

The Home HANDYMAN

January/February 2022 • Vol 32 No 01



MAKE A DOUBLE GARDEN BENCH



EASY TO MAKE PADDED SOFA

Smart tips for tackling a kitchen remodel on a budget



- What you can and can't recycle
- Tips for choosing the right paint
- Power tool and accessory guide
- Make a garden drinks cooler
- How to build a modern industrial chandelier



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Packed with step-by-step projects for the DIY'er

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FROM THE WORKBENCH

Lessons for the DIY'er from... Fortnite

Now if you don't know what Fortnite is, I don't blame you, but if you have a tween/teenager in your house, you would have heard of the online gaming sensation. Epic Games' Fortnite is a multiplayer shooter game, with a concept, at its core, where everyone only has one life and the last player standing wins. The difference to many other games is that you play online, with real people from all over the world. 350 million people, with between 12-15 million playing daily...

My son plays the game, and he loves it – he doesn't talk about much else. What I as a parent found great was that, during the lockdowns where he was confined to the house for weeks, he still had 'play dates' with his friends, albeit online. Hearing their conversations and laughter was a bright spot during some tough days.

Where does the connection with DIY come in, you may be asking yourself? Firstly, Fortnite takes strategy. The more you play, the more you realise you need a strong strategy to try and win the game. Although there are many strategies that can lead to success, there is still strategy to winning. DIY is the same – do you just dive headfirst into a project without doing any planning?

Secondly, sometimes the odds aren't in your favour. Every player technically has a one percent chance of winning in Fortnite, yet if you're highly skilled, you can improve those odds, but even the best players usually don't win more than 10-20% of the time. There's always an element of luck to a Fortnite game, and even though some people don't like to admit it, luck plays a role in life, as well. Of course, 'luck' tends to follow those who are most prepared (see the previous paragraph).

Thirdly, success also takes teamwork. If you play Fortnite in solo mode, it's you against 99 others. One chance to stay a live to the end. However, if you play in the Duo or Squads mode, you have a much better chance of staying alive longer. Like DIY, if you go solo in Fortnite you can still win. But you can get further faster with other people lending a helping hand. Maybe its just some encouragement, a cold drink when you really need one or handing you those inevitably dropped tools. A spouse or a friend is a great DIY teammate.

Finally, it is important to be flexible. You can never be sure exactly where you're going to drop in Fortnite, what items you'll get or who will be near you. The players who do the best are those who can adapt in all kinds of different situations. Life is often the same way. It's the people who can adapt in new situations and stay clear-headed in the face of adversity, who do well. "n boer maak 'n plan' is something I am sure every DIY'er can attest to – despite well made plans, sometimes you need to be flexible to complete a project or a task.

While it might seem odd to compare the complexities of DIY with a video game, there will be things out of your control, whether woodworking or playing an online game – two things you can control, however, are your reaction to the circumstances, and your preparation (the important aspect of safety being imperative).

Finally, I would like to take this opportunity to wish all our valued readers a happy and healthy 2022.

Gregg



The Home HANDYMAN



www.homehandyman.co.za

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OFF THE SHELF

Your guide to the latest products in the world of DIY

Cordless trimmer for you garden

Get perfect hedges with the Makita DUH602Z Hedge Trimmer

The Makita Cordless 18V DUH602Z Hedge Trimmer perfect shape this summer with the minimum amount in the battery and off you go.



with its brushless motor is ready to get your hedges in of effort, providing performance without any hassle, you simply clip

Features of the DUH602Z include a rotating rear handle that can be adjusted 90 degrees both left and right and an anti-vibration structure that reduces the vibration felt by the user, providing both comfort and ease of use. This model has a 21.5mm maximum cutting diameter and three different variable speed controls, as well as a blade release function that reverses the blade if it jams.

The blade length is 600mm with a maximum cutting capacity (strokes per minute) providing you with 0-4400 on high, 0-3600 on medium and 0-2000 on low.

The batteries and charger are sold separately.

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

Extended guarantee for top paint brand

Plascon now offers an incredible 15-year guarantee on its iconic Micatex

The trusted and proven duo of mica for stretch and marble for strength has made Plascon Micatex South Africa's favourite exterior paint choice for decades. Due to its strength and reliability, Plascon Micatex has been specified by leading architects and proudly South African for over 40 years, making it the default choice in exterior protection.

The addition of Polycell Fine Crack Filler earlier in 2021 means that Micatex's formulation **now** has even more built-in toughness and protection. Polycell Fine Crack Filler's formulation **has** been enhanced for exterior and interior use. By securely covering all hairline cracks, Plascon Micatex prevents damp – a very common problem on exterior walls – by retarding water seepage.



And now, as we're about to enter 2022, the wonder product is offering an astounding 15-year guarantee on its toughness. This remarkable extension of the previous 12-year guarantee shows that Plascon is not shy to stand behind its uniquely formulated coatings.

Plascon Micatex with Polycell derives its WeatherTough Protection TM from the unique combination of special grades of mica and marble. Tests have shown that the paint film of Plascon Micatex is two times thicker than conventional paints and 23% tougher than a leading competitor. This makes Plascon Micatex with Polycell the unrivalled leader in delivering the strength and durability needed to protect your exterior walls from both the harsh South African weather conditions and the wear-and-tear of everyday living – a welcome silver lining indeed.

In addition, keeping exterior walls clean and looking newer for longer (a necessity in periods when budgets are tight and value is essential) has been made easier – Plascon Micatex with Polycell has very low dirt pick-up ensuring that dirt and dust washes off easily.

For more information, call 011-951-4500 or visit www.plascon.co.za

Introducing a new crack filler solution

South African plaster brand, RhinoLite®, has launched three new products under the RhinoFill® brand

"The new RhinoLite® RhinoFill™ Crack Filler range is an environmentally friendly, high performing, yet cost-effective product for interior and exterior use," says Ryan McGinn, Product Manager. "Our team has worked tirelessly to ensure that the range is not only easy to use and apply, with a low shrinkage rate, but can also be sanded down to a smooth finish on most surfaces."

This new range offers excellent strength, durability, adherence and can be used to repair minor cracks, chips, and holes. It is available in dry powder bags 2kg and 10kg – as well as ready mix tubs. The dry powder mixes easily with water into a lump free paste, with low slump and drying shrinkage. It can be applied in multi-layers up to 5mm thick.

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



Install knobs, hinges, and drawers faster than ever

The easy-to-use Kreg Hardware Jig Installation Kit

This special Kreg kit is now available for professional cabinet installation, concealed hinges, and drawer slides. The kit includes the following:

The Kreg Cabinet Hardware Jig takes the guesswork out of installing cabinet knobs and pulls. Adjustable guides allow for accurate hole placement, with built-in measuring scales for repeatable results. The moveable edge guide and measuring scales make it easy to position knobs precisely, while adjustable drill guides ensure straight holes for perfect knob and pull positioning every time.



Make cabinet door installation easy and get drill press accuracy with any hand drill with the Concealed Hinge Jig. It is simple to use with any drill and no special tools are needed. Adjustable cams ensure proper hinge offset, plus the durable carbide-tipped drill bit is included.

The Drawer Slide Jig simplifies drawer installation by aligning slides in the cabinet and on the drawer. Accurate slide positioning with built-in indexing tabs, plus repeatable results without measuring and marking. This jig is versatile for use in cabinets, cases, and more.

Kreg's Classic Face Clamp is a great clamp for joinery with a 51mm reach, that clamps materials up to 57mm thick. Its compact size fits easily into tight spaces and it helps create a flush joint during pocket-hole assembly. Its also Compatible with Kreg Jig® R3's Portable Clamp Adapter. These clamps feature large clamp pads that distribute clamping force evenly and hold pieces flush during assembly.

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Jeffrey K. Moela

Wins a Makita MT M9203B Finishing Sander



Prizes are not exchangeable

The importance of sharing

WINNER

Firstly I would like to thank you and pass on my sincere greetings to all the readers of SA's original DIY magazine, as well as the editor.

I would like to encourage all South African's to share their ideas. Again, I like to encourage all the people to share everything that they know. After sharing, we learn something. Together we can learn something, especially if we share.

Reading is one of the most important skills we can have in our lives. So, it is necessary to know how to read. I would

like to encourage people to use their talents to make tables, desks, chairs and different kinds of wood products with their hands.

Last, but not least, let us share, on order to succeed.

Jeffrey K. Moela, Burgersfort

Ed replies: What a great sentiment Jeffrey! And what a wonderful surprise it was to receive a handwritten letter in the post. It really has been years since we last received one, so thank you for your time and effort to get in touch with us.

Discussing diameter

Regarding my winning letter from the last issue, I have a 'wood worm' in my immediate vicinity who I frequently assist with technical knowhow and normally assist him to complete his projects. I also frequently do 'routing' on my milling machine to help him. So, the power tool will be a great asset in his woodworking workshop.

I want to comment on Chris Mans' Bright Idea about cutting a thread (page 51 – volume 31, no.11). Please keep in mind, I hate killing initiative! The gentleman mentioned a 'skew' end product. Every screw thread has (1) a major diameter, (2) a minor diameter and (3) an effective diameter. Also, on (1) and (3) there must be clearance, otherwise (theoretically speaking) one ends up having an interference fit! So, what I recommend is, the thread diameter to be cut must be slightly smaller than the nominal size to achieve a proper good-looking thread.

What also enhances the operation is to turn the job to be cut so that the die can slip on before the cutting starts. Just for the hell of it, the effective diameter is the controlling factor. There are many personal feelings about percentage contact of screw-threads, I believe that 75% is totally acceptable. I have technical info which says 60% is still okay.

John Broughton, by email



A thank you

Just a long overdue note to tell you how much I have appreciated *The Home Handyman* through the years. Most recently I finally got around to using an idea from your magazine to build a workshop bench. I am tickled to death with it because it works much better than the clumsy old table I had.

I am 77 years old and in addition to caring for my wife who had a stroke 18 months ago I still squeeze in time to 'mess around' in my workshop. My wife is making good recovery for her age but at our age we know the possibilities are not great for complete recovery but we are content with whatever we can achieve!

William Venrick, by email

Butcher's block repair

I have a butcher block table that my ex drilled on, leaving a hole on the top. How can I repair?

Lorraine Mills, Clifton

Ed replies: *Without seeing the table, I am kind of guessing here, but my thought is that you could rout out some rectangular sections of the top (rout and then chisel square ends on the grooves) and then glue replacement pieces into the top. You would likely need to sand and refinish the top, but it would provide you with a good surface to finish.*



Reader request – retirement living for woodworkers

From the editor: A reader emailed us recently to ask for help in finding a retirement community that maintains a workshop for its residents. He's 68 and describes himself as a very serious hobbyist woodworker. His note started me thinking that there are probably plenty of folks looking to downsize but who don't want to give up their shop.

I told him that I would throw the question open to readers of the magazine. Does anyone know of a community with a good shared shop? Let us know at editorial@homehandyman.co.za. Thanks!



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



Our competitions – the fine print

Prizes may not be exchanged for cash. The closing date is stipulated by the competition box. If not stipulated, it closes on the last day of the issue. For example: Jan/Feb edition. All competitions close on the last day of February. To enter simply e-mail your answer to: editorial@homehandyman.co.za and include your name, surname, address and a day time contact telephone number with your entry. Unless otherwise stipulated, competitions are lucky draws and the correct entry drawn on the closing date will be the winner. The prize may differ from the picture shown. By entering this competition you agree to all rules and accept that the decision of the publisher is final and that no correspondence thereto will be entertained. This competition is open to all readers of *The Home Handyman* except employees of THH, BB Print and employees who work for the company that sponsors the prizes and their immediate families. Prizes not claimed within 60 days will be forfeited.

Rolux is back – 64-year-old SA brand relauches

Just mention the word 'Rolux' and you'll bring a smile to the faces of many South Africans. It has held a place in the hearts of a generation of homeowners who associate the brand with hardiness and resilience – if you bought a Rolux, you had it for life!

The much-loved garden and power equipment brand now has a new leadership team, dedicated to maintaining the level of trust Rolux has built up among its customers over the last 64 years. Under the name Panners Investments, this group of enthusiastic entrepreneurs are bringing fresh focus to the brand and a new, more diversified range of products. Keeping up the legacy of durability and reliability, the team is excited to combine the trusted qualities of Rolux with innovative and cutting-edge features to enhance the outdoor South African lifestyle.

What can you expect from Rolux this summer?

- Rolux Magnum X Lawnmowers – the new generation of lawnmowers known for their extra strong steel chassis, extra strong wheels with sealed steel ball bearings, extra strong steel axles and extra-long three-year warranty on chassis. The electric mowers have 230V of power, and are available in 1800w, 2200w 2600w and 3000w. The petrol mowers are available with 159cc and 196cc 4-stroke engines.
- Rolux Magnum X Chainsaw – with a 45cc petrol engine.
- Rolux Magnum X Brushcutter – with a 43cc petrol engine.
- Rolux Magnum X oils and lubricants
- Rolux Magnum X cutting line
- Lawncare products including the Rolux Rake, a 500mm Spike Roller to aerate the lawn and a 500mm Smooth Roller to level out uneven lawn.
- Rolux spares including lawnmower bar blades and extension cords, replacement chains and guide bars for the chainsaws and brushcutter bump heads and cutting line.

Whether you're family-focused and love gardening with your kids, a socialiser mowing your lawn on a Saturday before a braai, a garden-lover taking pride in your outdoor space, or an outdoors enthusiast luxuriating barefoot in the sunshine, Rolux has the product to match your lifestyle. Rolux's Managing Director Bruce Williams says, "Rolux takes pride in providing homeowners with the tools they need to create the ultimate outdoor lifestyle where family and friends can spend time together and relax."

For more information, visit www.rolux.co.za or email bruce@rolux.co.za



Rolux team from left: Bruce Williams, Managing Director; Tracy Williams, Brand Manager and Stuart Williams, CEO

Summer home décor trends

The world is slowly recovering from the pandemic and we have developed a new sense of connection with our homes. For many, building a sanctuary-like environment has become the core focus when redecorating. France-based DIY Retailer Leroy Merlin, releases their summer home décor trends, adapted to the beautiful hot South African climate this October, with the majority of products locally sourced. To keep homes cool this season, there are paint colours and decorative accents for home lovers with varied décor tastes.

North Meets South is a bright and colourful continuation of previous bohemian trends, displaying an optimistic way of living emphasised by a small but intense range of colours. "It's Northern Scandinavian designs from the 50s and 60s combined with an exotic, joyful, sunny jungle vibe, a recall of California, Miami or the Riviera destinations in vogue during that era," says Jillian Kay, Décor Category Manager for Leroy Merlin South Africa. The simplicity and lightness of dull golden or beige bamboo furniture mixes well with oversized tropical leaves and illustrated

flower-like patterns on cushions, framed wall art, lampshades and wallpapers. Decorative accents include irregular glossy ceramic tiles, metal irregular shaped mirrors as well as wood, lattice and rattan pieces.

The Modern Nature trend is all about naturality; a clean, conscious, sustainable and minimalist design throughout your home. Create a sleek mood by incorporating tones of beige and slightly greyish hues with smooth paint textures or a brushed raw effect, ideal for a natural-looking paint finish. Complement

Nature is calling with Plascon's Colour Combination of the year for 2022, featuring earthy Africa-inspired hues

With the new year upon us, Plascon welcomes freshness and rejuvenation as we edge closer to a post-pandemic world. For South Africa's foremost coatings brand, 2022 symbolises more than just a new beginning, but a newfound appreciation for our wellbeing and an opportunity to create positive transformation. What better way to feel restored and reset than by looking to the healing properties of nature?

The Colour Combination for 2022 works in a 60:30:10 ratio. This aligns with best design practices that the industry utilises, which suggests that 60% of a space should consist of a dominant colour, 30% a secondary colour, and 10% an accent colour. Plascon therefore makes it easier for architects, interior design, decor professionals and members of the public alike to adopt this approach and tastefully achieve a well-considered look. Suitable for both interior and exterior schemes, the three shades each explore various elements of nature.

Plascon's hero – or dominant – colour representing 60% of the ratio is Plascon Pear Fantasy (Y5-B2-1). This soft yellow-green makes for a modern, neutral shade while being comfortably familiar. Capturing the soothing charm of a sandy

shore at sunrise, this shade instantly puts our minds at ease and enlivens our spaces.

Constituting 30% of the Colour Combination ratio is Plascon Desert Water (B5-B2-2) – a calming and uplifting pale blue hue with an illuminating touch of purple. Inspired by the sunlit surface of tranquil water, this shade is subtle yet impactful, perfectly complementing the neutral Pear Fantasy. Lighter blue shades are associated with health, healing, tranquillity, and softness.

Rounding off the ratio of impeccably matched shades that emulate the essence of nature, Plascon Zanzibar (70) makes up the final 10% of Plascon's Colour Combination for 2022. A soft yet grounded colour, there's a quiet warmth to this gentle smoky brown that brings an anchoring balance to lighter, cleaner hues. Capturing the fresh soil and majestic tree trunks of an early morning trail, this colour brilliantly accentuates the Plascon Pear Fantasy and Plascon Desert Water.

Notably, the combination has been chosen to reflect a specifically African context, from the actual colours themselves to their very names. "Often,

trends that filter down to us from Europe or the USA are designed for that context, and not an African reality. Here, we are bringing together colours that reflect the way we live here, and that are created with Africa in mind," says Plascon's head of marketing Suvasin Moodley.

Plascon furthers its commitment to innovation with its Colour Combination for 2022. With the brand's sensitivity to context and its thoughtfully selected colours, the palette encourages optimism, calm, and balance. Set the tone for the new year by injecting fresh life into your space with this tranquil yet uplifting trio that speaks of home in so many ways!

For more information, email colouradvice@kansaiplascon.co.za

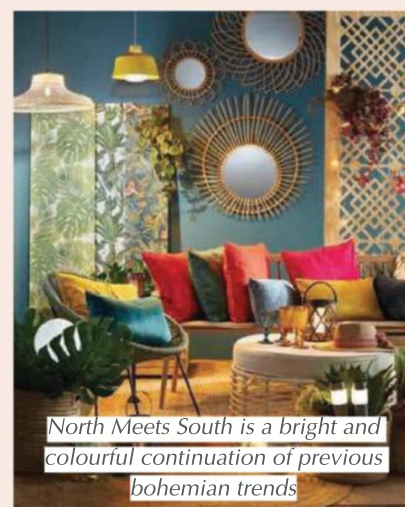


this trend by adding decorative accents to the clean and calming environment with wood, stone, plaster and natural fibres in throws, rugs, ornaments and lighting. Candles in reusable ceramic vases are always a must for a beautiful scented and calming space.

