



Older Individuals who are Blind  
Technical Assistance Center

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## **Lesson 16: Basic Home Repairs**

### **Introduction**

Household management involves more than keeping your home clean and tidy. Knowing how to perform simple interior decorating and minor home repairs are important for a sense of independence. Most people enjoy decorating the walls of their homes with family pictures or paintings. Then there are basic home maintenance tasks, like replacing batteries in appliances and smoke detectors, tightening loose screws, replacing air filters, setting the thermostat, and finding resources for tasks you can't or don't want to do yourself. Caring for your home will build confidence in your ability to live independently.

### **Lesson Goals**

- Select the tools needed to complete basic home repairs
- Follow adaptive tips to enhance your interior decorating skills
- Identify by touch the types of batteries used in small appliances
- Replace air filters for your heating and air conditioning system
- Identify the appropriate screwdriver for tightening loose screws
- Adjust the thermostat for your heating and air conditioning system
- Locate and turn off the water line to the toilet, kitchen, and bathroom sinks, and washing machine
- Reset the breaker box

### **Tools for Home Decorating and Repairs**

If you enjoyed home decorating or home repairs in the past, you probably already own the tools referred to in this lesson. Designate a cabinet or toolbox to hold all or most of your tools. Include a sturdy carpenter's apron with pockets that can hold tools and fasteners for various jobs. The apron will keep your hands free to work and keep your tools handy at the same time.

### **Standard and Adaptive Tools**

Generally speaking, it is a good idea to buy the best tools you can afford.

Bargain brand tools can break easily and be harder to use. Don't forget to label the items in your toolbox or cabinet. Keep an assortment of rubber bands, twisty ties, sturdy string, felt-tip pens, and notecards or post-it notes close for labeling.

- Screwdrivers- it's a good idea to have a basic screwdriver set with various sizes of flat-head and Phillips-head screwdrivers. If you have low vision, get screwdrivers with brightly colored handles that are easier to locate visually. Handles that fit comfortably in your hand are easier to turn. A magnetic screwdriver works well in places that are hard to reach.
- Fasteners and hooks-keep on hand several sizes of screws, nails, hooks, and picture hangers
- Hammer-ideally, use a general-purpose, 16-ounce claw hammer. The claw end not only removes nails but serves as a pry bar.
- Adjustable wrench and a vice grip wrench
- Adjustable and standard pliers
- Needle-nose pliers-these help hold nails or loosen screws; most pairs also include a wire cutter.
- Measuring devices-try to have a 12-inch ruler, yardstick, and metal tape measure. These can be marked with tape, dots of paint, or notched at the intervals you prefer. A standard fabric tape measure can be marked with French knots at 6, 2, 1, half an inch, or whatever you need. You can also buy adaptive versions of these measuring devices from specialty companies. If you have woodworking experience, you may want to buy a retractable, talking tape measure and a device called a Click Rule. This device is a threaded rod with tactile lines that click into place. It allows a measurement as small as 1/16 inch and is more precise than a retractable, talking tape measure.
- Batteries-many appliances require batteries, including TV remotes, flashlights, portable CD players, toys, lighted magnifiers, and hearing aids. It would help if you always had batteries available for your home's smoke detectors. You can save some money by buying a

battery charger and rechargeable batteries. If you have room, get a battery holder to hang on the wall near your toolbox, making it easier to take inventory of what you need.

- Flashlights and portable lighting sources-if you have low vision, it might be helpful to have more than one portable lighting source to help you when you're working around the house. Having enough light is essential for your safety and ability to do tasks. Snake lights are especially helpful under a sink because they can stand alone or be wrapped around pipes, leaving your hands free to work. LED lights provide bright light, last a long time, and are inexpensive. Many lanterns are free-standing and provide good light.
- Utility scissors-it doesn't take long to ruin office or kitchen scissors by using them to cut wire or other tough materials. Utility scissors are made to be stronger than typical kitchen or office scissors.
- Tape. Buy rolls of masking, electrical, duct, painters, packing, and any other tape you might need for projects.
- Glue
- Spray lubricant

Make sure you use the right tool for the job. For example, screwdrivers should not be used as a chisel or to pry open lids of cans. It's also a good idea to always return your tools to the toolbox so you can find them when they're needed.

