

**WONDRIUM**

Topic  
Hobby & Leisure

Subtopic  
Crafts & Woodworking

# Fundamentals of Home Maintenance

## From Repairs to Renovations

Guidebook

Andy Machin  
Margaret McClure



# WONDRIUM

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Andy Machin is a home improvement specialist who focuses on home remodels, renovations, and additions. He has also taught college-level construction estimating.



Margaret McClure is a landscape and interior designer who remodels fixer-uppers for resale.

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# Disclaimer

This content depicts home-maintenance activity that may require the use of specialized tools, practice, or other training to reduce the risk of injury or damage. Please obtain adequate training, follow all tool manufacturers' use instructions and protocols, disconnect all utility and power sources, and always consult a professional before undertaking any of the activities depicted if you are not qualified to perform them. You recognize that there are risks of injury that may occur if you undertake such activity, and you expressly assume such risks and waive, relinquish, and release any claim that you may have against The Teaching Company as a result of any injury incurred in connection with your undertaking the activity. The opinions, positions, and methods of repair provided in this content reflect those of the relevant presenter and do not necessarily reflect those of The Teaching Company or its affiliates. Any undertaking of such activity is done at your own risk.

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# About This Guidebook

This guidebook serves as supplementary material to the videos in this program. Each chapter provides a brief description of the home maintenance project demonstrated in the episode, including the skills you'll learn and tools and materials you'll need to complete the job. For specific step-by-step instructions associated with each project, please refer to the videos, which provide in-depth explanations and visuals to guide you and help you learn. In the videos, the experts also cover best practices for various tasks, tips for buying or renting tools, and important safety information regarding the use of such tools as drain snakes, wet saws, rototillers, and power washers.

# Home Repairs, Upgrades, and Beautification

Whether you own or rent your home, doing basic maintenance, repairs, and upgrades yourself can save you money and give you greater peace of mind knowing that you can solve problems when they occur. In this course, you'll learn skills needed to tackle a variety of projects that might show up on your to-do list, from patching drywall to replacing an exterior light. Broader topics are also covered, like home construction and how plumbing, electrical, and ventilation systems work. In this episode, you'll learn tips for budgeting for all your home projects, planned and unplanned.

## Budgeting

When budgeting for repairs, maintenance, and upgrades, there are a couple of rules you can use to guide your saving. These are rough estimates, but the idea is to put some money aside and get into the habit of saving for your repairs.

- The 1% Rule:** Over the course of a year, consider putting aside 1% of what you initially paid for the house for upgrades and repairs. So, if you paid \$300,000 for your home, put aside \$3,000 a year.
  
- The Square Foot Rule:** Each year, put \$1 aside for every square foot of your home. For a 2,000-square-foot home, put aside \$2,000 a year for maintenance.

# Understanding Home Plumbing

It's easy to forget the unseen network of pipes inside your walls, ceilings, and floors that makes up your home's plumbing system—until something goes wrong. Knowing how this intricate system works can help you visualize and diagnose problems when they occur. This episode broadly covers the water supply system for incoming clean water, the drainage system that removes waste, and the different types of pipes you might find in your home.



# How to Unclog a Drain

There are clogs, and then there are *clogs*. If your usual attempts to dislodge debris in your sink or toilet don't work, the blockage may be somewhere deeper in the drainpipe. This lesson will show you how to check and clean your sink trap, a common site for clogs, and how to use a snake to break through the harder-to-reach ones. You can save hundreds of dollars by taking care of these problems yourself instead of calling a plumber.

## Clogs in a Sink Trap

### TOOLS AND MATERIALS

- Pan
- Plumbing wrench
- Towel
- Lights



## Deeper Clogs at the Main Sewer Line

### TOOLS AND MATERIALS

- Snake
- Plumbing wrench
- Screwdriver
- Hose
- Work gloves
- Protective eyewear



# Installing a Bathroom Faucet

Whether you need to replace a leaky faucet or want to upgrade your bathroom, installing a faucet is a DIY project you can do in a day. This lesson takes you step-by-step through the job, from shutting off the water to replacing the old faucet and hooking up the supply lines to the new one.

## TOOLS AND MATERIALS

- Crescent wrench
- Channellock pliers
- Phillips-head screwdriver
- Light
- Bucket



# Decorative Yard Plantings

People are drawn to gardening for different reasons. Perhaps you want an outdoor hobby to reduce stress and anxiety, or maybe you just want to look at something pretty. Whatever the motivation, gardening is an engrossing and satisfying activity. And it will add value to your home. But where do you start? This episode covers how to envision, prepare, plant, and maintain a garden. You'll also learn tips for successful gardening, such as starting small, staggering blooms, laying landscape fabric, and using a mix of compost and mulch.

