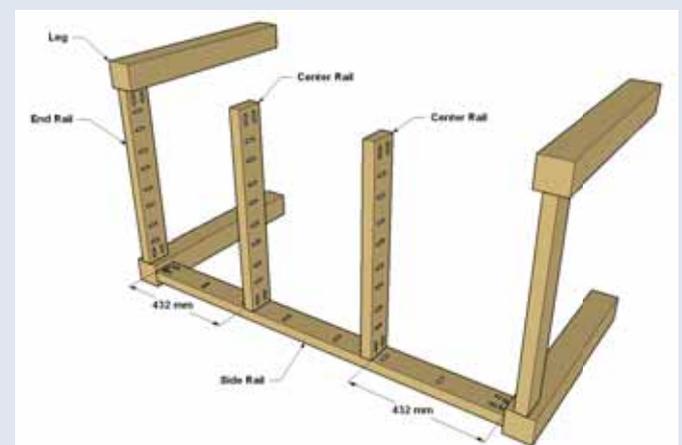
Start with the End Rails



Make the Side and Centre Rails

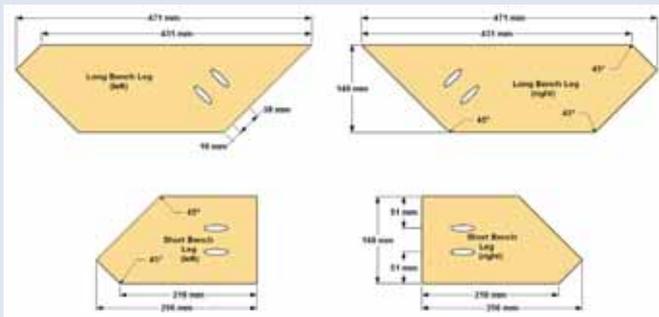


Assemble the End Rail and Legs

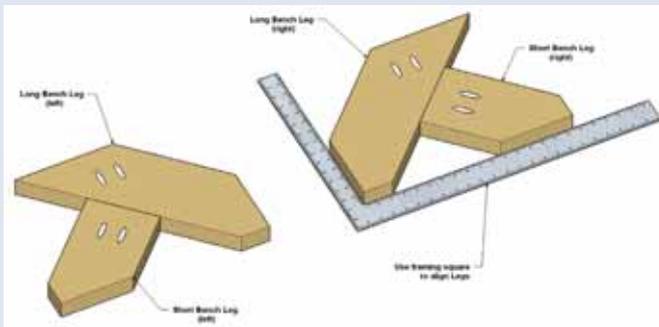


Add the Side and Centre Rails

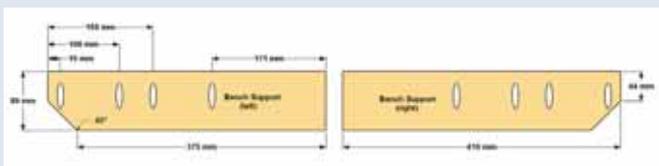
Seat the family around this spacious table and enjoy meals [outdoor] in style for years to come.



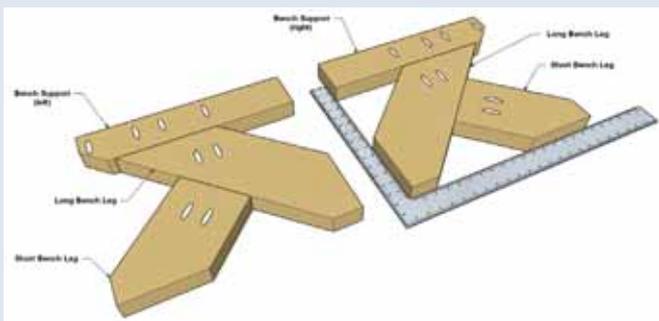
Make the Bench Legs



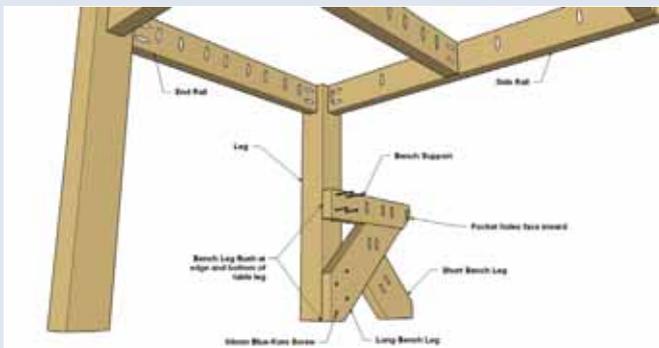
Assemble the Bench Legs



Make the Bench Supports



Add the Bench Supports



Install the Bench Legs

Step 9: Cut eight Bench Supports from 38mm x 89mm boards, as shown in the cutting diagram. Trim one end of each at 45°, as shown. Set your Pocket-Hole Jig for 19mm-thick material, and then drill pocket holes at the locations shown. Again, make sure to orient the Seat Supports so they mirror one another when you drill the pocket holes, and you end up with four left and four right Bench Supports. Sand the pieces smooth.

Step 10: With the framing square still in position, align each Bench Support to each appropriate leg assembly, as shown. Apply glue and secure the Bench Support to the leg assembly using 64mm Blue-Kote pocket-hole screws.

Step 11: With the table on a flat, level surface, set the first leg/support assembly against the inside of a table leg so that the inside end of the leg assembly is flush with the inside of the Leg face, as shown. Face the pocket holes inward. Secure the Bench Leg to the Table Leg with glue and 64mm Blue-Kote screws as shown. Repeat this same process for the Other Bench Legs.

Step 12: From 38mm x 89mm boards, cut four Long Bench Rails and four Short Bench Rails as shown in the cut diagram. With your pocket hole jig set up for 19mm-thick material, drill pocket holes along one edge of each of these Bench Rails at the locations shown. Next, set your jig and drill bit for 38mm-thick material, and then drill pocket holes in the ends of all of the Bench Rails.

Step 13: Starting with the outermost Bench Rail first, secure the Rail to the Bench Support at the location shown using glue and 64mm Blue-Kote screws. Position the second rail with the pocket holes facing in, as well, and repeat this process. Install the rails for the other three benches the same way.

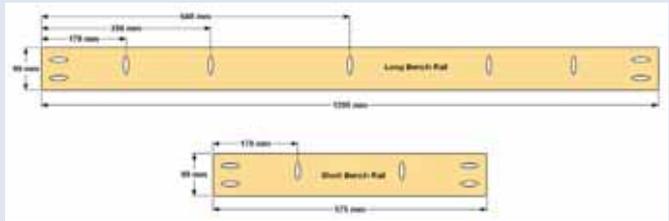
Step 14: If you are going for a two-tone look on your table, with a solid stain on the table base, and a natural tone on the top and benches, it's a good idea to finish the completed table base now, before you install the Top Boards and the Bench Slats.

Step 15: From 19mm x 140mm boards, cut six Top Boards to length, as shown in the cutting diagram. Then cut four Long Bench Slats and four Short Bench Slats. Sand these parts, and then apply the natural finish to the Top Boards and Bench Slats. Make sure to allow enough time for the boards to dry before installing them.

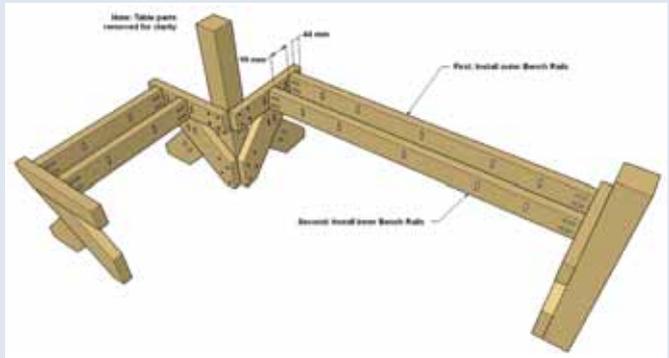
Step 16: Install the six Top Boards using 32mm Blue-Kote Pocket-Hole Screws, as shown. Make sure the gaps

between the boards are consistent and that the ends all align as you install them.

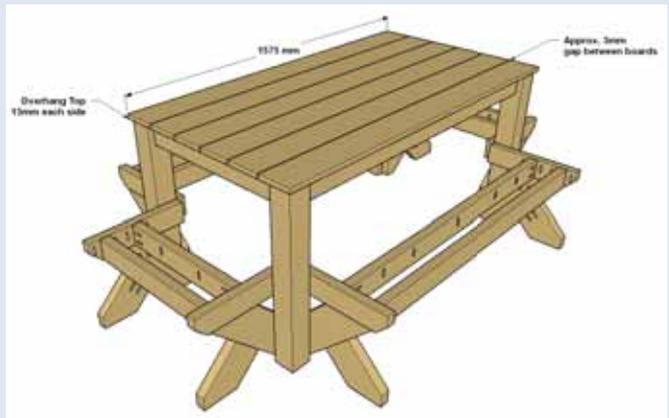
Step 17: Starting with the outermost Long Bench Slat first, position it as shown and secure it to the Bench Rails and the Bench Supports using 32mm Blue-Kote screws. Next, position the second Slat and secure it the same way as the first. Repeat this process for the other three benches.



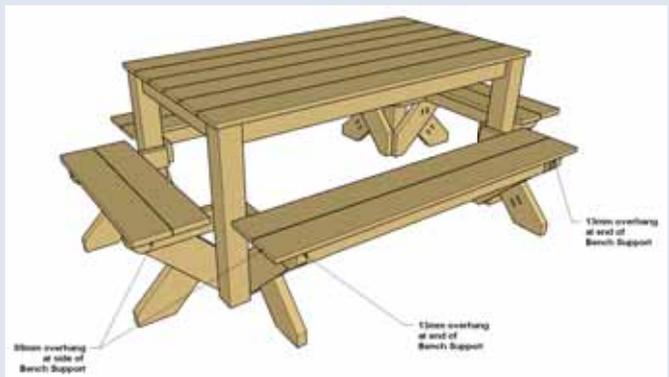
Make the Bench Rails



Install the Bench Rails



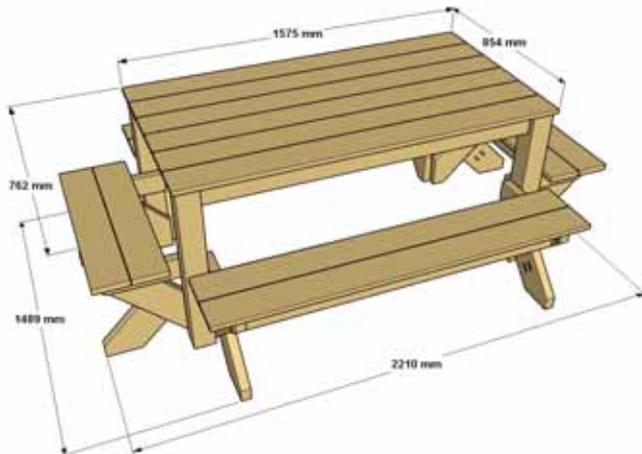
Install the Top Boards



Install the Bench Slats



Close up of the leg and benches



An overview of the picnic table with dimensions

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A simple and quick to make dog bed

Learn how to make a cheap and easy bed for your furry friend



Make a budget dog bed



Even big sister likes it!

In the last issue we detailed how we 'boarded' up a metal gate using plywood, so when we were having the plywood board cut at the hardware store, we knew that there would be offcuts, and had an idea to use them to create a dog bed. We asked the hardware store to cut as many 100mm x 700mm pieces as possible from the unused wood and ended up with a total of 13 of them. The particular size was chosen to a) be able to create a bed big enough for the dog in question, and b) be the correct size to fit in a continental cushion as the bed.

First things first, we played around with the pieces of wood available to 'dry fit' the fit. Once we had the design, we sanded down all the wood. If you are going to finish the bed, now would be a

good time to do that (we didn't think we were going to until everything was put together, which wasn't ideal).

We decided to use wood glue to fit the dog bed together before screwing it all in place, so, using an additional piece of wood to ensure that the sides and back of the bed were straight and formed a right angle, we applied glue, pushed together and let them dry. We had six pieces to form the base, so after a bit of trial and error, we found an item around the home which was the ideal size to use as a spacer while we glued the base pieces to the sides – in our case it was a USB power bank.

Once everything was glued we let it dry for an hour before securing each piece with a wood screw. At this point we

realised that, with a pillow or blanket in it, the height of the bed wasn't adequate. Fortunately, we had three spare pieces of wood. The downside was that we didn't have the relevant tools – a biscuit joiner would have been ideal. However, with a few more screws and a liberal amount of wood glue, a second 'level' was added which is strong and secure.

It was at this point that we decided to finish the bed in Danish Oil. Modern Danish Oil is a mixture of varnish and either linseed or tung oil. It provides very good protection to woodworking projects without obscuring the colour and grain of the wood. It's not a film finish – it dries and hardens in the wood, not on the wood so your workpiece will not have a 'plastic' look.



1
The few pieces of wood we needed for this project



2
Sand the wood smooth



3
Applying glue



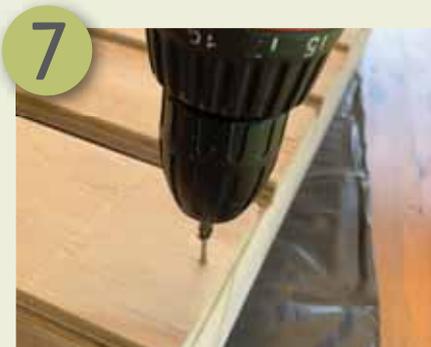
4
A spare piece of wood ensures everything is square



5
Using a spacer



6
All glued up



7
Screwing the bed together



8
Adding more wood for height



9
Applying Danish Oil

Before applying finish, it is important to remove as much of the dust as possible from the workpiece. Try to apply the finish in a relative dust free environment i.e. not in your workshop right after you have finished sanding. This finish should also be applied at room temperature and in a well-ventilated area - it will smell.

It is easiest to apply this finish by first transferring some into an old yoghurt container to work out of. Liberally apply the finish over the whole workpiece using a brush or rag. You can put on a lot, flooding the surface. After 30 minutes, come back to the piece and reapply

finish, particularly to areas where all the finish has been soaked in.

