Home Environment:

Furniture & Woodwork Recycling

NAME _________________________

CLUB _________________________
Welcome To Furniture & Woodwork Recycling!

You're ready to have some excellent experiences through one of Ohio's newest 4-H Projects! The project offers you many challenges in furniture and woodwork recycling. Best wishes!

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TDD No. 800-589-8292 (Ohio only) or 614-292-1868
Reprinted 6/03—900—204437
Furniture & Woodwork Recycling

You have many exciting opportunities in your Furniture and Woodwork Recycling 4-H Project. Whether you restore an antique, finish furniture or woodwork, or upholster a piece of furniture, you will be responsible for the recycling of an old piece into a new life of usefulness to make your home a nicer place to live in. In addition, you will develop knowledge, skills, and understanding related to the principles of design and learn refinishing techniques that will benefit you throughout life!

You can carry this project for several years. For example, this year you might finish a simple wooden piece of furniture for your family's home, and then, when you have more experience, you might tackle something that requires more effort, such as restoring a dining room suite, caning a large item, upholstering your living room furniture, etc.

To complete this project successfully, you will:

1. Choose one large or several small pieces of furniture or woodwork and recycle it or them into new usefulness through one of these three options:
   a) Restore an antique
   b) Finish a piece of furniture or the woodwork in a room
   c) Upholster furniture

2. Learn the advantages, challenges, treatments, and techniques of various kinds of materials used in restoration, refinishing, or reupholstery.

3. Keep complete and accurate records of your plan, progress you make, and the results of your efforts. You do not have to complete this project in one year, and may want to plan it over several years. It is important to develop a schedule or plan of steps for your project, though, and check off items as you go.

4. Obtain and use bulletins and pamphlets from the Cooperative Extension Service related to furniture restoration, refinishing, or reupholstering in completing your Recycling 4-H project.

Restoration

You can gain much satisfaction by restoring an antique to its original beauty or to a better-than-original condition! Think about the craftman who spent hours centuries ago smoothing and hand-polishing the surface of your piece. Think about the first owners of your piece and the pride they felt when placing it in their home. Doesn’t it make you feel good that you can restore its beauty and use it in your home?

Choosing Antiques For Restoration

Restoring antiques takes time, patience, and care. You will want to choose a piece of furniture that needs restoring, that is worth restoring, and will suit your needs when completed. To decide if your antique is worth restoring, answer these questions. Most of your answers should be “yes” if your antique is worth restoring. If you have several “no” answers, you might want to consider some refinishing methods other than restoring.

| Does the wood have a natural beauty? | yes | no |
| Is the design pleasing?             | yes | no |
| Does it fit your purpose and your home? | yes | no |
| Is it well constructed?             | yes | no |
| Can missing parts and damaged places be easily and inexpensively repaired? | yes | no |
| Will the restored piece cost less than an equivalent new piece or will you and your family value the restored piece more than a new piece? | yes | no |
| Does the piece need restoration rather than cleaning? | yes | no |
Restoring Your Antique

Restoring your antique will take much patience and hard work, but your results will be worth it! In restoring your antique, don't try to make the piece look new. Part of its charm lies in its signs of age and use. Over-restoration can ruin a fine old piece. If your antique is not disfigured, leave indications of age — the cabinet maker's marks, original labels, the mellowed surface or patina of the wood (don't sand through to "new" wood), and some signs of wear. The proof that a piece is an antique and often its commercial value rests on those marks!

Your Extension Office has several bulletins to help you in restoring your antique. Here, though, are the usual steps for restoration:

1. If possible, take "before" pictures of your antique. You'll be amazed at your accomplishments at the end if you have something to remind you of how it looked at the beginning.

2. Arrange a large work area with plenty of light and ventilation where antiques can be left undisturbed during restoration. Be sure to protect the walls and floor or ground with drop cloths or layers of old newspaper.

   Where will you restore your antique?
   __________________________
   __________________________
   __________________________

   Can you leave your antique undisturbed there?
   __________________________
   __________________________
   __________________________

   What sources of light and ventilation will you have?
   __________________________
   __________________________
   __________________________

3. Remove the hardware (drawer pulls, knobs, hinges, locks, etc.), upholstery, and other removable parts of your antique. It is easier to do a nice job if you don't have to "work around" these items. It is also easier to clean, repair, and restore these smaller items if they are first removed from the larger piece.

   List the parts you will remove from your antique before restoring it.
   __________________________
   __________________________
   __________________________

4. Make any structural repairs that are needed in your antique. Getting your antique in sound condition may include replacing missing parts, replacing or gluing rungs and spindles, tightening joints, repairing veneer, fixing breaks and cracks, etc. Here are some helpful hints.

   . . . Antiques may have missing spindles, corner braces (blocks of wood that are sometimes glued and/or screwed in to strengthen corners formed by two pieces of wood, such as those found between chair legs and seats or between chair seats or table tops and the wood skirting beneath them), stretchers (the pieces of wood that keep chair and table legs in position), etc. If so, duplicates will need to be made and inserted to replace the missing parts. Be sure that replacement parts are made from the same kinds of wood as the original parts so that the finish will look the same. Although some refinishers advise replacing missing parts with easier-to-apply metal braces, plastic pieces, etc., this is not advisable in restoring antiques. In restoring antiques, the aim is to restore them to their original condition (or better!). Using parts that are not in character with the original piece can lessen the value of your antique. You will want to restore your antique to its original condition as much as possible.

   Are any parts missing from your antique? Yes. If so, what parts are missing, and what kind of wood or material were they made from?
   Part: __________________________
   Material: __________________________
   Part: __________________________
   Material: __________________________
   Part: __________________________
   Material: __________________________

   Where and how will you get the replacement parts you need?
   __________________________
   __________________________
   __________________________

   How much will they cost?
   __________________________
   __________________________
   __________________________

   . . . Since most furniture is put together with glue, nails, screws, and/or dowels, knowing how and where to use each type of fastener is important.
The three kinds of glue you’ll probably use include:

a) White or wood glue - this kind of glue can be used on most furniture (that isn’t exposed to the weather, since it’s not waterproof). Apply it to only one of the surfaces to be joined, then clamp the two together until the glue dries at least 24 hours.

b) Contact or rubber cement - this glue is great for regluing veneers. Spread it thinly over both surfaces to be joined, and wait for it to dry before sticking the surfaces together. Make sure the pieces match exactly before applying the glue. Once they’re stuck together, it’s almost impossible to pry them apart to refit them.

c) Epoxy glue - this glue holds very well. Mix the resin and hardener in equal parts, apply to one surface to be glued, and clamp the pieces together while the glue sets. Epoxy glue is a permanent glue. It is very difficult to separate pieces glued together with it. You will probably want to use the other two kinds of glue instead.