## TOOLS AND MATERIALS

- Gardening gloves
- Shovel
- Rake
- Compost/amended soil
- Utility knife
- Weed-barrier material (optional)
- Black mulch (optional)



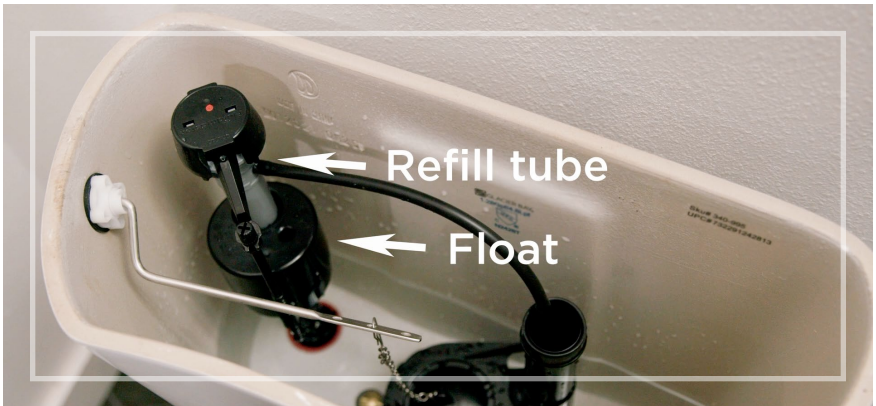
# How to Fix a Toilet

Many things can go wrong with a toilet, often without warning. They can run, which wastes water; leak, which can cause damage; or just not flush. Some problems can be fixed by replacing a worn-out part or repairing a seal. In this episode, you'll learn about the parts of a toilet and how to fix common problems that, if left to a plumber, could cost you hundreds of dollars.

## Replacing a Flush Handle and Flapper

### TOOLS AND MATERIALS

- Crescent wrench
- Flat-head screwdriver
- Bucket
- Sponge
- Carpenter pencil
- Toilet-repair kit



## Replacing a Wax Ring

### TOOLS AND MATERIALS

- Crescent wrench
- Utility knife
- Plastic scraper
- Trash bags
- Towels
- Sponge
- Gloves
- Large tub or basin
- Flat-head screwdriver
- Wax ring
- Caulk and caulking gun



# Replacing a Toilet

At first glance, replacing a toilet might seem intimidating, but if you consider the \$500 or so that a plumber would charge to do it, it's worth your time and effort to tackle the project yourself. This episode will show you step-by-step how to remove your old toilet and install a new one.

## TOOLS AND MATERIALS

- Wax-ring kit
- Crescent wrench
- Socket wrench
- Mini hacksaw
- Plastic scraper
- Utility knife
- Towels
- Sponge
- Gloves
- Bucket
- Large tub or basin
- Tape measure
- Carpenter pencil
- Caulk and caulking gun

# Garbage Disposal Repair and Replacement

Garbage disposals can stop working for several reasons—their circuitry can become overloaded and trip the circuit breaker, or they can become clogged, especially if the food going into them isn't appropriate. In this episode, you'll learn how to reset your disposal and dislodge an obstruction as well as how to replace the disposal, which can save you the \$600 or so that a plumber would charge for the job.

## TOOLS AND MATERIALS

- Allen wrench
- 2 flat-head screwdrivers
- Plumbing wrench
- Channellock pliers
- Towel
- Lights
- Pan or bucket



# Home Electricity:

## Installing a Dimmer

While some electrical projects can be done with minimal experience, they all require respect for electricity, because unlike some home maintenance projects where you can get by with trial and error, an electrical mistake can lead to serious injury. Safety is key. In this episode, you'll learn how circuit breakers work, how to read your home's electrical panel, and how to upgrade a standard light switch to a dimmer switch to give you more control over your home's lighting.

### TOOLS AND MATERIALS

- Light-dimmer kit and wire nuts
- Flat-head screwdriver
- Phillips-head screwdriver
- Voltage tester
- Screw gun (optional)

### Identifying Wire Colors

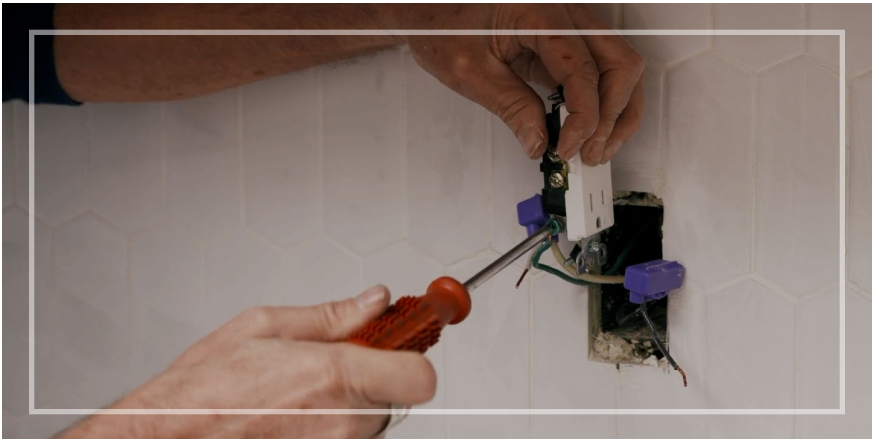
- ▶ Black wire is the "hot" wire by standard, and carries electricity from the breaker panel into the switch.
- ▶ White wire is the "neutral" wire by standard, and sends any unused electricity back to the breaker panel.
- ▶ Green wire (or sometimes uncolored) is the "ground" wire, and takes electricity back to the breaker panel, then outside to a rod that's buried in the ground.