Once our dogs had used the bed for a few days we decided to add some castors to the bottom for ease of movement. As we didn't want the dogs to go flying if they jumped in a bit boisterously, we spent a bit more on castors with brakes so that it is steady and stable with the brakes on but easy to move for cleaning purposes with the brakes off.

All in all, this project took a few hours, and both dogs, even the bigger one who it wasn't designed for, use it every day!



10
Attaching the castors

Easy, cheap and quick to make, this DIY project is perfect for gifts, expanding your garden or simply beautifying your home. Clifford Roberts and woodworker Andries Eygelaar explain how it's done.

MAKE A NIFTY PLANT NURSERY

The test-tube plant nursery allows you to bring your gardening efforts indoors as part of your home décor

What we used

- A grinder, fitted with a wood-sanding flap.
- Bench drill stand
- Sandpaper
- A frostner drill bit
- Vice
- Table saw/plane
- Any scrap piece of wood
- At least three test-tubes

The bottom line

Cost: Less than R50
Skill level: Easy
Time: ±2hrs

Plants are the new pets. That's according to US-based trendspotter Li Edelkoort who spoke at this year's Design Indaba in Cape Town. Her words make the timing of this project, perfect – it demonstrates how to make a simple plant nursery that can double as an alternative way to display flowers. It's super-cheap and super-quick too.

The idea was inspired by a friend who propagates plants by making cuttings, but always hides these in his scullery window because the containers he uses are unsightly. Like many woodworkers, we found some ideas online and created our own.

By inserting some flowers, these nifty containers can also be used to brighten a room. The materials we used are braai-wood, test-tubes and a sealant. Some

décor shops and florists stock test-tubes, but they can be pricey. A quick search online will lead you to a school lab supplier; we got ours at around R7 each from Science World in Parow Industrial, Cape Town.

Now, before starting, you want to make sure the wood is well dry as wet or green wood is likely to crack as it dries. Make sure the wood is rid of borers and other pests that could potentially damage other woodwork in your house. Don't take a chance and rather get yourself one of the paintable, liquid solutions commonly available at hardware stores. Cover the wood in the liquid and seal it in a black plastic bag. Avoid the bag sticking to the wood too much by blowing air in before tying a knot. Then, leave it in the sun for as long as recommended.

A word on plant propagation

Propagation in water, as this project involves, is just one of the ways to grow plants from cuttings. Part of the enjoyment of this technique is to be able to see the roots developing. You can also fill the test-tubes with good soil and plant the cuttings straight in. In both cases, you're likely to have more success when you use hormone powder or even cinnamon powder, which encourages growth and deters pests. Encourage the plants by keeping them in a well-lit, but not hot, area and replace the water once a week. Roots should show within two to three weeks.

Step-by-step guide

Step 1: When you select the wood, there are a few things to keep in mind. We felt we wanted something with a little character. To us, a gnarled chunk is just as part of the display as the plants it'll be home to, but you might want a square block with interesting grain that fits with your décor.

If, like us, you're going for the firewood-option, think about where you'll drill the slots for the test-tubes. You can have as many holes as you prefer but drilling on an incline or uneven surface can be tricky so choose a piece to start with that isn't too angled or complicated.

Once you've treated it, you'll need to decide how you're going to use the piece – either on a flat surface or suspended on a wall. This will determine how the wood should be cut.

We wanted the display piece to stand on a counter, possibly against a wall, so we needed the wood to have two flat surfaces that met at 90 degrees. To this end, we used our table saw and plane to cut the side and bottom, square with each other. You can also trim the sides, if you wish.

Step 2: If, like ours, the wood has been lying under your braai for a while, it'll be dusty and flaky. You'll want to remove all the loose, flaky bits of wood and bark. We placed the wood in a vice and used the grinder with a wood-sanding flap, which made the task quick and easy. You can use whatever tool you have available and does the job. Tidy up the ends of the wood too.

Step 3: Measure the diameter of your test-tubes and mark the locations on the surface of the wood where you want to create the recesses that'll take them. Our blocks of wood can easily accommodate three to four recesses.

Now, fix the frostner bit that matches the width of the test-tubes, to your drill. Grip the wood and proceed to drill the recesses. The ideal set-up sees you using your vice and a drill-stand. Our recesses were equally deep. They shouldn't cut

all the way through the wood but must be deep enough to keep the test-tube from being top-heavy and toppling out. Each of our test-tube recesses takes up about one third of the test-tube.

If you plan to suspend the wood on a wall or in some other way, you'll need to investigate the various ways to do this, what fittings you may need and what additional tweaks to the wood you may need to make.

Step 4: Using a light sandpaper, smooth over all sharp edges. To finish off, cover the block with a clear lacquer or sealant and allow to dry properly. This will protect the wood and bring out the grain even more.

All that remains is to assemble your cuttings or flowers, fill the test-tubes with water and show off your handiwork.



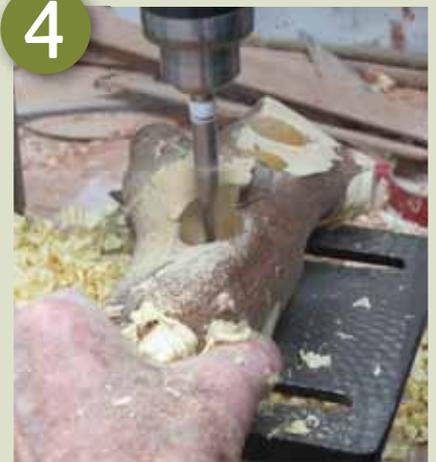
Using the grinder, sand away any loose or undesirable parts of the wood



Plane one or two sides of the wood to create a flat base to hang on a wall or sit on a counter



After planing



Drill the holes where you want them, making them deep enough to hold the test-tube



Finish off the piece with a sealant or lacquer

The step 'open'

Materials list

Wooden parts

- 4 x Legs (Hard Wood) – 18mm (thickness) x 34mm (width) x 327mm (length)
- 1 x Step Platform (MDF or Hard Wood) – 16mm x 220mm x 300mm
- 2 x Platform Support (Hard Wood) – 18mm x 45mm x 168mm
- 2 x Short Dowel (Hard Wood) – 16-18 diameter, 294mm in length
- 1 x Long Dowel (Hard Wood) – 16-18 diameter, 332mm in length
- 4 x Biscuits – No. 20

Metal parts

- 2 x Connecting Strap (Mild Steel) – 1,6mm x 13mm x 111mm
- 4 x Washers for Straps (Mild Steel Plated) – 4mm ID, 10mm OD
- 8 x Washers for Joints (Mild Steel Plated) – 1 x 6 ID x 12 OD
- 2 x Hinge Pins (Mild Steel) – 6mm x 32mm
- 1 x Pin for Catch (Mild Steel) – 6mm x 35mm
- 1 x Small Washer for Catch (Mild Steel) – 1,6mm x 4 ID x 12-15 OD
- 1 x Large Washer for Catch (Mild Steel) – 1,6mm x 4.5 ID x 25 OD
- 1 x Spring for Catch (Spring Steel) – 6mm ID x 7.5 OD x 15mm
- 1 x Cross Pin for Catch (Brass Welding Rod) – D1,6mm x 8mm
- 2 x Screws Support to Leg (Steel) – M6 C/S Head, 30mm
- 4 x Screws for Straps (Pozi or Sq) – D8 Head, 19mm
- 2 x Screws for Catch (Pozi or Sq) – D4 Head, 12mm
- 4 x Screws for Supports* (Pozi or Sq) – D8 Head, 55mm
- Alternative to biscuits

The step 'closed'

FOLD-UP STEP

Learn how to make the ideal gift

>> Willie Marneweck

I named this fold-up step “One small step – for womankind”, because it was primarily designed to enable ladies to reach those high shelves in the kitchen and pantry. Imagine how thrilled your lady will be if you made one for her. I reproduced a fair number of the steps and offered them as gifts to my wife, daughters and lady friends and all were thrilled to receive them. I’ve had no come-backs indicating that something broke. The height of the step is 260mm, so it is just high enough to be safe. Photos 1 and 2 show the step folded open and closed. By the way, the open and closing motion of the step is unique and really cute.

Making the step is fairly easy if one has the basic machines and hand tools and some practical woodworking experience. The materials are also not very expensive. Returning to the matter of machines, a table saw, a planer/thicknesser, a drill press (and some drill bits), an under table mounted router (and some cutters) were used. A handheld router will also suffice while a jigsaw is useful but not essential.

There is one challenge though, and that is to make the safety catch, which entails a bit of metalwork. Maybe you can cope with it or a friend can assist.

Drawing 1 shows three views of the assembled step in in folded open orientation. This gives the overall sizes and shows which side is considered the front side. For the required materials, have a look at the materials list.

It may be appropriate to say this once; accuracy is important. For this reason, some dimensions shown with an asterisk in the drawings are important.

Making the wooden components

Like all chairs, the ‘One Small Step’ also has right- and left-hand components. To avoid mistakes the right, left, front, rear, inside and outside orientations must be scrupulously observed. The side of the step with the carrying handhole is defined as the front side.

Most kinds of wood will do, but remember that woods like pine, ash, oak and the like, make it difficult to drill exactly due to their grains. Kiaat, beech, blackwood, etc. work better. I even used silky oak (see photo). For the platform I prefer 16mm thick MDF (medium density fibreboard) but solid wood will equally suffice. If MDF is chosen one should find a small piece somewhere because it is normally sold in sizes of 1820 x 2760mm.

The legs

Refer to drawing 2. Machine the four legs 18mm thick x 34mm wide x 335mm (a bit longer than final size). Identify each leg by randomly naming them as: Outside Right, Outside Left, Inside Right and Inside Left.

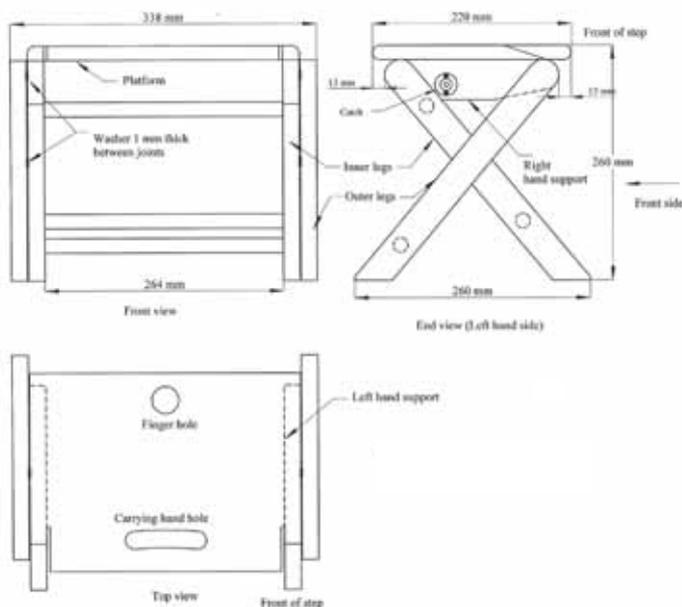
Next drill all the holes taking great care to drill very accurately observing drilling the correct hole diameters and depths. Note that some holes go through and some only partly. The diameter of the dowel holes will depend on available dowels (see under Dowels). Forstner drill bits are preferable for dowel holes, but not essential. Spade drill bits will not do.

Lastly cut and sand the R17mm half rounds at all top ends.

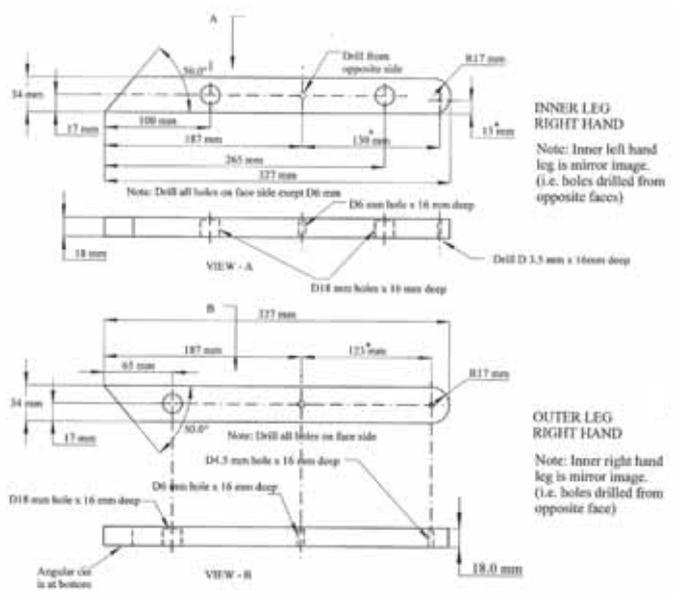
Platform supports

The two supports can next be made as shown in drawing 3. Machine a length of wood 18mm thick x 45mm wide x 310mm long. This is enough for two supports. Split the piece at an angle of 50° and identify left and right sides. Study drawing 3 to mark out the pieces and then drill the holes.

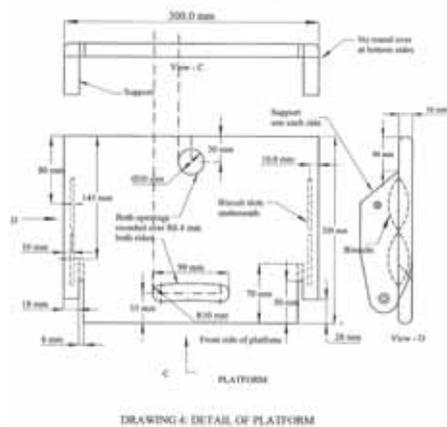
Remember to countersink the D6 mm holes sufficiently to allow the M6 x



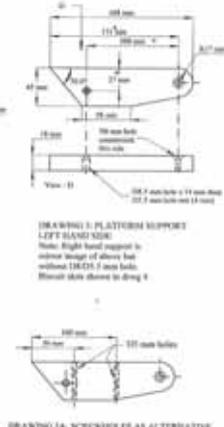
Drawing 1: Assembled step



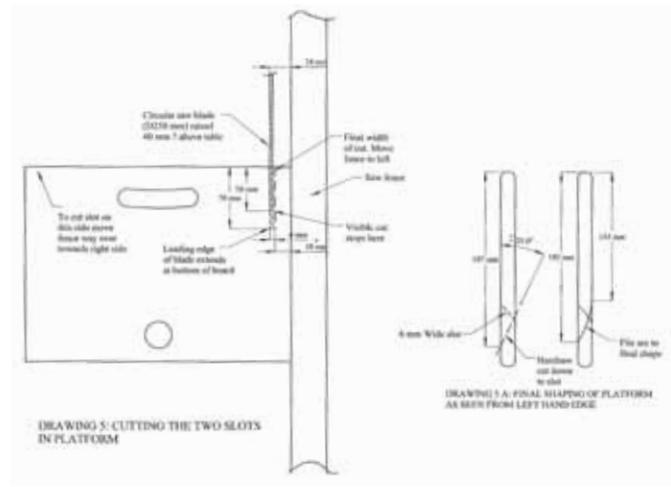
Drawing 2: Detail of legs



DRAWING 4: DETAIL OF PLATFORM



DRAWING 3: PLATFORM SUPPORT



Drawing 5 & 5A

Drawings 3 & 4

30mm countersink screw heads to go in flush or even slightly deeper.