What parts of your antique need to be reglued, tightened with nails or screws, or have the dowel pins repaired?

What kinds of materials will you need for making these repairs?

... To replace or tighten spindles, chair rungs, stretchers, etc., first try to remove them from the piece. Clean out the sockets by carefully scraping out all the old glue with a narrow-bladed knife. Then lightly sand the ends of the rung or spindle with sandpaper to remove all the old glue.

... If the rungs or spindles aren’t too loose in the sockets, wrap the ends of the rungs or spindles with a single layer of sewing thread to add thickness to make the joint tight. Thinly coat the thread with glue and let it dry. Then apply another coat of glue and insert the ends into the sockets. Clamp the parts together with rope or strong cord to keep them tight while they’re drying.

... If the rungs or spindles are very loose, clean out the old glue and sand them as described above. Instead of wrapping the ends with thread, though, carefully cut a deep kerf (slot) into the end of the rung, but not so deep that it will show when the piece is reassembled. Then insert a tiny wooden wedge to spread the kerf slightly. Trim the excess off, and glue the spindles or rungs back into the sockets as described above. Clamp them together with rope or cord to keep them tight while they’re drying.

... If you can’t remove a rung (or spindle or stretcher or leg) to tighten it in the socket, try drilling a very small hole into the edge of the joint. Then use a syringe to squeeze glue into the joint through the hole. The pressure will make the glue spread evenly and will make the joint tight again.
Do you have spindles, stretchers, rungs, etc. that need tightening in the sockets on your antique?

What steps will you take to tighten them?

... Other joints can be tightened in ways similar to tightening rungs and spindles. First remove the old glue and screws and clean all the pieces thoroughly. Then fill the screw holes with filler, reglue everything together, and insert wood screws. Clamp or bind all pieces together tightly with rope or strong cord to keep the pieces from moving.

What other parts of your piece need tightening?

What steps will you take to do this tightening?

... Repairs of veneer (veneer is layers of wood glued together in the cross grains, rather than a solid piece of wood ... plywood is a type of veneer) should be done very carefully. It's not easy to do a good job in repairing veneers. You will want someone who knows how to do the repairs to help you.

—If the veneer has just delaminated (separated because of moisture), it can be put back together by first coating both of the wood surfaces with contact or rubber cement. Let the cement dry thoroughly and then carefully align the pieces and clamp them back together.

—If the veneer is chipped, it might possibly be patched with a matching piece of veneer from a lumber dealer. Cut a pattern from heavy paper to use in making the patch fit the old chipped place exactly. You may need to cut away any slivers of wood and old glue from the chipped place with a razor knife to make the patch fit better. The patch should be cut so that the grain is running exactly the same direction as the rest of the veneer. Attach the patch with rubber cement as outlined above. Then sand and stain the area to match the rest of the piece. Because it is difficult to repair chipped veneer well, you may instead decide to do nothing except stain and smooth the chipped place.

If your antique is veneered, what kinds of repairs, if any, will you need to do?

Where will you get your needed supplies?

How much time do you think it will take to make these repairs?

... Fixing breaks and cracks in antiques requires patience and hard work to do a good job.

—Small cracks that aren't subject to much stress can be repaired by using wood glue or epoxy cement and clamping the pieces together with rope or cord until they dry.

—Breaks or splits that are subjected to more stress can be carefully repaired with dowel rods, glue, and reinforcing cleats as needed. Parents, advisors, or key leaders in furniture repair will be able to help you decide the best way to repair major damage to your antique. Generally, the order of steps for repairing major breaks is as follows:
• Carefully clean and align the pieces so that they will fit together perfectly when repaired.
• Carefully mark the spots where dowel pins will be inserted so that the pieces will be evenly matched when put together.
• Prepare the dowel pins by cutting appropriate-sized pieces from a length of dowel rod. Generally, pins about 1 1/2" long by 1/4" diameter will be enough for light pieces of furniture, though heavier pieces will require longer and bigger pins. The pins should be scored (roughed up so that the glue will hold) with a triangular file or serrated pliers.
• Carefully drill holes the exact size of the dowel pins (or a little deeper) at the dowel markings made earlier on the pieces.
• Glue the dowel pins into one of the pieces and then thinly coat the entire surface of the break or crack with glue. Put the pieces together, and clamp them with rope or cord until they're dry.
• If added strength is needed, hardwood cleats can be attached (but they must be made not to show). These cleats are made from thin wood boards attached with wood screws across the back or bottom of the break to provide stability.
• After repairs are completed, the break or crack should be sanded to make the repair as invisible as possible.

big scratches, or is “alligatored,” it will have to be removed and a new finish applied. No matter what you do, be sure to wear rubber gloves and protect your skin and eyes from all the cleaners and chemicals you use! Also be sure to protect your work area with drop cloths or newspapers!

Because it’s hard to tell what kinds of dirt have piled up on antiques, it’s also hard to tell what kind of cleaner is best to use. Be sure to test any cleaners you use on a small out-of-sight place before you proceed with the whole piece. This way you make sure the cleaner won’t damage the finish.

... To clean the piece, you can usually begin by washing the entire surface with paint thinner and a soft cloth; this will remove wax, dirt, and grease.

... This can be followed by a wash of cleanser/conditioner made of 1 qt. hot water, 3 TBSP boiled linseed oil and 1 TBSP turpentine if the paint thinner leaves the surface a bit “uneven” in appearance. Dip a soft lintless cloth into the hot solution and wring out well before wiping the furniture. Polish with a soft dry cloth.

5. Decide what to do with the old finish. If the original finish is generally in good shape, but has a lot of polish or dirt on it, it should be cleaned rather than removed. Most old furniture should be left alone if it just shows signs of the wear it received through the years, and should be refinished only if it has been abused or repainted. If, though, the old finish is damaged with peeling or scarred areas,
Will you have to remove the original finish, or can it just be cleaned well?

If cleaning will do the job, what steps will you need to do to restore your finish?

... Doing a good job in removing old finishes is almost an art in itself!

—First you must decide what kind of remover will be best for the finish.

- If the finish is lacquer, use a lacquer thinner to remove it.

- If the finish is shellac, or some very old kind of varnish, use denatured alcohol solvent or shellac thinner to remove it.