# How to Replace an Electrical Outlet

We depend on outlets to deliver the electricity we need for most of our daily activities. When outlets malfunction, it's not just annoying—it also can be dangerous. Knowing how to replace an outlet is a good skill to have because you can make your home safer and save the \$150 or so that an electrician would charge. Topics covered in this episode include how to work safely with electricity, how to determine an outlet's amperage and why that's important, how to remove an old outlet, and how to install a new one.

## TOOLS AND MATERIALS

- New electrical outlet
- Electrical receptacle tester
- Flat-head screwdriver
- Phillips-head screwdriver
- Wire cutters



# Replacing an Interior Light Fixture

A new light fixture is an upgrade that can completely transform a room. This episode takes you through the steps of disconnecting and removing an existing fixture and correctly wiring and mounting the new one. While this can be a one-person project, it will be easier if you have a helper. As with any electrical project, safety should be the highest priority.

## TOOLS AND MATERIALS

- New interior light fixture
- Voltage tester
- Ladder
- Boxes (for support)
- Flat-head screwdriver

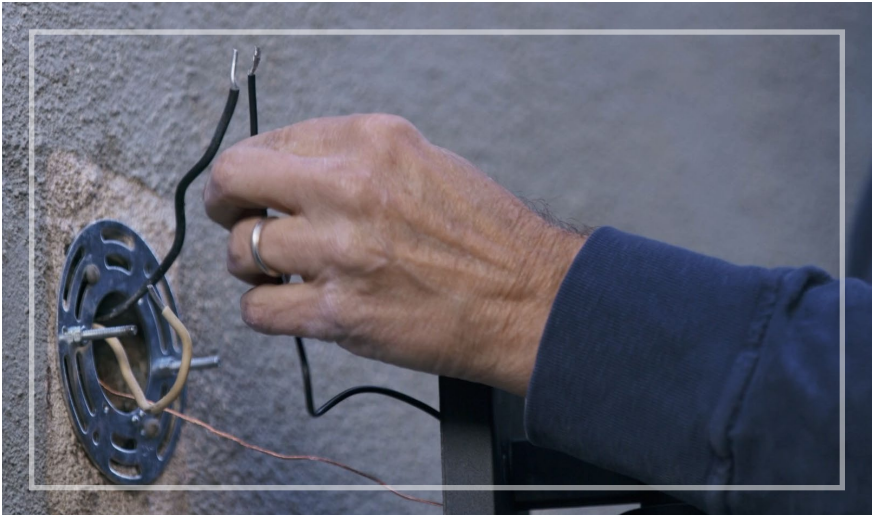


# Replacing an Exterior Light Fixture

Exterior lights are a practical, convenient upgrade for your home. They're a great safety feature and replacing old fixtures can give your home a more modern look. This episode takes you through the steps of disconnecting and removing an existing fixture and correctly wiring and mounting the new one. This can be a one-person project, but it will be easier with a helper. As with any electrical project, safety should be the highest priority.

## TOOLS AND MATERIALS

- New exterior light fixture
- Voltage tester
- Flat-head screwdriver
- Wire cutters



# Changing Air Filters and Vents

Maintaining your home’s heating and cooling system is an easy way to prevent problems that can be annoying and wasteful as well as dangerous and costly. Topics covered in this episode include how heating, ventilation, and air conditioning (HVAC) systems work, how often they need to be serviced by a professional, and how to replace your air filters and registers, which can improve the air quality and energy efficiency of your home.