Inspired by the Wabi-sabi philosophy, the Desert Rose trend, appreciates beauty that is imperfect. "If you are looking for a style that you can truly make your own, this 'more is more' bohemian style is for you," adds Kay. "It focuses on timeless designs and fine craftsmanship which creates visual interest and tactility for a carefree, relaxed, unique and

unusual space." Paint colours include beige, white, brown, and terracotta. For signature decorative embellishments, hand-crafted organic shapes and textiles as well as sustainable materials are a perfect fit. The mix of materials gives a feeling of a home that is part of its surroundings. Accent colours include warm, earthy neutrals with a discreet pop of colour, creating a unique but cosy environment. Natural woven wall-hangings, framed mirrors, throws and layered rugs are essential pieces in this design.

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



North Meets South is a bright and colourful continuation of previous bohemian trends



Looking for a big upgrade to your kitchen on a little budget? Though the average kitchen remodel costs can be quite staggering, there are ways to achieve the Pinterest-worthy kitchen you're looking for, for a lot less.

7 Smart tips for tackling a kitchen remodel on a budget

There comes a point in every homeowner's life when the kitchen starts to look a bit dated. If you are on a strict budget then you may feel like you just have to live with it since kitchen renovations can be so expensive. The problem is that a dated kitchen will eventually be one that is not very usable as things progressively get worse.

There are ways to save money on renovations, including the kitchen. In fact, with the right strategies, you can update your kitchen for thousands less than you would expect to spend. Sometimes, a renovation can be a hybrid between an actual renovation and a makeover. Both can make the kitchen more functional.

In this article, we will go over some of the ways you can save money doing a DIY renovation.

1. Pick one big, must-have update, and budget around it

Almost everyone has at least one must-have item in their dream kitchen. But if yours is eating into your budgeting plans, try to recentre your kitchen remodelling strategy around it – many modern kitchen looks can be achieved for a lot less than you think.

If you are dying for a new set of stainless steel appliances, but don't have the budget to add a pretty subway tile backsplash behind it, invest in the appliances and try painting or using a tile-mimicking wallpaper to accomplish the sleek, modern look for the time being. Add a few green plants and natural wood decorative accents and you'll be set.

You can always revisit your updates down the line, while achieving the modern feel you're looking for right now.

2. Use peel-and-stick backsplashes or wallpaper

If you don't want to shell out for new paint or real tile, opt for eye-catching peel-and-stick wall accents. There are plenty of options available online – some offer the 3D pop of coloured or glass tile, while others convincingly mimic the ever-popular farmhouse shiplap look.

These accents are usually extremely easy to install, and with many options available at prices that won't break the bank, you'll be able to give your kitchen a fresh look for less with ease.

3. Swap out light shades instead of entire fixtures

Switching up the shades on your kitchen lighting is a simple



Under cabinet kitchen lighting instantly adds a new dimension to the kitchen

but powerful way to change the look of your cooking space. If you're going for a warmer look, switch stark white shades for yellow or red ones.

For a modern, open feel, ditch the lampshades altogether and opt simply for decorative Edison-style lightbulbs.



When it comes to kitchen island lights, it's important to pick the right size pendants for your island and overall kitchen space. Once you've chosen your pendants, you'll also want to make sure the wire is at the right height for your ceilings – if you need help adjusting this, call an electrical professional to have it done properly.

4. Upgrade hardware instead of your entire cabinet

To breathe life into your old cabinets, install new hardware with a modern finish instead of replacing them. To make sure you're buying the right size hardware, unscrew a few of your existing knobs or drawer pulls and take them to the hardware store with you.

Don't want to buy all new hardware? Spray paint your existing hardware for an affordable yet stylish update (black-painted hardware looks stunning on white-painted cabinets).



While you've got your hardware removed, add a coat of paint to your cabinets to freshen them up – this is much cheaper and easier than refinishing or replacing them. Need help? Call a painting professional for an expert's touch.

5. Choose a floating floor to install over your existing one

If your existing floor is level and in good shape, but just doesn't match your style anymore, opt for floating click-lock flooring to save money on flooring removal.

Several kitchen flooring options can be installed over existing, level surfaces, including laminate or luxury vinyl planks (which are both incredibly budget-friendly flooring materials). These planks are designed to simply sit, or float, on top of the existing surface without the use of adhesives or finishing nails.



Depending on the condition and material of your existing flooring, this may not be an option for all homes – consult a flooring professional to help gauge whether this can be done in your kitchen.

6. Opt for battery-powered under-cabinet lighting

Remember, no one will ever see your under-cabinet lighting. So, if you want to shed some light on your working kitchen areas without shedding too much cash, opt for stick-on, battery-powered under-cupboard lights to save a little more on your kitchen remodel.

The best part is that you can always remove the lights and install fancier, hardwired options down the line.

7. Don't DIY major installations

Lastly, while it may be tempting to cut corners on flooring, cabinet or countertop installations, DIY-ing this type of work is an easy way to wind up in the red on your remodelling project. Improperly installing flooring or other kitchen features can result in a damaged subfloor and ruined materials.

The worst part? If you have not followed your installation instructions to the letter, you can void the manufacturer's warranty, meaning you'll have to pay for all of your flooring, cabinet or countertop materials all over again.

Additionally, there are a number of important housing codes to pay attention to when updating your kitchen. For example, permanent kitchen islands are usually required to have electrical outlets installed within the island – this is to prevent cords on kitchen appliances from being run across walkways, which can be dangerous if pulled down by a pet or child.

If you violate these codes by DIY-ing an installation, it can make it difficult to sell your home down the line, or worse, put your family in danger.

We cannot stress this enough: do not DIY major kitchen installations. You'll save more money in the long run by hiring a remodelling services professional to do it right the first time.

7 Minor kitchen remodelling project ideas

Whether you're remodelling on a budget or just want to update a few smaller things in your cooking space, here are a few minor remodelling project ideas to try in your kitchen:

1. Repaint the walls (or just one of them)

Paint is a simple way to boost your kitchen's look and feel. Most kitchens can usually be totally painted using just two gallons of paint (which can cover up to 75m²).

Glossy paint is usually the best choice for kitchens, as it is easier to clean off grease and sauce splatters from regular cooking.

2. Repaint, refinish or reface the cabinets

When it comes to updating cabinets, repainting, refinishing or refacing them are much cheaper options than replacing them entirely.

- Refinishing or repainting cabinets: This is the process of sanding and repainting or restaining your cabinets. It is the most budget-friendly option, and ideal if your cabinets are in great shape but need a cosmetic facelift. Refinishing cabinets costs about two-thirds the price of refacing.
- Refacing cabinets: This is the process of removing and replacing just the doors (or faces) of your cabinets. Though slightly more expensive, this is still about 25% less expensive than replacing cabinets.

3. Update your cabinet hardware

While you're working on your kitchen cabinets, consider removing and replacing the hardware with more modern handles or drawer pulls. It's one of the easiest minor kitchen remodelling projects, and must less expensive than replacing or refacing your cabinets.

In 2022, kitchen hardware is trending toward handles instead of knobs. Try going with clean, straight lines and shiny metal finishes for a sleek, updated look. For a farmhouse style kitchen with white cabinets, dark wood handles add a lovely natural accent and contrast.

4. Replace the countertops

A countertop upgrade is a quick way to change the entire feel of your kitchen's working areas. Butcher's block countertops are becoming incredibly popular in many kitchens; oftentimes, you can just replace one section of your counters with butcher's block instead of all of them, saving you more on countertop materials.

5. Install new flooring

Kitchen floors can take a beating – if yours have seen better days, consider replacing them with a new covering. Linoleum and vinyl are great, low-cost options for a minor kitchen remodel. If you want the feel of real wood, engineered hardwood flooring is a good budget-friendly alternative to solid hardwood flooring.

6. Upgrade your light fixtures

Want to see your kitchen in a new light? Upgrading your light fixtures is a simple, but impactful, kitchen remodelling project that can change the whole look of the space.

7. Add a backsplash

Adding a tile backsplash is a simple way to make any kitchen pop. Porcelain or ceramic tiles are popular, reasonably-priced options for kitchen backsplashes, but if you're looking to tackle this minor kitchen remodel on a budget, you can also try peel-and-stick options that give the appearance of tile or glass.



Kitchen floors can take a beating – if yours have seen better days, consider replacing them with a new covering

How to plan the budget for your kitchen renovation

Setting a budget for your kitchen renovation project requires more than just crunching numbers. So do your research before grabbing the calculator. You should visit showrooms, read magazines, attend trade shows and research online resources to learn what's available today. Make a wish list and then transform it into a 'reality list' that includes price tags. Choosing Plan A and Plan B options for appliances, countertops, tile, and just about everything else is a good idea. Maintain a running list of alternatives so that a designer can add or remove items to fit your budget.

Define the scope of your project

Defining the scope of your kitchen renovation is the first step. Do you plan to refinish and update some items, like sinks and countertops, but leave others intact? Or do you plan to remodel your kitchen from top to bottom? It is easier to estimate the cost of a renovation when you know what you want to accomplish. A contractor can help you identify all the costs involved in your remodel early in the project planning stage.

Create an itemised list of materials

Make an itemised list of the supplies you need to get a sense of your materials' cost. You should list multiple brands and prices for each item you want to sell. You can therefore play around with the numbers to determine how much you should allocate. Identify which items are essential and which are nice to have. As you plan your budget, you'll know what you can't let go of and what can be downgraded or lost altogether. You should consider that there may be hidden costs you need to factor into your project, such as dealing with building code issues or eating out while your kitchen is being renovated. We would suggest setting aside 15% of your budget for hidden costs.

Know how much you can spend

Now that you have an idea of your materials costs, you can determine how much you can afford to spend on your project. Create a budget you can afford. No matter the situation, you do not want your renovation project to interfere with your financial stability. It may be necessary to alter the scope of your project to make it more affordable.

Loans are an option for people who have equity in their homes and want to finance renovation projects. It would be better to pay for your renovation out of your pocket unless you are certain it will significantly increase the resell value of your home. Keeping costs low will motivate you to avoid paying interest on a loan.

Shop around for contractor quotes

You should get quotes from multiple contractors instead of

hiring the first one you contact. There is a risk of overpaying or hiring someone who won't be a good fit.

Look for cost-cutting opportunities

Staying on budget is possible if you cut costs. Anything you can do yourself, whether it's repainting your walls or replacing lights, will save you money in labour costs. In addition, consider repairing old appliances instead of replacing them completely.

Stick to the plan

The cost of a renovation can skyrocket if you change your plans mid-project. Although some changes cannot be avoided, limit large deviations to a minimum. It can lead to unmanageable costs.

Be prepared for some sweat equity

You can save money by doing some of the easy work yourself. What's the point of hiring someone to remove cabinets from the wall or remove tiles from the floor? After demolition, let the professionals handle the demolition-after all, tearing stuff up is pretty easy.

Break down costs

Your remodelling budget should allow you to allocate a specific amount for each component of your project. Costs associated with a kitchen remodel are typically broken down as follows:

- Cabinets: 30-35%
- Labour: 20-25%
- Appliances: 10-15%
- Flooring: 8-10%
- Electrical: 7-9%
- Countertops: 6-8%
- Plumbing: 5-7%
- Demolition: 2-5%
- Other: 1-3%



Is there anything better than a nice cold drink in the summer? This handy garden drinks cooler will help!



BOTTOMS UP!

>>> Dave Parker



Tools and materials

- A big pile of pallet wood
- 'Some' 2,4m lengths of 90mm x 38mm timber
- Clear outdoor varnish
- Paint
- Assorted screws and nails
- Threaded inserts
- Heavy duty castor wheels
- Hinges, handle, bottle opener, towel hanger
- Mitre/chop saw
- Drill/Screwdriver
- Kreg Pocket hold jig
- Sander
- Tape Measure and pencil
- Paintbrushes
- And of course, a cooler box

I wanted something which could keep our drinks cold during our family braais without taking up the space in the fridge, which was needed for the food! Having seen a cooler box on wheels I thought it would be great to make something similar and I saw loads of great examples on Pinterest and Google.

Step-by-step guide

Step 1: My first job was to find a suitable cooler box. As this only needed to keep drinks cold for a few hours I didn't need a brand expensive cooler box, this one only cost about R200 brand new.

I planned to build the cooler box lid into a hinged lid so I needed to remove the hinges and handles from the cooler box. Once removed I filled in the holes with some clear silicone.

Step 2: The next step was to build the four legs. I wanted these to be quite sturdy so I joined two pieces of 90mm x 38mm timber together with pocket screws and

glue. Then it was time to make a frame to hold the cooler box and then add the legs.

I used the cooler box to guide me on the dimensions. Once the top and bottom frames were assembled, I attached the legs and gave the whole frame a quick sanding and a few coats of outdoor paint.

Step 3: I wanted a rustic look to the stand so I decided to strip some pallets and clad the frame in some sanded pieces of pallet wood. The same pallet wood was used to create the shelf inside the cubby and the edging around the top.

Once the pallet wood was all fixed in place

I gave it a couple of coats of clear outdoor varnish to give it a nice shine.

As a personal touch I also printed off a logo and put it on the front of the cooler before coating in varnish to protect it.

Step 4: Now I needed to fix the lid in place. After putting the cooler box in its place I put the lid on and built a wooden frame around it before screwing the frame to the lid itself and giving it a couple of coats of varnish. The lid was then held in place with a couple of zinc plated hinges and a matching handle was screwed to the front.

Step 5: At this point the cooler was quite heavy and would need a couple of people to move it even when it was empty – once full it wasn't likely that it could be moved.

I decided to get some castors with a heavy weight rating. To fix these in place I drilled a hole in the bottom of each leg and used some threaded inserts to enable me to adjust the height of each wheel to level the table out if needed.

Step 6: For a few finishing touches I used a spare floor tile for the side table part, put a towel holder hook on and the all important bottle opener!

I haven't included any dimensions as this all depends on what cooler box you have and if you want a side table or not. This project was well worth it and was a big talking point at many family braais.



First step – find a cooler box and remove the hinges



Next step was to build the four legs



I joined two pieces of 90mm x 38mm timber together with pocket screws



And then used glue for extra measure



5 I used the cooler box to guide me on the dimensions for the frame



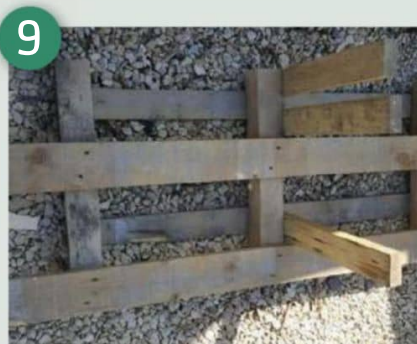
6 The design for the bottom frame



7 Once the top and bottom frames were assembled, I attached the legs



8 Next give the whole frame a quick sanding and a few coats of outdoor paint



9 Next I stripped some pallets



10 The pallets were used as rustic cladding



11 The same pallet wood was used to create the shelf inside the cubby and the edging around the top



12 Once the pallet wood was all fixed in place I gave it a couple of coats of clear outdoor varnish to give it a nice shine



13 As a personal touch I also printed off a logo and put it on the front



14 After putting the cool box in its place I put the lid on and built a wooden frame around it



15 I then screwed the frame to the lid itself and giving it a couple of coats of varnish



16 I decided to get some castors with a heavy weight rating



17 To fix these in place I drilled a hole in the bottom of each leg and used some threaded inserts to enable me to adjust the height of each wheel

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- Durable carbide-tipped drill bit included
- Strong, lightweight materials for easy handling



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- Strong, lightweight materials for easy handling



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Add comfy seating to your game room, kids' room, or dorm room.



A DIY PADDED SOFA



Tools and materials

- Plywood: 19mm x 1220mm x 2440mm
- 50 x Kreg 32mm coarse-thread pocket hole screws
- Danish Oil finish
- 2 x Indoor/outdoor bench cushions (Approx. 1220mm x 432mm x 76mm)

CUT LIST AND PARTS

1 x Shelf	19mm x 127mm x 1220mm
3 x Brace	19mm x 127mm x 372mm
4 x Support	19mm x 508mm x 724mm
1 x Seat	19mm x 559mm x 1321mm
1 x Seat Back	19mm x 470mm x 1321mm

This stylish sofa is made with just one sheet of 19mm plywood and a couple of off-the-shelf indoor/outdoor cushions. With so many colours and styles available, the customisation possibilities are almost endless.

Step-by-step guide

Step 1: Start by ripping the one Shelf and three Braces from a sheet of 19mm thick sanded plywood, as shown in the cutting diagram. A saw guide makes it easy to make straight, accurate cuts. Next, cut each part to final length. Set your Kreg Jig for 19mm thick material, and then drill pocket holes in the three Braces at the locations shown. Sand the Braces and Shelf smooth, and set them aside for a later step.

Step 2: Use the dimensions shown to lay out the first Support where shown on the sheet of plywood. Now cut this Support using a jigsaw. For best results, cut just on the 'waste' side of your layout lines, rather than trying to stay on the lines exactly. Then sand the edges up to the layout lines to get them flat and smooth. With the first Support done, use it as a pattern to trace out the remaining three Supports on the

plywood, as shown. After you sand all the edges flat and smooth, drill pocket holes on the four Supports at the locations shown. Note there are two 'left' side and two 'right' side Supports that mirror one another. Sand the faces smooth.

Step 3: Start with two 'left' Supports and one Brace. Position the Brace where shown, making sure it sits straight and square, and then attach the Brace to the Supports using 32mm coarse-thread Kreg Screws. Repeat the same process for the 'right' Supports.

Step 4: With the two side assemblies together, you can now add the centre Brace to complete the base frame. Notice the centre Brace is set 19mm farther toward the front of the sofa than the side Braces. This is to make sure the centre Brace pocket hole screws are offset from the side Braces and don't hit each other.

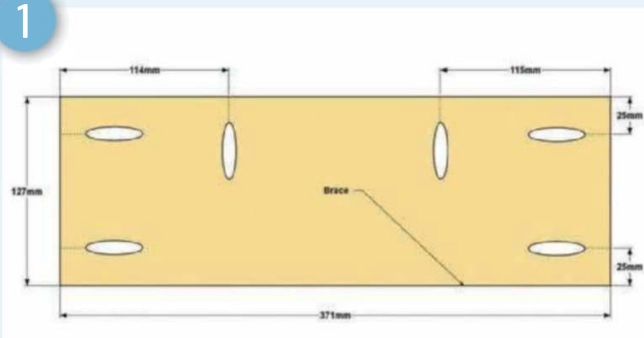
Step 5: Cut a Seat to length and width, as shown in the cutting diagram. Then sand the edges and faces smooth. To install the Seat, first lay the sofa base assembly on its back edges, as shown. Position the Seat, making sure it overhangs each outside Support edge equally, and clamp the Seat in place. Secure the Seat to the Supports using 32mm-thread Kreg Screws.