To join the supports with the platform there are two options. If you have a biscuit cutting machine cut the two slots in each support as indicated in the drawing 3. The piece must be put with its outside face down when cutting slots because the platform will also be slotted using the outer edge as reference. If a biscuit machine is not available, drill screw holes as indicated in drawing 3A.

Platform

Make the plank 16mm thick x 220mm x 300mm or use 16mm thick MDF. Following the detail of drawing 4, make the carrying hand hole as well as the finger hole. The former can be drilled first and then the rest cut out with a jigsaw or coping saw. Finish both holes by rounding around the holes top and bottom with a 1/4 inch (R6,4mm) round over bit. The outer edges of the platform can also be rounded over all round, leaving only the two bottom side edges intact. If biscuit joints are going to be used, also cut the slots as indicated in drawing 4.

Next cut the two side slots. The process is shown in drawings 5 and 5A. The slots must be 6mm wide, with the inner edge of the slot exactly 18mm from the side. Use the table saw blade to make a radial cut. By moving the fence to the left, the slot width can be increased to 6mm. To cut the slot on the left side of the platform, move the fence much further to the left.

Drawing 5A illustrates how the slanted cuts in the projecting 18mm wide strips are made. This best done with a small hand saw and dressed afterwards with a sharp chisel or file. The cuts are done on the 18mm wide strips outside of the 6mm wide slots. Mark the starting point of a cut 197mm from front edge and angle cut at some 25°. Cut right through the 18mm protruding pieces.

Dowels

The last wooden components are the three dowels. The lengths are given in the material list. If you are successful in finding dowels of about 16 to 18mm diameter and have a drill to match, then it is a matter of cutting the three dowels to length.



One can make your own dowels to fit your available drill size (try a drill size between 16-20mm diameter. Make your dowels by fabricating square sticks of appropriate lengths, the square sections being exactly the diameter of the hole. Round over all four edge sides with a router round over cutter having a radius half the diameter of the holes, or as near to that as possible. It may be necessary to dress the dowel ends to produce a nice and tight fit in the holes. This method has the added advantage that similar wood to the rest can be used.

The metal components

(connecting straps, swivel pins and safety catch)

The connecting straps are showing drawing 6. Note that the holes must be countersunk very deep to enable the heads of the relevant screws not to protrude, or as little as possible.

Paint the straps with spray can in black or what you prefer.

Drawing 7 details the safety catch. Study it carefully. I found the washers at our hardware shop and bought a length of 1m x D5mm rod at the people that sell iron materials. Similarly, with the D6mm rod for the swivel pin. You can improvise by cutting the required lengths of D5mm and D6mm from steel bolts (unthreaded parts).

The D5mm stem must be drilled with a 1,6mm hole for the cross pin as shown. Round the ends of the pin. The spring of 6mm inside diameter must be cut to a length of 15mm. Many hardware stores sell a variety of springs, and a suitable one can be selected. When inserting the cross pin mar it slightly to get a tight fit. Round over the stem and cut a spigot at the other end. Here a metal working lathe is called for but I'm sure a bit of ingenuity will find a way around this if a lathe is not available.

Make the two hinge pins with mild steel rod D6mm x 30mm long. You can again substitute the rods by using M6mm bolts cut off at 30mm lengths. Round the ends slightly.

Assembly of the step

It is considerably easier to paint the components before assembly. Do all necessary sanding and paint all the components with varnish, Woodoc10 or whatever you prefer. The platform seems to look good if painted in a bright colour. Of course, all areas that will get glued must be masked, such as contact area where supports join the platform and the tips of the dowels. Dowel holes must be plugged with paper.

While the paint is drying, make some assembly gauges. See drawing 8 and associated instructions. Use any suitable scrap sticks of 264mm long to accurately space the inner legs. When paint is dry and hard glue dowels in place with ordinary white PVA glue. Clamp the legs together until the gauges touch the insides. See that everything is square and flat.

The outer legs can now be glued using spacers of 302mm long. The outer legs must be joined over the inner frame by first inserting the hinge pins and washers. Remove the spacers and fold the structure flat and legs together. See that the legs are in perfect alignment. Make corrections while glue is still wet.

The platform and supports can be glued with the biscuits in place (or glued and screwed). See that the 'wedge' tip of the support is exactly 40mm from the back edge of the step board. See drawing 4.

Insert the two M6 x 30mm countersink head screws through the supports and force-screw them into the predrilled holes in the outer legs. These screws do not tend to come loose during usage but a bit of 'Loctite' in the 'tapped' part will do no harm.

Next attach the straps to the upper part of the inner legs where the appropriate holes have already been drilled. Use D8 mm (head dia.) x 19mm long Pozi or square drive screws, (countersink head). Fit washers underneath the straps. To attach the straps to the insides of the supports is a bit tricky but go ahead as follows. Put the Step in folded open position on one end (say right side) as

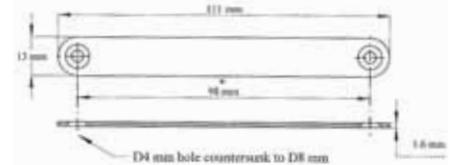
per drawing 9, and push components together. See that the "touch" spots are touching. Swing strap inside the support and use a pencil or sharp awl through the hole of the strap to lightly scribe two arcs, one on inside of hole and other on the outside (the holes are much larger than the pencil point!) Fold the step in its closed mode as in drawing 9 and again scribe two arcs with the strap inside the support. The centre of the little square where the four arcs intersect is the place to insert the next strap screw. Predrill with D3.5mm drill bit and fix with a D8 x 19mm screw. Remember the washer underneath. Do the same on the left side.

Check that the step folds open and closed easily. The round finger hole can be utilised to swing the platform. If you worked accurately the swing motion will be smooth.

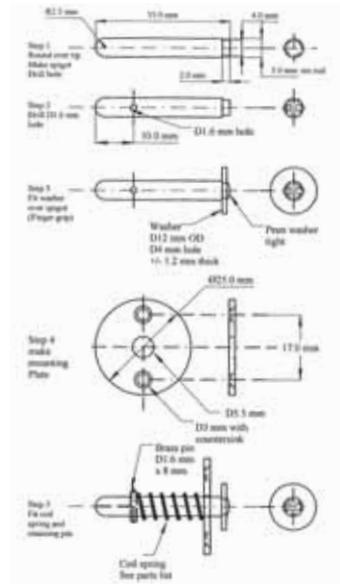
The last thing to do is to fit the safety catch. This is only on the and fitted through the predrilled hole in the left-hand support. Push the catch into the pre-drilled hole and attach with two screws D4 x 12mm Pozi. Check that the pin goes in perpendicular to the support. The pin should protrude about 4mm in the inside of the support and just below the strap. It should almost touch the strap, for minimum play. On the other hand, should the strap interfere with the pin just mark the spot on the strap, remove the strap and carefully file a slight notch at the pre-marked place with a thin round file.

The last thing to do is to check that the step stands evenly by putting it in folded open mode on a flat surface. If it wobbles slightly, sand off a bit of the foot of one leg not touching. Similarly, in folded closed mode, sand away a 'toe' of the foot that is too high.

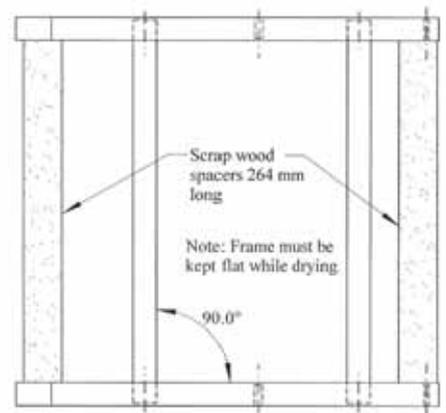
I hope you have enjoyed the project and had great fun making the step.



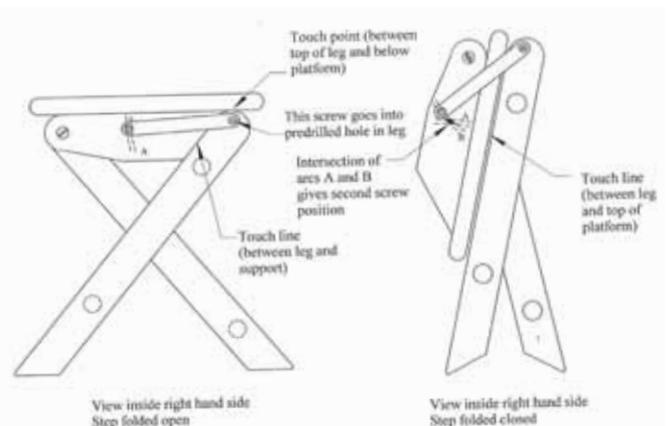
Drawing 6: Connecting strap



Drawing 7: Detail of catch



Drawing 8: Glueing inner frame



Drawing 9: Finding second screw hold of strap

Find out how to best provide light for each area of your home.

Lighting an entrance

Just like for the other spaces in your home, there are three types of lighting you need to consider for your entrance or hallway. The first is the ambient lighting. This is the overall light that allows you to use the space, and it functions as good daylight would.

Next comes task lighting. This is the illumination that allows you to perform specific actions. If it's big enough, you might have a desk area in which to work, but even in a small passage you might need concentrated light to check your appearance before you leave, for instance, or tie shoelaces.

Finally, there's feature or accent lighting. This draws attention to a particular aspect of the space. In the entrance that could be artwork on the wall, or a mirror, or perhaps a piece of furniture. However, it could also be used to wash light over a wall, for example, creating a decorative effect to add interest to the space.

The ambient light for an entrance could be provided by a pendant light hung from the ceiling. Remember, though, that it's there to light up the whole space, rather than leaving some parts of the entranceway in shadow. Dark areas will make an entrance feel smaller than it really is, and inhibit easy circulation through the space. If a single pendant isn't going to cut it, think about hanging a series of them down a long narrow hallway. As well as providing even light, they'll make an appealing and contemporary feature.

It's worth considering dimmers so you can soften the ambient light when you want. A bright entrance seen from other living spaces that are lit in a more subdued fashion in the evening can be overbearing.

SHEDDING LIGHT on your home

Lighting has evolved over the years – and continues to evolve – yet most homes still rely one type or style of light fitting throughout. Just Google 'the impact of the light on wellbeing' and you'll be greeted with over 200 million results. That's a lot of reading...

What this goes to show is that good lighting is more than simply popping in a downlight every few metres. There is a lot more involved. With this in mind, in this article we enlighten readers on the best way to illuminate different areas in the home.



Lighting a kitchen

In most homes the kitchen has the honour of being both the heart of the home and the most multifunctional room in the house. The right lighting is essential to both these appropriations and ultimately means the difference between a space that is merely functional and one that is fun to be in. It's important for kitchen lights to be decorative and ambient, while sufficiently illuminating the key work areas such as the stove and work surface.

A single, central light fitting is the most conventional way of lighting a kitchen. The advantage of having just one light is that it is easy to clean, especially in a kitchen where lighting fittings tend to get dirty quickly because of the steam and dust in the space.

Downlighters also work because they can be positioned above work surfaces and angled as needed, as opposed to a single central fitting that will cast a shadow on the work surface as the light source will be behind you when you face it.

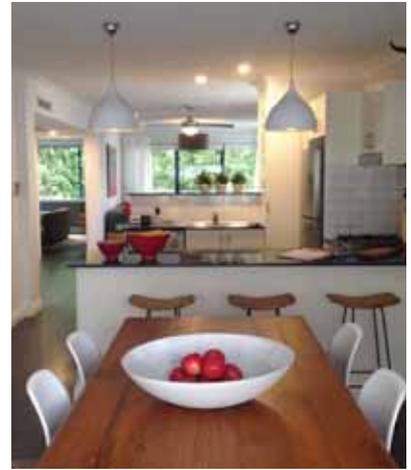
Track lighting is a popular option for the kitchen, with a similar effect to

downlighters but with much lower installation costs. Track lights are installed on a flexible cable, which means they can be directed at any angle, except for a curve. They're wonderfully versatile because they can be installed from room to room, as well as across ceilings of varying heights and down walls or columns. The light fittings are then attached onto the track wherever they are needed. You may opt to have a spotlight above the main work surface and select an interesting pendant for above the breakfast nook.

The softness of under-counter lighting is great for creating ambience in the kitchen. It is especially ideal if the kitchen is used for entertaining or next to an entertainment space where a bright shining kitchen light may be too harsh. If function is the first priority here then opt for a fluorescent light that will give a cool, broad pool of light.

The ideal combination of lights for your kitchen is determined by the main function of the space, though it is important to strike the right balance between function and ambience.

Lighting a dining room



The dining room has evolved over the years to keep up with our changing lifestyles and the way we utilise the space in our homes. What was once a room used primarily for formal meals, now also functions as a place to gather for board game nights or to do homework after school. Furthermore, the dining room as we know it is no longer restricted to a four-walled room of the home. Modern homes often feature open plan living where the dining room, kitchen and living room all flow into one another.

To keep up with the multifunctionality of this room, well-considered lighting is essential. You ultimately want your fixtures to provide adequate lighting but they should also impact the mood of the space, regardless of whether they're switched on or off.

The middle of the room is not necessarily the best place to suspend a hanging fixture. If you're going for a chandelier or pendant light you want it to be placed over the centre of your dining room table, wherever that may be in the room. Select a spot for your table first and then install the lighting.