## TOOLS AND MATERIALS

- Screwdriver
- Ladder
- New air filter
- New register

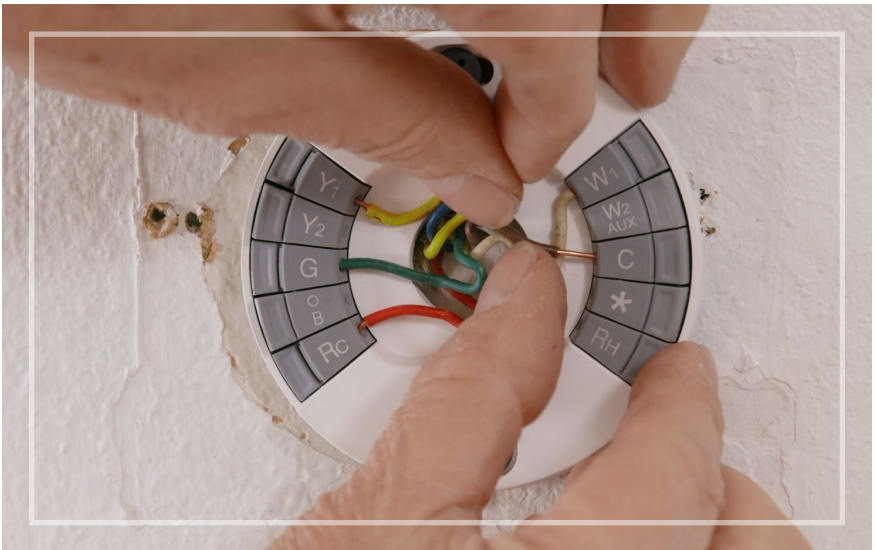


# Installing a Smart Thermostat

Smart thermostats allow you to program and control temperature settings in your home with an app on your phone or other device. There are many brands to choose from, and some models have more capabilities than others. In this episode, you'll learn how to remove your existing thermostat and safely install a new one. This simple upgrade can save energy and lower your utility costs.

## TOOLS AND MATERIALS

- Selection of flat-head and Phillips-head screwdrivers
- Smart thermostat



# Building a Vegetable Box

There are many benefits to growing your own food: It's good for the environment; it saves you money; it's fun and educational; and food just tastes better when it comes from your own garden. This episode shows you how to create a successful garden that will continue to thrive season after season. Topics covered include selecting and preparing a location, building a planter frame, layering the soil, and adding plants.



## TOOLS AND MATERIALS

- |   |  |
|---|--|
| <input type="checkbox"/> Gardening gloves | <input type="checkbox"/> Deck screws           |
| <input type="checkbox"/> Shovel           | <input type="checkbox"/> Soil                  |
| <input type="checkbox"/> Rake             | <input type="checkbox"/> Wheelbarrow           |
| <input type="checkbox"/> Lumber           | <input type="checkbox"/> Weed-barrier material |
| <input type="checkbox"/> Handsaw          | <input type="checkbox"/> Utility knife         |
| <input type="checkbox"/> Level            |  |

- ▶ Take the vegetables' seasonality into account
- ▶ Growing area needs at least six hours of sunlight
- ▶ Soil condition and water availability are keys
- ▶ Planting surface should be flat



# Installing Home Insulation

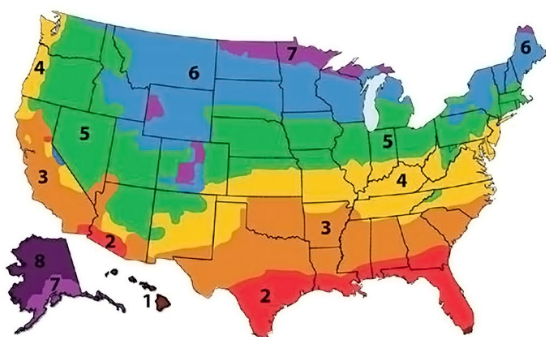
Insulation is a time-honored way of upgrading your home. Adding it—or even just repairing it—in your attic, basement, and crawl spaces can save you hundreds of dollars each year in heating and cooling costs. Understanding the basics of insulation, such as how to measure correctly, how to choose the right R-value, and whether to use batts or rolls, will make your project go more smoothly. This episode takes you through an installation from start to finish, covering these topics and more.

## TOOLS AND MATERIALS

- Utility knife
- Dust mask
- Gloves
- Protective clothing
- Safety goggles

### Insulation Sizes

- ▶ Batts are usually 48", 93", or 96"
- ▶ Rolls are 17' to 80'
- ▶ Width is 16" or 24"



## Recommended Home Insulation R-Values

Zone	Gas	Heat Pump	Fuel Oil	Electric Furnace	Attic	Cathedral Ceiling	Wall		Floor
							Cavity	Insulation Sheathing	
1	✓	✓	✓	✓	R30 to R49	R22 to R38	R13 to R15	None	R13
2	✓	✓	✓		R30 to R60	R22 to R38	R13 to R15	None	R13
2				✓	R30 to R60	R22 to R38	R13 to R15	None	R19 - R25
3	✓	✓	✓		R30 to R60	R22 to R38	R13 to R15	None	R25
3				✓	R30 to R60	R22 to R38	R13 to R15	R2.5 to R5	R25
4	✓	✓	✓		R38 to R60	R30 to R38	R13 to R15	R2.5 to R6	R25 - R30
4				✓	R38 to R60	R30 to R38	R13 to R15	R5 to R6	R25 - R30
5	✓	✓	✓		R38 to R60	R30 to R38	R13 to R15	R2.5 to R6	R25 - R30
5				✓	R38 to R60	R30 to R60	R13 to R21	R5 to R6	R25 - R30
6	✓	✓	✓	✓	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 - R30
7	✓	✓	✓	✓	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 - R30
8	✓	✓	✓	✓	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 - R30

# Hanging Drywall with Ease

Drywalling is one of the pillars of home maintenance work. You might think only the pros can do the job, but it's not as difficult as it looks. In this episode, you'll learn the skills needed to complete a drywall project from beginning to end, including how to measure the space, how to cut and hang the drywall, and how to tape, mud, and sand the joints. It's a lengthy process that requires patience, but it's worth it when you consider the money you can save by doing it yourself.