## **Tips for Decorating Your Home**

Many people enjoy decorating their homes with furnishings, pictures, plants, and other things that express their taste. The way your home furnishings are organized can make your home attractive, safer, and easier to navigate. Placing furniture along walls or using furniture to create straight pathways and square turns help prevent bruises or minor injuries.

If you have low vision, you may want to review Lesson 7 to minimize glare and maximize light in your home.

### **Decorating Your Walls**

Everyone enjoys personalizing the walls in their homes with photos,

paintings, clocks, or shadow boxes. Here's what you'll need from your toolbox to hang items on your walls: an adapted measuring device, ruler, hammer, needle-nose pliers, tape, nails, hooks, picture hangers, and your carpenter's apron.

If you're hanging one picture, try using your body height to decide how high to hang it. Mark the spot with a piece of tape or pencil if you have low vision. Put a nail on the mark and hammer the nail about three-fourths of the way into the wall. Remove the tape before hanging the picture. You may want to make a small dimple in the wall where the nail will go to help hold the nail in place as you drive it into the wall with a hammer. You may find it helpful to hold the nail in place with needle-nose pliers to protect your fingers and provide color contrast. If the wall is made of drywall or sheetrock, try using hooks designed for this wall type.

If you are hanging more than one picture, think about hanging them at different heights, eliminating the need to hang multiple pictures at the exact height. To make sure the pictures are level, you can use a tape measure or long string to measure each frame's bottom corner's distance to the floor.

If you are not comfortable using a hammer, look for picture hangers to push into the wall with your hand. Many of these will hold a fairly heavy picture, especially if you push them into a wall stud.

### **Window Treatments**

If you measure for new blinds, remember they fit within the window frame both vertically and horizontally. Some blinds are quite decorative, especially those with a cornice at the top that eliminates the need for curtains or drapes. If you want to add a sheer curtain that allows in light when the blinds are open, use an adjustable rod that is easy to install. If you're hanging curtains that open and close with pull cords, consider having them hung by a professional or a friend experienced in hanging draperies.

### **Replacing Batteries**

Replacing batteries is a common household task. Most devices use one of six types of batteries. A TV remote generally takes double-A (AA) or triple-

A (AAA) batteries. Size C and D batteries are often used for flashlights and toys. Some smoke detectors and talking bathroom scales take nine-volt batteries. Batteries for common hearing aids are shaped like coins and come in different sizes.

In the past, you may not have paid much attention to different battery sizes. With practice, you can use your sense of touch to differentiate between batteries. AAA batteries are the smallest of the tube-shaped batteries, double AAs are slightly larger, and C and D batteries are considerably larger. These types of batteries have a small terminal on one end and are flat on the other.

A nine-volt battery is rectangular and has two terminals on one end. These terminals snap into a small cap that holds the battery in place within a device. The smaller terminal of the battery snaps into the larger terminal on the cap and vice versa.

When changing batteries, consider working over a tray. This technique helps keep track of the battery door, and the batteries will be less likely to roll away from you. New batteries might be left in their package or placed in a small container while the old batteries are removed. This method will help you differentiate the old batteries from the new ones.

Most battery compartments are on the back or bottom of appliances or devices. You can locate a battery cover with your fingertips. It may be marked by a few raised lines and slide off when pressure is applied, or it may have a small latch that lifts. Other battery covers are secured with screws that must be loosened with a small Phillips-head screwdriver before you can remove the cover.

Once the cover is removed, use your finger or fingernail to dislodge AA, AAA, and hearing aid or coin-type batteries. If you apply pressure against the end with the spring for sizes AA, AAA, C, and D, the batteries will pop out more easily. Remember, the flat end of these batteries goes against the spring. When you remove a battery, note how the battery was oriented in the compartment to orient the new battery correctly.

Sometimes battery compartments are difficult to locate tactilely or visually.

You can put a long, thick piece of material, like string or ribbon, under the battery or in the battery compartment in these situations. When the battery compartment is closed, the string will stick out. This technique does not affect the battery's use and is a quick way to locate the compartment.

### **Tightening Loose Screws**

Homes have many doors, including a front door, screen door, shower door, cabinets, and doors on furniture pieces. Most doors have handles, and most handles are attached with screws. Door hinges are also attached with screws. Electrical outlet and light switch covers are also usually attached with screws. Screws in all these places may eventually loosen with regular use.