- If the finish is varnish or paint, you may need to use paint and varnish remover followed by a recommended neutralizer. Generally, the paste-type brush-on removers that contain methyl chloride do the most effective job for the least cost (Zip Strip, Red Devil, Checker Brand, etc. are examples of this kind of remover). The spray-on removers that have recently appeared on the market are hard to use, tend to blow away before hitting the furniture when you're working outdoors, and are more expensive than brush-on removers. The refinishers that you rub on with steel wool and "leave the finish behind" are generally much more expensive than brush-on removers, and the results are not nearly as satisfactory as those obtained through the methods outlined here.

- Removers do need to be followed by neutralizers such as denatured alcohol solvent (the most commonly recommended for varnish) or paint thinner. The neutralizer will remove the last traces of finish and remover and will restore the chemical balance of the surface of your antique so that it can be sanded and refinished well.

- Although some people use a mixture of lye and cornstarch-thickened water to remove numerous layers of paint, this method is not recommended for 4-H members in their projects. Lye can damage wood surfaces beyond repair and can ruin the value of your antique.

... To remove the old finish, apply a liberal coat of remover with an old paint brush (that means really glob it on there!), working on one small section at a time. Thus, you might remove the finish from a small table by first removing the finish from the top before proceeding to the skirting under the top, and then do the skirting before you do each of the table legs. Give the remover enough time to work, but do not allow it to dry out. You may need to add some more remover and "play" on the surface with your brush a bit to get the remover to penetrate and remove the old finish to the bare wood. Usually, varnish can be removed with one application of remover, but thick multi-coats of paint may require a second or third application.

—To get the old finish and remover off the piece, (a) use scrapers such as a putty knife or spatula to remove it from large flat areas, (b) use old newspapers, old rags, or cheap paper towels to remove it from other areas, (c) use cord or rope or toothbrushes to get the remover and finish off the detailed parts of your piece.
Pay special attention to removing finish from crevices, grooves, etc. Fine cord coated with remover is an excellent means of removing finish from these areas or from turned pieces such as legs and spindles. Hemp rope coated with remover will help remove finish from the larger grooves on turned pieces. Old toothbrushes do an excellent job in removing finish from carved nooks and crannies, too.

The keys to successful finish removal are patience, working on small areas, patience, using enough remover and giving it time to work, patience, attention to details, and patience!

Once the old finish is removed, the surface of the antique should be washed with a neutralizer, such as denatured alcohol solvent or paint thinner. Use cord, toothbrushes, and/or steel wool with the neutralizer to remove the last traces of the old finish. Then wipe the entire surface with a lintless cloth damp with the neutralizer. Allow the antique to dry thoroughly before preparing for the new finish.

If you need to remove the old finish, what supplies will you need to do the job and how much will they cost?

What is the step-by-step process you will use in removing the old finish?

What kind or remover and neutralizer will you use?

How long will it take you to do a good job in removing the finish?

6. Once the old finish is removed, re-examine the piece and make needed repairs. For example, dents can be raised by pressing the wood with a hot iron through several layers of dampened wool. Oil stains can be removed with a dry-cleaning solvent. Stains can be removed with wood bleach. Holes can be filled with filler made from glue and sawdust from the piece, etc. Your County Extension Office has several bulletins that can help you in making other kinds of surface repairs.
7. After the finish is removed and all repairs made, it's time to start preparing the surface for a new finish! At least three smoothings with abrasives will be necessary.

... For the first smoothing, sand the piece in the same direction as the grain with fine sandpaper or finishing paper. A finishing sander works well for this first smoothing. Of course, wrapping the sandpaper around a piece of wood or blackboard eraser to make a sanding block works very well, too. For turned surfaces, rub in the direction of the grain with the sandpaper—but in your hand rather than on a block for the first smoothing.

... For the second smoothing, use very fine sandpaper or finishing paper, following the same procedure used in the first smoothing. At the end of the second smoothing, the entire surface should feel as smooth as glass. It takes much patience and hard work, but the results are worth it!

... For the final smoothing, rub the entire piece, following the direction of the grain, with 000 steel wool, followed by another rubbing with 0000 steel wool. This final rubbing will give your antique a "better than professional" feel.

What supplies will you need to smooth the surfaces of your antique?

What steps will you follow in doing this smoothing?
8. After smoothing, dust your antique and the work area thoroughly so that dust won’t get on the wet finish and cause unsightly roughness. For the final dusting of your antique, to make sure every speck of dust is removed, use a tack rag.

Why is it important to make sure your antique is dust free before applying a new finish?

How will you make sure your antique is free of dust?

10. Select and apply a new finish that will enhance the character (and thus the value) of your antique.

... For pieces that were originally lacquered, use the best lacquer that can be found. Several excellent lacquers are available in spray form. Follow the directions on the container, but remember that the thinner and the more even each coat is, the better the results will be! Allow at least ½ hour between coats for the lacquer to dry.

... For pieces that were originally shellacked, consider the character of the piece to decide whether to reapply shellac or to use another kind of finish. If the decision is made to use shellac, again make sure that each coat is thin and even and that adequate drying time is allowed between applications. You also will need to buff the surface with 0000 steel wool between coats.

... Often, one of the best finishes for wood antiques is handrubbed oil. Tung oil produces beautiful results. Another oil mixture some people like to use is a mixture of 3 parts boiled linseed oil and 1 part turpentine.

—Apply the oil to the wood with a cheesecloth pad or sponge, working in a circular motion in small areas. After the oil is on the wood, use the heel of your hand to rub the finish in the direction of the grain until the oil disappears. The heat from your hand helps the oil penetrate the wood. This process should be repeated over the entire surface until no more oil is absorbed and until the surface attains a hard mellow finish. Generally, you should plan for several weeks of repeated rubbings to attain the best results.

... There are several excellent satin or flat finishes on the market that may also be very appropriate for your antique. Clear satin synthetic resin or polyurethane finishes are often good choices.

NOTE: High gloss finishes are NOT recommended for restoring antiques. Such finishes detract from
the character of the piece and lessen its value. Satin or flat clear finishes give the piece just as much protection and a much better look.

—Apply the finish with a good quality brush or sponge. Follow the direction of the grain at all times, and apply the first coat in a thin even layer, smoothing out any places where overlapping is necessary. Allow the first coat to dry at least 24 hours (more if the directions on the can so indicate) before buffing with 0000 steel wool. Dust the antique again thoroughly with a tack rag before applying the second coat in the same manner. After the finish has cured undisturbed at least one week, give it a final rub with your hands, using FFFF pumice and mineral oil.