## Hanging Drywall

### TOOLS AND MATERIALS

- Rasping jab saw
- Razor knife
- 1 5/8-inch drywall screws
- Level
- Drill with Phillips-head bit
- Stepladder



## Covering Drywall Seams

### TOOLS AND MATERIALS

- Mud pan
- Paper tape
- Mesh tape
- All-purpose mud
- Drywall knives



## Sanding Drywall Mud

### TOOLS AND MATERIALS

- Sanding block
- Protective mask

# Interior Maintenance: Drywall Patching

Like hanging drywall, patching it is a multiday project and one that you can do yourself. Fixing a hole takes strategy, patience, and accepting that things sometimes get worse before they get better. This episode takes you through the steps of a patch job, from removing the damaged drywall, to cutting and attaching a new piece, to blending the repaired section with the original wall to make it look like it never happened.

## TOOLS AND MATERIALS

- Stud finder
- Carpenter pencil
- Utility knife
- Screw gun
- Small piece of drywall
- Drywall screws
- Step stool
- Tape measure
- Level
- Drywall tape
- Drywall mud
- Sanding block
- Drywall sanding mask
- Drywall texturizer (spray)



# Painting Interiors

How you paint your home reflects your creativity and style. Taking the time to do it well will ensure your walls look their best. But if you've never painted a room before, where do you begin? This episode takes you step-by-step through a paint job, covering topics such as how to select the right type of paint and sheen, how to prepare your walls, how to protect areas with tape, and how to use an edger and a roller to get a solid, even coat of paint.



## TOOLS AND MATERIALS

- |   |   |
|---|---|
| <input type="checkbox"/> Paint/primer   | <input type="checkbox"/> Sandpaper        |
| <input type="checkbox"/> Paint roller   | <input type="checkbox"/> Paint trays      |
| <input type="checkbox"/> Edge roller    | <input type="checkbox"/> Bucket           |
| <input type="checkbox"/> Edge brush     | <input type="checkbox"/> Masks            |
| <input type="checkbox"/> Tarps          | <input type="checkbox"/> Painting clothes |
| <input type="checkbox"/> Painter's tape |   |

### Five Types of Sheen

- ▶ Flat
- ▶ Eggshell
- ▶ Satin
- ▶ Semi-gloss
- ▶ High-gloss

# Sealing Things Up: Caulking

Caulk is a material used in homes to seal joints or seams against leakage or penetration. At least once a year, you should check the sealed areas in your house and recaulk them as needed. In this episode, you'll learn how to complete a basic caulking job, from choosing the type of caulk, to cutting the tip of a new tube, to laying a smooth, even bead using a caulking gun. A simple home maintenance project like this can usually be done in less than a day.

## TOOLS AND MATERIALS

- Caulk and caulking gun
- Razor knife
- Sponge and warm water
- Kneepads
- Rags



# Interior Upgrades: Wall-Mounting a TV

A wall-mounted TV saves space and modernizes the look of a room. This upgrade takes some planning, measuring, and assistance to do it safely and get it just right. This episode guides you through the steps of deciding where to place your TV, locating studs to support it, finding a mount compatible with your TV, installing the mount, and securing the TV.

## TOOLS AND MATERIALS

- Screw gun
- Drill
- Stud finder
- Level
- Phillips-head screwdriver
- Socket wrench
- Tape measure
- Pencil
- Wall-mount kit



# Hanging Shelves

Displaying something on a wall is a nice way to make a statement or just personalize a space. And if you want to display items on a shelf, it needs to be both secure and level. This episode shows you how to hang a shelf by using wall anchors for support instead of studs.

## TOOLS AND MATERIALS

- Hammer or rubber mallet
- Cordless drill
- Phillips-head screwdriver
- Screws
- Tape measure
- Level
- Drywall anchors
- Nail for pilot holes
- Shelf



# Hanging a Mirror

No bathroom is complete without a good mirror. In this episode, you'll learn how to hang one properly. Steps include measuring the mirror and wall, marking reference points on the wall, installing wall anchors for support, and attaching the mirror. To do this project safely and make sure the mirror is level, it's best to have a helper assist you.