Step 6: Now cut a Seat Back to length and width, as shown in the cutting diagram, and sand it smooth. Set the Sofa upright again and place the Seat Back in position so the edges are flush with the Seat edges. Clamp the Seat Back in place, and then secure it using 32mm coarse-thread Kreg Screws.

Step 7: Finally, place the Shelf on top of the Supports as shown, making sure it overhangs equally on each end. Secure the Shelf to the Supports using 32mm coarse-thread Kreg Screws.

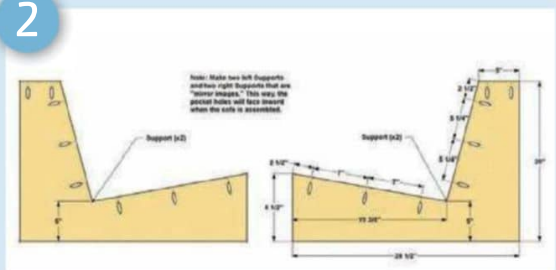
Step 8: Do any touch-up sanding that's needed, and then soften the exposed corner surfaces of the seat and seat back by sanding them. Brush or vacuum the sawdust from the sofa. Then you can apply the finish. We chose to just wipe on a natural oil finish. Of course, you could paint the sofa, too. Once the paint or finish dries, you can throw on the cushions, and relax in comfort on your new sofa.

1



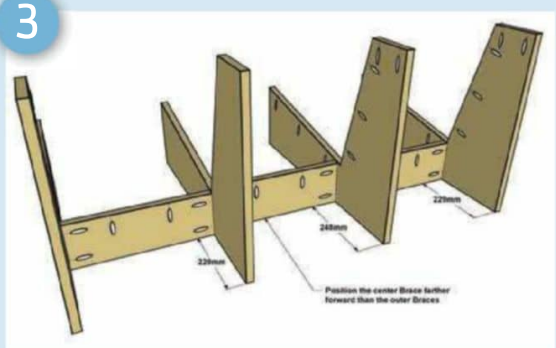
Make the Brace

2



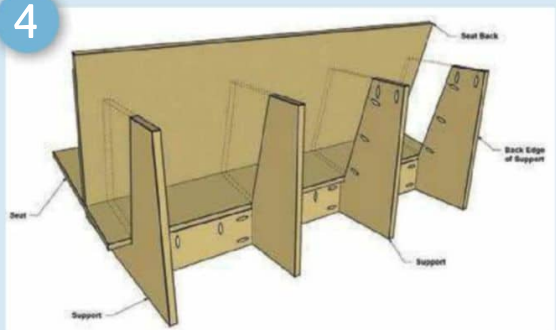
Make the Supports

3



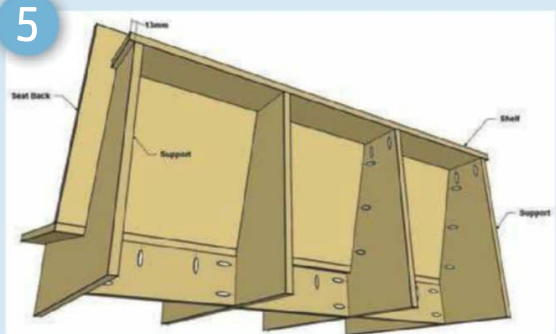
Assemble the Supports and Braces

4



Attach the Seat Back

5



Add the Shelf



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Use our handy guide to choose the right paint for your home.

How to choose the right paint for all your home projects

Whether you're painting your home's interior, exterior, furniture, or cabinetry, our tips for what to look for in paint products, plus how to save time and money, will help you paint any item or surface successfully.

When it comes to refinishing interior walls, cabinetry, furniture and exteriors, not all paints are created equal. There are so many types of paint and knowing what paint to choose for the job can save you time, money, and frustration.

Choose your colour



Choosing a paint colour is often one of the most personal choices you make in your home

Choosing a paint colour is often one of the most personal choices you make in your home. Choices can vary depending on many different factors such as room size, light, and whether or not you're painting to sell your home. As a general rule, when painting to stage your home to sell, choose white or neutral colours because it makes it easier for a potential buyer to envision themselves and their belongings in the space.

Choosing a paint colour for your home that you plan to keep and live



in is deeply personal. Take note of the items that you plan to keep in the room after your painting is complete, you can choose to go with a paint colour in the same colour family for a cohesive look or choose a colour on the opposite end of the colour wheel to be complementary yet bold! In general, cool colours like blues and greens tend to create a calm and relaxing space while warmer colours like reds and oranges create a more vibrant atmosphere. In the end, it is your space, so pick a colour that makes you happy!



Natural bristled brushes made from animal hair are more expensive and are better suited for oil-based paint



Use less than three colours in a room to avoid the room feeling 'too busy.' Most major paint brands have sample designs to help you choose colours that go well together.

FLAT OR MATTE

Pros	Good for hiding imperfections or for covering rough surfaces.
Cons	Harder to keep clean, so not recommended for high-traffic areas.
Best for	Bedrooms and other low-traffic areas, or surfaces like ceilings that you want to downplay.

EGGSHELL OR SATIN

Pros	Stands up to washing, so works well in higher-traffic areas.
Cons	The added sheen means imperfections will stand out more than with a flat paint.
Best for	Kids bedrooms, dining room, bathroom, or kitchen walls.

SEMI-GLOSS

Pros	Durable, washable, and moisture-resistant.
Cons	Details or imperfection will stand out.
Best for	Kitchen, bathrooms, trim, and doors.

GLOSS

Pros	The most durable, shiny finish.
Cons	Very shiny – every detail or imperfection will stand out.
Best for	Windows, trim, and doors.

Select the finish

Next you need to pick the right paint sheen or finish. The finish makes a big impact on how the paint looks on the wall and also determines how durable or washable the paint is. In general, the higher the shine, the more durable the paint, but each finish has its pros and cons.

Choose how much

Before you actually purchase your paint, we highly recommend buying sample sizes of the colour that you think you want to work with and testing them on your wall. You may notice that the light in your room plays completely differently on the actual painted surface than it did on the paint chip. Some pants can even look very different from room to room. Or, maybe the throw pillow that you thought would match perfectly actually doesn't!

Once you're completely set on your paint colour and sheen, it's time to determine how much paint you need to buy! The easiest way is to measure the size of your room and ask the paint store staff. Remember to mention if you have vaulted

walls or special design elements such as additional soffits, coffered ceiling, heavy texture, or lots of windows or doors in the room that may affect the amount of paint that you need to purchase.

Sealants

Very often paint does not adhere to a sealed joint and the colour of the sealant may be nowhere near the aesthetic colour finish needed. What do you do? Use sealants and adhesives to prepare the areas prior to painting as preparation is the key to a successful application.

Den Braven has a range of paintable sealants and adhesives suitable for specific applications. Remember that it is most important to select the correct product for the job on hand. Acryl-W is ideal for filling internal small cracks and joints – such as walls, where hooks have left holes in the wall, and ceiling cornices. Acryl-W does not crack once fully cured as it is a plastic elastic sealant.

Hybriflex-540 sealant is ideal to seal around window and door frames. Doors that have slammed shut often loosen in

the frame, with cracks the plasterwork. These areas need sealing prior to painting. Hybriflex-540 adheres to steel and aluminum. It used for expansion joints in concrete and natural stone, wood, enameled surfaces, sealing granite tops in the bathroom and kitchen. For use indoors and outdoors

If you are giving wooden furniture a face lift, use Woodflex to fill any joints or imperfections prior to painting. Woodflex is sandable once fully cured. It does not discolour when painted. Available in four different wood colours.



Interior paint

When it comes to painting interior walls, you can save yourself a lot of effort by choosing a dual-purpose paint that includes both primer and paint. Interior latex paints that include primer, cover walls in one coat, which eliminates the need for multiple layers of paint. Whether painting a dark wall white or making a slight colour change to your interior walls, paints that include primer give better coverage than traditional latex paints, and you will save yourself time and money since less paint is needed.

If you're painting a bathroom or room that is prone to high humidity, like a sunroom, look for specialty interior paints that are made for high-moisture areas of the home to help reduce the possibility of peeling and staining over time.

Painting cabinetry, doors, and interior trim

If you're thinking about painting the cabinets, doors, or interior trim in your home anytime soon, the key for choosing the right paint is finding one that is not only highly durable but also has a beautiful smooth finish. It's important to choose carefully when it comes to paint products for high-traffic areas in the home, including interior trimwork, doors, and cabinets, which receive the most daily wear and also happen to be the most visible areas.

Water- or oil-based enamel paints are formulated specifically for these high traffic areas and are dual-purpose when it comes to durability and finish. Many enamel paints contain self-levelling additives that help to ensure the paint will spread evenly and reduce brush marks. Enamel paints do not



UN Den Braven Sealants

Visit our website for technical specifications



require a top coat, as these paints are formulated specifically to give a highly durable and strong finish.

An enamel paint will give a smooth, durable finish that is tough enough to hold up to daily wear and tear.



Allergy-free paints

If anyone in your home suffers from asthma, allergies, or is sensitive to the chemicals or fumes of paint, choosing the right paint for your home becomes an even bigger challenge. The good news is there are now interior paint products on the market with both low and zero volatile organic compounds, or VOCs. These interior paints help reduce allergens and sensitivity to paints.

Exterior paint

With so many varieties of exterior paints on the market, it can be overwhelming to know what paint will do the best job and hold up to a wide range of weather conditions for years to come. The most durable exterior paints with the greatest staying power have formulations that include UV protection, resistance to mould and mildew, and resistance to chipping, flaking, and cracking.

Seeking out an exterior paint that checks all the boxes when it comes to durability is the best way to ensure that you will find the right paint for your home's exterior. Exterior paints that contain a primer will require fewer coats and less paint, which will help save time and money when it comes to painting your home.

Exterior paint with an excellent hiding power has the ability to sufficiently conceal the surface where it is applied. It contains a paint pigment that can easily cover old paint jobs and imperfections. This characteristic is affected by the thickness and the way the paint is applied, which is why it's important to get painting experts to perform your paint job.



Furniture paint

There are a myriad of furniture paints that are available on the market, including ones with chalk-style finishes, high-gloss lacquer, and finishes that create a distressed look. If you're not looking for a specialized decorative paint finish for a furniture paint job, traditional water- or oil-based enamel paint will give a beautiful, smooth, and durable finish on furniture that will be tough enough for even high-traffic furniture pieces. No top coat is needed when it comes to enamel paints, as the finish is formulated to be strong enough to be used without a top layer clear coat.

A quick trick for applying enamel paint to furniture is to use an extender additive with the paint, which extends the paint drying time, increases paint levelling, and helps eliminate brush marks. Supplementing with an extender additive makes the furniture painting process smoother and helps to hide any painting imperfections. Refer to the directions found on the extender additive to determine how much product to mix with your paint.



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KID BED MAKEOVER

Learn how to make a treehouse bunkbed



Tools and materials

- Toddler-sized bedframe
- MDF: 2440mm x 1220mm x 18mm x4 pieces
- Screws (4.0 x 20mm, 4.0 x 30mm, 3.6 x 35mm-black)
- Drilling machine (x2)
- Jigsaw
- Sandpaper 220p and 80p
- Primer 1 litre
- Paint 2,5 litre
- 7 x T-Hinge
- 5 x Handles
- Paint rollers
- Degreaser
- Measurement tape

>> Bob Michaels

We live in a small townhouse, and with our second baby we needed a safe space for our children to sleep. As their age difference is small (a toddler of 2 years and baby of 7 months) they can sleep together in the same room but the baby is not allowed to crawl out of bed, while our oldest should have some protection from falling but can climb out if he wishes.

That is why we opted for a toddlers bunk bed (150cm x 70cm) which can be (partly) closed for protection.

Step-by-step guide

Step 1: I was not comfortable enough to make a strong frame so we bought one to start of as a base. It came with a white primer, stairs which we didn't use and two drawers for beneath the bed. The exact size is 161cm x 81cm x 170cm and we estimated it to be 220cm in height after the roof was finished.

The bottom bunk is 23cm from the floor to leave space for the drawers and the top bunk is 110cm from the floor as this leaves enough headspace for both children.

After sanding and painting the bedframe, the first challenge was the support for the roof as this was lopsided and designed in a freeform, trial-error way. I wanted it to be 50cm in height from the bedframe and have an asymmetric look. When we were satisfied we copied these beams for the front and started sawing the planks for the backside. It would serve as support for the support-beam itself strengthening the structure.

Step 2: To give it an extra home-made look we sawed each plank with different widths. I made up a numbering scheme for each width of the planks which would total the whole width available: Topside plank width (in cm): 9 15 7 11 5 13 5 9 11 13 7 15. Downside plank width (in cm): 15 7 13 11 9 5 13 5 11 7 15 9.

As in the pictures, we thought hard and long on how to cut the planks on the top side where the roof would be, but in the end we made a small calculation error and it was off by a few centimetres. The support beam was in front of it so you can't see it, and once that was assembled we had a first good look at how our house would look like.

From here on we could add the second support beam on the front with an extra plank across the tip of the roof for extra strength.

Step 3: After finishing the support beams, back panel and side panels it was time for the most interesting part: the little doors which should be cute, practical and protective for both children.

The lower left door is 78cm x 92cm made out of 7 planks (11 9 7 12 10 11 10 – 8 9 12 11 7 11 12) and the two windows are 66,5cm x 65cm (7,5 9,5 12,5 10,5 8,5 11 – 12,5 7,5 10,5 8,5 11,5 9,5).

On the inside of the doors we made small strips to hold all the planks together. Later we had to adjust this a little so it would not bump against the bedframe, and we had to cut off corners where it would hit the roof.

Step 4: With the doors in place the project was almost finished. Meanwhile we sawed the roof to our liking where we made it a few centimetres longer on the sides and top which looks quite playful.

It was time to do the finishing touches for the few planks missing on the front side below the roof and more decorative planks around the entrance for the bottom bunk. In the window we sawed small strips for the window frame to project small babies from escaping.

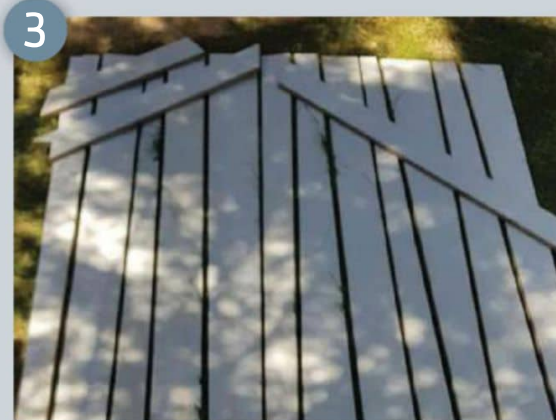
The last thing to design was the wooden locks for all three doors. This simple solution works perfectly, but I had to cut out a little bit of the upper doors and fixed an extra wooden block onto it.



The original bunkbed which we converted



The first challenge was the support for the roof



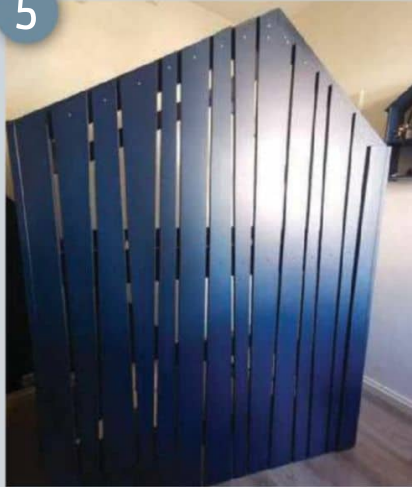
The panels were designed in a freeform style to be more playful

4



The back panel in place

5



Back view of the back panel

6



Add a second support beam on the front with an extra plank across the tip of the roof for extra strength

7



The little doors were designed to be cute, practical and protective for both children

8



On the inside of the doors we made used strips to hold all the planks together



Time to Unwind

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We all like to spend a bit of money on our tools, but accessories are just as important, because if you don't get the right accessory then your tool won't fulfil its potential.

ACCESSORISE!

Power tool accessories are often confusing to many a new DIY'er, but have no fear. In this article, we are going to discuss which accessories you should consider buying and why power tools are one of the most important weapons in your do-it-yourself arsenal.

In our opinion, power tools are a necessity for home improvement projects. Having the right power tools always makes any project go smoother and often much faster. You will likely get results that look for professional as well. Most power tools are sold as just the basic item, however, each type of power tool comes with some great accessories. You will want to consider purchasing some of these accessories, especially if you plan to use your power tools often. In some cases, power tools are sold with an accessory kit – this is a great investment as it is often less expensive than purchasing individual accessories.

You may not know what accessories you are going to need down the road for a particular power tool. That can keep you from purchasing the power tool kit with accessories, then you may wish you had them down the road. Take some time to research the power tool you wish to purchase and find out about the various accessories available and their use.

It is also a great idea to compare the price of the power tool with the accessory kit to the price of it without. If the difference is only a few rand, then get the accessories. If you find you won't use them, you can always sell them to a friend or one of the online auction sites.

Drill bits are accessories you will have to purchase based on what you will be using the drill for as well as the materials you are drilling. Drill bits made of carbon are only recommended for use on wooden materials. Countersink drill bits make the hole wider. This allows you to use flathead screws and get them

flush with the material. This makes your project look more professional. A tile bit is especially designed for working with anything ceramic or glass. You should only use a tile bit at a very low speed. A chuck key is used to loosen or tighten the chuck. Generally, a chuck key comes with your drill when you purchase it, but you can buy a replacement if necessary.



Accessory kits are a great investment for power tool users



Take some time to research the power tool you wish to purchase and find out about the various accessories available and their use

Routers are great power tools for detailing, carving, and engraving (read our current series on routers by Denis Lock to see just what can be achieved). There are hundreds of different bits for routers to choose from. You will have to do some investigating to purchase ones that will suit your particular project. A router table comes in very handy if you plan to use your router a great deal. Of all the accessories made to use with a router, the router table is the most useful. It turns the portable router into a precision stationary machine

A pair of saw horses is definitely useful when you are operating any type of saw that involves cutting materials that you can lay across them. They support both ends of the material at the same time so you can use both of your hands to operate the saw. To help you get the best possible cut, a laser guide is a wonderful accessory. It puts out an infrared light in a straight line for you to follow as you cut.

There are various grades of sandpaper to use on sanders. You need to make sure you use the proper grade for each project. A dust bag is an attachment helps to reduce the amount of dust by capturing it and holding it.

You can find power tool accessories at retail stores, on the internet, and at home improvement stores. You may need to purchase accessories that match the brand of power tool you purchased. It is a good idea to have the model number ready when you purchase power tool accessories, especially if it is an older model. There may be more than one type of accessory for a particular power tool and you won't know which is for yours unless you have the model number to compare with the information on the packaging.