Hang your fixture too high and your table won't be bathed in enough light. Hang it too low and it will

block people's line of sight when they stand up from the table or may even hit the centrepiece such as a tall vase of flowers. Play around with the height of your fixture until you get it just right. If you can, turn the fixture on when it's being hung so that you can see exactly what height offers the best balance of light and space.

Supplement your overhead lighting with additional fixtures. Sometimes a single fixture over the table does not offer sufficient illumination for the entire room and this can create dark

corners. Lamps and wall sconces add style to the room and provide that extra bit of layered lighting.

Dimmer switches are recommended for almost all rooms of the home, but nowhere are they more appropriate than in the dining room. They enable you to turn the brightness up for task-oriented activities and down low to create a cosy atmosphere at mealtimes. Also consider the total wattage of the fixture. All bulbs in a single fixture should add up to between 200 and 400 watts.

Lighting a lounge



The lounge is known as the living room for good reason. It's the place where we spend a lot of time, be it socialising with family and friends, watching television or practicing a hobby. Considered lighting works to enhance the look and feel of a space, and plays an important part in achieving the right ambience. The best lights for a lounge is usually a balanced combination of different lights, which are determined by the main function of the space, as well as individual taste and style.

Uplighters illuminate from the bottom up, essentially lighting the ceiling. These types of lights tend to be very comfortable on the eye and create very little glare. Illuminating the ceiling helps to make a room appear larger than it is, which can be useful in small homes. Uplighters also make it seem like the ceiling is the source of light, and as it reflects down it creates a soft, even spread of light.

Uplighters tend to work best on white ceilings but have little or no effect on thatch or wooden panel ceilings. Uplighters with a dimmer switch, are useful because they let you easily control the amount of light in the room.

It is possible that uplighters aren't the best option for your space. That's when downlighters work. Since they're recessed in the ceiling

Lighting a bathroom



Your bathroom is one of the most functional spaces in your home so ensuring that it has the right type of lighting is essential. Good lighting in the bathroom is not only functional though – well-considered lighting can take your bathroom's overall aesthetic from drab to fab with the flick of a switch.

Ideally, your bathroom's main source of light should come in the form of downlighters. If you've decided to go with this option then be sure to choose sealed, waterproof downlights for above the shower as constant exposure to steam can lead to electrical problems further down the line. This said, downlighters are costly. If you're looking for a more budget-friendly option then a circular, sealed fluorescent fitting is the way to go. These offer sufficient light for good

visibility and don't use much electricity. This is also a clever option if the bathroom light in your home gets left on throughout the night for the little ones.

Bathroom mirrors and good lighting go hand-in-hand. The most important thing about mirror lights is that they need to work to make your face look even and shadow-free for the most accurate reflection of yourself. To achieve this shadow-free look, shine the mirror light towards your face instead of shining the light onto the mirror and straight back at you, as you would with a painting. Instead of reflecting the light glare of the fitting, the image reflected in the mirror will be beautifully illuminated. If the mirror is square, rectangular or round then luminaires on either side of the mirror will illuminate your reflection best.

Lighting your bedroom



the main benefit of downlighters is that they allow for an even spread of light. They're a popular choice and available in a variety of styles and sizes. As a rule of thumb, downlighters need to be placed 1.5 to 2m apart but this also depends on the height of the ceiling and what the lights are needed for. Generally, the higher the ceiling the more downlighters you'll need, unless you're opting for a particularly soft light effect.

Downlighters are the best option for creating focus within a room, especially if you have a particular ornament or artwork that needs to be illuminated. For the best results use a 24-degree beam for focussed lighting, such as highlighting a picture, and a 60-degree beam for creating an even spread of light across a broader area or for passageways. A 38-degree beam is the most common option for downlighters, but they can create 'archways' of light on the walls, especially down passages.

Just like accessories complement and complete an outfit, table lamps and floor lamps add the final touch of lighting elegance to a space. In the lounge, table lamps and floor lamps are especially important, not only for illuminating specific areas but also for enhancing the decor in a space by acting as a bridge between the lighting and the furnishings.



Given that the average person will sleep for roughly one third of their life, your bedroom is one of the most important rooms in your home. It's a respite for you to relax in, and it deserves more than a little of your attention when it comes to lighting design. Since light is one of the driving forces behind our circadian rhythms (our daily cycle of sleep and wakefulness), properly managing it in the space where you rest your head is all the more important.

While it's generally not recommended for creating the perfect sleep environment, you probably do more in your bedroom than just sleep. Depending on the size of your room, you may have several zones where you perform a variety of activities: your wardrobe and vanity, a reading area, maybe a desk for work, the remaining space, and of course, your bed.

Bedrooms need a mix of ambient and task lighting, and possibly accent lighting if there are some items you would like highlighted. But overall, upon entering you will want to have some general lighting for moving around safely. For general lighting,

consider the size of your room and how much space it is that you actually need to light.

Ideally, your bed and the space that surrounds it should be designed to help you relax. You want to get into bed at the end of the day and unwind, which means avoiding melatonin-disrupting blue light at all costs. Light bulbs in bedside lamps should be very warm or warm white – opt for a colour temperature somewhere around 2 000-2 700K. Don't install lights directly over the bed, which can be harsh while lying down. Ideally, you want soft lighting from the sides, with well-shielded fixtures and a beam angled downwards, to keep light from shining in your eyes.

In a perfect world, you would keep your work life out of your bedroom, but not everyone has the space. If you have a work area in your bedroom, use lighting to keep it separate from the sleeping area. In this space, you'll need task lighting that is bright and cool to keep you alert and prevent eye strain. Select a fixture with directional lighting that you can control and aim directly at what you're working on, such as a task lamp.

For more information, visit www.eurolux.co.za

TOUGH CLEANING JOBS MADE EASY

Read our tips to easily tackle some of the most troublesome cleaning jobs around the house.

Cleaning behind and under the refrigerator

Time it takes: 20 to 30 minutes

Why it matters: Lots of dust on the coils can cause a refrigerator to run inefficiently. And dust under the refrigerator can mix with moisture from the air to gum up the finish on your floor.

Step 1: Pull out the refrigerator by grasping both sides and gently wiggling it toward you; some are on wheels, so this may be easier than you think. When you can, reach behind and pull the plug (your food will survive for the short time it takes to clean). You may have to release (lift/unscrew) the two front feet of a refrigerator otherwise you might battle, or even break the feet off.

Step 2: To dislodge dust around the condenser coils (the wiggly apparatus in back), use a long, thin tool known as a refrigerator-coil brush, then gently vacuum with a brush attachment. Some refrigerators have their condenser coils behind a removable grille in the front. If yours does, snap off or unscrew the grille and clean the coils, as above.

Step 3: Wipe down the wall, the back of the refrigerator, and the sides with a damp cotton cloth and a little dish soap. Then vacuum and clean the floor. A solution of 1/3 cup white vinegar and two litres of warm water is a safe bet for most surfaces, except tile and stone. For those, use plain hot water or a tile or stone cleaner.

Step 4: After the floor is completely dry, plug in the refrigerator and slide it into place. Make sure it is level otherwise you will have problems with the unit icing up.

Try to do this: Twice a year.

Clearing dead bugs from an overhead fixture

Time it takes: 15 minutes

Why it matters: The corpses pile up, especially in summer. They're not dangerous to your health, but who wants to look at them?

Step 1: Turn off the light and tape down the switch for safety. Wear an apron with pockets to stash supplies. With a screwdriver and a cotton cloth in your pocket, climb a tall stepladder which will get you eye-to-eye with the fixture. Unscrew the light fixture and dust the bulb with the cloth.

Step 2: Climb back down and head to the kitchen. Dump any dead bugs into the trash. Line the sink with a large dish towel (to prevent breakage) and place the light cover on top, open-side up. Fill with warm water and a squirt of dish soap and let soak.

Step 3: Wipe with a sponge, rinse, and dry. (You can also pop some light fitting covers into the dishwasher).

Step 4: When it's dry, reattach the light cover. (Consider switching to frosted-glass domes, which camouflage the body count better than clear ones).

Try to do this: Whenever you're sick of looking at the bugs.



Cleaning ceiling-fan blades

Time it takes: 15 minutes

Why it matters: When dust sits around, dust mites move in. They contribute to allergies and sinus infections. A dusty fan can send mites scattering to bedding and furniture, so it's actually a health risk.

Step 1: Tape down the fan's switch for safety.

Step 2: Spread drop cloths or old sheets on the floor and over any furniture under the fan. Try to cover a radius about twice as wide as the blades.

Step 3: Fill a spray bottle with water and two tablespoons of distilled white vinegar and use it to spritz the inside of a cloth shoe bag or pillowcase. Put on a baseball cap.

Step 4: Standing on an extra-tall stepladder that puts you about a head above the blades, slip the bag or the pillowcase over each blade, pulling it back to trap dust (you can use the same one for all the blades – just keep manoeuvring it to find a clean spot). Use a cotton cloth for residual grime and to dust the base and the light fixture. If, however, you have a very high ceiling that's out of range use a ceiling-fan duster. It is shaped to fit around the blades and screws onto an extension pole.

Try to do this: At the beginning and the end of the hot weather, or every other month if you use the fan year-round.



Scouring the kitchen dustbin

Time it takes: 15 minutes

Why it matters: When traces of food and liquid that escape the bin bag are left to fester, mould, mildew, and bacteria can grow, causing a nasty stench. Mould and mildew can also get into the air and exacerbate allergies.

Step 1: Take the bin outside and hose it down. Pat dry.

Step 2: Spray the bin inside and out with a cleaner designed for pet messes; these products contain enzymes that kill bacteria and neutralise odours.

Step 3: Wearing rubber gloves, scrub the can with a toilet brush or a nylon-bristle broom. Rinse with the hose and towel dry, or, even better, let the bin dry in the sun; the heat helps eradicate mould.

Try to do this: Every other month or whenever the bin smells horrible.



Remove grease from kitchen cabinets

Time it takes: 10 to 20 minutes

Why it matters: Nothing can be tougher to remove than built up grease and dirt on kitchen cabinets. The longer you leave it, the more layers that are built up and the harder it gets to clean.

Step 1: To get them clean, pop a damp sponge or cleaning cloth into the microwave and heat for 20 to 30 seconds until it's hot.

Step 2: Spray the cabinets with an all-purpose cleaner containing orange oil and let sit while you put on a pair of rubber gloves. Remove the sponge from the microwave. Wipe off the cleaner with the hot sponge. Once cleaned consider using a cabinet refinisher to restore your cabinets to their previous glory.

Try to do this: Every six months.

Get rid of the unsightly rings in your bathtub

Time it takes: 15 to 20 minutes

Why it matters: You want your bathroom to look good. It's a room that nearly every guest in your home will see at one point or another, and it's important to make a good impression. If the first thing a guest sees is a prominent ring around the bathtub, that's not a good impression. A ring around the tub is caused by a build-up of soap scum and oil from bathing products. While the bath is in use, the soap scum and oil float to the top of the water and sit there for an extended period of time, causing deposits to build up in layers until there is a visible ring around the tub. The more frequently baths are taken, the faster that ring will build up.

Step 1: The best option to get rid of a bathtub ring depends on the materials used in your bathtub. Using an incorrect cleaning method will not only be ineffective, but also could cause damage to the tub itself. Depending on the bathtub material, you may have to take a different approach to get the tub completely clean.

- **Plastic:** Try a 50:50 mixture of chlorine in water. Apply to the ring with a spray bottle and let the solution sit for 15 minutes before scrubbing. Use a scrub brush to scrub out the solution and then rinse the tub thoroughly. Repeat as necessary until the ring is gone, and remember to rinse out the tub thoroughly.
- **Porcelain:** Combine half a bucket of water with 1/4 cup of ammonia and 1/4 cup of baking soda. Use a non-abrasive sponge soaked in the solution to scrub the bathtub, repeating as necessary on problem areas until the ring is gone. Rinse thoroughly and repeat as necessary until the tub is clean.
- **Enamel:** You'll need to use water and a bathtub cleaning agent such as Ajax powder to make a paste. Spread the cleaning paste around the tub and be sure to completely cover the ring, then let it sit for half an hour. Rinse away thoroughly.
- **Acrylic:** Acrylic tubs are becoming a more and more popular choice for homeowners due to the fact that they are so low-maintenance and easy to clean. Acrylic is a very non-porous material, so it doesn't allow soap scum and other build up to cause the ring around the tub as easily in the first place. If you do experience soap scum build up, simply use a non-abrasive bath cleaner, let sit for at least 15 minutes, and then wipe away.

Try to do this: As you can see, getting rid of a bathtub ring is hard enough; you need to put in work up front to keep it from coming back. The rule of thumb is to clean the tub on a weekly basis, but that varies depending on how often you use the tub. There's no way to guarantee that the ring won't eventually return, but at the very least, you can hold it at bay.

Clean pet urine stains

Time it takes: 20 to 30 minutes

Why it matters: Pet urine stains and odour can quickly ruin your furniture, but with proper cleaning, it can be salvaged. You have two important goals when cleaning pet urine on upholstery. First, it is important to soak up the urine without driving the urine into the cushions or fill material below the fabric. Once the urine soaks into the stuffing below, you may never get it out. Second, you need to get the urine out of the fabric immediately.

Step 1: Extract the moisture by blotting the area with paper towels or cloth. Rubbing can spread the stain. If you have a shop vacuum, you can also use it to remove the liquid before it can soak in.

Step 2: Place a dry cloth on the spot and allow it to dry completely before you begin to clean the spot with our homemade upholstery cleaner for pet stains.

Step 3: Mix the water and vinegar. Use it sparingly to dab at the stain, dampening it, then lifting the moisture with a dry cloth. If you add some hydrogen peroxide it will even take any odour away.

Avoid soaking the material; you don't want to drive the urine into the underlayer. Repeat the dabbing and drying until the stain is gone. Adding a little oil to the water and vinegar mixture will create an excellent DIY furniture polish, as well.

Step 4: The next step is to sprinkle the stain with baking soda. Pet urine is acidic and can ruin the fabric. The baking soda not only neutralises the acid, but it also helps deodorise the fabric and is a natural homemade fabric freshener. Work the baking soda into the fabric and let it dry, then vacuum it away. Repeat the entire process if any stain or smell remains.