## TOOLS AND MATERIALS

- Screw gun
- Phillips-head bit
- Tape measure
- Carpenter pencil
- Drywall anchors
- Level
- Mirror



# Replacing Door Hardware

Doorknobs endure a lot of wear and tear and often need to be replaced. A locksmith might charge you \$75 to \$100 for about five minutes of work, but you can easily do the job yourself. This episode takes you through the steps of replacing a standard bathroom doorknob. Keeping your doorknobs in good working order ensures safety and privacy, and replacing them can also update the look of your home.

## TOOLS AND MATERIALS

- Screw gun
- Flat-head screwdriver
- Phillips-head screwdriver
- Razor knife
- Door handle kit



# Installing a Smart Deadbolt

Home security is a part of home maintenance, and a smart deadbolt is an upgrade that lets you monitor and control access to your home remotely with an app on your phone. This episode explains how to attach a smart deadbolt to your existing locking mechanism. After installation, you still have the option to use your key, but you'll have peace of mind knowing that you have a keyless option as well.

## TOOLS AND MATERIALS

Screwdriver

Smart deadbolt



# Installing Window Blinds

Upgrading the window coverings in your home serves both practical and design purposes. Inside-mount mini blinds, which are installed at the interior of your window frame, are commonly used today. They're clean, simple, and less noticeable. This episode shows you how to measure for a perfect fit and how to select the right size when purchasing blinds. You'll also learn how to mount the brackets, attach the valence, and snap the blinds into place.

## TOOLS AND MATERIALS

- Screw gun
- Pencil
- Tape measure
- Inside-mount mini blinds



# Replacing Wall Baseboards

Baseboards, a type of moulding, provide a decorative finish and add depth to a room. Big-box stores usually have countless designs to choose from, so you should be able to find one that fits your style. This episode takes you through the steps of measuring, cutting, fitting, and attaching new baseboards. A classic home upgrade, they prove that little touches can have a big effect on the look and feel of a home.

## TOOLS AND MATERIALS

- Miter saw kit
- Tape measure
- Finish hammer
- Pencil
- Kneepads
- Work table
- 2-inch finish nails
- Drywall blade
- Nail punch
- Stud finder
- Baseboards



# Adding a New Kitchen Backsplash

A backsplash is one of the most aesthetically pleasing ways to upgrade and modernize your kitchen. They're not only personal—reflecting your creativity and style—but also practical, because they're much easier to clean than a wall. But creating a backsplash requires strategy and patience. This episode will show you how to install one with a mosaic pattern. Topics covered include measuring your space, using a wet saw, laying out your design, applying adhesive, placing tiles and spacers, and finishing with grout. Contractors will generally charge more than \$1,000 for a job like this, so doing it yourself is a great way to save money.



## TOOLS AND MATERIALS

- Mosaic tile
- Ceramic tile adhesive
- Trowel
- Spacers
- Grout
- Grout float
- Tape measure
- Pencil
- Sponge
- Bucket of water
- Wet saw
- Utility knife
- Painter's tape
- Roll of masking paper (or other protective material)
- Safety goggles
- Earplugs



# Inspecting and Cleaning a House Foundation

One of the most important parts of your home’s exterior is the foundation, and though you may not interact with it often, keeping it in good condition should be a priority. This episode covers some basics of concrete foundation maintenance, including how to avoid common causes of damage, what to look for during an inspection, how to safely remove mold, and when to call a professional.

## TOOLS AND MATERIALS

- Mask
- Bucket of bleach
- Gloves
- Scrub brush



**Tip**

Maintain at least 4–6 inches of exposed concrete

# Patching Stucco

Stucco is a popular building material made from a combination of Portland cement, lime, sand, and water. It's highly durable, inexpensive, resistant to fire, and low maintenance, but stucco is still susceptible to damage. In this episode, you'll learn how to fill holes and blend the patches with the surrounding surface. To stay on top of maintenance, it's best to inspect stucco in and around your home at least once every two years and even more often if your area experiences frequent rough weather.

## TOOLS AND MATERIALS

- Cleaning brush
- Spackle knife
- Sponge
- Bucket
- Premixed stucco compound



# Decorative Lawn Edges and Lighting

When you maximize your outdoor spaces, you not only make them more exciting—you also add value to your home. A simple way to divide your yard into sections is to use bender board, a plastic edging that’s versatile, durable, and affordable. This episode shows you how to install bender board, from measuring your space and digging the trench to laying out the boards and staking them in place. The final step, placing solar lights, adds a nice finishing touch to the area.

## TOOLS AND MATERIALS

- Tape measure
- Pickax
- Shovel
- Hammer
- Razor knife
- Handsaw
- Miter box
- Solar lights (optional)



# Laying New Sod

Sod is grass that's harvested into rolls and held together by its roots and a layer of soil. It's used in a variety of places, such as golf courses, sports stadiums, and residential spaces. This episode takes you through the complete process of laying sod and shows you how to properly use a rototiller and a sod roller once the sod is in place. You'll also learn tips for watering and caring for your new lawn to ensure it takes root and thrives.