When choosing replacement tool parts, be sure to research the right part for your particular tool. Choosing a replacement part that is not compatible with your tool could lead to further problems, safety issues and additional repairs. Contact your tool's manufacturer if you have any questions about the right kinds or sizes of replacement parts you may need.

Power tool accessory safety

Power tool accessories work along with the power tool to perform the required task or job efficiently and safely. Whether it is a saw blade, drill bit or grinding wheel, you should choose accessories that are specifically recommended by the tool manufacturer for use on its tool. Just because an accessory can be attached to your power tool, it doesn't mean it is intended for use on that tool and does not ensure safe operation. Speed, size, guarding, application, and mounting requirements must all be addressed. Third-party websites often promote use of accessories that are inappropriate for a particular tool, often turning it into a tool used for other than its intended purpose. The site may include pictures of accessories mounted on well-known brands of power tools. This does not mean the accessory use is recommended by the manufacturer of the tool.

Always follow some common sense safety rules:

- Always read and follow the safety information in the operator's manual of the power tool and recommended accessories.
- Do not use a damaged tool or accessory
- Use the manufacturers' recommended guarding for the accessory
- Wear personal protective equipment appropriate for the application
- Keep bystanders at a safe distance
- Keep the cord clear of the accessory
- Never run the tool while carrying it at your side
- Make sure the accessory has come to a complete stop before putting the tool down

If the accessory is not specifically recommended by the tool manufacturer, the following are some of the problems which can occur:

- Accessories that are incorrectly sized cannot be properly guarded or controlled. The outside diameter and thickness of your accessory must be within the capacity rating of your power tool.
- Accessories running faster than their rated speed can break and fly apart. The rated speed of the accessory must be at least equal to the maximum speed of the power tool.
- Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may break or cause the operator to lose control.
- Make sure the accessory has come to a complete stop before putting the tool down.

Be safe – use accessories recommended by the manufacturer of the power tool.

The 10 most useful power drill attachments

Garden hole digging bit

Spring planting is a cinch with a garden hole digging drill bit. It comes in different diameters, and will dig a perfectly round, flat-bottomed hole you can drop your new plants right into.

Scrubbing pads

Get your household cleaning jobs done more quickly and easily with a set of scrubbing pads for your cordless drill. Each package generally comes with two soft and two regular pads for tackling dirt, grime, and stains without having to break a sweat. Great for scrubbing skirtings, cleaning shower doors, and more.

Drill guide attachment

Add a whole new level of accuracy to your home improvement projects with a drill guide from. A-centring drill guide base can be set to accurately drill both straight and angled holes. No matter what drilling motion you're doing, it will give you maximum support.

Angle adapter

Drilling in tight spaces can be made easier with the use of a magnetic angle attachment. They have a magnetic tip for faster retention, and are usually impact rated for both drills and impact drivers. Its small size means it can slip into seriously close quarters.

Scrubbing brush

Get a scrubbing brush for your cordless drill and you'll zip through deep cleaning the house. Choose the flat brush or the corner & edge brush for general cleaning, or the flat brush soft for carpet and upholstery. Whichever you decide, it will make home maintenance chores easier.



Power tool accessories work along with the power tool to perform the required task or job efficiently and safely

Paint roller cleaner

Cleaning a used paint roller is messy and time-consuming – unless you have a paint roller cleaner. Attach the accessory to your drill and slip your roller cover on. Then spin it clean! You'll save time, water, and money if you use this product on your very next project.

Flexible extension bit

A flexible shaft bit holder helps you work in hard-to-reach places, like under cabinets and in drawers. The shaft flexes up to 90 degrees and won't rotate during use. And it has a magnetic bit holder, which will keep your fasteners and bits secure while driving.

Magnetic drill bit holder

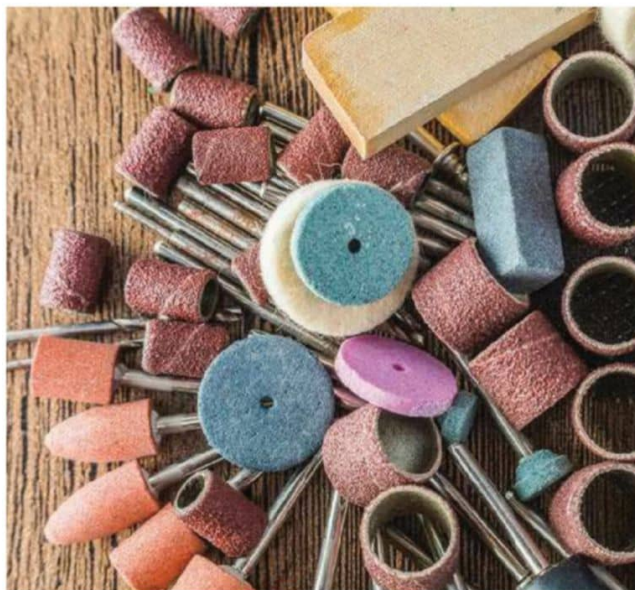
Magnetic bit holders will help you switch between drill and drive bits with ease. A powerful magnet ensures a secure hold on bits, and its heat treated, custom alloy steel means it can withstand abuse.

Self-centring drill bits

Self-centring bits make one-handed loading and releasing of drill bits a reality. Usually available in sets, each will allow you to change bits without re-chucking. That's a huge time-saver! Generally also includes a self-centring feature to ensure perfect drilling.

Nut driver set

Nut driver sets are ideal for use with your cordless drill. The drivers have hex shanks and are magnetic, making fastening nuts quicker and easier than ever.



Get your household cleaning jobs done more quickly and easily with a set of scrubbing pads for your cordless drill

7 common power tool replacement parts

Power tools work hard and go through a lot of wear and tear. Even if you maintain a regular maintenance schedule, you will eventually have to repair your power tools. First, you have to diagnose the problem. Then, once you know what is acting up, you have to choose the right replacement tool parts for your particular make, model and tool size. There are a handful of parts on your power tools that wear out or break down more often than others. Checking these first can help save time when getting ready to repair your tools.

1. Power cords

Power cords are vulnerable to a lot of wear and damage. The rubber insulation can become damaged or fray during use which then could expose the tool's wiring. Exposed frayed wire is an electrical hazard and should be fixed or replaced immediately. A tool's power cord may also become loose, or the cord protector may come off. When performing maintenance checks on your power cord, also be sure to check that the prongs on the plug have not become bent or loose.

2. Batteries

Batteries are one of the most common replacement tool parts. Your cordless tool batteries will eventually need to be replaced, especially if you are running them every day. Heat will burn out your battery's fuel cells. Allowing the battery to overheat or storing it in a high-heat area can cause it to burn out and die. Batteries also need some power in their cell to make a working connection with the charger. Therefore, if the battery runs out, it will likely need to be replaced.

3. Carbon brushes

Replacing carbon brushes is very common among power tool repairs. They are the component that allows the electrical current to flow through the tool and to its rotating parts. Carbon brushes wear out naturally just from use. There are a few signs that your carbon brushes are just about done. Your tool may have trouble starting, run low or not start at all. Failing carbon brushes may also cause sparks inside the casing.

4. Drive belts

Many motors use belts to operate. These are loops of rubber, like a stiffer rubber band, that circle two rotating shafts. The belt drives energy from one shaft to the other, which is what enables the power tool to run. Drive belts are common replacement parts because they deteriorate over time. They can also break down even if the tool is not in use for long periods of time. Since drive belts are made of rubber, they are prone to dry rot and become cracked and lose elasticity.

5. Power switch

A bad power switch can keep your tool from starting or cause that on-again/off-again temperament when trying to turn it on. The power switch can burn out or wear out with use. You can usually check it by just removing the tool's housing, though some tools may require a little digging. If your power switch needs replacing you should also check the wiring, which may also need to be addressed. Damage from heat may cause the switch to melt, burn or become discoloured.

6. Bearings

Bearings are what make the movement in your power tool possible. Your tool's bearings will eventually wear out over time, just from standard use. Running your tool high or for anything other than its intended use could cause the bearings to wear out sooner. When bearings wear down, they may cause the tool to overheat, make high-pitched screeching noises or stop working altogether.

7. Accessories and bits

When it comes to power tools, it is a given that their accessories will wear out. Saw blades and drill bits wear down through use until they just aren't any good anymore. Sometimes they chip. Sometimes they snap in half. Sometimes they get lodged in a piece of wood, brick or concrete. Bits come made in several different kinds of materials. Be sure to choose the one that is right for the job at hand.



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PUT YOUR FEET UP

In this article I will show you how I went about making a double seat garden bench with a footrest

>> Kevin Ravenscroft



Tools and materials

- Wood: 60mm x 40mm planed softwood battens at 2m lengths and 70mm x 18mm planed soft wood 2m lengths for the slats.
- Assorted woodscrews
- Wood saw
- Wood glue
- Chop saw
- Hammer
- Wood paint
- Battery drill
- Countersink
- Drill bits
- 8mm coach bolts, washers and nuts

There are quite a few of these bench designs on the internet, but true to form, I didn't have a plan as such and just went along with what came into my head along the way. Maybe it is not the best way to work, but that's the way I do it...

The wood I used is really cheap pine; it's not very good but with plenty of sanding it should be okay as I'm going to paint the bench as well.

I will be using power tools which include a battery drill and a chop saw throughout this build, and as such will be wearing personal protective equipment to include ear and eye protection and a dust mask appropriate for the tool I am using.

After some initial thoughts, I came up with a plan of how I was going to approach the

garden bench build. The bench will be of a rustic look, but all holes will be countersunk and filled.

After taking some dimensions for height and width from a bench at a local sports club I will make the bench 140cm in length and 50cm wide and the seating height would be 45cm making for a comfortable seating position. To add comfort I will add four supports for the horizontal slats these slats will have a radiused recess using either a jigsaw or bandsaw.

I am keeping the horizontal slats at full length of the bench – this is not only for strength but also for putting items under the console, say snacks, with drinks on the upper deck. the bench will be constructed using coach bolts and screws making for a sturdy and durable bench.

Step-by-step guide

Step 1: To start I cut to length the radiused supports at 500mm. I roughly drew the radius to what I thought would be a comfy seating position on one of the supports and cut out on the band saw, I then transferred this radius on to the other three. After cutting I sanded.

The next job is to cut the front and back lengths of timber the supports will be inside these lengths and screwed in four positions with wood screws for each support. Check the diagonals to ensure the framework is square and adjust if necessary; this will be the framework for the horizontal slats.

Step 2: We can now move onto cutting the four legs for the bench – these are cut at 460mm and each corner is clamped and drilled to suit an 8mm coach bolt; an 8.5mm drill or 9mm will be fine, Coach bolts are fitted, washers and nuts then tightened and additional screws are added for strength, the bolts I had were too long so I cut them back to the nut with a hacksaw.

Step 3: The slats are cut to size on the chop saw, and placed individually on the framework front and back first then equal spacings for the remainder, these are screwed in two positions at each support, with screws.

I have sanded rough edges as I have been constructing the bench, but at this point I sand everything with medium grit sandpaper, it will get more difficult as the build progresses to sand concealed areas.

Step 4: Onto making the back supports. The angle of the back support is quite important as too far forward will not make for a comfy seating position, too far back and you find yourself slipping off the bench.

Looking online there are plenty of sketches with varying degrees which is confusing, so I think the best option is to have a trial fit with a scrap pieces of timber until you come up with something which suits. I think between 60-70 degrees will be somewhere near.

My back supports (560mm), two for each side of the bench will have the angle notched at the bottom on the inner two and then they will be bolted and screwed to the framework and slats can either be vertical or horizontal, the two end supports are drilled straight onto the framework beams, strength will be given to these supports when the arm rests are fitted, use a straight edge to ensure that all the back supports are in line.

I need to consider how the arm rests will fit into place as well on the outer sides as the centre console will provide inboard arm support if needed.



First step: gather your wood



To start I cut to length the radiused supports at 500mm



Check the diagonals to ensure the framework is square

4



The framework is for the horizontal slats

5



The framework complete

6



We can now move onto cutting the four legs for the bench

Step 5: Adding arm rests. Using the back support angle as my guide, I transferred the angle onto one of the outer arm rests (560mm), I then cut the angle on the bandsaw and screw into place, using screws in two positions, then using a small spirit level, I placed this on top of the arm rest and measured to the bottom of the framework which was approximately 250mm; these pieces are cut on the chop saw and sanded, then using wood screws, two in the side and two through the top of the hand rail on both ends of the bench.

The same method was used on the centre console, the uprights were screwed through the top and then from underneath through the horizontal slat.

Step 6: With the arm rests and console battens in place it's time to cut the horizontal back rest and console slats, these were measured off, cut on the chop saw and sanded before being screwed into position two in each end using 15mm wooden spacers.

I routed the edges of the slats for the console, these were then screwed in place in two positions each side I wished I had routed the slats for both the base and the backrests but too late... I wasn't taking it apart at this stage, so eventually I routed just the top slats for a more rounded look.

Step 7: The final thing to do was to make a brace for the legs, this is just an elongated 'H' section, I measured up 20mm from the bottom of the legs and drilled in positions for the ends and then the brace was screwed into position through the ends using screws.

Step 8: Well, I was going to Paint the bench but unfortunately the weather has taken a turn for the worse so it will have to wait, I've put it in the summerhouse for now as there was no room with it in my Workshop.

Step 9: For the footrests, I wanted a design which was easy to lift up and down. After looking online I found just the thing ratchet hinges the hinges stop and hold in increments then open to extent to close, after looking at various types I settled for the ones in this build.

As for the Install, I bolted and screwed the end two hinges straight to the existing end pieces of timber, for the inner two I had to cut 100mm x 60mm timber offcuts. I sanded these and then Initially screwed in place then later I bolted these for additional strength.

Next job was to make some side pieces of timber for the footrests, four in total, these were made from a 60 x 40 batten sawn down the middle length ways to form four battens at 320mm.

I screwed these into position on the bench then I made some slats for the footrests, five per side. These were made from pallet wood that had been through the thicknesser. I cut these to size at 460mm and drilled two holes in each end of all 10 slats – these holes were counter sunk as well, Starting at the top slat first, then the bottom and the rest equally spaced.

That's it! the footrests are in and working as well. As far as the bench build goes, it was complete in just over two days. It is really solid as every joint is either screw or bolted, and it's really comfortable as well with the console acting as arm support as well as somewhere to put your drinks.



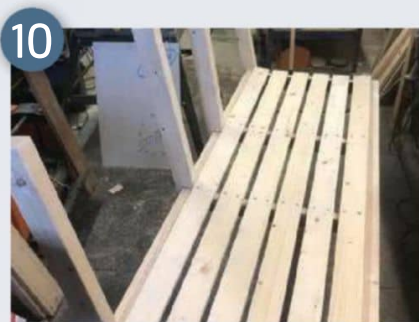
7
Top view of the legs



8
The slats ready to be installed



9
The slats are cut to size on the chop saw, and placed individually on the framework



10
I then sand everything with medium grit sandpaper



11
The angle of the back support is quite important



12
The back supports and arm rests installed



13
Done! Until I decided to add footrests...



14
I found ratchet hinges to use for the footrests



15
I bolted and screwed the end two hinges straight to the existing end pieces of timber



16
Next job was to make some side pieces for the footrests



17
The footrests in the 'down' position



18
And here they are 'up'

WHAT YOU CAN AND CAN'T RECYCLE

Recycling for your average suburban household in South Africa is a bit of a schlep: the infrastructure for collecting recyclable material isn't really in place – yet.

Households generally have to separate their rubbish and take the recyclables to a municipal drop-off centre or a buy-back centre because there's not much in the way of kerbside collection. Many people just can't be bothered. But, there are also many people out there who would recycle if they knew how to. This guide aims to help you get started.

How good is South Africa at recycling? The recovery rates for various materials are as follows:

- Cans: 69 percent
- Paper: 59 percent
- Glass: About 25 percent
- Plastic: About 17 percent

Informal recyclers recover much of this material from dustbins and landfill sites. This is not ideal, firstly from the point of view of the health and safety of the recyclers. But also because

the recyclable material is contaminated with other waste. First prize would be if households sorted their waste, so that 'uncontaminated' recyclable material could be collected.

Why you should recycle

Firstly, the Earth's resources are not infinite so we shouldn't waste them. And, you know that sign that reads "Leave this place in the same condition as you'd like to find it"? Well, the same applies to the planet. You'd rather see your grandchildren running through piles of fallen autumn leaves than piles of discarded rubbish (wouldn't you?). More specifically, the government wants to reduce the amount of plastic, cans, paper and glass going to landfills by 70 percent in the next decade or so. To meet that target, households need to stop simply throwing away rubbish and start implementing the three Rs: Reduce, Reuse and Recycle.

What can be recycled?

Metal

- Coldrink and beer cans
- Food tins
- Metal lids of glass jars
- Aluminium cans (e.g., Red Bull), foil and foil packaging
- Paint, oil and aerosol cans (leave labels on them so recyclers can see whether they contain hazardous material)
- Rusty cans can be recycled

Glass

- Beverage bottles
- Food jars such as tomato sauce, jam and mayonnaise bottles

Glass

The following cannot be recycled:

- Drinking glasses
- Light bulbs – ordinary and energy-saving compact fluorescent lights (CFLs) – and fluorescent tubes. NB: CFLs and fluorescent tubes should not be thrown away with ordinary rubbish. They contain mercury, a toxin that can leach into the soil and groundwater if not disposed of properly. Take your old CFLs to the drop-off points at Pick n Pay and Woolworths stores where they will be disposed of safely. If you don't have this option, place your old CFLs in a sealed plastic bag before you throw them in the bin.
- To dispose of standard fluorescent tubes you can either contact Don't Waste Services if you have



a lot of them. Also in JHB and surrounds in JHB/surrounds are: Brakpan: Computer scrap recycling – 011-740-4330; Kempton Park: Desco electric recyclers – 011-979-3017. Alternatively, you can contact Ewasa (the E-Waste Association of SA) for other contacts.

Paper	• White office paper • Magazines and books (as long as nothing is laminated) • Newspaper • Cardboard (boxes and cereal boxes) The following cannot be recycled: • Laminated or waxy paper • Punch confetti • Carbon paper • Stickers
Plastics	Plastics are made from oil, a non-renewable resource, and much of the plastic packaging we use every day is recyclable. Ice cream and milk containers, fabric softener bottles, plastic bags and even cling-wrap can all be recycled. The easiest way to determine whether a plastic product is recyclable is by looking for its recycling logo. There are seven plastic recycling logos and most plastic packaging is imprinted with one of them. The logos tell you what type of plastic a container is made of. Each type has to be recycled separately.
Tetrapak	Fruit juice and milk containers look like they're made out of paper, but they are lined with aluminium foil and plastic so they must be recycled separately. Tetra Pak has opened its first small-scale recycling facility in Germiston, Gauteng, where its packaging is recycled into roof tiles, furniture and stationery. The company has plans to open more recycling plants around South Africa. For more information about Tetrapak, visit www.tetrapak.co.za
Batteries	Disposable batteries are not recycled – this is apparently because the material recovery rate is too small to make recycling economically viable. But they should not be thrown away with ordinary household waste either, because they contain toxic chemicals that can leach into the soil and groundwater. Rechargeable batteries, on the other hand, are recyclable. Add to this the fact that they last a lot longer than ordinary batteries and you have a compelling argument to buy rechargeables from now on.