As you probably know, there are two types of common screws. One has a straight slot across the head of the screw. You can identify this screw by running a fingernail inside the slot across the top. This type requires a flat-head screwdriver with a flat end that fits into the slot on the screw. In contrast, a Phillips-head screwdriver has four flanges that narrow to a point on the end. It fits into screws that have a cross shape on the top. If you have difficulty telling flat-head screws from Phillips-head screws, especially when the screw is already driven into a surface, spend time feeling the heads of several screws until you can distinguish them from each other.

A screwdriver with a magnetic tip can make tightening screws easier, particularly if the screw is small or in a hard-to-reach place.

When working with a flat-head screw that is already in place, determine which direction the slot is in so you can orient your screwdriver correctly. Remember a basic rule for tightening and loosening screws: "rightsy-tightsy, leftsy-loosey." Another way to think about this is that right is clockwise, and left is counterclockwise. This rule often applies to tightening and loosening other items around your house, like lightbulbs, lids of jars, nuts, and bolts.

### **Maintaining Heating and Air Conditioning Systems**

Good preventative maintenance on your heating and air conditioning (HVAC) system will reduce the need for repairs and extend the system's

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life. If your main unit is outdoors, keep leaves and other debris from collecting on top or getting stuck in the vents. Occasionally, spray the unit with a water hose to wash out the dust and small amounts of debris. Since you might not visually notice when leaves or dirt are building up, consider scheduling a regular time to do this activity.

If the indoor part of your HVAC unit is accessible, occasionally check for leaks. Some older units have small copper pipes through which water circulates. These can become corroded and begin to leak. Checking for puddles from time to time around the unit can prevent major damage to your floors or carpet.

The intake vents that circulate air through your home use filters to trap dust and other particles. Changing or washing filters every 1-6 months can improve your system's efficiency and possibly lower your monthly utility bill.

When changing filters, use your sense of touch to feel how the old filter is positioned before removing it. As you remove the filter, notice how it slides so that you can replace the clean filter with little frustration.

Portable air conditioners are also popular. The filters on these devices are usually on the side or back of the device. Although some of these filters need to be changed every 2-6 months, filters on many newer models only require you to occasionally wash the filters and then put them back in the machine.

A thermostat is the final part of a standard HVAC system. You may have more than one, depending on the size of your home. Are you able to see yours well enough, with or without a magnifier, to operate it? Some thermostats have a digital display, making it very difficult for a person who is blind or has low vision to set. Some may be accessible with a talking device from a specialty company. If the talking device does not work on your system, ask someone to set your thermostat with parameters that will work for summer and winter temperatures.

If you have an old-fashioned thermostat with a small lever that slides up and down or back and forth, ask someone to help you mark temperatures that are comfortable for summer and winter, and then you can move the



lever between the two markings. You can use tape or glue for this task. You can also use this method for rotary-type thermostats.

It is a good idea to have your HVAC system checked at least once a year by a professional. During these visits, you can ask the repair person to change the batteries in your smoke detectors. If you have your system checked more often, he or she can also change HVAC filters in or near the ceiling.

### **Smoke Detectors**

Smoke detectors are critical for home safety. It is important to know how many detectors are in your home, where they are located, and what type you have. One way to keep your smoke detectors operational is to change the batteries when the time changes in both spring and fall.

### **Water Heater**

Make sure you can locate and turn off your water heater's shut-off valve if it springs a leak. Some leaks occur around the shut-off valve and drip. Other leaks are internal through the pipes. This type can be detected by feeling the pipes near the bottom. They will be hot. On every water heater, there is a dial for setting the temperature. Adjusting this dial when you are away from home for several days can save money on your utilities. You may want to put a dot of glue or another kind of raised dot at the temperature you use most often and one on the vacation setting.

### **Water Shut-Offs**

If you have a water leak in your home, you will need to find the water's shut-off valve to the toilet, bathroom sink, kitchen sink, or washing machine very quickly. A faucet-style valve below the tank usually controls water to the toilet. If your toilet does not have a shut-off valve, the water will need to be shut off outside. A similar valve near the wall usually controls water for sinks. The valve for the washer is usually located behind it on the wall, about waist high. The main valve that controls water flow to the entire house is usually in a basement or outside. If it's outside, it is most likely in the front yard.