... Here are several other helpful hints for applying finishes:

—Don't work under a forced air heating/cooling duct. It may blow dust or cause your piece to dry unevenly.

—To avoid the danger of dust, don't sweep the floor within a 24-hour period before or after you apply the finish.

—Apply the finish inside if possible. Even if you removed the old finish outdoors, move the piece indoors to apply the new finish. Fresh finish works as well as fly paper in attracting and holding insects!

—Have a light between you and the surface you are finishing to help you see specks of dust and uneven spots.

—Make sure the temperature is above 70° so that the finish will dry properly.

—Stir the finish if directions call for it, but be careful not to shake it. Shaking mixes in air bubbles that are very hard to smooth out.

11. The final step in restoring your antique is to reapply the hardware and upholstery as necessary (see part 3, “Upholstering Furniture”).

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<tr>
<th>What kind of finish will you use to restore your antique?</th>
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<th>What will you need to do to finish the restoration of your antique?</th>
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<table>
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<tr>
<th>What steps will you use to apply it?</th>
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12. Take an “after” picture if possible, and congratulate yourself for a job well done!

Recording Your Antique

It’s important to keep accurate records of what you did, how you did it, how much it cost, and your results in restoring your antiques. Use the record form at the end of the project book to keep pictures and tell about your antique before you started work, the progress you made, and your finished product.

Finishing Furniture & Woodwork

It’s exciting to see the new beauty, comfort, and usefulness a finished piece of used furniture or old woodwork can have in a home! Your refinishing project can be as simple as removing the finish from an old picture frame and reapplying new or painting a chair or lamp for your room. Or you can choose a more complex project, such as refinishing all the woodwork in a room, restoring an old trunk to new usefulness, refinishing
or painting furniture, etc.

In deciding upon a piece of furniture or woodwork to refinish, you need to make sure that your time, effort, and expense will be well invested. You should be able to answer most of these questions with a “yes” response if an item is worth refinishing.

<table>
<thead>
<tr>
<th>Will the refinished piece fit into my home and meet a need?</th>
<th>yes</th>
<th>no</th>
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<tbody>
<tr>
<td>Will the cost of refinishing the piece be less than the cost of purchasing a new item?</td>
<td>yes</td>
<td>no</td>
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<tr>
<td>Can I obtain the supplies and help I need in completing my project?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Will the result of my refinishing be worth the time and money I will have to put into it?</td>
<td>yes</td>
<td>no</td>
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<tr>
<td>Do I have a well-lighted and -ventilated place in which to work?</td>
<td>yes</td>
<td>no</td>
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<tr>
<td>Can I get the equipment I need?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Am I willing to take the time to do a good job?</td>
<td>yes</td>
<td>no</td>
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Methods of Finishing Furniture & Woodwork

Finishing furniture and woodwork requires time and patience, but it’s well worth your effort. In refinishing, the idea is to make the piece of furniture or the woodwork as nice and as useful as possible. You will use different skills, need different supplies, and follow different procedures depending upon the item or items you refinish. Some instructions are included here to help you with some kinds of refinishing projects. The County Extension Office also has a number of resources that you will want to use in planning and doing your refinishing project. Meanwhile, here are some helps to use in various methods of refinishing.

If you are going to refinish a wood piece of furniture, what kind of piece are you going to do?

______________________________

What steps will you follow in doing the refinishing?

______________________________

What supplies will you need?

______________________________

How long do think it will take to finish?

______________________________

Refinishing Woodwork So That The Wood Shows Through

Finishing woodwork is similar to finishing wood furniture, but there are some ways to make the job easier. The basic steps include the following:

1. Take “before” pictures so that you will be able to see what a difference your work makes after you finish.
2. Arrange the room so that the finish cannot drip onto the floor, furnishings, lights, walls, etc. You will want to cover things with drop cloths or newspaper to be extra careful.

3. Arrange the ventilation so that fumes cannot build up, but also so that there are no drafts and so that the temperature does not fall below 70°. This will help ensure that the chemicals and new finish can work properly.

4. Carefully remove all the baseboard and molding so that you can work on it separately to avoid marring the adjacent walls, ceiling, and/or floors; this also makes it easier to work on or mask the walls, floors, glass, and/or ceilings next to the woodwork to avoid getting remover or new finish on them.

5. Remove windows from their tracks where possible to allow a more thorough job and to help prevent them from getting stuck with the new finish.

6. To remove the old finish, use a good quality brush-on paste-type paint and varnish remover containing methyl chloride. Follow with a recommended neutralizer.

**NOTE:** The spray-on removers that have recently appeared on the market are hard to use and are more expensive than brush-on removers. The refinishers that you rub on with steel wool and “leave the finish behind” are generally much more expensive than brush-on removers, and the results are not nearly as satisfactory as those obtained through the methods outlined here.

**NOTE:** Heat guns are another method of removal that requires more expertise and more safety skill than most 4-H’ers have. They can be dangerous and should be used only with the close supervision of a responsible adult.

**NOTE:** Although some people use a mixture of lye and cornstarch-thickened water to remove numerous layers of paint, this method is not recommended for 4-H members in their projects. Lye can damage wood surfaces beyond repair and can ruin the value of your woodwork.

... To remove the old finish, apply a liberal coat of remover with an old paint brush (again, that means really glob it on!), working on one small section at a time. Give the remover enough time to work, but do not allow it to dry out. You may need to add some more remover and “play” on the surface with your brush a bit to get the remover to penetrate and remove the old finish to the bare wood. Usually, varnish can be removed with one application of remover, but thick multicoats of paint may require a second or third application.

... To get the old finish and remover off the woodwork, (a) use scrapers such as a putty knife or spatula to remove from large flat areas, (b) use old newspapers, old rags, or cheap paper towels to remove from other areas, (c) use cord or rope or toothbrushes to get the remover and finish off the detailed knick knacks, balusters, etc.

... Pay special attention to removing finish from crevices, grooves, etc. Fine cord coated with remover is an excellent means of removing finish from these areas or from turned pieces such as banisters and posts. Hemp rope coated with remover will help remove finish from the larger grooves and turned pieces. Old toothbrushes do an excellent job in removing finish from carved nooks and crannies, too.

... The keys to successful finish removal are patience, working on small areas, patience, using enough remover and giving it time to work, patience, attention to details, and patience!

... Once the old finish is removed, the surface of the woodwork should be washed with a neutralizer, such as denatured alcohol solvent or paint thinner. Use cord, toothbrushes, and/or steel wool with the neutralizer to remove the last traces of the old finish. Then wipe the entire surface with a lintless cloth damp with the neutralizer. Allow the woodwork to dry thoroughly before preparing for the new finish.