Try to do this: As soon as your pet is a naughty cat or dog.

Decrumbing the toaster

Time it takes: 5 to 10 minutes

Why it matters: Besides being a mess, the crumbs can smoke, stinking up your kitchen and possibly setting off your smoke alarm.

Step 1: Unplug and remove the crumb tray. Dump out the crumbs, then wash the tray with dish soap and wipe dry with a cotton cloth. Hold the toaster upside down over the trash can and gently tap out any remaining crumbs.

Try to do this: Every second month.



Scrubbing shower doors and tiles

Time it takes: 10 to 15 minutes

Why it matters: If they're ignored for too long, mould and mildew can seep into the grout, and there may be no way to remove them. A build-up of soap scum can discolour ceramic and stone tile.

Step 1: Spray the walls with an all-purpose cleaner, then go at them with a stiff-bristle scrub brush. For heavy soap scum, mould, and mildew, use a stronger cleaner.

Step 2 (for those with shower doors): Use glass cleaner or, if you're dealing with serious soap scum or hard-water spots, undiluted white vinegar that has been heated to boiling (just be careful). A scrub brush can scratch glass, so use a microfiber cloth or, for gentle abrasion, a non-scratch scrubbing sponge. A trick for shower-door tracks: Pour a little vinegar into the track, let sit for a few minutes, then rub with the scrub brush and towel-dry. No need to rinse. After a shower or two, the vinegar smell will be gone.

Try to do this: Every other week for light cleaning (using the all-purpose cleaner); once a month for the shower-door tracks.



Clean an electric stove top

Time it takes: 30 minutes

Why it matters: If you've got an electric hob with hotplates, cleaning can be a little more difficult. It's common for owners to dither over how to clean electric hob plates – should you scrub them or treat them delicately? Fortunately, hotplates can usually withstand a bit of rough treatment, which should make cleaning much quicker and simpler.

Step 1: If your hot plates are removable, take them off the cooker top – this will make cleaning much easier.

Step 2: If your hot plates are removable, take them off the cooker top – this will make cleaning much easier.

Step 3: Use a specially designed commercial cleaning product which is the easiest option. Apply as directed and allow to soak in before removing it.

Step 4: Don't be afraid of using wire wool to scrub hot plates, but test on a small section first. If any scratching appears, stop immediately and switch to a softer cloth. Always rinse the hot plate thoroughly.

Try to do this: Often. The secret to maintaining a clean, shiny hob is to clean up spills and dirt as soon as possible before they've had time to dry on. Believe it or not, spending just five minutes a day wiping your cooker top is a better option than spending much longer on the job once a month.

Removing toilet stains

Time it takes: 10 to 20 minutes

Why it matters: Hard water can quickly build up on taps, showers, sinks, and toilets and over time can leave rust and scale stains that are very unsightly and often extremely difficult to remove. Nowhere is this more problematic than in a toilet, which sees a lot of use and holds standing water constantly.

While there are many commercial cleaning products that can remove hard water stains in the toilet, several household products can be just as effective and will rid your bowl of the dreaded ring without harsh chemicals.

Step 1: Baking soda and vinegar are two of the most useful household products that can be used to clean many things, including hard water stains in the toilet. Pour about 1 cup of vinegar into the toilet bowl and swish it around with a toilet brush. Let it sit for about one minute.

Step 2: Add about a cup of baking soda to the toilet bowl, then add another 1 to 2 cups of vinegar. This will create a fizzing action. Let the solution sit for about 10 minutes.

Step 3: Use a toilet brush to swish the solution around the bowl, making sure to get the solution onto any stains that are above the water line. Don't flush the toilet.

Step 4: Let the vinegar and soda solution sit for up to 30 minutes, swishing one or two more times until the stain is gone. If any stain remains, scrub it with the toilet brush or a stiff-bristled nylon brush. Flush the toilet to rinse. For really stubborn hard water toilet stains, try using Borax paste. Another option for scrubbing very stubborn hard water stains in the toilet is 0000-grade steel wool (0000 is the finest grade). Steel wool cleans by itself or with plain water, but you can also use it with household cleaners. Be sure to use 0000-grade steel wool to prevent scratches to the porcelain surface.

Try to do this: Monthly. There is no need to use harsh and costly chemicals to prevent hard water toilet stains. Borax, vinegar, and baking soda do a great job of cleaning and disinfecting. Used regularly, they will prevent hard water stains from building up. To help keep your toilet clean and free of hard water build-up, try regular cleanings with Borax, which can help to soften hard water. Just use 1/4 cup Borax with every cleaning.





7 Secrets for the perfect workshop layout

Tight on workspace? Does it take you longer than it should to complete projects? Learn how to set up your workshop for optimum results

The experts at Kreg offer seven ways you can gain some extra space in your garage or workshop through a more efficient setup of your workbench, power tools, and more.

'Shared space'" shop

If woodworking isn't the only thing going on in your workspace, it is important to keep the layout flexible. You can do this by dividing your space into zones. Perhaps your garage or workshop includes space where you can permanently house larger items like a workbench, a drill press, and a miter saw station, which you can use as a secondary work surface. It is also an ideal place to use benchtop tools. Other (portable) items can be stored away when not in use.

Flexible middle

The upside of a zoned arrangement is that it leaves plenty of room for the car. But, when the car is backed out, the space can be used to put larger power tools (table saw, jointer, drill press, etc.) to work. Outfit your tools with mobile bases and

casters to make setting up shop easy. Then, when the work is done, simply park your tools back in place to make room for the car again.

Effective tool groups

Perhaps you have a dedicated workshop, but it's small. Figuring out the best 'combos' for grouping and arranging your tools will make your shop easier and more efficient to work in. The idea is to arrange your tools in small groups. Below we highlight a handful of solutions that may help you get more out of your shop space.

Central workstation

Place your table saw and workbench back-to-back in the centre of your workshop. That way, your bench can act as a large outfeed support for the table saw. Just make sure your bench is the same height or a bit lower than your saw. This makes it perfect for handling sheet goods. Another plus is that the combined size of the saw table and bench makes an extra-large glue-up and assembly station.

Galley setup

Another option is to place the workbench behind the saw, separated from one another so that you can work between them – like working in a galley kitchen. With this setup, you can use your bench as an infed table to support long boards and large sheets of plywood.

Prep tool duo

Another set of tools that works well together is the planer and jointer. While they're not 'everyday' machines, they can see some pretty heavy use at the beginning of a project. A smart way to position them is together along a wall close to your lumber rack.

Shaping and drilling trio

Another grouping that works well is the band saw, drill press and router. While this trio may seem like an odd mix, there are a couple of reasons why these tools work well positioned close together. First, each of them works well placed against a wall. Since the router table is typically lower than the band saw and drill press tables, it gets positioned between the two. That way, it can serve as a handy work surface for holding parts or accessories while you're working at the drill press or band saw.

A truly-efficient shop

Try not to see tools as stand-alone equipment. Look at how they work together, as well as how they fit into your workspace. Ultimately, this will save you space, time, and trips across the shop. And, after a tool shuffling or two, you may even feel like you have a whole new place to work. What a great feeling!

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BLUE POWER

In the final part of our series on spray painting, we look at maintaining your equipment.



SPRAY PAINTING

for the amateur Part 3

Spray painting can be a great alternative to other finishing methods – if done properly...

>> Willie Marneweck

It is highly recommended that the spray gun is disassembled after a spray session.

1. Remove left-over paint, replace cap and wash gun by partly filling with thinners. Shake and pull trigger to clear nozzle.
 2. Remove fluid container cap and air cap and put it in container of thinners.
 3. Pull trigger and unscrew paint nozzle with the appropriate spanner. Wash the nozzle in thinners.
 4. It is not necessary to remove the needle every time, but it should be done now and then. Unscrew needle adjustment knob and pull out needle and spring. Add thinners. The adjustment knob may also be removed now and then, and the threads cleaned thoroughly.
 5. Using a nylon brush and a small bottle brush (the latter is sometimes supplied with the spray gun) scrub the cup and its cap and the entire gun well with clean thinners.
- Similarly, the other parts should be washed.
6. The air cap must also be cleaned as in step 5 above. Observe that all the air holes are open. If not, the holes may be cleaned carefully with thin wire, e.g. a paper clip or some thinner gauge wire. Be careful not to damage the hole where the nozzle tip protrudes through.
 7. The nozzle requires special attention. See that no paint and other debris is hiding inside and clear the nozzle orifice (use a toothpick but never wires, etc.). The surrounding small air holes must also be cleared using an appropriately sized wire (e.g. paper clip).
 8. Check that fan adjustment knob and airflow knob turn all the way, in both directions. Use Q20 to lubricate if necessary.
 9. Reassemble gun. Remember to pull trigger when refitting air nozzle.

COMPARING SPRAY PAINT AND HAND FINISHES

Characteristic	Spray Finish #	Hand Finish \$
Equipment cost	High	Nil
Learning time	High	Low
Possibility of bad results	Medium	Low/medium
Preference to appearance	Individual taste	Individual taste
Speed of application	Fast	Slow

Characteristic	Spray Finish #	Hand Finish \$
Drying/curing time	Fast	Slow
Water resistance	Excellent	Low
Life expectancy	Excellent ≥ 40 y	Needs regular refinishing
Application in furniture industry	Exclusive	No
Appearance on light coloured wood	Browns wood	Browns wood
Resistance to sunlight	Not suitable	Not suitable
Wood movement due to moisture	Fairly low	As unfinished

#: Finish with acid catalyzing reaction lacquer

\$: Finish with Woodoc 10 or Danish oil

The table does not compare finishes such as water-based lacquer, varnishes, etc.

SPRAY PAINTS SUITABLE FOR WOODWORK FINISHING

Type of Paint	Features and Comments	Solvent
Nitrocellulose	Single pack, outdated, life about 20 years	Lacquer thinners
Reaction lacquer	Catalyst needed, industrial workhorse, life ≥ 40 years, browns over time	Lacquer thinners
Lacquer water-base	No catalyst, not well known, not browning	Water
Varnish	Very old finish, some polyurethane types give good life expectancy	Turpentine
Enamel	Very old finish, needs primer and undercoats	Turpentine
Velvago	Plascon propriety product intended for brush or sponge roller	Turpentine
K1 Autopaint	Single pack, usually called duco	Lacquer thinners
K2 Autopaint	Catalyst needed, automotive industrial workhorse	Lacquer thinners

SPRAY PAINTING FAULTS AND CURES

Effect	Cause	Cure
Dry spraying, giving sandy effect	Solvent too volatile	Use slower solvent
	Spray gun too far from work	Move closer to work
	Too much atomizing air	Reduce atomizing air pressure
Runs and sags	Too much fluid flow	Increase atomizing air pressure
	Gun too close to work	Move gun further away
	Movement too slow	Move gun faster
Uneven coating	Gun movement irregular	Move gun at uniform speed
	Uneven overlap	Overlap evenly
	Arcing of gun	Move gun more vertically, don't 'swing'
Excessive overspray	Too much air (pressure too high)	Reduce atomizing air pressure
	Uneven movement of gun	Move gun uniformly
	Fan width too wide	Turn back fan opening knob
Spattering or 'orange peel' effect	Lacquer too viscous (thick)	Add more thinners
	Insufficient atomizing air	Increase atomizing air pressure
	Paint flow too high	Balance atomizing air/fluid flow

(The table above is acknowledged as from a Plascon instruction book)

Maintenance of the compressor

1. Check the oil level regularly.
2. Open the air filter and clean with compressed air. Wash if necessary. This is possibly the most overlooked maintenance item.
3. With air tank under pressure, slowly open valve below tank and allow condensed water to blow off.

Maintenance is imperative to ensure good spray painting results



ABOUT WILLIE:

Willie is a retired electrical engineer by profession. Woodworking became his hobby as a primary school pupil and continued all his life. After early retirement he started a woodworking concern which he ran for 15 years, manufacturing items on order. He is a founder member of the Woodworking Association of Pretoria.

Approximately 25% of heat loss in a home comes from the roof

If your home isn't properly insulated, it may get very warm during the summer and cold in the winter. If you want to insulate your home to control the temperature better, there are easy ways to fix the problem.

Don't hesitate, insulate

Whether you are considering investing in solar panels, solar water heating, heat pumps or any other green source of energy for your home, the first step you should take is to improve your home's insulation. This will ensure that you maximise the use of natural resources and don't waste energy. If you skip this step, you will end up spending a lot of money buying a very powerful system to cover the energy needs of a badly insulated house.

Insulation is one of the most efficient ways to save energy at home since it keeps it warm in the winter and cool in the summer. In fact, it is estimated that in one year a typical three-bedroom house can save up to R5000 on energy bills by installing ceiling and cavity wall insulation.

This article will help you understand the importance of home insulation as well as introducing you to the different measures you can choose from to improve your home's insulation and make it as energy efficient as it can be.

What is home insulation?

Insulation will help you keep the desired temperature in your house all year round, protecting it against cold in winter and excess heat in summer. Insulation is also useful to reduce noise pollution. A well-insulated house is very energy efficient and will need very little additional heating and cooling.

How much money you will save by insulating your home will depend on different factors such as your climate, the type of insulation and the size of

your house. Moreover, depending on how old your house is, you will need to incorporate more or fewer insulation measures. The good thing is that you generally don't need any planning permission for fitting insulation measures and they will eventually pay back so it is a wise investment.

Usually, modern houses are built to very good insulation standards (and orientated correctly according to the sun's path), but old houses need a lot of work to be done. In the last case, there are probably many options to improve the energy efficiency of your house. When too cold, heat can be lost in all directions, so you should think of integral insulation to keep the heat in your house.

You can choose to insulate your roof, floors, walls, windows and doors. The

Sealing common problem areas

Put weatherstripping around doors and windows to prevent drafts

Weatherstripping goes around the perimeter of your doors and windows and helps block air from coming through the seams. Look for weatherstripping with adhesive backing and cut it to the height you need for the seam of your door or window. Take the backing off of the weatherstripping and press it into place to secure it.

Add sealant around gaps in your floors and walls

There are usually small cracks or gaps in the corners between your floors and walls, which could lead to heat loss. Open a tube of silicone sealant and squeeze a small line of it into the corners of your floor to fill the gap. Smooth out the silicone with your fingertip or a sealant scraper to push it further into the gap to help it seal better.