## **Breaker Box**

It is important to know where your breaker box is located and which room or appliance each switch controls. Usually, the large switch at the top shuts off the entire house or apartment. Other large switches probably control large appliances, like the stove, refrigerator, and dryer. The switches that control each room in most breaker boxes look like a light switch.

When an electrical circuit in your home is overloaded, the switch controlling that circuit will flip to the opposite side to shut off the current. Trail down the switches to find which one is affected. To again engage the electricity, push the out-of-line switch back in place. Label all the switches, so you know what each switch controls. In addition to labeling the switches, it is a good idea to keep a record of what each breaker is linked to in a way that you can use it. A record can be created by recording the information or making braille or large print lists of which areas in your house correspond to the various circuit breakers.

## **Meters**

Your electric, gas, and water meters may be located on the side of your home, in your front yard, or the basement of your house or apartment building. You may monitor your utility bill if you can read the digital display on the meters. Newer meters have real-time meter readings. Many companies can read your meter from their office. Utility personnel should not need to come into your house for a meter reading. When someone is coming to your home to change a meter, turn off a utility, or check something in the neighborhood, the utility company should notify you ahead of time. Do not allow anyone in your home until you check with your utility provider.

## **Doorbells**

Most doorbells provide just a quick "ding-dong." Many can barely be heard, and if the television or radio is on, you may not hear the ring at all. Or, if you are in a room that is not near the front door, hearing the doorbell might be virtually impossible, even with good hearing. Consider replacing your doorbell with one that is loud and lasts more than two seconds. Check with a hardware store to see what is available. If you have limited hearing,

consider a device you can attach to a belt or shirt pocket that vibrates or can be programmed to hear the doorbell no matter where you are in the house.

## Summary

This lesson shared suggestions and techniques for household tasks. Before you decide to do a task yourself, keep in mind that being able to do a task is not the only issue. For example, you may be able to change the batteries in your smoke detectors, but it may not be safe for you to climb a ladder to reach them. Some tasks may require tools you do not have and hiring a repair service may be less expensive and faster than buying the necessary tools. Or you may choose not to do a project yourself simply because you don't like to do it.

Remember, even if you turn a household job over to someone else, it's always a good idea to know how the task is done. That knowledge puts you in charge.

## Suggested Activities

- Look for some loose screws in your toolbox (or anywhere else you keep them). Then slide your fingernail across the head of each screw to identify whether it is a standard slot-head screw or a Phillips-head screw. Try gathering a group of 10 screws, with five of each type in different sizes. As you identify each screw, put it in a pile with the other slotted- or Phillips-head screws. Once you are done identifying each screw, you should have five types in each of the piles. Keep practicing until you can accomplish this task accurately.
- Examine at least five items in your home that use screws. Locate where the screws are on each item and determine if the screws are slotted- or Phillips-head screws. Some good items to include in this activity are light switch covers mounted on the wall, electric outlet covers, door handles, hinges, and handles of cabinets and drawers.
- Find at least five items around your home and determine the direction used to tighten or loosen them. Good items to look at are lightbulbs, soda or water bottles, screws, the end of a flashlight where you replace the batteries, nuts, and bolts. Also, look at some hot and cold

faucet handles to determine if they follow the adage for tightening and loosening discussed earlier ("righty-tighty, lefty-loosey").

- Look at your circuit breaker box and see if you can identify the circuits. Try this with another person who can help you tell which rooms or items connect with each circuit. If you cannot easily identify the circuits, create two labeling systems. Create one system at the box for the circuit breakers themselves and a portable record of each circuit connection. For example, if you put a large print or tactile label on the first circuit on the top left row, call that Circuit 1, the second one from the top Circuit 2, etc. Once you have done this at the circuit breaker box, then record it in a way you can read or access without going to the circuit breaker box. For example, if you can read large print, make a chart that lists #1, #2, #3, and so on and each connection's details. If you cannot read print, capture this information in a recorded format or using a computer or smart phone.
- Find items in your home that use the different types of batteries discussed in this lesson. Determine where the batteries are located in each item. Practice opening and closing the battery compartments. Finally, practice inserting and removing the batteries.

## Resources

Find talking tape measures and tactile rulers/tape measures at the following companies:

- [MaxiAids](#)
- [LS&S Products](#)
- [Independent Living Aids](#)
- The Click Rule can be purchased from [Highland Woodworking](#)