Four good reasons to recycle

Recycling is the third of the three Rs (Reduce, Reuse, Recycle). So, before we list the four reasons to recycle, we need to remind you that:

- The first step is to try to reduce the amount you consume – if you don't need it, don't buy it – and you'll reduce the amount of waste you generate.
- When you do buy something, choose a brand that has the least amount of packaging or the kind that can be reused, recycled or composted. And look for products that are as Earth-friendly as possible.
- Look also for products that are made from recycled material, if there's a demand for recycled plastic products, for example, more plastic will be recycled and less will end up in landfill or polluting the oceans. Also less virgin material will have to be mined or grown. Remember, what you buy influences what's made.
- Before you throw something away, think first if there's any way it can be reused. Can you grow seedlings in it or use it to hold paper clips or wrap a birthday present? Can it be given to a charity shop or a children's home? This may sound obvious, but we've been living in a disposable culture for so long that some of us forget to ask these kinds of questions.

And, finally:

- **Reason 1:** Every metric ton of paper recycled saves 17 trees and uses 40 percent less energy, and 50 percent less water. If all household paper/cardboard were recycled 750 000 cubic metres of landfill space would be saved a year, saving local authorities R60-million a year in collection and landfill costs. The energy saved from paper recycling in a year is sufficient to provide electricity to 512 homes for a year. (Source: Paper Recycling Association of SA)
- **Reason 2:** Glass is 100 percent recyclable but it does not biodegrade. The raw materials for glass – sand, soda and lime – all have to be dug from the earth and melted together at very high temperatures. Energy is saved by recycling. The energy saved from recycling just one bottle will power a 100-watt light bulb for almost an hour. Every ton of glass recycled also saves 1,2 tons of raw materials. (Source: The Glass Recycling Company)
- **Reason 3:** Cans are 100 percent recyclable. They are melted down to make new steel. This reduces the need to mine new iron ore and saves on the energy used to mine and process it. More than 36 000 tons of high-grade steel is recovered for re-smelting a year. (Source: Collect-a-can)
- **Reason 4:** A total of 562-million PET bottles were recovered for recycling in 2007 alone. This removed 19 000 tons of plastic from landfill, but that was only 24 percent of the PET bottles made that year. Recycling a ton of PET containers saves 7,4 cubic metres of landfill space. And 19 x 500ml PET bottles can be recycled into enough fibre filling for a standard pillow. (Source: Petco)

Find out which hidden danger may be lurking in your home.

FIRE HAZARDS IN THE HOME

Most homeowners know the drill for reducing the risk of a house fire: closely monitor cooking, candles, and fireplaces. They also refrain from smoking indoors. Matches and lighters are also stored away where children cannot reach them.

1. Worn electrical cords

The electrical cords on any appliances that you frequently move – such as your vacuum cleaner or power tools, or even your laptop – can end up taking a great deal of abuse. Although power cords have no expiration date, they can wear out over time as they are used and abused.

For instance, the insulation around the power cord can wear away, either from the cord's overheating or through misuse. If you've ever been guilty of pulling the vacuum cord out of the outlet by the cord itself rather than the plug, you may have weakened the insulation that surrounds the electrical cables. Similarly, electrical cords that run through high-traffic areas may lose their insulation as they are repeatedly stepped on. Cords that get caught or pinched between heavy furniture can see the same kind of damage.

Cords that have lost their insulation can potentially electrocute you, not to mention the fact that they are a serious home fire hazard.

Although all these precautions are an excellent start for promoting fire safety at home, they don't necessarily protect you from every fire hazard. Here are 10 home fire hazards you might not realise you have, and how to safely use, store or dispose of each item to reduce the risk of fire.

How to protect your home

If any appliances or extension cords in your home get hot to the touch or show signs of wear, do not use them. You can recycle worn extension cords.

You can prevent your cords from wearing out in the first place by:

- Keeping cords out of the path of any foot traffic
- Not forcing cords into spaces that may pinch or crimp them
- Never using staples or nails to attach cords to a skirting or wall

Finally, you should never run a cord under a rug. This prevents the cord from releasing heat and keeps it out of your sight, so you are less likely to notice if a problem develops.



2. Recalled appliances

Even if your appliances have intact cords, they may still pose a fire threat to your home if they have been recalled. Some of the most recalled appliances include:

- Microwaves
- Lamps
- Indoor generators
- Washers and dryers
- Ovens
- Lamps
- Computer batteries

How to protect your home

It's a good idea to periodically check for lists of recalled items (or visit the manufacturer's website) to make sure nothing in your home appears on the list. Make looking over this list part of your twice-yearly fire safety routine. If you discover that one of your appliances has been recalled, contact the manufacturer to determine the proper next steps for dealing with the issue.

3. Heaters

Having a heater in the winter can often mean the difference between chattering teeth and cosy warmth. But because heaters are portable, many users will place them too close to combustible items, like curtains, furniture, rugs or blankets.

Coil heaters are especially dangerous, because the coils are so hot that they can quickly ignite anything flammable that comes into contact with them.

How to protect your home

If you use a heater in your home, make sure it is kept far away from any items that could catch fire. Also, the radiator-type heaters that diffuse heat over the entire surface of the appliance are safer than the coil heaters, although you must keep both kinds away from flammable items. Be sure to follow proper usage instructions. For instance, you should never leave a heater unattended. It also should not run all day.



The electrical cords on any appliances that you frequently move can end up taking a great deal of abuse

4. Clothes dryers

According to the National Fire Protection Association (NFPA in America), their fire departments respond to an estimated 15 970 home fires involving clothes dryers or washing machines each year: 92% of these fires involved the clothes dryer.

So, what is it about clothes dryers that make them such a potent home fire hazard? Accumulated lint. This material is very flammable, and it can build up both in the lint trap and in the venting system. Since dryers use heated air to work, and exhaust that air through the vents, any lint in the system has the potential to ignite.

How to protect your home

use Cleaning the lint trap of your dryer before each use can do a great deal to prevent fires. However, that is not the only cleaning you need to do to protect yourself from this home fire hazard. Experts recommend having your dryer vents professionally cleaned every 12 to 24 months.

In addition, know the warning signs that your dryer vents may need cleaning, including:

- An extra hot dryer
- Clothes that take a long time to dry
- A burning smell when you run the dryer

5. Loose outlets

If plugs keep falling out of an outlet, it's more than just a nuisance – it's a major home fire hazard. That's because the contacts in the wall have worn down, meaning they are not able to securely grip your plug, causing a missed electrical connection. This missed connection can cause electrical arcing (a spark wherein electricity jumps from one place to another), which can cause a fire.



Accumulated lint is very flammable, and it can build up both in the lint trap and in the venting system

How to protect your home

Replacing loose outlets is a simple job for a professional electrician. In general, you can expect to spend a few hundred rand per outlet, although most electricians will have a minimum charge for your bill. If you are committed to DIY, there are many sites that will walk you through the process – but it's always better to get professional help when you're dealing with electrical work.

6. Oily rags

Changing your own oil is a great way to save money, but it can increase your risk of a home fire. That's because oil-soaked rags can spontaneously combust without any spark to ignite them. This is a risk whether the oil is from your car's engine, from oil-based paint, from varnishes or from the vegetable oil you use in the kitchen.

Here's how it works: The rags will slowly heat to the oil's ignition point via oxidization. Oxidization causes a substance to release heat, and, if there is no place for the heat to dissipate – because the rags are in a pile, for instance – then the temperature will rise to the oil's ignition point, starting a fire.

How to protect your home

When you have oily rags that you wish to reuse, hang them up to dry outside or in a well-ventilated room before washing them. This will allow the heat to dissipate safely as the rags dry and help prevent spontaneous combustion.

If you plan to dispose of oil-soaked rags, make sure you place them in a container with a tight-fitting lid, then fill the container with water. It is safest to use metal containers, but you can use a zip-top plastic bag as an alternative.



Keep heaters away from combustible items like curtains, furniture, rugs or blankets

7. Excess sawdust

Woodworkers and home improvement DIYers know that sawdust is the inevitable result of their projects. Unfortunately, it is hazardous to allow sawdust to collect.

Not only does sawdust ignite and burn much easier than whole pieces of wood, but sawdust in the air ignites even more easily. Even a fine layer of sawdust poses a significant home fire hazard.

How to protect your home

Make sure you regularly clean up any sawdust you create using a vacuum specifically made to collect combustible dust. Once the dust has been vacuumed up, it can be bagged in a plastic garbage bag and disposed of in the bin. If you plan to make a serious hobby of woodworking (or other sawdust-generating activity), invest in a good dust-collection system.

8. Household chemicals

Your home is full of various chemicals that are potential fire hazards, including:

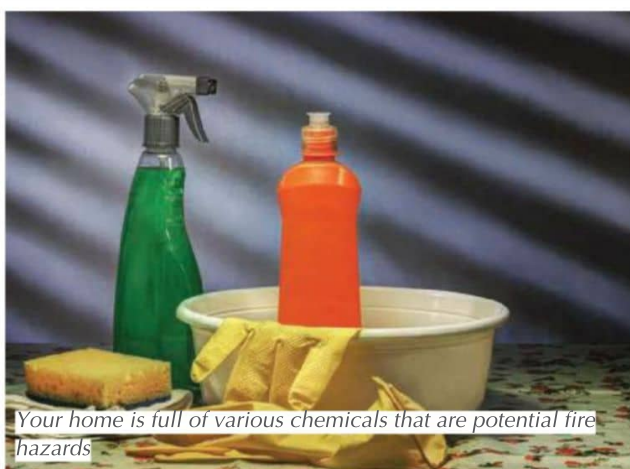
- Aerosol cans of cleaning solutions under your kitchen sink
- The bottle of nail polish remover in the bathroom cabinet
- Ammonia and bleach in the laundry

Thankfully, unlike oily rags, these types of chemicals are not likely to spontaneously combust. Instead, they can sometimes emit combustible fumes or can catch fire if used too close to any kind of open flame or spark.

How to protect your home

Make sure that you keep combustible household chemicals well away from anything that can cause a spark, including:

- Outlets
- Candles
- Fireplaces
- Lit cigarettes



Your home is full of various chemicals that are potential fire hazards

9. Crumbs in the toaster

Most people are not surprised to learn that half of all fires begin in the kitchen. After all, fire (or heat) is a necessary component of cooking. However, while you are perfectly aware of the potential fire hazards of using the stove and oven, you might overlook the possible danger lurking in the humble toaster.

Toasted bread generates crumbs, which can accumulate in the bottom of your toaster. These combustible crumbs can ignite during normal toasting and set the appliance on fire.

How to protect your home

Most toasters have a removable tray on the bottom for easy cleaning. Make sure you clean out the tray regularly to mitigate this home fire hazard.

10. Non-dairy coffee creamer

This innocuous grocery item may be your preferred coffee additive, but it is also a highly flammable substance. In fact, when powdered coffee creamer is suspended in the air, it is potentially more flammable than flour or rice dust. Everyone from YouTube stars to the Mythbusters team have used coffee creamer to create fireballs to show off its flammable nature.

The good news is that it would require much more creamer than you use in a normal cup of coffee to put yourself at risk. However, it's important to recognise just how flammable your non-dairy coffee creamer is, just in case.

How to protect your home

Keep your coffee creamer away from open flames – and if you should ever drop a whole container of the stuff, consider using a vacuum for combustible dust to clean it up.

By becoming aware of these 10 common – and not-so-common – fire hazards in the home, you can help protect both your family and your property. It's also critical to know what you'd do in the event of a fire – whether it's establishing your evacuation plan or having a fire extinguisher at the ready.

Toasted bread generates crumbs, which can accumulate in the bottom of your toaster; these combustible crumbs can ignite during normal toasting and set the appliance on fire



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One of the most common methods of jointing used in woodworking and DIY, half-lap joints are easy to cut – even using basic hand tools – and offer a very strong jointing method.

The half lap joint

>> Geoff Hollingdale

With the use of a quality wood glue, half-lap joints are an effective way to join thin or thick sections of timber together for a neat finish for woodworking and DIY projects. You can use half-lap joints to assemble picture frames, make sturdy tables and create frames with invisible joints (no screws are used).

The half-lap joint has two sections, both cut to half the depth of the wood, that are glued together to overlap. The ideal situations

for using a half-lap joint are where you want a decorative – no screws visible – way to join wood together, or where you have thick sections of timber that need to be joined.

You can certainly find woodworking joints more attractive than the half-lap; also, one or two other forms of joints, like the mortise and tenon joint might be more effective and stronger. But few woodworking joints match the half-lap for all-around usefulness and ease of construction.

Before you make this joint

As you can see by the picture introducing this joint, it consists of two workpieces reduced to half of their thickness where they lap over each other. This provides a face-grain-to-face-grain joint with plenty of gluing surface. Simple butt joints, on the other hand, rely on an end-grain-to-edge-grain bond that can break easily. Even a dowel-reinforced butt joint won't prove as strong as a half-lap.

Half-lap joints do reveal end grain on both sides of the joint, so avoid using the joint where this spoils the appearance of the project. You'll often see the use of half-laps for shop-cabinet door frames, workbench leg frames, outdoor furniture, and internal web frames for furniture such as dressers.

THE TYPES

The End Lap (L)

Or referred to as the pull lap, this is the basic lap joint when members are joined end to end at a parallel or perpendicular angle. When the joint forms a corner it's called a corner lap.

The Half Lap (T)

When workpieces are joined at one of the member's shins (center). The member does not continue to pass the joint.

The Cross Lap (X)

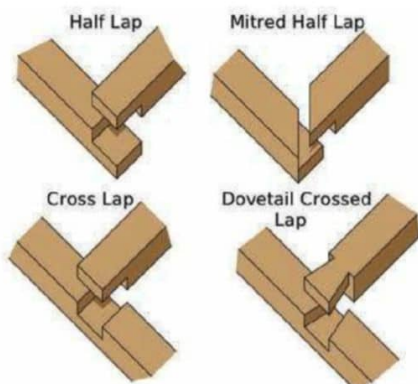
The joint occurs in the center of one or both of the members, and joined at an angle. This requires more finesse and measuring when creating your notch. The crosses members continue past the joint (as opposed to the half-lap where the member ends at the joint).

The Dovetail Lap

This occurs when the notch is cut an angle on both sides in order to resist easy withdrawal. The members will have to be joined with one member being placed above the other and fitting together like a puzzle piece. This is used for framework purposes to prevent the joint from being pulled apart.

The Mitred Half Lap

The weakest of the lap joints, due to the angle at which mitered joints are cut and result in less surface area to be glued.



The lap joint is very practical due to the fact that it distributes pressure and weight throughout the entire workpiece. When using wood, the lap joint is also ideal if you exist in an area with high humidity and temperature fluctuations. Lap joints are timeless and for good reason! They've been used in building log cabins, but today are used in table, chair, toy, and frame making.

To demonstrate the use of the lap joint we're going to explore its use in a practical skills building project.

Pentagon shaped side table

Materials needed: two lengths of pine Par 3m x 45mm x 20mm (nominal); Scrap piece of 6mm MDF (ask at your local wood supply shop) 300mm x 300mm.

The project is uncomplicated and serves the purpose of marking-out, completing a number of lap joints and developing hand and basic power tool skills. A key part of the project is measurement and alignment. Whether you make projects with use of power tools or simply carry out some basic construction, learning to measure and fit accurately is key.



Step-by-step guide

Step 1: Measure and cut the pine

You'll need to end-up with a stack of 10 pieces 360mm long and a separate stack of five pieces 440mm. Remember that for any project we measure twice and cut once. Always cut to the right of the mark made. To aid in keeping the ends square, use a mitre box and a backsaw. There are a number of models available in hardware stores. To aid in getting a clean starting line at the cutting mark, score across the grain with a Stanley knife.

Check using a set – square that the ends on the five pieces cut to 440mm are square and the same length. Minor variations can be discounted. If more than 1mm, use a wood rasp to adjust. Any slightly over-length pieces of the 10 x 360mm can be trimmed when the pieces are joined together and glued.

Step 2: Mark-up pieces for half-lap joints

We are going to shape the top and bottom pieces of the assembly in the form of a Pentagon. You all know what a pentagon looks like, TV news from the USA often shows the headquarters of the American military (The Pentagon).

The angle to cut the half lap joints is 360 deg. divided by 5 = 72 degrees. You'll need a protractor for this. A plastic school protractor will do or make a cardboard template with the cutting angle marked from a plastic protractor. Or use an Angle Guide.

Another way is to use an adjustable protractor. Remember to score across the wood grain where the saw cuts are to be made. Use a box cutter knife. The depth of the lap joint will be half the thickness of the wood. The best tool for doing this is a Marking Gauge. Set the stop for the marking pin at half the wood thickness and scribe a line. Shade in the area to be cut out.

Step 3: Cutting out the joints

It's very tempting to use my power mitre saw to prepare the joints but that would miss the point of learning basic hand tools and fitting skills. Use a backsaw to carefully cut down to the line marked as half the thickness.

Our next action is to remove the waste material at the joint. Perhaps the easiest way of doing this is to drill out the bulk of the waste. This is a good time to introduce the Forstner bit. Forstner bits typically come in a range of sizes from 10 to 35mm. They bore precise, flat-bottomed holes in wood, in any orientation with respect to the wood grain. They can cut on the edge of a block of wood and can cut overlapping holes. Because of the flat bottom to the hole, they are useful for drilling through veneer already glued to add an inlay, Forstner bits bore smooth, flat bottomed holes with clean edges.

1a



Fig. 1A: Stanley mitre box

1b



Fig. 1B: Leroy Merlin mitre box

2



Fig. 2: Check ends square and all pieces are the same length

3

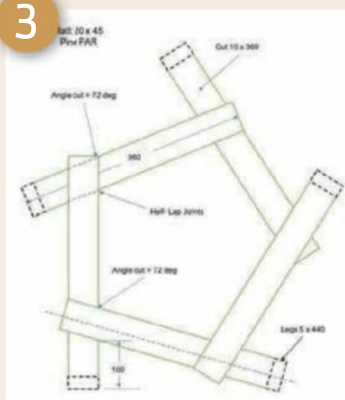


Fig. 3: Mark-up of pieces

4



Fig. 4: Angle guide/Speed square

As a novice woodworker you should start purchasing one or two, such as 10 and 20mm and progressively build a collection. I'm going to use a 20mm mounted in a power drill and a drill guide.