7. Once the old finish is removed, re-examine the woodwork and make needed repairs. For example, dents can be raised by pressing the wood with a hot iron through several layers of dampened wool. Oil stains can be removed with a dry-cleaning solvent. Stains can be removed with wood bleach. Holes can be filled with filler made from glue and sawdust from the piece, etc. Your County Extension Office has several bulletins that can help you in making other kinds of surface repairs.

8. After the finish is removed and all repairs made, it’s time to start preparing the surface for a new finish! At least three smoothings with abrasives will be necessary.

... For the first smoothing, sand the woodwork in the same direction as the grain with fine sandpaper or finishing paper. A finishing sander works well for this first smoothing. Of course, wrapping the sandpaper around a piece of wood or blackboard eraser to make a sanding block works very well, too. For turned surfaces, rub in the direction of the grain but with the sandpaper in your hand, rather than on a block, for the first smoothing.

... For the second smoothing, use very fine sandpaper, following the same procedure used in the first smoothing. At the end of the second smoothing, the entire surface should feel as smooth as glass. It takes much patience and hard work, but the results are worth it!
... For the final smoothing, rub the entire piece, following the direction of the grain, with 000 steel wool, followed by another rubbing with 0000 steel wool. This final rubbing will give your woodwork a "better than professional!" feel.

9. After smoothing, dust your woodwork and the room thoroughly so that dust won't get on the wet finish and cause unsightly roughness. For the final dusting of your woodwork, to make sure every speck of dust is removed, use a tack rag.

10. The next step in refinishing woodwork is to stain the wood, if you desire. There are many excellent brands of stain on the market that wipe on easily with a sponge or soft lintless cloth. Follow the directions on the can, but be careful to apply the stain evenly to all parts of your woodwork. Work with the grain, and rub off excess stain to avoid an uneven look. Then allow the stain to dry overnight before applying a clear finish.

   **NOTE:** Although there are some stain and varnish mixtures on the market, these products are not recommended for use in 4-H projects. It is difficult to obtain an even application of color with them, and generally the results aren't nearly as satisfactory as the results that can be obtained by using the processes described in this book.

11. There are several excellent satin or flat synthetic resins and polyurethane finishes available that can be used in refinishing woodwork. As with good furniture, you will want to select and apply a finish that will enhance your woodwork and room.

   ... Apply the finish with a good quality brush or sponge-brush. Follow the directions on the can of finish.

   —Apply the first coat in a thin even layer, smoothing out any places where overlapping is necessary.

   —Allow the first coat to dry at least 24 hours (more if the directions on the can so indicate) before buffing with 0000 steel wool. Dust the woodwork again thoroughly with a tack rag.

   —Apply the second coat in another thin even layer, again taking care to smooth out any overlapping or uneven places.

   ... Here are some additional helpful hints for applying finishes to woodwork.

   —Generally, it's a good idea to avoid applying "varnish" kinds of finishes to the tracks in which windows slide. Instead, protect them with a good quality wax. This will allow the windows to move freely without sticking and will still protect the wood.

   —If there are forced air heating/cooling registers in the room, turn them off to prevent blowing dust and uneven drying.

   —To avoid dangers of dust, don't sweep the floor within a 24-hour period before or after you apply the finish.

   —Stir the finish if directions call for it, but be careful not to shake it or otherwise mix in air bubbles. They're very hard to smooth out.

   —Have a light between you and the surface you are finishing to help you see specks of dust and uneven spots.

   —Make sure the temperature is above 70° so that the finish will dry properly.

12. The final step after the finish has completely dried is to carefully put the windows back in their tracks and to reapply any baseboards and moldings that were removed. Any spots that are accidentally marred can be touched up with dabs of stain and spot repairs of finish.

13. Take an "after" picture if possible, and congratulate yourself for doing such a good job!

   

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<thead>
<tr>
<th>In what condition is the wood and the original finish of your woodwork?</th>
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<th>What precautions will you take to protect walls, floors, furniture, etc. in the room in which you will be working?</th>
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<th>What steps will you follow in refinishing your woodwork?</th>
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<th>How will you smooth the wood and the new finish?</th>
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15
Painting Furniture and Woodwork

Furniture and woodwork painted a color that enhances the room can provide just the finishing “professional” touch that you need! Paint can be an especially good choice if the furniture or the wood in the woodwork is non-descript, marred, or if it just doesn’t look as nice as it would painted!

In choosing your colors, you’ll want to consider these color facts:

There are hundreds of colors. But all of them are derived from the PRIMARY HUES.

Secondary Hues are a combination of the primary colors.

An easy way to see color relationships and choose color schemes is to use a color wheel.

“WARM”

“COOL”
Colors differ in value and intensity. Value refers to lightness and darkness of a color. If you add white to a color, you will get a tint or light-value color. If you add black to a color, you will get a shade or low-value color. A color as we find it in a watercolor box will be an intermediate color as far as value is concerned.

Intensity means dullness or brightness of colors. A color as we see it on a color wheel or in a watercolor set is usually fully intense (bright). But if we add a bit of its complement (opposite on the color wheel), it becomes dull.

Colors help to set the mood you want. How will your room be? Cheerful? Serene? Sophisticated?

Tips for Using Color

... Warm colors (reds, yellows, and oranges) make woodwork and furniture appear to advance and come closer to you, thus making the painted surfaces look larger.

... Cool colors (greens, blues, and purples) make furniture and woodwork appear to recede and be further away, thus making the painted surfaces look smaller.

... Light colors in a small room will create an impression of size.

... Colors should not be used in equal proportions in any one room.

... A mix of both warm and cool colors in each room is desirable.

... Don't use bright colors in large areas as this will detract from furnishings.

... Do have continuing color flow through the house and use harmonious colors in rooms that adjoin.

... Don't paint the woodwork and trim in a small room different from the wall color, or it will clutter the room and make it look smaller.

... Don't paint unfortunate architectural features, like radiators, to contrast with their background, as this will emphasize them.

... Do remember that colors are relative and must be seen together.

... Beware of using glossy paints in living areas since such surfaces might glare more than you want.

... Do study color swatches in both daylight and nightlight, as colors often change under artificial light.

... Don't have all shiny or all rough-textured fabrics in one room — vary them for visual interest.

... Do consider building a color-scheme around a painting, a fabric, or colorful rug if the colors please you.