Put door sweeps on exterior doors to keep air from coming in

Door sweeps cover the space between your floor and the bottom of the door to prevent drafts from blowing under them. If you get a door sweep with an adhesive back, simply cut it to the width of your door, peel off the backing, and attach it to the bottom. Otherwise, you may have to nail it into the door with the provided hardware.

Put thick curtains in front of your windows to prevent heat loss

When you leave your windows uncovered, they can transfer cold air inside your home. Hang up thick, dark curtains in front of your windows and keep them closed whenever you want to keep your house warm. The curtains will block the cold air from coming in any further so it doesn't affect the temperature of your home.



Leave your curtains open when it's sunny so the sunlight can naturally warm up your room so you don't have to use as much energy to heat it.



You can also use sealants to stop draughts from coming through cracks and gaps

most important thing is the walls since for a typical house the walls will lose around 30 to 40 percent of the heat. The roof comes in second place, accounting for approximately 25% of heat loss. Then comes windows and doors with 20% and finally, the floor.

What are insulators made of?

There are different materials and qualities, but generally good insulators consist of products that have a structure similar to wool, that trap tiny pockets

of air. Fabrics such as cotton and hemp are great insulators, which means that having strong curtains will help to have a well-insulated home. Also, wood-based products like hardboard and wooden doors are good insulators that will help keep your house warm. There are also spray foam solutions which are generally polyurethane-based. Foam can be either used for roof tiles since it fills gaps or the adhesive strip variant can be used around windows and doors. You can also use sealants to stop draughts from coming through cracks and gaps.



Spray polyurethane foam for roof - technician spraying foam insulation using plural component gun for polyurethane foam, inside

WHAT TYPES OF INSULATION ARE THERE?

Wall insulation	Depending on the type of wall you have, you can use: <ul style="list-style-type: none"> a) Cavity wall insulation (there is a gap between the inner and outer leaf). An insulator is inserted to the wall through drilling holes which are then refilled with cement. b) Solid wall insulation (no cavity inside them). If you have solid walls you can choose between internal and external insulation. External insulation typically covers the entire facade of the property while internal is generally applied to inner rooms.
Roof insulation	<ul style="list-style-type: none"> a) Warm loft, insulating immediately under the roof. This is more expensive than cold loft but usually is a better insulator. b) Cold loft, insulating immediately above the ceiling of the top storey.
Window and door insulation	Make sure you have double (or triple) glazed windows and doors. This is, having at least two panels of glass some millimetres apart instead of a single glass. Double glazing will also protect you from outer noise, keeping your home warm and silent.
Floor insulation	This might be very expensive, make sure if you really need it depending on the type of floor you have. Usually, modern houses have insulators under the concrete floor surface, but older houses with suspended floors will need some investment. One very accessible alternative for floor insulation is placing good rugs all around. This will also give you a nice feeling when walking.

How does the heat escape from my house and the cold get in?

There are five ways that heat can escape:

1. **Conduction** – That's heat moving through solids like metal or brick.
2. **Radiation** – This is the heat you directly feel when you stand near a heat source. It is in fact infra-red radiation, and just another form of 'electromagnetic radiation' like radio waves, visible light, ultra-violet and x-rays – which all travel at the speed of light. If you take infra-red photos of your house on a cold, still night you can help see where heat is being lost.
3. **Convection** – This is the natural tendency of warm air or water or other gases and liquids to rise, while cold air or water falls. This often results in circulation of air and is the main principle behind central heating radiators.
4. **Air movement** – Draughts are a common form of heat loss, taking warm air from within the home and letting it out into the outside (and typically replacing it with cold air coming in). Another example is a wind blowing past a house, which will generally have a cooling effect on it. Water movement has the same effect, but there are no known UK examples of systems to recover heat from water before it is put into the drains.
5. **Evaporation** – Not a process that we naturally associate with heat loss, but if it rains on a hot summer day, after the rain stops, some of it may evaporate from the roof and walls, and this will cool the home considerably.



Polyurethane foam board wall insulation



Polyurethane foam

BRIGHT IDEAS

Readers share their time-saving, space-saving or innovative ideas

Stop a jumping dog

Our one-year old rescue dog found out that she could scale our garden walls, and once she had a taste for it, she would jump over at every available opportunity (her much larger big sister hasn't tried once...) We needed to find a cheap, quick solution (we have over 50 metres of wall so making the brick walls higher wasn't really an option.

We visited the local hardware store looking for a solution and found some lengths of 20 or 25mm electrical conduit for just over R11 per 4m length. We bought a bunch of these

and connectors (R1.50 each) as well to join two pieces together, plus some long masonry screws and curtain rail hangers (R25 each) – these we placed in the middle of the long lengths to keep the conduit straight. Then it was just a case of drilling into the walls, ensuring there was enough of the screws sticking out to keep the conduit in place, and cut the pipes to size.

It's not the prettiest solution, but it seems to be working, and for a few hundred rand we have made sure that our dog stays inside and enjoys our

garden rather than dodging cars in the road!

Don Marais, Modderfontein



PVC pipe trick

My father-in-law was a farmer who taught me all the 'Boer maak 'n plan' tricks I still use today.

He used a lot of PVC irrigation pipes (those 50mm black 'plastic' pipes). Often, the pipe would be punctured or burst and had to be repaired. He believed that the only way to repair the leak was to cut the pipe and mend it by inserting a short piece of 50mm steel galvanized pipe in between the two ends and hold it in place with a hose clamp on each side.

The PVC pipe has to be heated so that the steel pipe will get in deep enough on both sides. At home one can use something like a propane torch to do this, but what do you do in the veld kilometres from home?

My father-in-law always had a tube of Bostik glue and a box of matches/cigarette lighter in the cubby hole of the bakkie as well as a plastic bag full of hose clamps. He would smear glue inside the PVC pipe (one end at a time) and set it alight.

The glue will burn, not the pipe, and when the flame dies, the PVC pipe will be so soft that one can easily push the steel pipe deep enough inside. Cool it immediately with cold water and you will never be able to pull the steel pipe out of the PVC pipe again. The joint will last forever.

Just remember to put the clamps on the PVC pipe first, but because the PVC pipe 'melts' into the steel pipe, one can even get away without using clamps.

Manie Ferreira, Nelspruit



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Congratulations to Manie Ferreira who wins a Tork Craft combo sheet metal nibbler cutter and jig saw.



Autumn is the perfect time to make crafts with leaves and nature

MAKE A LEAF CLAY DISH

Clay leaf dishes are a fun project to make with the kids this autumn

This leaf clay dish is one older children can make. It would make a beautiful gift which they can personalise for a birthday or Christmas. It's a gorgeous piece that can be used as a ring dish or simply to hold items such as keys and coins. You can even turn it into a leaf bowl by using different leaves!

We made painted these leaf dishes a bit more formal than kids would probably want to make, but older kids may like these colours. These would also look great in a bright red, orange or yellow for autumn.

Tools

- Air drying clay
- Leaves – we used the leaves from a hydrangea plant
- Acrylic paint – we used rose gold, gold and bronze
- Sealer – mod podge gloss
- Knife

Step-by-step guide

Step 1: First gather your leaves. We used hydrangea leaves which is recommended for their shape. Feel free to try different leaf shapes as it is easy to roll out and start over if you do not like the way it looks.

Step 2: Cut out a piece of your air drying clay. Roll it out and then stamp your leaf onto it. Press firmly and make sure to press on all parts of the leaf to get a complete imprint.

Step 3: Take off your leaf and cut around the outline of the leaf with a knife (have adults do this part).

Step 4: Now remove the excess air drying clay from around your imprint.

Step 5: Gently start to roll up sections of your clay. There is no specific pattern required, just leave a

bit of space in between the rolls and leave the tip of the leaf intact. If any portions of the clay are not smooth, dip a sponge in a bit of water and use it to smooth out portions of the clay.



If you'd like to make a leaf bowl instead, place your leaf inside a small bowl to shape the clay into a bowl shape.

Step 6: Allow the clay to air dry and harden, preferably on a cookie drying rack so that the bottom gets exposed to air as well. After 24 hours, check if the top of the clay is hardened. If it is, flip it over to allow the bottom to air dry. If not, let it dry for another 24 hours and then flip it the next day if needed.

Step 7: Once your clay dishes are dry and hardened, you can now paint them! We did two coats but if you

really want to ensure coverage for gold, it may require three coats. Darker colours would be fine with two coats, while lighter colours like gold and yellow may need three.

Step 8: Seal them with mod podge gloss or a more heavy-duty sealer if desired.

For more great craft projects, visit www.thebestideasforkids.com



If you would like to use these leaf clay dishes as soap dishes, you will need to use a heavy-duty waterproof sealer.



The supplies you will need to make a clay leaf dish



Press the leaf into the clay



The imprint of the leaf



Cut the leaf shape out of the clay



Gently roll up sections of the clay



Leave to dry



Once dry, paint in the colours of your choice

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Remove efflorescence on brick

What is the best way to clean efflorescence off old black brick? Are the chemical residues damaging to grass or plants below? Are manufactured products available, or raw bleach or acids best?

Leo Shuler, by email

Ed replies: Efflorescence is a white deposit of water-soluble salts that can appear on masonry bricks. It can be a fine powdery substance or a crystallised build-up. Depending on the type of salts present it can also appear green, brown, or yellow. Efflorescence happens when soluble alkalis are present in the brick or grout and moisture is able to penetrate the brick forcing salt deposits to the surface. This can happen a month after the brick was laid or as long as a year later.

To clean efflorescence from bricks a chemical cleaner or efflorescence remover can be used. A good mildly acidic soap cleaner can work well depending on the severity of the salt build-up. In some cases, the use of a pressure washer is not

necessary. It can be a simple spray on procedure that eliminates the efflorescence salt deposits from the brick.

In extreme cases where the calcite type of crystallised build-up has occurred, appearing as an ivory coloured very hard substance, a calcite pre-soak may have to be applied several times prior to using an efflorescence remover. If a pressure washer is needed to aid in efflorescence removal, be cautious of using too much pressure which can damage the mortar joints.

Cleaning efflorescence from brick will not cure the problem meaning it only cleans the surface of the brick but will not stop efflorescence prone bricks from re-depositing more salts on the surface. Moisture entering and mixing with the soluble alkali sulphates in the brick is what causes the efflorescence problem. At this point, all you can do after cleaning is to prevent moisture from entering the bricks by applying a brick sealer.

Before sealing bricks, it is important to be sure they are completely dry. Allow the

brick surface to air dry for several days after cleaning efflorescence. Otherwise, you may trap moisture in the brick which would promote efflorescence from reoccurring underneath the sealer.

Cleaning efflorescence from bricks is not difficult with the right brick cleaner and a little patience. Be sure to follow the directions on the efflorescence remover that you use and to apply a good brick sealer once the surface has completely dried.

Most chemical removers will have an impact on grass or plants, so be careful when using them – if possible, try and protect your garden from the run-off.



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Our winning query comes from Buang Lairi who wins a hamper from Den Braven.



Refinishing fridges

I have two fridges that I bought in the nineties which still work very well but I'm sort of tired of their appearance. I would like to give them a revamp by painting them retro one blue and the other red. What should I do? Spray painting maybe?

Buang Lairi, Rouxville

Ed replies: When painting a fridge, clean the exterior with soap and warm water. Any dust or grime left on the outside of the refrigerator will mess up the paint and prevent it from going on smoothly. Use a damp cloth or microfibre towel to wipe the front, sides, and top. Let the fridge air dry. Don't brush it with a towel because that could leave lint behind, which makes paint look bumpy.

Sand the fridge to remove the gloss. This will help the paint adhere to the refrigerator's surface better. Scrub gently but firmly with a medium grit sandpaper, like 180-grit, which strips away the varnish without damaging the refrigerator itself. If your fridge is already painted, you don't need to take off all of the paint. You only need to sand off the glossy finish.

Cover any areas you don't want painted with painter's tape. This includes door handles, hinges, or rubber seals. Press the tape firmly around the spots you want to protect so that paint can't seep underneath.

Choose a two-in-one paint and primer in the colour of your choice. Not only does it save you from having to prime the fridge separately, it also tends to be a thicker paint. That helps avoid splatters and drips, as well as provides more coverage. If you don't use a two-in-one paint and primer, you'll have to prime the refrigerator before painting. You can buy primer at a hardware store or paint store.

Paint three thin coats with a foam roller, letting the paint dry between coats. Use slow, even strokes to roll the paint onto the surface of the refrigerator. Multiple thin layers is better than one thick layer, which is more prone to chipping or dripping. Use a small, angled brush to paint hard-to-reach areas. Let the paint dry for at least 24 hours before plugging the fridge back in.

If you want to go the spray painting route, cover the entire surface (once sanded) with an oil-based spray primer. Primer will help the spray paint stick to the refrigerator. Hold the can about 20cm away from the fridge as you spray, moving the can back and forth constantly to avoid spraying too heavily in one area.

Let the primer dry for at least an hour. Check the instructions on your can to see how long the drying time is for that specific type of paint. It can vary from 30 minutes to three hours based on the manufacturer.

Spray the paint in thin coats, letting each one dry completely. Instead of spraying one thick coat, spray multiple lighter layers to prevent dripping. Allow each coat to dry before you apply the next coat. Shake the paint can for at least a minute before you start spraying to thicken it up. If you notice any drips once a coat has dried, use a piece of fine, 150 to 220 grit sandpaper to lightly sand it off.

Let the paint dry for 24 hours before moving the fridge back. If you try to take the fridge back inside when it's not totally dry, you could smudge or chip the paint. It will dry best in a warm, dry spot.



Repainting a fibreglass pool

I have an old fibreglass pool that has been resurfaced once about 10 years ago and the paint on the sides comes off on ones hands if you rub it, the mosaic is coming off. Is there any way of repairing this without having drain the pool.

Alex Dunn, by email

Ed replies: We would assume that the paint used is an epoxy? No epoxy pool paint will last 30 years, except according to aging lab tests that were performed by the SABS years ago. (The UV and Salt Spray aging test results predicted a lifespan of 25-30 years).

In the real imperfect world, the normal expected lifespan on a normally HTH chlorine-treated pool is 8-10 years. This lifespan can come down to six years if a salt chlorinator is used on high dosage settings, as they normally are. Epoxy coatings age due to UV and chemical breakdown

over time in the form of a slow chalking released into the water. The effect is less rapid on good high-solid epoxy formulations than on older Polyamide floor epoxy formulations or compromised water-thinned, or high solvent content formulations, but they do thin out over time nevertheless.