Remember to put on a pair of safety glasses when drilling.

With the workpiece set up between two stabilising pieces, adjust the stop collar step by step until the 'skirt' of the Forstner bit just pierces through the line marking the half- depth line of the joint.

Step 4: Finish the cutting of a joint

Mount one of the pieces in the vice or a Workmate. If using a vice, 'pad' the vice faces with thin pieces of hardboard to avoid damage to the wood workpiece. We're going to remove the bulk of the waste with, for example, a coping saw, or a 24 TPI hacksaw blade mounted in a holder. The advantage of the coping saw is that you can alter the angle of the cutting blade as you cut. Both are handy tools for cutting joints, trimming edges, cutting dowels.

Step 5: Finishing and fitting the joints

Use a range of chisels, 6mm, 12mm and 18mm to remove remaining material until you have a half- joint which is flat and level to the eye to the depth marked on the joint. Your chisels will need to be very sharp if they are going to work for you. A blunt chisel is really unsafe to work with, as you might apply too much force and the chisel will slip off the workpiece and cause a hand injury.

Begin the fitting process. Start with any pair of pieces where the joint is intended to mate. Hold the two pieces together and see if you have a reasonably partial fit, a pair perhaps clearly too tight or a pair that clearly needs some work on it. Choose a pair with the partial fit. Use the chisels to shave off areas where you can see that the joint fit is overtight, too high on one side, fits on one edge but not the opposite. What you need is a fit that is level across both sides and is not overtight. Remove timber carefully, you don't want a 'sloppy' joint.

Fit each joint in a methodical fashion, checking frequently for fit. When you have a good fit, recheck the angle to see if it is still within a small variance at 72 degrees. Clearly mark with a soft pencil the two pieces as 'A' and 'A' with an 'X' across the joint pieces showing which way around the joint fits. Do the same for each joint.

Clear a suitable space where you can lay out all the pieces of the pentagon. Fit the pieces together, as you've marked them. Hopefully all the pieces will interlock without you having to force the 'dry' assembly into position. You might want to exchange a couple of pieces to get a better fit. Don't get too involved in getting the ideal best fit, you'll end-up ditching the project. If you did swop any pairs around, erase the old pencil marks and rewrite the 'A', 'A' etc.

Step 6: Ready for gluing

By now you're probably fed-up with cutting lap joints but you will have certainly picked-up skills in marking, cutting, chiselling, using a wood rasp and fitting. Even when you eventually own power tools such as a mitre saw and a router which allow you to cut fast and accurately with repeatability the basic skills you've learnt will stand you in good stead. Well done so far!

Sort through your wood working clamps to find some small ones. A useful clamp for lots of jobs like this one, is a spring-loaded clamp. Generally, these can be squeezed open to 80-100mm. They're not too expensive. Being a woodworker or handyman, you can never have enough clamps to add to your collection.

If you've got say, three spring clamps then for this project you can do three joints for the assembly followed by the other two once the glue for the first three is set. Get ready some small pieces of cardboard or thin hardboard to put between the clamp face and the wood to avoid marks on the wood. Also have on hand a roll of 25mm masking tape.

Apply a very thin layer of glue to each pair of joints. Alcolin or Genkem wood glues are ideal for most wood-work projects. Push a pair of joints together, wipe off any surplus glue; hold the small pieces of cardboard/hardboard in place with masking tape, place the clamp in position. Leave the glued and clamped pieces carefully to one side and let the glue set: (about two hours). The glue will continue to cure over the next eight hours.

Move on to the next pair, glue and clamp. Once a complete pentagon has been assembled, place it upright and let the glue fully cure. Repeat the process for the pieces that make-up the second pentagon.

Step 7: Perform final trimming

A final step before sanding is to trim the ends of the pentagon assemblies. Mark-off the small triangular section at the ends of each leg. Score through with a box cutter. Using a backsaw trim to the edge. Smooth-off with a file.

A light hand sander is a good choice for the home handyman. The type which uses a third of a sheet of sandpaper is practical as its not heavy to work with and is economical with sandpaper use. Use a 120 grit paper and sand the surfaces of the assemblies and the legs. After an initial sanding there might be one or two places where small gaps are to be seen. Use Alcolin or Brummer Pine colour wood filling. Use sparingly, you don't want to be sanding off a lot of wood filler.

Step 8: Cut and shape the top insert, fit supporting pegs

As a further step in this basic skills woodwork project, we're going to fit an insert into the top pentagon. Since both assemblies are the same it doesn't matter which is designated the 'top'.

For a high res version of the drawings and the cutting list of this project, email editorial@homehandyman.co.za



Fig. 5: Marking the section on the workpiece. The width of the material is then marked, and the second cut line marked. The area to become the lap-joint is shaded



Fig. 6: Using a marking gauge to score a line half the thickness of the timber



Fig. 7: Sawing to the inside of the marked line down to half the thickness



Fig. 8: Forstner bit and typical set

9

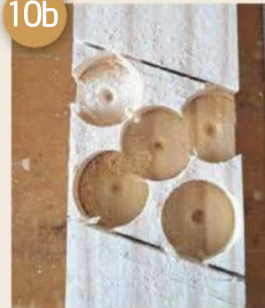


Fig. 9: Example of a drill guide

10a



10b



Figs. 10A and 10B: Drill set-up – drilled out waste area

11a



11b



Figs. 11A and 11B: Using a hacksaw and using a coping saw

12



Fig. 12: Cleaning-up joint with a chisel

An offcut of 6mm MDF was used for the top insert. Your local woodstore usually has small offcuts of MDF after cutting customer's orders. The shape being cut can be easily made by tracing with a pencil the inside contour of the top. Make a pencil mark on the inside edge of one of the sides of the pentagon and the edge of the piece of MDF so that you know where to orient the piece when cut to shape. Clamp the MDF onto a work surface and use a backsaw to cut the pentagon shape.

Decide the pattern of holes you would like; see the example drawings to view a couple of hole arrangements. (Fig. 18). Mark the centres and use a 20mm Forstner bit to drill the holes.

To support the piece of MDF inside the top pentagon I used shelf support nails. It's a piece of moulded plastic with a nail inserted, designed to hold shelves in position, which I found ideal for supporting the MDF top.

Step 9: Attach the legs

To make this step easier, a simple jig was made to allow fitting of the legs with 8mm dowels. Drilling into soft pine is such that the drill tends to 'wander'. The jig is made from some scrap pieces of 12mm MDF glued and screwed together. Its purpose is to position an 8mm drill brad point bit on both the pentagon ends and legs. It is used clamped in place using scrap pieces to hold it in place while drilling. The 3mm pilot hole can be drilled using a pilot hole bit.

To drill the 8mm hole for the dowel, use a Brad Point bit. In our case we will be using dowelling rod (sold in 1m lengths) with pieces cut and trimmed to 40mm. The hole drilled in the leg piece needs to be drilled about 15mm deep so set the stop-collar to the same depth where the stop collar grips the outer flute of the drill when the small screw set into the Stop Collar is tightened.

Glue dowels into legs. Dry fit a leg into either end of the pentagon assembly and see if it lines-up with the end of the end piece of the pentagon. If your drilling efforts are reasonably made, then there should be no big issue. Lightly pencil, a '1', '2' etc., on each leg end where it can't be seen after gluing with a matching mark on the pentagon end.

If the leg is a little (1mm) misaligned we can glue it without the dowel to the pentagon, clamp it square and re-drill the 8mm hole after the joint assembly has set. A dowel can then be glued in. Not ideal practice but it will secure the joint; they have very little load placed on them. The best way to assemble the legs to the pentagon assemblies without some very long clamps is to make-up a couple of jigs where the edges are at 90 degree to each other.

The first picture shows an accurately cut, general use jig formed with the aid of a 90 degree square and cut from 16mm MDF. It allows the pentagon piece to be held at right angles to the leg and stays in position until the glue has set. We have a set of six, very useful when making wooden frames.

The second picture shows a right-angle jig and is a 'quick knocked together' piece made from a couple of scraps of MDF glued and screwed together. Two or three can be quickly made and as long as the piece is 90 degrees as checked with a square, it doesn't matter what it looks like and unlike the purpose made jig it can only be used in a specific way.

Step 10: Sand and paint the assembly

Trim the ends of dowels protruding from the assembly using a hacksaw blade in a holder. Place a sheet of sandpaper, grit side up between the hacksaw blade and the workpiece to avoid marking the timber. File or chisel the dowel flat with the timber.

Fill any small gaps or surface holes with filler. Use only sparingly. Wait until it is dry before sanding. Sand the assembled unit with a 150 grade paper. Seal the pentagon and top inset piece using Woodoc 5. When dry surfaces can be rubbed down lightly with sandpaper, wiped clean with an 'old' cotton tee shirt and forms a ready surface for spray or brushed/roller applied matt or satin finish paint. Sealing the MDF and pine pieces reduces the need to use an undercoat. Apply a thin coat of wood glue to the edges of the MDF piece; line-it up with the marks you made on the edges of top piece and MDF piece, tap into place. Sit back with a drink and admire your handiwork.

13



Fig. 13: Test fitting joint

14



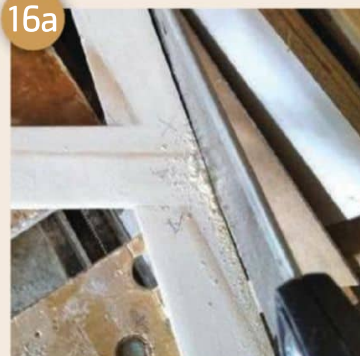
Fig. 14: Marking-up each fitting joint

15



Fig. 15: Spring clamp

16a



16b



Fig. 16A and 16B: Mark-off ends and score across grain. Cut and trim

17



Fig. 17: Orbital hand sander

18

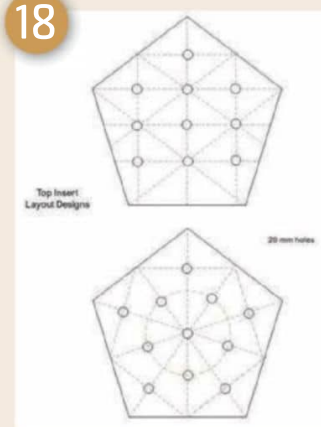


Fig. 18: Hole layout examples

19

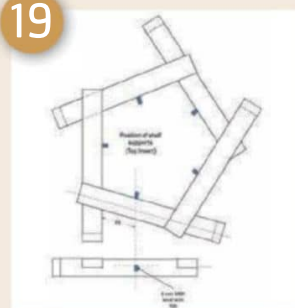


Fig. 19: Inserting support pieces to hold top

20

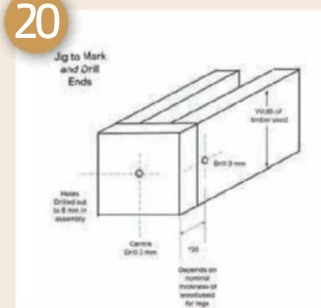


Fig. 20: Jig for drilling pilot holes for 8mm dowels

Create a spectacular chandelier with your metalworking skills.

MODERN INDUSTRIAL CHANDELIER

>> Simon Dardegan



Tools and materials

- MIG welder
- Angle grinder
- Drill press
- Welding magnets
- Router
- The required square tubing
- 6 x steel washers
- 4m of 'lamp wire' 16 gauge
- 2,5m of 'lamp chain'
- Wood for the installation (if needed)
- Nuts and screws
- 2 J-hooks
- Lighting fixture
- 6 x Threaded nipples for lighting fixture
- Spray paint

For Christmas last year my wife asked me for a chandelier that she had seen in a 'hardware' store. It was a pretty cool looking light, but the price tag was a little more than I was willing to shell out. So, I said that I would make it.

I found a good picture of the light online and downloaded a picture of it. I also looked on the website to see if I could get any dimensions. I was able to find the overall size, so I loaded the photo into a programme called Fusion 360 as a 'canvas' and created a sketch over the top of it to get the shape.

From there it was off to my local metal supplier for 3/4" (19mm) 14 gauge steel square tubing (4 pieces X 6m). I didn't really think through how much I would need, but it was cheap. I would have liked to have gone a little bit smaller, but I knew that I was going to be challenged stringing electrical wire through the whole thing. I was also nervous that it would be incredibly heavy. I also got a piece of 38mm channel with 12,5mm flare (1,8m) and a piece of 1 38mm bar stock (1,8m).

From there I went back to the workshop to start laying things out to start cutting and welding.

Step-by-step guide

Step 1: I started by cutting all the parts out in to match the drawing. I started with the end pieces (trapezoids). On one side, I needed to figure out how to get the electrical connections from the ceiling, all the way down to the light bar and into the lights.

To do this I drilled a 12,5mm hole in the centre of the bottom tube (inboard side), a hole in the top of the bottom tube, and two holes in the top tube. You can see in the photographs where I drilled the holes. Prior to welding, I fished a piece of stainless steel wire through the tube and out the holes. Then I was able to tack the corners so that the wire was captured inside the tube.

Once I had the two end pieces together, I welded the long pieces on each of the four corners of the trapezoids. At that point, I basically had a metal box.

Step 2: The next phase was to figure out the top. I started by clamping up the triangles to get the base width (and tacking the top. This was done on both sides, I just set the vertical angles of both triangles until the middle section fit in between them. This basically completed the top of the lamp. I had a little more fish tape to pull through and finished welding.

Step 3: In order to keep the wiring hidden, I welded a 12,5mm square tube to the centre of the lower ends.

The lights are mounted on the 38mm channel. I ground out sections of the flange and welded 12,5mm square tubing on over the holes that I had cut out. In the top of the 12,5mm square tubing, I welded threaded nipples that fit into the bottom of the light sockets. I also welded four nuts inside the channel. These will be used to 'close' the channel and enclose the electrical connections.

In order to create a 'wax guard' to fit with the candela light bulbs, I domed out the washers and set them over the nipples, and welded them to the 12,5mm square tubing.

With the light bar complete, I welded it into the frame. The final welding detail was the hanging brackets that were welded on the top.

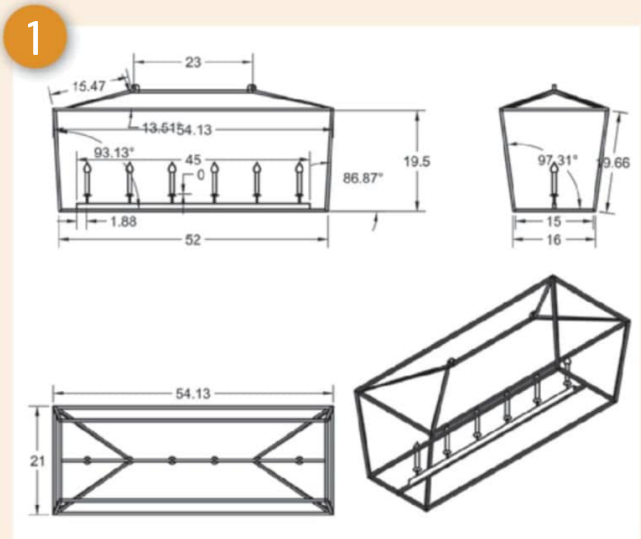
Step 4: Again, back to the wiring and how to get it through the interior of the light. The stainless steel fish tape stayed inside the tubes during the whole weld up, now the moment of truth: will the fish tape be able to get the electrical wire through the holes and corners without coming apart?

I actually had nightmares prior to completing this step. If the wire disconnected, I would have to cut the lamp apart to restring the wire. If the edges were too sharp on the drilled holes, it would cut the insulation on the wire... also bad.

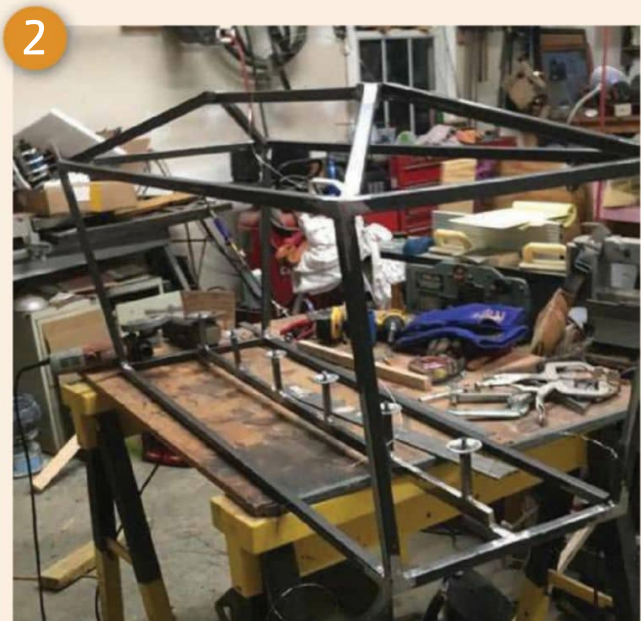
Well, I worked up the courage and slowly started the process. It had only been a couple weeks work for my son and I to weld, grind, weld, grind... It worked! It slid through the whole thing without a single issue. All that worry for nothing.

Step 5: Each of the light fixtures had two wires attached. I fed the wires through the centre and screwed them on to the nipples. Then it was just a matter of wiring all of the sockets together in parallel. This was a little bit tight; there was a lot of wire and a lot of wire nuts that I had to fit inside the centre of the channel. Tedious, but manageable.

When everything was connected and fit inside the channel, I put the 38mm bar stock across it and closed it with



Dimension (in inches)



Drilling the holes



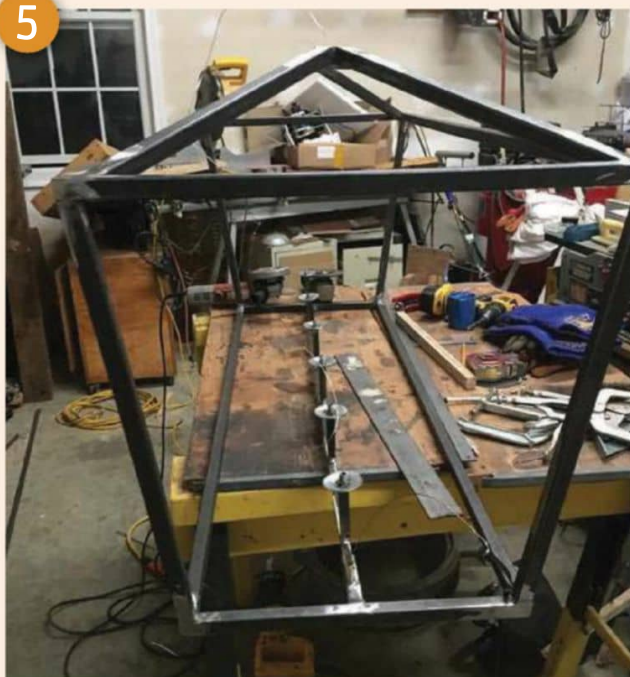
In order to keep the wiring hidden, I welded a 12,5mm square tube to the centre of the lower ends

4



With the light bar complete, I welded it into the frame

5



When everything was connected and fit inside the channel, I put the 38mm bar stock across it and closed it with screws

6



The old, and the new...

screws. Nearly done... so I figured I should give it a check, so I screwed the bulbs in and wired it to a socket. Magic! I hadn't messed up the wiring and all the lights came on.