... Don't choose neutral negative colors just because they're safe. Your woodwork should make your room look as nice as possible.

... Do emphasize horizontal lines in a room that is too tall, and emphasize vertical lines in a room with a low ceiling.

... Don't use too many colors in a room, and don't use all neutral hues.

... Do remember that color in a large area looks "more so." Your color sample should always be lighter and several degrees more subdued than the final results you intend.

In choosing the kind of paint you use on your furniture or woodwork, you'll want to consider the following:

... Latex paint is easy to use, easy to clean up with water, and is available in various forms: flat, semi-gloss, and glossy.

... Oil-based paint needs to be cleaned up with turpentine or paint thinner, but does an excellent job in penetrating bare wood and protecting it. It is also available in a variety of forms.

... Sprayed-type oil, enamel, or latex paints are okay for small items of furnishings that can be painted out of doors, but they're rather expensive and take too much skill to be practical for painting woodwork.

... Different brands of paint require different methods of application and cover different amounts of areas. Read the directions carefully before buying paint.

In painting your furniture or woodwork, you'll want to follow these basic steps:

1. Take a "before" picture if possible for a reminder later of how your furniture or woodwork looked before you started.

2. Arrange your work area with plenty of light and good ventilation (but no direct drafts or blasts from hot/cold air ducts!). You'll want your furniture or woodwork to be able to be left undisturbed while you paint. Be sure to protect the walls, floors, lights, and other furnishings in the room (paint splatters and spills) with drop cloths or heavy layers of newspaper. If you're painting woodwork, you'll want to mask adjacent walls and doors with masking tape and remove windows where possible to make painting easier.

3. If you're painting woodwork, remove the baseboards and moldings where possible and practical for the first coat at least. If you're painting furniture, remove the hardware
(drawer pulls, knobs, hinges, locks, etc.), upholstery, and other removable items to make painting easier.

4. Wash the woodwork or furniture with mild detergent and water to remove dirt and grime, taking care not to raise the wood grain by using too much water. Work in small areas at a time, rinse thoroughly to remove all the detergent, and allow to dry completely (overnight at least) before proceeding.

5. Make any repairs that are needed. Steps 4 and 6 in the "Restoring Antiques" section of this project give detailed directions on how to make repairs on wood items. Metals and plastics require different methods. Your County Extension Office will have additional information to help you.

6. Sand the woodwork or furniture to a very smooth surface. It may be necessary to do a first sanding with medium grade sandpaper, followed by a thorough sanding with fine sandpaper or finishing paper. Either an electric finishing sander or a piece of sandpaper wrapped around a block of wood or blackboard eraser to make a sanding block will work on flat surfaces. Of course, covered sanding blocks and/or sandpaper cupped in your hand will be necessary for curved surfaces, crevices, etc. Always work with the grain of the wood, or in one direction on metal. Keep sanding with fine sandpaper or finishing paper until the surface is smooth and almost glass-like.

7. After sanding, dust the furniture or woodwork completely so that dust won’t get on the painted surface and make it rough. For the final dusting, use a tack rag to make sure all the dust is removed.

NOTE: If the floor needs cleaning up before you can paint, be sure to allow at least a half-day for the dust to re-settle, and dust the surface of your piece again with a tack rag before painting.

8. Now it’s time to paint! Here are some helpful hints:

... Mix the paint well with a stirring rod.

... Pour enough paint to work with into a container designed for use with the brush, paint pad, sponge-brush roller you’re using; or use one of the attachments that can be purchased for the top of the paint can to wipe against.

... Use the best quality brush, sponge-brush, paint pad, or roller that you can. Dip the bristles or surface about halfway into the paint, and wipe off the excess against the edge of the paint container before starting to paint. This will help prevent drips and using too much paint at once.

... Follow the directions on the can, but often it is best to apply the paint across (perpendicular) to the grain with a few strokes, and then finish spreading it out smoothly in the same direction as the grain. Don’t “overwork” the paint, but smooth it to a thin even coat and avoid leaving brush marks or overlapping marks.

—It’s usually best to paint small pieces of the furniture or woodwork (like spindles, grooves, and crevices) first, and leave painting the large flat surfaces for last. If it’s hard to paint the smaller pieces without getting paint on the adjoining pieces, though, you may want to work from one side to the other. This would avoid lap marks that show where one section of paint dried before the next section could be applied.

... Make sure the first coat is applied as thinly and evenly as possible. Allow it to dry at least 24 hours (or longer for some paints) before lightly sanding and dusting again with a tack rag.

... Apply the second, thin even coat in the same way as the first coat and allow to dry for another 24 hours before moving or using the furniture or reattaching the woodwork.

... Here are some other helpful hints to consider in painting:

—Avoid painting the tracks in which windows move. Protect the tracks instead with a good quality wax.

—If there are any heating/cooling registers in the room, turn them off to prevent blowing dust.

—Have a light between you and the surface you’re painting to help you see brushmarks and dust.

—Make sure the temperature is above 70° so that the paint will cure properly.

—Remix the paint occasionally to make sure the color stays even.

9. After the paint has dried thoroughly, reat-
tach the hardware and reassemble the furniture or woodwork. Any spots that become marred can be touched up with more paint evened out to avoid lap marks.

10. Take an “after” picture if possible and enjoy the results of your work!

In what condition is the original finish of your furniture or woodwork?

What precautions will you take to protect areas of the room not being painted?

How will you ensure good ventilation without drafts?

What steps will you follow in painting your furniture or woodwork?

How will you smooth the surface?

How will you avoid dust and rough spots in the paint?

How will you make sure the color is even in the paint?

What color and kind of paint will you use?

Why?

Is the color warm, cool, or neutral?

Why did you choose the color you did?

What kind of applicator will you use—brush, paint pad, brush-sponge, or roller?

What other supplies will you need?

Other Refinishing Methods

Weaving seats and panels in furniture, caning, needlepoint and needletufting, metal working, stencilling, antiquing, etc. are other methods that are also used in refinishing furniture. Unfortunately, space in this book does not permit complete explanations of the processes used with these methods. Your advisor, County Extension Office, local library, or a reputable hardware or lumber store are good resources to provide more information.
Recording Your Results
Keeping “before” and “after” pictures, accurate records of what you did, how much it cost, the time you spent, and records of your accomplishments is very important. Be sure to keep your records on the page in the back of this booklet.

Upholstering Furniture
Adapted from Upholstering A Chair, by Helen T. Puskar, Pennsylvania Cooperative Extension Service

Do you have a piece of furniture that looks worn, frayed, and generally “tired?” Can you imagine how much nicer it would look with a new covering and perhaps some extra padding? If so, you’ll find many satisfactions in reupholstering!