At the end of the day this is only a decorative finish that reduces maintenance and algae infestation and offers a very nice finish. After aging and thinning of the product, it can be refurbished quite easily by slight sanding and rolling on two new top-layers (at 50% or less than original cost, especially in DIY applications the refurbishment cost is very low.)

Unfortunately though, draining the pool to refinish it would be the best course of action.

Accuracy in woodwork
cannot be understated



Successful use of power tools part 3

>> Denis Lock

In Part 1 of this series I stated that the successful use of power tools builds on three cornerstones. These cornerstones and the inter-relationship between them is shown in photo 1. In Part 1 the safety cornerstone was discussed. In Part 2 I covered the control cornerstone. In Part 3 I will cover the accuracy cornerstone.

Woodworking literature abounds with the words (and inflected forms thereof) accurate, precise and exact. My Oxford dictionary lists these words as synonyms. The sciences (mathematics, statistics, physics, chemistry...) give them different meanings. As a woodworker I make a distinction between accuracy and precision. I define accuracy as the extent to which a given measurement agrees with the desired or planned value. I define precision as the extent to which a group of measurements agree with each other. This may not be the desired value. Let me give you an example. I am making a side table and the plan calls for legs that are 350mm long. If I cut the four legs at 349,8mm, 349,9mm, 350,1mm and 350,2mm the result reflects high accuracy/high precision. If I made a

measurement error and cut the four legs at 339,8mm, 339,9mm, 340,1mm and 340,2mm the result reflects low accuracy/high precision. The legs are 10mm short (inaccurate) but match each other (precise). This table wouldn't wobble and who would notice that the table was 10mm lower than the plans called for.

How accurate must my woodwork be? How precise must my woodwork be? It depends what you are doing. If you are building a bookcase the overall height, width and depth do not have to be highly accurate: unless it has to fit in an alcove. If you are cutting mortice and tenon joints (photo 2) and many other joints you need to be accurate to a tenth of a millimetre otherwise you will end up with sloppy joints. I remind my students that woodworking glues do not have gap filling properties and you need 'piston fit' joints if you want to build heirloom furniture. If you cut a set of mortices their width needs to be precise (all the same). Otherwise you will have to adjust machine settings to make each tenon a good fit.

Control of a hand-held machine or control of the workpiece on a floor-standing or bench-mounted machine is an absolute pre-requisite for accurate woodwork. Part 2 of this series covered these considerations. I repeat that control is more than techniques and the use of accessories and jigs. It is also the correct use of the body. This only comes from lots of practice. Control is a necessary condition for accuracy but not a sufficient condition.

A second condition is that the machines being used are well maintained and are properly calibrated. Worn parts must be replaced: you can't work to an accuracy of a tenth of a millimetre on a machine that has half a millimetre of play. Many machines allow for the adjustment of the fence pointer or mitre gauge pointers and detents. Check your user guides for advice on performing this calibration step. A third condition is that blades and bits are sharp. Blunt tools are dangerous to use because of the excessive force needed. This unnecessary force also reduces control and potentially reduces accuracy.

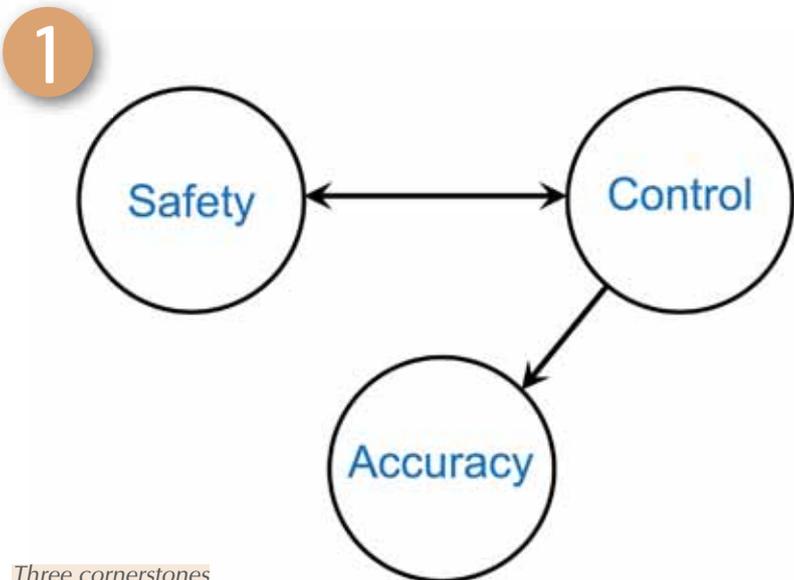
The fourth condition is that the machine settings are accurate. These settings include: cutter (bit/blade) distance from the fence; cutter height (extension) above the table; cutter extension below the machine base; cutter height above the bed; offset between infeed and outfeed tables/fences; angle settings on mitre gauges; and angle settings between cutter and table/fence. In some cases machines are provided with integral scales (dial and linear— photo 3) to aid in making these settings. How accurate are these scales? Have the scale pointers been correctly calibrated? Do you still have 20-20 vision and can you make sense of all those little marks? Is there a better way of making the settings than using the manufacturer supplied scales/pointers? If the answer to this question is yes or machine does not have built-in scales what measuring devices do you need?

The list of standard woodwork measuring devices is well known: steel rule (I have four – 150mm, 300mm, 600mm and 1000mm); tape measure (I have two – 3m and 5m); squares (I have a framing square, a try square and a bevel square); marking gauges (I have two – one with a pin and one with a sharp-edge wheel); and a protractor. There are two measurement tools, which are generally regarded as

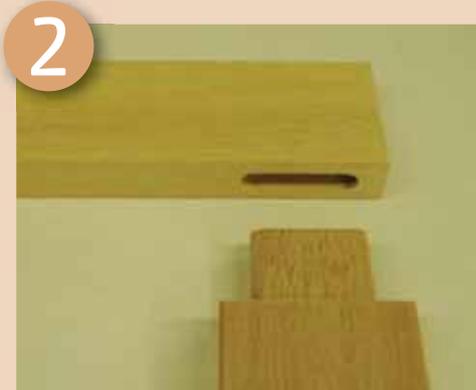
engineering tools, that I would not be without. These are a pair of dividers and a digital calliper (photo 4).

A well-known woodworking adage is: “Measure twice, cut once.” I do not subscribe to this wisdom. I believe that when the human brain, human eye, a measuring instrument and a machine come together in space and time you have a recipe for error. Errors result from poor eyesight, poor lighting, parallax errors, transposition errors (measure 43,1mm, cut 41,3mm), arithmetic errors ($2 \times 77\text{mm} = 144\text{mm}$), inaccurate instruments (a square that has been dropped on the floor too many times) and incorrect zeroing of the measurement. Unfortunately, these errors do not cancel each other they tend to compound each other. I agree with the carpenter who said: “The more you measure, the less accurate you are.”

My philosophy is: “Don’t measure unless you absolutely have to.” When I worked in the computer industry the acronym SSS stood for Software Systems Support. In my woodwork shop it stands for Stops, Spacers, and Story-sticks. These are three of the categories of items that I use to achieve accurate woodworking. I may initially use a measuring instrument to get the stop in the right position on the machine or workpiece, to get the



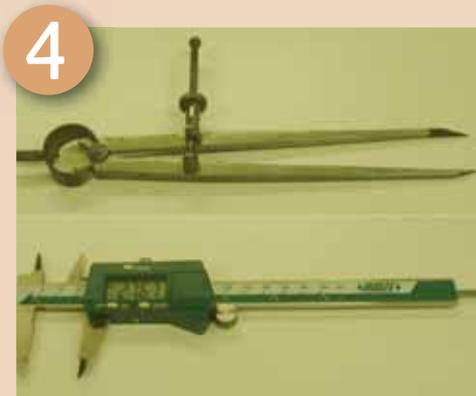
Three cornerstones



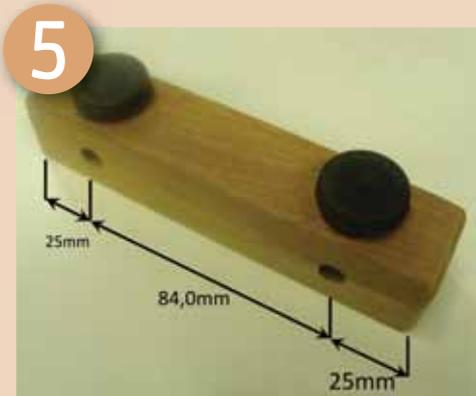
Mortise and tenon joint



Circular and linear scales



Dividers and digital callipers



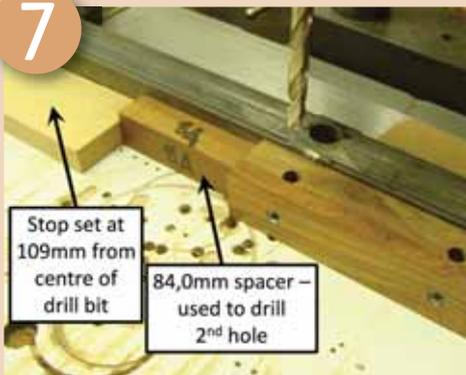
Fence adjustment block (FAB)

6



Use of FAB

7

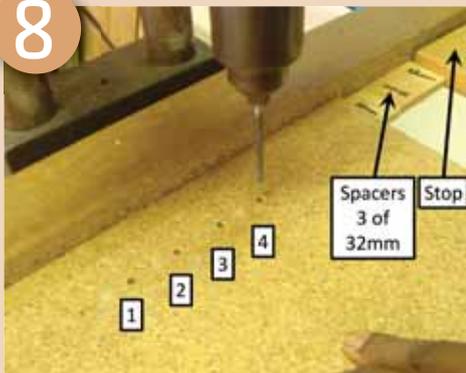


Stop set at
109mm from
centre of
drill bit

84,0mm spacer –
used to drill
2nd hole

Accurate, repetitive drilling

8



Spacers
3 of
32mm

Stop

More accurate, repetitive drilling

9



Bedside pedestals



spacer the right width or to get a mark in the right place on a story-stick. I reword the old adage: “Measure once, set a stop and cut many with high precision.”

Photo 5 shows one of the accessories I make: router parallel fence adjustment block (FAB). Its use is seen in photo 6. The centre-to-centre distance between the fence rods on my Bosch router (and many other routers) is 84,0mm. The two 8mm diameter holes in the FAB need to be accurately drilled at 84,0mm apart. This is achieved by using a stop and a spacer as shown in photo 7. The stop is clamped at 109mm from the centre of the bit. This does not have to be very accurate and is achieved using a 105mm spacer (84mm plus 25mm minus 4mm which is the radius of the drill bit). This step is not shown. The 84,0mm spacer has been machined very accurately: its length was checked with my digital calliper and it was fine tuned with a sandpaper block. The first hole is drilled with the FAB up tight against the stop. The second is drilled with the 84,0mm spacer between the FAB and the stop. The holes for the treaded inserts are also drilled using the same 84,0mm

spacer. The 84,0mm spacer is immutable. I used it last month, I can use it today and I can use it in three month’s time. The results will always be the same. Can’t say that about my eyes and a rule.

Photo 8 shows the drilling of four holes for shelf pegs in a cupboard side. The Euro standard calls for these to be 32mm apart. The stop seen in photo 8 is set to drill hole 1. The subsequent three holes are drilled by adding first one then two and finally three 32mm spacers. The spacers don’t have to be exactly 32mm, but they do have to all be the same (low accuracy/high precision). This is achieved by setting the table saw fence at approximately 32mm, ripping a piece of scrap and the crosscutting three identical spacers.

The drawer runners for the pair of bedside cabinets (photo 9) have to be very accurately fitted. Once again a stop and spacer come to my rescue: see photo 10. The spacer needs to be parallel to the top of the drawer. This is solved by adding a lip to the spacer that is parallel to the edge of the spacer. Photo 11 shows how this was achieved by using an auxiliary fence



Is it square?

on my router table. A lot of the time I regard my table saw and band saw as rough sizing machines and turn to my thicknesser and router table to do the final accurate sizing.

As well as fitting the one part of the drawer runners accurately to the drawer sides the companion piece of the runners must be fitted accurately to the cabinet sides. For this project the distance between the bottom of a drawer and the bottom of the next drawer must be 154,0mm. A 154,0mm spacer was accurately machined like the 84,0mm spacer shown in photo 7. It was then split in half (photo 12) to give two identical spacers. These two spacers were then used to accurately cut the slots in the slotted spacers shown in photo 13. The three spacers seen in photo 13 assured the accurate placement of the three runner pieces. The stop and spacer shown in photo 10 were used 12 times. The three spacers shown in photo 13 were used four times. The result is the accurate fitting of the drawers seen in photo 9. A lot of accuracy, not a lot of measuring.

Enough about stops and spacers. The third S in my SSS acronym stands for story sticks. Woodworkers have

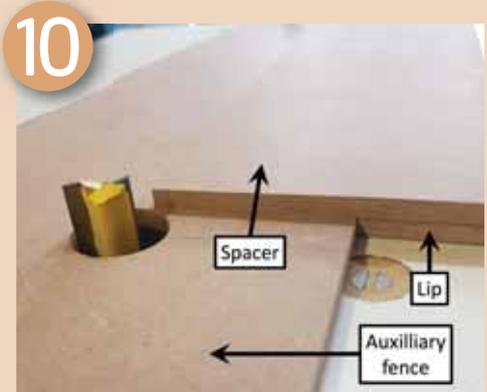
relied on story sticks for centuries. These modest aids, often simple lengths of off cuts, deliver repeatable measurements without the need for calibrated measuring devices and skill in using them. Photo 14 shows two pointed sticks clamped together to measure one diagonal of a drawer. Does the other diagonal measure the same? Check it with the story stick as clamped. If not the same some adjustment of clamping pressure and angles is required. The story stick is a lot easier to use and more accurate than a tape measure. I actually don't care what the diagonals measure: as long as they are the same.

I hope I have given you some ideas to improve your woodworking accuracy without becoming a slave to those little marks on the measuring instruments.