With all that done, some final grinding and a coat of matte black spray paint.

Step 6: I removed the light that was installed. Then, in order to hang a light that had two attachment points, I cut a piece of pine that was wide enough to cover the wiring box, and which was long enough to catch two joists in the ceiling and carry the chains (which I attached to the top brackets). I cut the wood, rounded the ends and routed a channel on the bottom side so that I could run the wires between it and the ceiling.

After a little acrobatics, I got the whole thing attached and hung up and wired it to a dimmer switch so it wasn't always on bright... ambiance and all.

After all was said and done, we can call it a victory. She was happy with her new light and I had a little extra money left in my wallet.

7



The finished project before hanging

8



After a little acrobatics, I got the whole thing attached and hung up and wired it to a dimmer switch so it wasn't always on bright

BRIGHT IDEAS

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

Using portable circular saw blades in a table saw

Lately, I have been using small portable circular saw blades in my table saw more often. The reason I have been using portable circular saw blades in my table saw is that I can get a thinner kerf, and that the blades are relatively cheap. I can get over 50mm depth of cut with a regular portable circular saw blade, so for most cuts the portable circular saw blade is adequate.

For my set-up, the leftmost is the blade

that came with my hybrid table saw. It's a regular blade, and doesn't cut super clean. The next one is a Freud thin kerf blade. It has a 2.6mm kerf. The next one is a thin kerf portable circular saw blade, with about 1.8mm of kerf. Finally, I have a 165mm blade for a battery-operated circular saw, with a 1.6mm kerf.

Having a really thin kerf blade is handy in that it makes for less sawdust, needs less power, and also leaves more wood.

I'm also less likely to end up with burn marks, because the teeth of the blade move slower, and with the thinner kerf I have more power left to push the wood thru the saw more rapidly.

This can be handy when cutting many thin slices off a piece of wood, such as to veneer something. If cutting from both sides, I can rip slices off a piece of wood up to 10cm thick.

Dillon Ketley, by email

Fix a leaking tap

Attached photo show a tap with a problem with leaking from the top side of a tap. This happened when the expander has been worn out and is not able to seal the stem of the tap. As it is impossible to replace an expander, I have an easy way to solve the problem as follows.

Unscrew the top nut of the tap, thread seal tape (used for sealing a water pipe's thread) winding around the stem of the tap. It must be in the form of a string and at least a half a metre, or as much as you can get in. Screw the nut back in place and it will stop the leak.

I have tested this method over a long period and can promise you that the thread sealing tape will last for a long time.

Chris Mans, by email



A bright light idea

WINNER

I fitted a motion flood light inside my garage so that as soon as I open the big door the light comes on automatically as the garage automation lights are not very bright. I use the normal garage light if I need to during the day or if I am working in the garage.

Grant Stead, Gillitts



WIN!

Tork Craft 3 Piece Multi-Tool Set

Includes a 63mm Folding Knife with 3Cr13 Blade, aluminium handle a blade push release mechanism; Multi-tool made from 2Cr13 material, included is a long nose plier, standard plier, side cutter, file, Phillips screwdriver, small slotted screwdriver, knife, saw, awl, medium slotted screwdriver, large slotted screwdriver a can opener; and an aluminium flashlight with three batteries included, tail push button to switch on/off.

Send your bright ideas to:

editorial@homehandyman.co.za with 'Bright Ideas' in the subject line or PO Box 24938, Gezina, 0031

Please include your name, physical address and a contact number (office hours). You may also include a photograph (300kb) of your bright idea (where applicable).

Please note: Winners' prizes may take up to six weeks for delivery and are sent by the prize sponsor. Prizes are not exchangeable.

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Congratulations to Grant Stead who wins The Worx Sidekick Portable Worktable from Tork Craft.



Keep the kids busy for a few hours with this easy craft.



FROM A POPSICLE STICK TO DESK ORGANISER



What you will need

- Popsicle sticks (for those who didn't save popsicles, many craft stores sell them)
- Glue
- Paints
- Scissors
- Paintbrush
- Cardboard
- Pencil
- Ruler

>> Yvonne van der Westhuizen

One of my childhood memories during the hot summer days in South Africa was the neighbourhood ice cream truck. Every day my brothers and I waited to the ice cream truck to get an ice cream. My mother, who believed in creating something from nothing, kept the popsicles after we'd finished the ice cream. During the winter days, she took out a box with all the used popsicles she saved and we made useful things out of them.

As a girl who loved to paint, I made boxes and desk organisers to organise my pencils and crayons. I highly recommend that we turn on our creativity and reuse things to keep our planet alive, and in this article, I'm going to share one reuse of popsicle sticks.

Step-by-step guide

Step 1: To make the desk organiser you will need a base in the shape you want. I choose a square 15 x 15cm. Firstly, I measured and drew with a pencil the shape and then I cut out the cardboard according to the sketch.

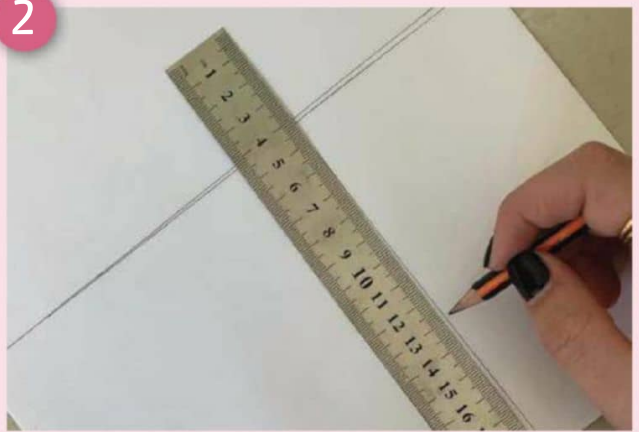
Step 2: Glue popsicle sticks on alternate sides of the square to form the first layer. Then, until you attain the desired height, apply glue on the very ends of the popsicle sticks and lay alternate layers in a pattern. I used 112 popsicle sticks to attain a height of 11cm (16 popsicle sticks add 1cm to the height).

Depending on your needs, the kids can make the desk organiser higher or lower – for paintbrushes, they may want to add more layers, but for crayons, they may want a shorter version.

Step 3: Allow sufficient time for the glue to dry, and then decide on how you want to finish the organiser. I decided to keep the popsicle sticks natural for my organiser, but your kids can decorate theirs any way they would like to.



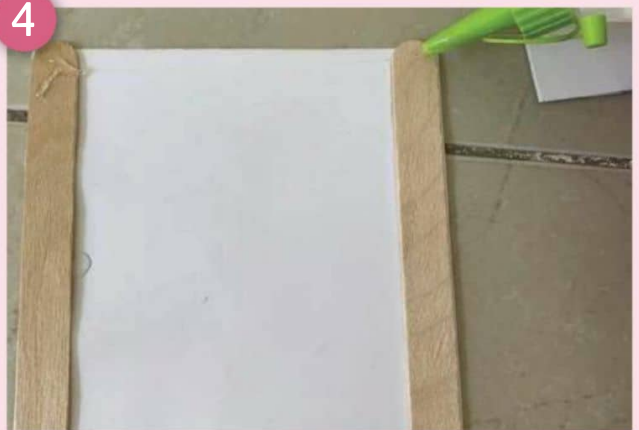
Gather all your supplies



Measure your size onto the cardboard



Glue the first two popsicle sticks to the cardboard



Add some glue on each corner for the next layer



Apply glue on the very ends of the popsicle sticks...



And lay alternate layers in a pattern



Repeat the process until you reach your desired height

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Avoiding tearout when cutting veneered sheets

When cutting veneered or melamine coated plywood or particle board on the table saw, I always have the problem of tearout at the bottom. How can I stop this from happening as I have a big order that I need to get out soon and don't want to ruin the plywood.

Andrew Grant, by email

Ed replies: Tearout can be reduced by cutting more slowly, setting the blade relatively low, and by the use of a zero clearance insert. But even with these measures, some amount of tearout still happens.

Some people avoid tearout by putting tape over the area to be cut, but that is time consuming and messy.

On high end table saws, this problem is solved by the addition of a "scoring blade". The scoring blade turns in the opposite direction to the main blade, so that it cuts with the teeth cutting into, not out of the wood. The scoring blade cuts a shallow cut ahead of the main blade, so that the main blade's teeth, where they exit the wood, end in the cut that was already made, so

that they don't pull the fibres out of the surface.

One can always emulate this behaviour by manually making a scoring cut. This can be done by setting the blade so that it cuts only 1mm into the material, and running the stock over the blade backwards.

This should only be done if the stock can be securely held, such as on a crosscut sled. The scoring cut should only be about

a millimetre deep, so that there is not enough for the blade to grab hold of, as cutting backwards across a sawblade is generally not the safest thing to do. But I know a scoring blade on a high end table saw does exactly that, so it can be done safely under the right circumstances.

After making the initial scoring cut, without removing the stock from the sled, the blade is raised to cut through the material, and another pass is made forward.



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Please include your name, physical address and contact number (office hours)

Please note: Queries will only be answered in the magazine. Winners' prizes may take up to six weeks for delivery and are sent by the prize sponsor. Prizes are not exchangeable.



Our winning query comes from Pete Trimborn who wins a subscription to *The Home Handyman* magazine for a year.

Gap at the top of exterior door

I have recently had a new wood front door installed by an independent joiner manufacturer. It was a bespoke new frame for an old barn conversion and a standard off the shelf exterior door to go into the frame.

The door at the top right corner is not meeting the stop and the weather strip but does at the bottom of the door. On the inside you can see the door face sticking out away also at the top.

I spoke to the joiner and he believes the frame is a little twisted but says it can't be fixed. He suggested a bolt to push the door in a bit but that is not fixing the problems.

I asked about moving hinges and he said that would only pull in the hinge side. I enquired about moving the stop but says the stop in frame is a rebate cut into the frame.

I can understand why he won't pull the frame out as it was hard work to fit. The question I have is, is there anything I can do or get another joiner to do to rectify this easily? The gap is not too bad but cosmetically annoying and let's some draft in. Help would be much appreciated.

Reiner Coetzer, Brakpan

Ed replies: It could be one of two problems. The frame was not 'boned through' i.e., the two legs are not parallel. This can be checked by placing a straight piece of timber against one jamb and sighting through diagonally to the other, any discrepancy will show as a taper.

The door could be twisted, which is not uncommon. The above test can be applied to the door, placing a straight parallel piece of timber on the face of the door and sighting across it. If the frame is twisted we would recommend having it refitted.

Oven cleaner stain on engineered wood flooring



An accident with oven cleaner has left a large stain and damage on our engineered wood kitchen floor. The chemical has dissolved the surface coating and soaked into the wood. There's dark staining over some of the damaged area, which is embedded in the grain of the wood.

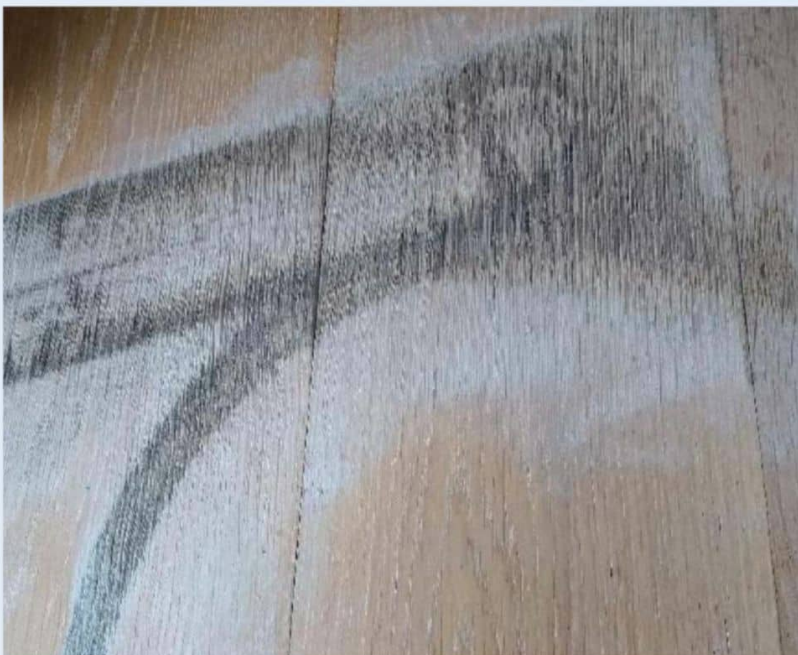
So far we've sanded the surface, tried household cleaners, Liberon wood bleach and household bleach. It's a bit lighter than it was but still (as per photo) pretty unsightly.

Does anyone have any experience or suggestions about how to deal with this? (Other than replacing the floor, which we really don't want to have to do).

Pete Trimborn, Western Cape

Ed replies: You need to determine how deep the stain has got into the wood surface (seeing as engineered wood flooring is different to laminate flooring – laminate flooring uses a photographic layer coated with a wear layer to achieve a wood-like surface, whereas engineered wood contains a top layer of solid wood).

Use a scraper and work on a small area and see how deep you have to go make the surface look acceptable. This will determine whether more serious sanding will solve the problem, but you may go through the veneer layer before this happens. Alternatively, you might have to discolour the wood, then wax and rub the area to match the rest of the wood.





STRAIGHT AND SQUARE (PART 2)

Denis Lock continues his series on ways to use a router safely and effectively.

The starting point for most woodworking projects is truing up (straight, flat and square) the wood that has been selected for the project. In commercial workshops this is done on two machines: a surface planer (what the Americans call a jointer) and a thicknesser (what the Americans call a planer). Many home workshops do not have these machines and these DIYers generally purchase wood which has been surfaced and thickened by the timber yard. In many cases the DIYer works with man-made boards such as MDF (medium density fibreboard), chipboard, plywood, OSB (oriented-strand board) or laminated shelving. All of these have flat smooth surfaces and consistent thickness.

After having cut (slightly oversize) the components called for by the cutting list the home handyman faces the challenge of ensuring that all edges (both long-grain and cross-grain) are straight and at right angles to the face. The long-grain edge and cross-grain edge must also be at a specified angle (normally right angles) to each other. Attention at this stage pays dividends when cutting joints and assembling components. If you take short cuts with this preparation, I can guarantee that you will battle in cutting, fitting and assembling the joints. My grandfather used to do this truing up with a jack plane or jointer plane fitted with a razor-sharp blade. I don't own such a plane nor do I have the skill to use it. The same is probably true for most of my readers. I do, however, own a router and achieve the same or better results than Granddad did.

Guiding the base of the router against a straightedge is a way to trim dead-straight, dead-square edges and to make other straight cuts with and across the grain. This technique is not new, nor is it exclusive to router use. I am sure that some of

>> Denis Lock
you have used a straightedge to guide a circular saw. This is the basis of modern track saws.

This article covers the use of a router to straighten the edges of boards prior to edge-to-edge gluing or other straight cuts. Most hardwood boards are only about 150mm wide today and edge-to-edge gluing is a common requirement. The 10-seater tabletop (photo 1) required that eight edges be trimmed dead-straight prior to glue up. This was done with a router, a straight bit and a 3-metre aluminium straightedge.

My bit of choice for straightedge routing is a 16mm diameter straight bit with a 25mm cutting edge. I need to know the distance (offset) from the base of the router to the cutting edge of the router bit. This is shown in photo 2. This will vary from router to router and the diameter of the bit used. It is about 51mm for my router fitted with a 16mm diameter bit. Rather than transferring this measurement (twice) and marking the workpiece let's make a gauge. Find a 500mm (or thereabouts) length of 3mm MDF and true up one edge by jointing, hand planing or sanding. Rip this to a width some 2mm to 3mm wider than the measurement taken in photo 2. Attach it to the edge of your bench top with about 6mm overhang.

I simply use two 12mm panel pins. Set the heads of the panel pins below the surface so that you do not scratch your router base. Clamp a straight piece of wood or MDF up hard against the inside edge as a fence as shown in photo 3. Plug in the router and place it with the back edge of its base against the fence and the base on top of the piece of MDF. Move the router to the left so that the bit is not touching the piece of MDF (photo 4). Switch on and by moving from left to right

1



A 10-seater table

trim the piece of MDF. Unclamp the fence and remove the piece of MDF. Remove any feathering by using a sanding block. Mark the gauge with the router model and bit diameter (photo 5). I use the word gauge because this is exactly what you have made: an immutable gauge which reflects the distance from the router bit cutting edge to the edge of the router base.

Photo 6 shows the edges of two boards about 400mm long and 150mm wide. One edge of each was cut using a table saw, the other using a bandsaw. Both edges require trimming before further use. They certainly are not ready for edge-to-edge gluing (photo 7). Photo 8 shows the setup to trim an edge of one of the boards. I am using the clamping stands described in my September/October 2019 article. The MDF gauge is placed on the piece of wood that requires trimming. The edge of the gauge is set in about a half to one millimetre from the rough edge. A straightedge is butted up against the other edge of the gauge and clamped into position. The straightedge is a piece of MDF with a 6mm hardwood edge. You don't need an expensive machinist's metal straightedge.

Before trimming the edge, run your thumbnail along (photo 9) the gauge to ensure that the entire edge will be trimmed. Remove the gauge, set the depth of the router bit so that will cut the full thickness of the piece of wood being trimmed. Using the same technique as described above rout from left to right, running the edge of the router base against the straightedge (photo 10). Photo 11 shows a partial cut. This picture is for illustrative purposes only: don't stop your cut half-way. Do not try to remove too much wood in one pass. If you inadvertently moved the router away from the straightedge (check by running your fingertips over the routed edge); make another full pass with the router. Don't make partial cuts. Photo 12 shows the finished cut. The proof of the pudding is in the eating. You must look very hard to find the joint between two trimmed pieces (photo 13). The boards are only held together by hand pressure.