Reupholstering requires time, patience, perserverance, and skill. You need to be willing to devote time, effort, and money to doing a good job. To make sure the piece you have is worth reupholstering, you should be able to answer “yes” to most of these questions:

to do all the work on the piece, you will want your results to last! To make sure your reupholstered piece is as nice as possible, you will want to consider the following when choosing your supplies and equipment:

... Fabric — You will want the best quality fabric you can afford. The fabric should be suitable for the furniture on which it is used as well as for the room in which the piece will be placed. Fabrics that will wear a long time and are colorfast, flame retardant, and soil resistant are the best choices. Nylon, cotton, olefin, wool, and linen fabrics usually have these characteristics if they have a balanced, tight weave. Brocaded fabrics and highly textured fabrics do not wear nearly as long. Check the label on the fabric to determine fiber content and care instructions.

Fabric finishes that help repel soil and stain damages are good investments. Silicone finishes repel water and fluorocarbon finishes repel both water and oil. The finishes should be applied by the manufacturers.

The finishes that can be purchased in spray cans are not nearly as good for reupholsterers’ uses because they are not designed for a specific fabric type.

It’s important to know how the fabric should be cleaned before it is purchased. Many manufacturers use the following cleaning code on their hang-tags.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Is the piece well designed and constructed?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Will the cost of supplies be within my budget?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Will it be better to reupholster than to buy a new piece?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Will my family enjoy the reupholstered piece enough to justify the work involved?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Will the piece fit into and be useful in the room where it is placed?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Can I get the equipment I need?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Do I have a well-lighted and -ventilated place to work?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Will I complete the work?</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

W = Water-based cleaner. Spot clean only with the foam of a water-based cleaning agent such as a mild detergent.

S = Solvent cleaner. Use a mild water-free dry-cleaning solvent.

SW = Both methods. The most versatile fabric type.

X = Vacuum or lightly brush only.

Of course, a small area should be pre-tested before using any of these methods.
Other helpful hints to consider in choosing upholstery fabrics include the following:

—Looped pile, long slubs or floats, etc. on fabric tend to snag and pull loose easily.

—To judge abrasion resistance, keep in mind that close-set weaves made from twisted ply yarns are the best. The arms of furniture wear first, though, then the top front edge of the seat. Soft cushioning helps reduce abrasion. The more tightly a fabric is stretched, the more vulnerable it is to abrasion.

—Fuzzing and pilling are a real problem with many polyesters and cheaper synthetics. Nylon and wool are better.

—Color abrasion is a real problem in linens, cottons, and chintzes. Avoid prints in these fabrics if possible.

After selecting the fabric you want, remove the old fabric from the chair by carefully removing tacks and thread. Make a pattern from the old covering and take complete measurements of it to decide how much fabric you need to buy.

... Padding — The padding material you use should be resilient, durable, and suitable for the piece of furniture on which it’s being used.

—Urethane foam is one of the most common and one of the best general-purpose padding materials. It is not damaged by dry-cleaning solvents, is durable, and maintains its resiliency.

—Foam rubber is also good, but is not generally as durable as urethane foam.

—Polyester fiberfill is lightweight, but needs to be applied with care.

—Hair padding comes in several grades and thicknesses, depending on the length and springiness of the hair.

—Tow, the fiber of the flax plant, is not resilient. It is most useful where a firm, durable pad is needed.

—Upholstery cotton felt is used over a pad of coarse stuffing, such as hair or tow, and helps give a professional-looking result.

... Tools — Here are some of the tools you’ll need for reupholstering:

—An upholstery hammer or claw hammer

—Heavy, sharp shears — for cutting webbing, burlap, etc.

—Webbing stretcher or block of wood 2"×3"×14"

—Shears — for fabric

—Screwdriver — for ripping when removing old upholstery

—Ice pick — to use as a regulator when smoothing such padding as hair and tow

—Tack puller

—Pliers

—Upholstery pins — to temporarily fasten fabric corners while fitting the cover

—Curved needles — to sew burlap to springs and flat surfaces when you sew from one side

—6" to 20" straight needles — an 8" to 10" needle is usually suitable

—A flexible steel tape — for accurate measurements

... Tacks — Do not use carpet tacks; they may split the wood. Upholstery tacks come in several sizes. No. 10 or 12 usually is recommended for seat-spring tying cord; No. 8 for back spring tying; special webbing tacks for tacking down webbing; No. 4 or 5 for burlap; and No. 3 for muslin.

Size of tacks for outside covering depends on number of thicknesses of fabric the tack must go through. For tacking fabric in front wood panel, use No. 2 tacks. When using cardboard strips or tacking through several thicknesses, use No. 6 tacks.

Gimp tacks have small round heads and are used to tack the finishing braid or gimp on the chair. Sometimes, decorative furniture nails are used to tack outside covering and to give a finished edge on chair.

... New Springs, if needed — Two kinds of springs are commonly used — the coil and zigzag or no-sag wire spring. The coil spring gives the most resiliency and comes in several styles and sizes. For seat work, heavy wire springs of 9- to 11-gauge steel are used. They vary in height from 4 to 14 inches. A dining room chair may have a spring 4 inches high; a living room chair or sofa, a spring 8 to 9 inches high or higher.

The cone-shaped spring mounted on a steel band cannot be used on webbing or wooden slats or on a solid foundation.

The hourglass-shaped coil spring, about 4 inches in diameter, is used on webbing or wood slats.

Back springs differ from seat springs. They are made from a lighter, 12- to 15-gauge steel.

A cushion coil spring is smaller and made from a lighter gauge steel than the back spring.

... Webbing — enough to replace existing webbing.

... Burlap — At least a 10½-ounce grade for covering places where strength is needed.

... Muslin — To use over all padded areas to keep padding in and dust out.

... Good Quality Twine — for tying springs and stitching.
What are you going to reupholster? _____________________________
What kind of fabric do you want for your reupholstered piece? ______________

Is it durable? ____________ Resilient? ____________ Colorfast? ____________
Soil Resistant? ____________ What color is it? ____________ Does it make the room
look nicer, as well as the piece of furniture? ___________________________

How will you make your pattern? ________________________________

How much fabric will you need? _________________________________

What kind of padding will you use? ______________________________
What tools and other supplies will you need? _______________________

How much will everything you need cost? _________________________

How much time will it take to finish? ____________________________

The Cooperative Extension Office has several excellent publications you will want to use in reupholstering your piece of furniture. Here are some of the basic steps you will be using, though.