ABOUT DENIS:



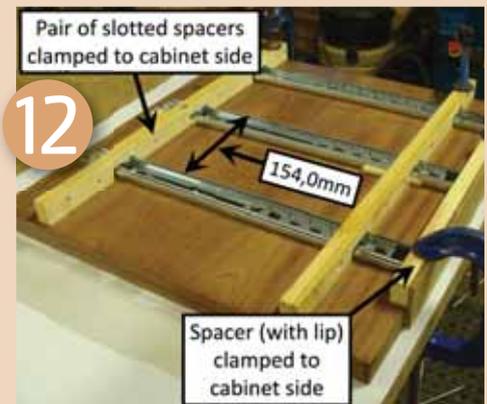
Denis Lock runs a woodworking school and shop in Midrand, Gauteng. He can be contacted at lock@worldonline.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za
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Fitting runner to drawer side



Trimming spacer dead parallel



Two from one



Fitting runners to cabinet side

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

The six must-have basic woodturning tools



Woodturning as a creative hobby is satisfying and rewarding. With the use of suitable woodturning tools and equipment one can churn out a number of decorative and functional items from wood. The possibilities can be numerous, right from bowls, vases, boxes, platters, to various types of hollow forms, utensils, etc. If you are a woodturning enthusiast and want to know about the basic woodturning tools that you must have to pursue this creative craft, then this article will prove to be very helpful to you.

The first thing you will need for woodturning is a good quality lathe. There are a number of factors that you need to consider when buying a lathe. Firstly, choose one that has components

and bedway made of cast iron. This will reduce the vibrations when working and will ensure accuracy and stability. A powerful motor, variable electronic speed, proper alignment of the two centres, a hollow tailstock and an integrated spindle lock and indexing system are some of the features that should be considered.

Once you have bought a high-quality lathe for woodturning, it is time to concentrate on the woodturning tools. Choose high speed steel (HSS) woodturning tools, as they have as much as six times the edge life than normal carbon steel tools. Tools of inferior quality lose their edge quickly and can cause injury to the woodturner. We would also advise beginners not to

buy second-hand tools as they are likely to have blunt edges and will need to be re-ground to their original profile. That can be a difficult task to execute without proper sharpening tools.

The basic woodturning tools mentioned above are a better value when purchased in a set. You can add more tools to your tool kit as you undertake more complex turning projects.

Here is a list of the basic woodturning tools along with their uses:

Spindle Roughing Gouge: This tool is used for transforming spindle blanks from square to round. This tool is straight and deep-fluted, and features a square tip and a broad cutting surface. When working with this tool approach

the work piece with the flute side facing up and the cutting side elevated from the handle. The bevel on the tip should contact the workpiece before the cutting edge. Once the gauge rubs the work piece, raise the handle so that the cutting begins. Typically, the centre of the work piece is worked on first before moving towards the ends. You can adjust the depth of the cut by lowering or raising the handle.

Skew Chisel: This is a flat bladed tool characterised by bevels on both side of its angular tip. It is used to give a fine finish on the spindle work. Typical uses include cleaning the end of grains of spindle, making shallow curves, 'v' cuts, pummels and beads. The cutting edge should meet the stock to be worked on at an angle of 45 degrees, quite above the centreline. Typically, you should always cut at one end of the stock and move towards the other end.

Spindle Gauge: This tool is characterised by a round blade and a shallow flute. The tip of the blade has a

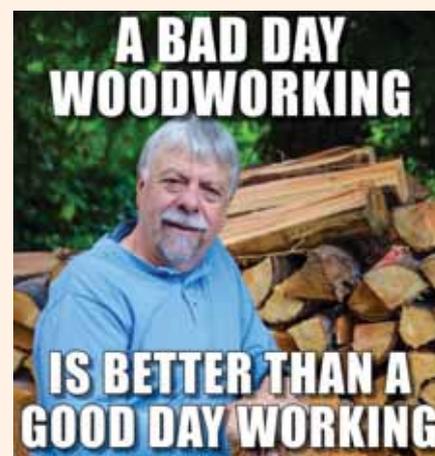
rounded profile and a bevelled edge. This woodturning tool is also known to many as the shallow flute gauge. Typically used for shaping and detailing work on the stock. One can create coves, beads and other profiles with it. This is also a bevel-rubbing tool and is presented to the stock slightly above the centreline. This tool should always cut downhill, that is first the highest point, then the lowest one and work out towards each end.

Bowl Gauge: This woodturning tool has a deep fluted blade and the tip is typically rounded or sharply pointed. Just like other gouges, the bevel of the tool should touch the stock first followed by the cutting edge. The tool is then rotated in the direction of the cut and pushed to shape the wood. They are also known as deep flute gouges and are used for initial shaping of bowls, faceplate work, etc. They are also used to create massive profiles and also for delicate finishing work.

Parting Tool: The blade of this tool is typically straight and narrow and

is characterised by steep chisel point and faceted faces. It is generally used to remove the waste material from the finished product and also to add details like fillets and beads. It is also useful to cut spigots that can be fitted into a chunk.

Roundnose scraper: The blade of this woodturning tool is typically flat with a rounded, bevelled tip. It is used to give a finishing touch on bowls and other spindle work, and for creating smooth flowing curves.



Woodworking associations

The Woodworking Association of Pretoria was established during 1989 as a non-profit association with the purpose of bringing together woodworkers in all disciplines in the Pretoria area of South Africa. Its objectives are, amongst others, the dissemination of information on wood and woodwork, to create co-operation between members, to exchange ideas and knowledge, to organise regular meetings, workshops and competitions of members in the various disciplines of woodwork, to issue a regular newsletter to members and to liaise with other similar associations and clubs in South Africa. Membership is open to any person interested in



woodwork who applies on the prescribed application form and pays the annual subscription. The Association currently has more than hundred members.

The monthly meeting of the Association takes place on the last Wednesday

evening of every month. At these meetings we usually arrange for one or two people from outside the Association to talk to us about woodworking-related products, equipment or techniques. There are three interest groups in the Association namely the Cabinet Makers, the Woodturners and the Woodcarvers Group.

Unfortunately, all the meetings of the Woodworking Association of Pretoria have been cancelled until further notice due to the Covid-19 virus. Keep checking the websites for updates.

For more information, visit www.ptawoodworkers.com

Yourself

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Ready, Set, Go

Set the scene for success when taking on a DIY task

>> Kim Roberts

For some, a handyman task is no problem. For others it can become a challenge to get the task completed. Hobbies too, can test one to the limits – even if it is a pastime that is supposed to relax and fulfil the craftsman.

Here are just a few pointers to take into consideration before starting a task or hobby. Having these in place can only assist you to attain a higher success rate.

1. Choose a fair-weather day. Not too hot and humid, where sweat can cause you to drop tools, and cause you to slip on the grip while handling a tool. Discomfort during a task can make the best person lose patience and become irritated. Too cold a temperature, and your grip might not be firm enough.
2. Always start a task in a good frame of mind, as we all know that all projects present unexpected challenges as you go along. Face each challenge in a positive way – as a challenge, not an aggravating problem. For some people, a project can be a great stress or grief release option, but for others, these circumstances will not be the times to tackle a task.
3. Choose clothing that is not too baggy that can snag unexpectedly on materials or on tools you are using, but airy enough to keep your body temperature at a comfortable level. Never work barefoot – use rubber soled, closed shoes to keep a firm footing, prevent shock risk or damage to your feet done by dropped materials or tools.
4. Do a quick check of all electrical tools to be used to be sure they are still in safe working order. (Use non-conductive gloves when working with electrical tools).
5. Uncluttered, large enough and clean surfaces/areas to work on/in sets any person in a positive frame of mind when starting a task.
6. Some people prefer to work in quiet, while others concentrate better with background music or noise. Set the scene.
7. Make sure that you have the correct tools and tool attachments that you require for the task at hand; and have enough of all the correct materials before starting anything.
8. Work out a plan of action of how you will progress with the task, ensuring that it will follow on in a logical and efficient manner.
9. Be sure to have enough time to complete the whole task, or to achieve safe/satisfactory partial completion. Rushing a project only leads to errors that are expensive in materials and in time, or could lead to unnecessary accidents.
10. Check your load shedding schedule and plan accordingly.

All these steps will lesson frustration, increase work enjoyment and should help toward greater success with your planned project.

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To DIY or not to DIY

About Annalien:



Annalien started her career at the *SABC* on *50/50* before moving to Germany after she met her husband. Later, they returned to South Africa and she took on various freelance projects, eventually getting hooked on DIY. Annalien was part of the team on *The Home Channel's Get It Done!* series.



Do you know when to throw in the towel and admit defeat?

>> Annalien Grensemann

This is a question that keeps on popping up in my life. A typical scenario in the Grensemann household: Something needs to be fixed or done in or around the house and I start off confidently tackling the job with my DIY skills, silently wondering whether I am brave or just plain stubborn to tackle this project by myself. As the hours slowly tick by, I become more and more agitated with this 'simple job' which became Mount Sinai with no good outcome in view. Then, eventually, that moment arrives where I have to hoist the white flag in surrender, calling in the specialists to come and fix the problem as well as the mess I've made. The specialists arrive, fixing the whole job in a jiffy.

Later on, sitting on my stoep with friends enjoying a glass of gin & tonic with all the trimmings, I ask the question: when to DIY or not?

They come up with many different answers, for instance: When you are making specific projects and being creative, DIY is the way to go. It is so forgiving, therapeutic and rewarding. Often your projects can also be a talking point when you have friends over and you have made, for example, a coffee table with an interesting design.

Sometimes it is more cost effective to DIY, but do your research well and work out the budget properly. Some

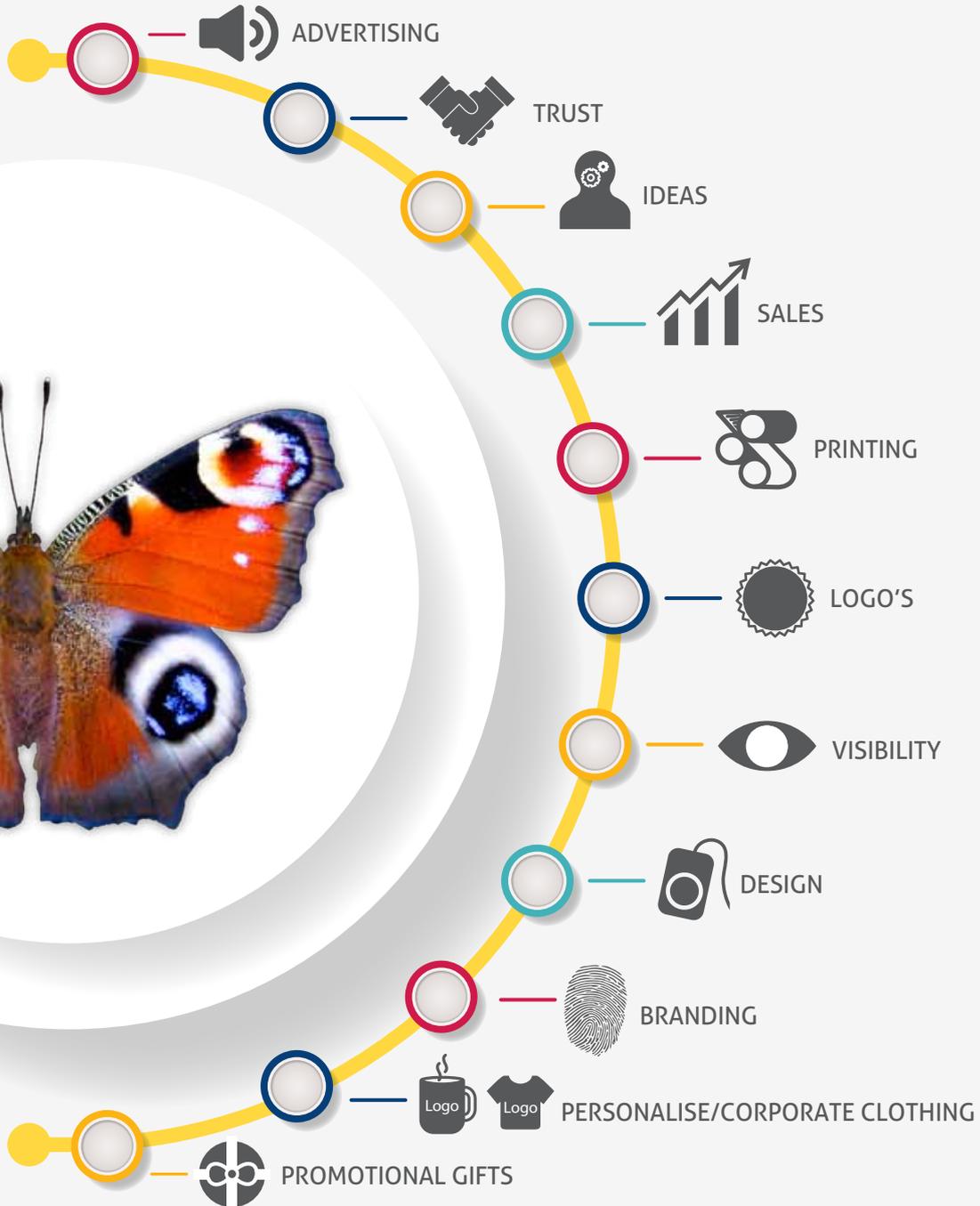
materials can be expensive, such as wood. Just keep in mind to budget in the fun and reward you will get by making it yourself...

When it comes to plumbing, electricity and some construction work, I definitely admit my limitations and call in the specialists. I also believe some DIYers are capable of handling some of these jobs, but be very sure of your skills and don't let pride do the talking.

Don't let money be the only reason you decide to DIY, as my friend discovered when he attempted a job in the garden to save money, cutting down branches in his huge tree; he ended up in hospital with huge medical expenses. That was a costly and painful learning curve...

At some stage during our discussions and G&T's, we became deeply philosophical about DIY. Aristotle, Nietzsche and even Jordan Peterson would have been proud of us. Several hours later, after sunset while sitting quietly with our own thoughts, I can proudly say we ended up with a final decision: You can't go wrong to DIY, but there are some conditions: Be sure that you will not hurt yourself in the process and be very aware of your skills and limitations. Do enough research when you are tackling a new job you have not done before, and never forget to have fun while doing it. So carry on and DIY!

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