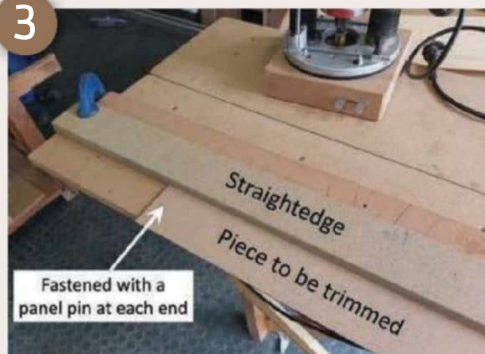
A hand-held router is inherently unstable: less than half of its base is supported when making the cut described above (photo 14). You need to be very careful not to tip the router. If I am trimming several pieces of wood of the same thickness, I use an 'outrigger' as shown in photo 15. The outrigger

2



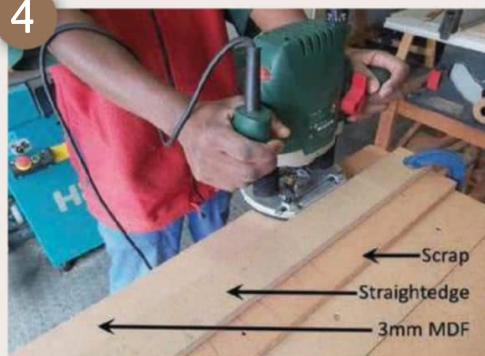
Required straightedge offset

3



Getting ready to trim a gauge

4



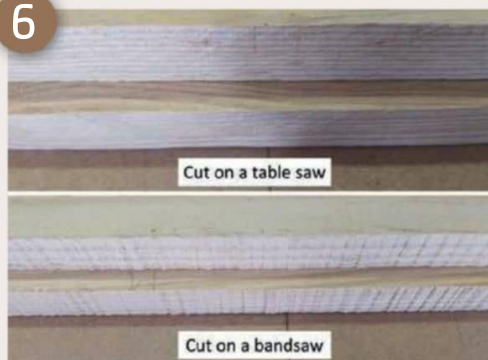
Trimming a gauge

5



Gauge labelled and ready for use

6



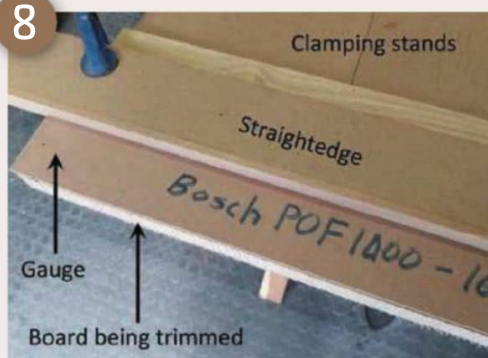
Edges of two sample boards

7



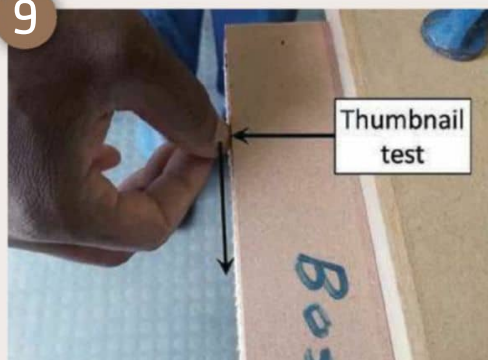
Not ready for edge-to-edge gluing

8



Set up to trim an edge

9



The thumbnail test

is a strip of wood the same thickness as the piece of wood being trimmed. It is attached to a piece of 6mm MDF with a few 16mm panel pins. Set the bit depth so that it cuts a furrow about 2mm deep in the MDF. Make sure you don't go right through the MDF into the clamping stands. As you can see in photos 16 and 17 the router is fully supported. You can concentrate on guiding it along the fence without worrying about tipping.

I wish Mother Nature had given me two pairs of hands or at least a prehensile tail. I struggle with one pair of hands to line up the gauge, the straightedge and the workpiece (photo 18) and to attach two C-clamps at the same time. My solution is to add an integral gauge to the bottom of the straightedge (photo 19). The gauge is attached with screws and can be simply replaced if necessary. One pair of hands is now sufficient to do the setup.

Archimedes said, "Give me a lever long enough and a fulcrum on which to place it and I shall move the world." Denis Lock says, "Give me a straightedge long enough and I shall glue up the top for a 24-seater boardroom table." I have glued up many long tabletops in addition to the one shown in photo 1. The table in photo 1 was made 15 years ago. The top is as flat and the joints are as tight as the day it came out of the clamps. No undue pressure was used to pull the boards together. They were dead straight and didn't need high clamping pressure. You can achieve the same.

10



Trimming an edge

11



Partial cut



Full cut



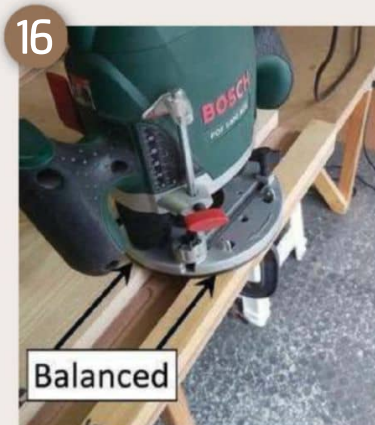
Where is the joint?



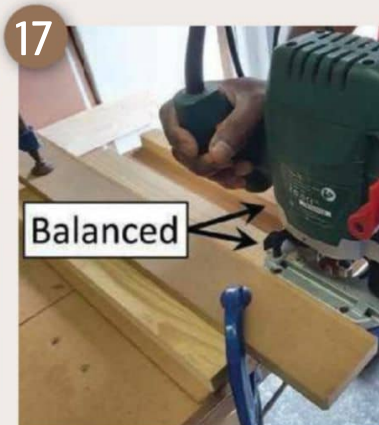
An unstable machine



Balance with an 'outrigger'



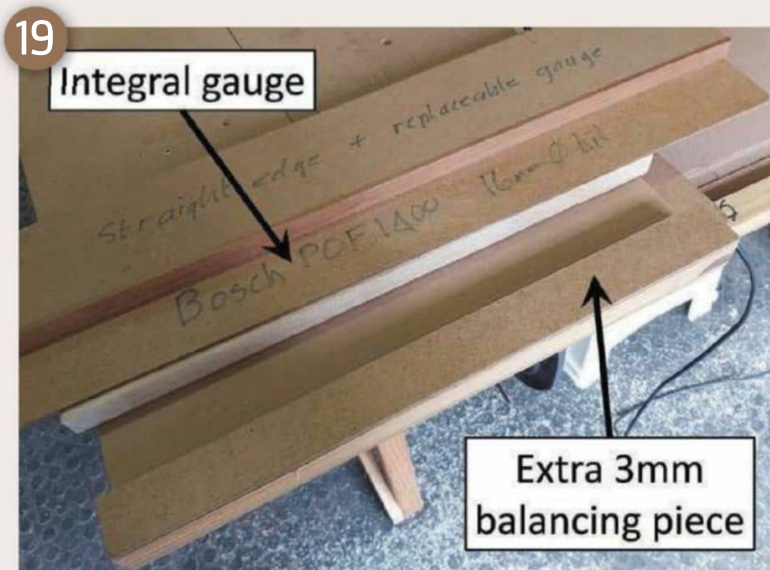
Router is now stable



Fully balanced



I wish I had two pairs of hands



Straightedge with integral gauge



ABOUT DENIS:

Denis Lock runs a woodworking school and shop. He can be contacted at denis@tacazze.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

Toys for Charity 31st Anniversary

The Witwatersrand Woodworkers Association Toys for Charity drive takes place at the end of November each year and in 2021 it was once again held at the Gereformeerde Kerk Randburg. The association had a good turnout, with around 1 300 toys donated.

The Toys for Charity drive asks that members of the Witwatersrand Woodworkers Association make and donate as many wooden toys as they are able to make during the course of the year. The association collects the toys and hands them over to our three nominated charities - Baby Moses, Kids Haven and Little Eden.

In spite of tough trading conditions, the Association has had wonderful support from sponsors over the past few years.

The Witwatersrand Woodworkers Association would like to say an especially big thank you to everyone who donated toys and prizes.

Any companies wanting to support the Witwatersrand Woodworkers Association Toys for Charity drive can contact Alistair Brande on 079-895-8709.

The Witwatersrand Woodworkers Association would like to thank the listed donors for their support:

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- Woodoc



Unusual woodturning project – Wooden earphone holder

Many people struggle to keep their earphones in a single place. This unusual woodturning project can solve your problem and let you keep them organised.

This wood turning project is great for beginners because it's simple to do. All you need to do is cut some pieces of wood and drill a hole for the wires. There is not much room for experimentation but is a nice project to try.



Are woodturning smells harmful?

Woodturning is a popular hobby that many people are interested in. However, it does have its downsides. One of these downsides is smells from the woodturning process. Many people are worried about whether or not smelling the wood while turning it will cause health problems for them.

If you are burning wood for any reason while woodturning, there are some precautions to take in order to be safe. You can use a respirator or mask designed for filtering out harmful vapours and fumes. If you are not burning wood when turning, then the wood is safe to smell.

The best way for someone to be safe while working with wood is by wearing a mask that covers their nose and mouth. It might feel uncomfortable at first, but it will keep harmful toxins out of your lungs. Although they are not harmful in small doses, prolonged exposure can cause health problems.

Is it safe to smell wood?

Many people like the scent of wood. Perfumes often include cedar as a component and probably everyone likes the scent of Christmas trees. Smelling wood is safe. What people should be worried about are wood stains and wood dust. Wood dust can cause serious health problems while turning. This is especially true if you are breathing large amounts of it over a long period of time.

Wood stains are also harmful and are very difficult to wash off after being on your skin for an extended amount of time.

They will also stain whatever surface the wood touches and this colour might be hard to remove.

What type of wood smells bad?

One of the most common types is walnut wood. It has a strong and unpleasant smell that can be hard to get rid of after turning it into bowls or other pieces. Another type is exotic woods from South America, Africa, and Southeast Asia. Although they are beautiful to look at, their smells are very difficult to deal with as well.

Usually the fresher the wood is, the more it will smell. If you are looking to avoid smells when turning wood, look for pieces that are well seasoned or are kiln-dried.

How do you stop wood from smelling?

If you are looking to avoid these problems, then buying pieces that are already seasoned or kiln-dried is the way to go. If not, there are some steps that can be taken in order to remove smells from wood after turning it into bowls and other objects.

One of the most common ways for removing smells when working with walnut is by boiling them in water and vinegar. This process will remove the smell, but you are left with a very strong-tasting wood that can be unpleasant to work with and eat from.

If you are looking for something more

permanent, then there are some ways of sealing the surface of your bowls or other objects after they have been turned. You can either use a food-safe oil or wax to seal the surface, but this will take away some of the natural colour and beauty. Make sure the wood you are working with is well dried, seasoned, and sealed in order to avoid any smells that are unpleasant.

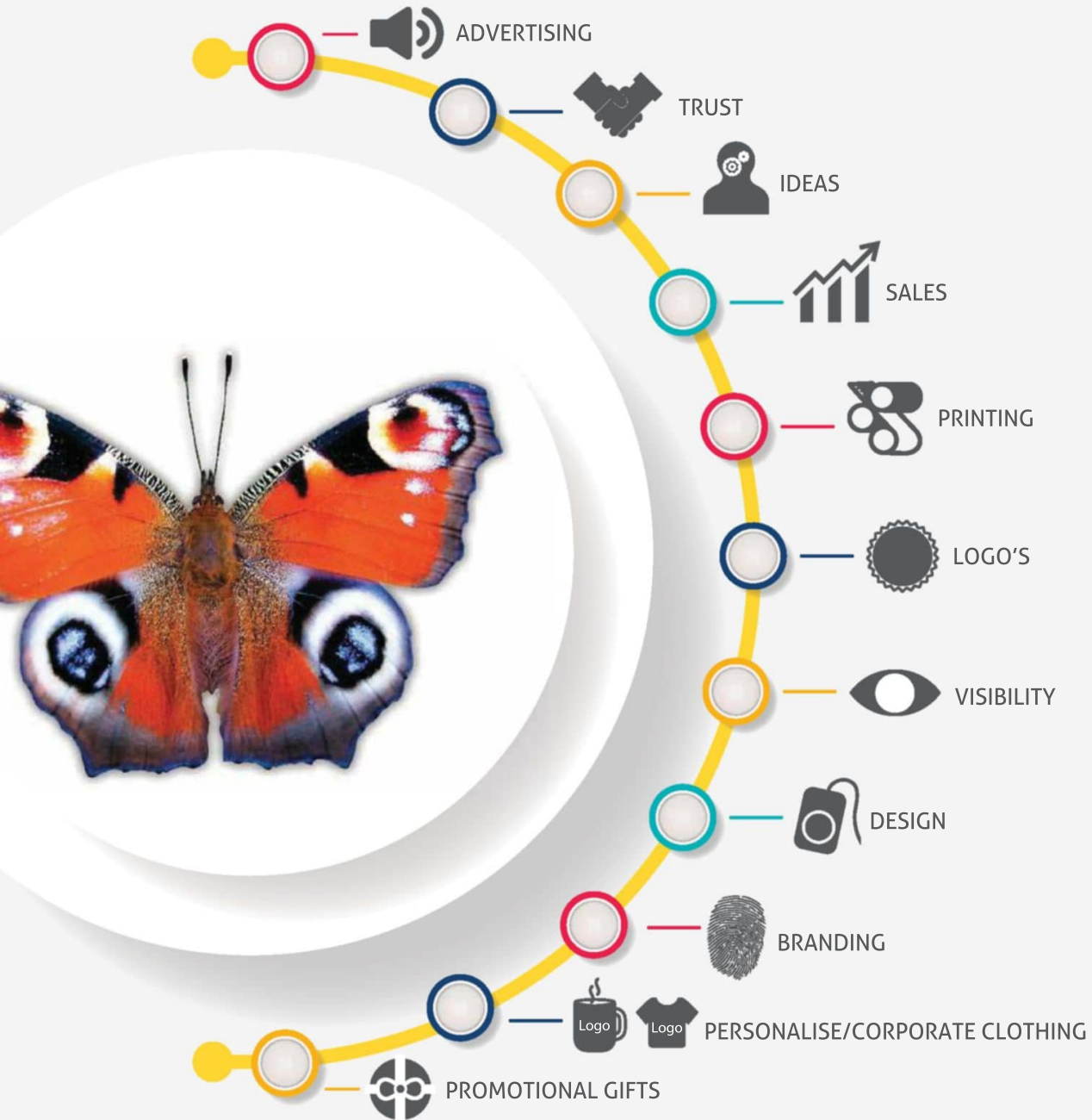
Is the smell of wood varnish harmful?

Although wood stain fumes are dangerous to human health, there are things you can do to keep yourself safe. Until the strong odour of wood stains fades away, make sure your house has adequate ventilation. To assist remove the smell, use activated charcoal or baking soda.

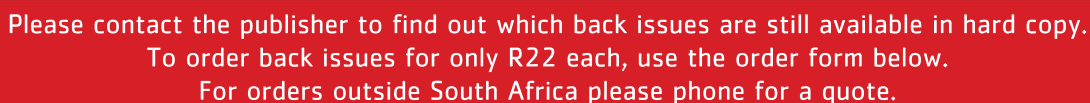
In the past, wood stains were produced from simple materials like as allowing rusty nails to soak in vinegar. This can produce a lovely dark colour. Today's ingredients for wood stains are more advanced. They also contain hazardous chemicals that might be harmful to people's health. When the wood stain is dry, the solvents evaporate, releasing VOCs (volatile organic compounds). Which contribute to air pollution and cause health issues.

Look for stains that are environmentally friendly and free of odour. New formulations, particularly developed for those who have asthma, sensitivity to chemicals, or allergies, are now available.

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10 inspiring DIY statistics and facts

Scroll down your Facebook or Instagram news feed, and there will be something there on successful DIY projects or some lovely handcrafted goods on offer. In fact, the whole world seems to be DIY-crazy – there are endless YouTube videos of eager and usually amateur DIY'ers. Beyond creating great handcrafted items like furniture, clothes, or scented soaps, there are also people actually building their dream homes from scratch. Take a look at our collection of informative and interesting DIY facts and stats listed below.

1. Millennials are leading the DIY'ers

DIY consumer demographics show that 73% of millennials take on DIY projects, while only 27% hire professionals. In part, this is due to this group being involved with DIY YouTube channels and tutorials. Furthermore, they also seem to be buying older homes (in lieu of the lack of homes available) in need of some TLC. Millennials are known to take on many DIY projects, including everything from furniture to creative planters.

2. One of the most common DIY injuries is falling off a ladder

According to the DIY accident statistics, lacerations from sharp tools and falling off a ladder are the most common injuries sustained by DIY'ers during home renovations. Burns and shock caused by electrical wires, chemical burns, broken bones from falling objects, and trauma from lifting heavy objects are also among the most common injuries during do-it-yourself projects.

3. Most DIY injuries happen in the summer

When it comes to the risk of a DIY home maintenance accident, statistics show that DIYers are most likely to sustain an injury between November and February.

4. People are using small DIY projects as a means to beat stress

Craft hobbies can be a great way to relax after a stressful day at work or as a means to cope during hard periods. Small DIY projects like punch needling, embroidery, knitting, clay molding, origami, painting, or crocheting can be great to relieve stress and anxiety. The fact that crafting helps reduce stress is one of many interesting facts about DIY.

5. The average home has 9 DIY jobs that need to be done

However, some 32% of homeowners end up postponing at least one of these pesky DIY tasks for more than a year.

6. However, on average, only 4 DIY jobs get finished within a year per household

While people are taking on more and more DIY jobs, not all end up being a success. It would seem that 37% of homeowners give up on their DIY home projects halfway through because they found it too overwhelming.

7. Interior projects are the most popular DIY projects

Specifically, 77% of do-it-yourself jobs end up being interior projects, while 23% are exterior projects.

8. Interior painting is the most popular DIY job

Around 55% of homeowners have painting the house on their to-do list, a further 33% plan on remodelling a bathroom, and 28% intend to install new flooring.

9. DIY'ers choose quality over price

DIY consumer stats show that 71% of DIY'ers choose to pay more to acquire quality materials for their intended projects, with the two most important features being reliability and durability. Also, 67% of DIY'ers create a budget for their planned projects and stick to it.

10. 65% of DIY'ers will pay more to get their hands on sustainably sourced materials

21st century DIY'ers are an environmentally conscious community, who know the importance of recycling. They're also keen to get their hands on energy-efficient materials, with 92% willing to shell out more to get them.



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WHAT ARE THE BENEFITS OF ARTIFICIAL GRASS?

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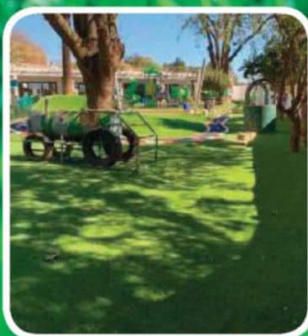
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40mm Soccer Duo Rye



13mm Multisport



30mm Autumn



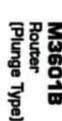
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