## TOOLS AND MATERIALS

- Rake
- Shovel
- Rototiller
- Safety glasses
- Work gloves
- Hose
- Sod cutter
- Lawn roller

### Watering Sod

- ▶ Day 1: Heavily soak
- ▶ Days 2 to 5: Water with lawn sprinkler in early morning and late afternoon
- ▶ Days 6 to 9: Water with lawn sprinkler as before, and look for dry spots to water by hand
- ▶ Day 10: Reduce watering to once a day

# Cleaning a Rain Gutter and Downspout

Gutters perform a simple but crucial role—collecting rainwater from the roof and channeling it into a downspout. Without gutters, rainwater can settle on your roof and cause rot, mold, and deterioration as well as soil erosion below. The best care you can provide your gutters is to clean them at least twice a year, more often if you live in a wooded area. In this episode, you'll learn how to clean debris from your gutters to prevent clogs and backups.

## TOOLS AND MATERIALS

- Tarp
- Ladder
- Gloves
- Gutter scoop
- Garden hose
- Yard-waste receptacle



# Power-Washing the House and Walkway

Cleaning the exterior of your home can feel like a losing battle, but it's an important part of regular maintenance. When a classic garden hose won't do the trick, a power washer may be the solution. In this episode, you'll learn how power washers work, how to use them safely, and what areas to avoid when using them. You'll also learn techniques for effective power-washing to ensure your hard work pays off.

## TOOLS AND MATERIALS

- Power washer
- Garden hose
- Safety goggles
- Earplugs

### Never Power Wash

- ▶ Stained wood
- ▶ Lead paint
- ▶ Old mortar
- ▶ Windows
- ▶ Gutters
- ▶ Asphalt shingles
- ▶ Air conditioners
- ▶ Vehicles

# Exterior Paint Touch-Ups

Like interior painting, exterior paint jobs require preparation and patience. They also require cooperation from Mother Nature, so this is not a project to save for a rainy day. This episode covers the basics of exterior painting, from choosing the right type of paint to prepping the surface and applying the first coat. Taking the time to complete each step thoroughly will ensure the job is done well.

## TOOLS AND MATERIALS

- Painter's tape
- Paintbrush
- Paint-roller kit
- Paint pan
- Scrub brush



# Weather-Stripping a Door

To maximize your heating and cooling system, your home needs to be tightly sealed. Otherwise, energy is wasted, and so is your money. Two major culprits of energy waste are poorly sealed windows and doors. This episode takes you through the steps of a weather-stripping project, from removing the old strip, to measuring, cutting, and securing a new one to the doorframe. This upgrade takes about an hour to complete and will save you money by making your home more energy efficient.

## TOOLS AND MATERIALS

- Tape measure
- Saw
- Miter box
- Screw gun
- Chisel or metal blade
- Screws
- Hammer
- Step stool
- Pry bar
- New weather stripping



# How to Repair a Broken PVC Sprinkler Pipe

An underground sprinkler system is a great investment because it gives you full control over how and when you water your lawn, and you use less water than if you manually water your lawn. But these systems can be tricky to maintain because the network of pipes is hidden from sight. This episode shows you how to spot and repair a broken pipe, an easy fix that can keep your sprinkler system in good shape.

## TOOLS AND MATERIALS

- PVC replacement pipe
- Saw
- Miter box
- PVC glue
- PVC primer
- ½-inch PVC coupler



# Assembling a Lawn-Tool Organizer

Over time, you're going to accumulate some big items in your garage—garden tools, handsaws, etc. So, where do you store them? This episode shows you how to install a basic organizer that will keep things off the ground and readily accessible. This project is much easier if you have a helper to assist you.

## TOOLS AND MATERIALS

- Screw gun
- Stud finder
- Tape measure
- Level



# Overhead Garage Storage

Garages are useful for many reasons, but over time, they can fill up with things that you don't use often. Storing items overhead is a great way to keep them organized and save space. In this episode, you'll learn how to locate ceiling joists, read an installation template, and attach all the parts securely. While this can be a one-person job, it's best to have a helper, because you'll spend most of your time on a ladder and will need spotting.

## TOOLS AND MATERIALS

- Cordless power drill
- Socket set
- Tape measure
- Stud finder
- Safety glasses
- Ladder



# Renovating a Wet Bar

This episode takes you through a complex DIY renovation project, combining many of the skills covered in other episodes. The key is to break down big projects into a series of smaller, doable ones. You'll learn how to approach projects methodically, which means thinking through each step, double checking your tools, and making sure you map out enough time for each step.

## Step 1: Disassembling Sink and Drawers, and Turning Off Water



- Phillips-head screwdriver
- Flat-head screwdriver
- Screw gun
- Plumbing wrench
- Bucket

## Step 2: Tiling the Wet Bar Backsplash



- Pencil
- Ceramic tiles
- Ceramic tile adhesive
- Trowel
- Tile spacers
- Marker pen
- Wet saw
- Safety glasses
- Ear protection



### Step 3: Grouting the Backsplash

#### TOOLS AND MATERIALS

- Premixed grout
- Bucket of water
- Grout float
- Plastic spackle knife
- Sponge

## Step 4: Installing a New Sink

### TOOLS AND MATERIALS

- Brushed-steel sink
- Faucet
- Plumbing wrench
- Channellock pliers
- Screwdriver
- Crescent wrench



## Step 5: Refinishing Cabinets

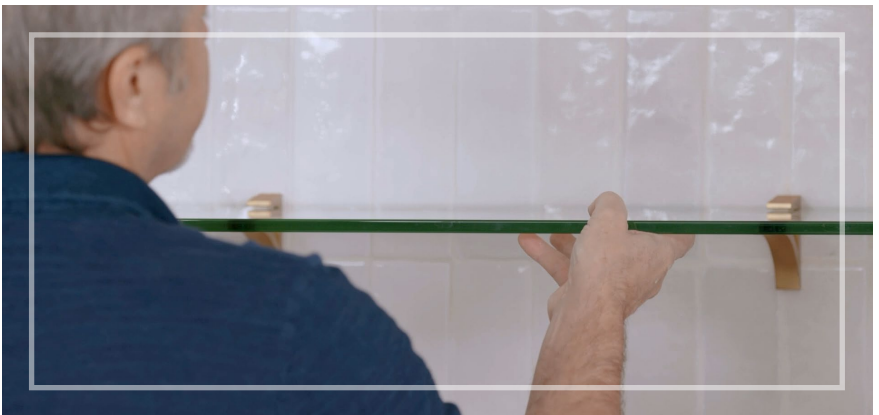
### TOOLS AND MATERIALS

- Sanding block
- Sandpaper
- Paint
- Paint tray
- Disposable paint tray liner
- Paint roller
- Paintbrush

## Step 6: Installing a Glass Shelf

### TOOLS AND MATERIALS

- Glass shelf and brackets
- New cabinet pulls
- Stud finder
- Phillips-head screwdriver
- Tape measure
- Pencil
- Power drill
- Ceramic-tile bit
- Wood bit
- Safety goggles



# Your Essential Toolbox



Ask any contractor, handyman, or do-it-yourself hobbyist what their best friend is when it comes to home maintenance, and they'll tell you it's a perfect toolbox. But they aren't built overnight. As you complete different jobs and develop skills, you'll collect tools along the way. This episode covers the types of tools you're most likely to need for basic home projects.

- ❑ **Cordless, rechargeable power drill:** Any type of 18- or 20-volt cordless drill is great for beginners and easy to find. They're also relatively lightweight, usually no more than five pounds.
- ❑ **Hammer:** A classic claw hammer is all you need. Be sure to find one that feels good in your hand.

- Hand-carry toolbox** (fine for home use)
- Level:** This tool indicates whether a surface is properly aligned horizontally or vertically. It's an essential tool for jobs such as hanging a shelf or installing a new door.
- Nail punch:** This tool allows you to drive nails below the finished surface without doing any damage.
- Outlet tester:** This tool measures voltage, indicates if the outlet is wired correctly, and detects live wires in the circuit.
- Pliers**
  - Channellock pliers (groove-joint pliers)
  - Classic slip-joint pliers
  - Linemen's pliers (electrician's pliers)
  - Needle-nose pliers
- Razor knife:** This tool can be used to cut drywall, plastic, wood, and other materials, such as ceiling tiles and cardboard.
- Saws**
  - Hacksaw:** This type of saw is used to cut through different types of metal.
  - Rasping jab saw:** This type of saw is used primarily to cut drywall.
  - Simple handsaw:** This kind of saw cuts through a variety of wood-type materials.
- Screwdrivers**
  - Flat-head (standard, slotted)
  - Phillips-head (cross-slot)

- Socket set:** This is a set of wrenches that are used to tighten and loosen different kinds of nuts, bolts, and fasteners. They come in handy when you're under a surface such as a toilet or a sink. Inexpensive sets are easy to find.
- Stud finder:** This tool helps you locate studs in walls for support when hanging heavy objects.
- Tape measure**
- Wrenches**
  - Allen wrenches:** Instead of clamping down on nuts or bolts like other wrenches, the Allen fits inside a slot. Since there are different sizes of slots, these wrenches usually come in a set. They're also deceptively powerful and can handle a great deal of torque.
  - Crescent wrench:** This type of wrench is perfect for tightening or loosening bolts.
  - Pipe wrench:** This type of wrench has more grip and torque than a normal wrench and makes any job involving pipes easier because the teeth and adjustment range allow it to clamp down on pipes and larger fittings.









# WONDRIUM

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4840 Westfields Boulevard  
Suite 500  
Chantilly, VA 20151-2299  
USA  
1-800-832-2412