1. Take a “before” picture if possible to remind you of what your piece of furniture looked like before you re-entered it into a new useful life!
2. Arrange a work area where the furniture you’re reupholstering and your supplies can be left undisturbed. If your family can arrange for an empty room or a dry corner in a basement where you can work without messing up the rest of the house, that would be great. If that is not possible, be careful to clean up each time you stop working so that you cause as little inconvenience as possible.
3. Prepare your piece of furniture.

... Remove old covering and padding, noting how they were originally put on. You can use the old covering as a pattern for cutting the muslin and new cover. Label each section of it and keep it intact until you have upholstered the piece. Old materials are usually good construction guides. Some or all of them may be reused.

... Hard rolls at front edges of a chair or sofa and around curved surfaces, such as edges of wings and arms, may almost always be reused. Carefully preserve tufting. Usually, the burlap to which tufting has been sewn can be removed from the back of the chair in one piece. With care, you can remove old buttons and covering and sew new covering and buttons in place without disturbing the tufts. Save rolls of padding on a channel back chair for reuse. Remove all tacks from the frame. Any left in will interfere with new ones placed later. Clean, repair, or remodel frame as needed. If exposed wood needs refinishing, do it before starting upholstering.

... Clean the springs. If they are rusty, rub with steel wool.
4. Place the webbing tightly on the seat.

... Measure bottom of the frame and mark the center of each of the four sides. Locate center strips of webbing and mark the space for as many more strips as are needed to make a firm foundation. One guide is to locate them so the crossings of the lengthwise and crosswise strips are where the springs should go. Do not cut webbing in advance. Start each piece from the uncut roll.

... Begin in the center of the back frame and allow end of webbing to extend 1 inch beyond outside edge of frame. Put in a row of three tacks across webbing. Avoid tacking in the same holes as old webbing was tacked, even though it usually is put back in about the same location. Keep tacks near middle of frame so the fold won’t come out to the edge. Fold short end back over tacks and put in a second row of four tacks slightly in front of first row. Stagger tacks to help prevent splitting the wood.

... Pull webbing to front frame of chair. Keep it straight and tight by winding it around a wooden block, or use a webbing stretcher. Grasp stretcher by the shaped part, and don’t let your hand come over the nail end. Place pedded or rubber end of stretcher against outside of chair frame so stretcher is at a slight angle. Push webbing over the nails in end of stretcher, and press down until webbing is tight. It should be tight enough to prevent sagging when springs are tied down to it, but not so tight that it will pull out where tacked or pull frame askew. Webbing should snap when flicked with your finger. Hold at this desired tension and put in first row of three tacks. Cut off webbing 1 inch from this row, fold edge back, and put in second row of four tacks.

... If you use a piece of webbing not long enough to reach over the stretcher, fasten another piece of webbing to it with a long needle. Stretch as if one piece until you tack strip in place.

... Put remaining rows of webbing in place from front to back. With curved or decorative frame, start webbing at front and pull to back.

... On one side, fasten strips of webbing that go across the frame. Start with center strip. Before tacking the loose end, interlace these strips through front-to-back strips.

How will you place the webbing on your piece of furniture?
5. Locate and sew the springs.

... Springs usually are placed where the webbing strips cross, but they may need to be off-center to be properly spaced. They can be placed anywhere if the webbing strips are close enough together.

... The number of springs in a chair seat will vary from 3 to 12 depending on size and shape of seat. When there is an even number of springs, set them in evenly spaced rows on the webbing. Springs grouped too close to the center of the seat tend to make it hard and uncomfortable. If springs are of different heights or weights, place the highest or strongest ones in the front row.

... In a large chair or sofa with separate cushions or with flat seats, place front row of springs as near the front edge of frame as possible. A piece of No. 9 wire may be fastened to the top coil of springs to provide a firm edge. Use metal clips or tie with sewing twine.

... Edge wire should be flush with outside edge of chair frame. Top coil of spring may be spread so edge wire comes out as far as desired.

... Set springs in place on webbing. Turn them so the free end of top wire, which should turn down, comes to one side of the place where spring will be tied. The best place is close to where the cord will tie from front to back. With a pencil, mark on webbing exact location of the springs before starting to sew them in place. With a straight or curved upholstery needle and sewing twine, start at a back spring and sew it fast to the webbing. Fasten thread with a slipknot and sew two or three stitches over the spring wire in each of four different places. Continue from one spring to another until all are securely fastened. If you need another length of string, tie to the first piece and continue sewing.

6. Tie the springs exactly through the center from front to back, from side to side, and in both directions diagonally with strong cord. This should give a strong flat top surface to put the cushion pad on.

How many springs are on your piece of furniture?

What steps will you use in sewing them?

7. Attach the edge rolls.

... Padded edges on upholstered furniture eliminate sharp corners, give a solid, well-shaped foundation for the final padding, keep the padding from working away from edges, and prevent the bare wood frame from wearing the covering.

... Edge rolls, particularly larger ones, often can be salvaged when old upholstery is taken off. If the rolls cannot be reused, you'll save time and labor by buying ready-made edge rolls at an upholsterer's supply house. Rolls come in sizes from ½ to 1 inch or more in diameter. The outer edge of the seat's roll should be flush with front edge of chair.

... To tack edge roll to frame, use a ½-inch hard roll and tack in place around outside edge of chair back and wings. Around front edge of chair arms tack a firm piece of cording, such as is used in slipcovers. This will give about a ¾-inch roll, a more desirable width for arms than a ½-inch hard roll.

Where will you need edge rolls on your piece?

8. Cover the springs with burlap and apply padding.

... Use urethane foam if possible. If not, pull loose padding apart to be sure it is free of lumps. Put about three-fourths of the padding on the chair, and arrange it in an even layer. With a long needle and sewing twine, sew padding to burlap covering of springs. Use the rest of the padding to level off uneven places caused by stitching. Where a loose cushion is used, padding will be thinner than padding on a chair seat without a separate cushion.
Cover the first padding layer with a layer of upholstery cotton or other fiber filling. Spread a cover of firm muslin over cotton or filling. Slip tuck muslin in place by putting tacks only part way into the frame. Fasten muslin first in center back, then center front, then center of each side. Work toward the corners. Keep grain of muslin straight each way and pull evenly in all directions. If there are hollow spots, raise muslin and filling and carefully fill in hollows with padding material.

When seat is firm, even, and smooth, trim muslin to fit, allowing about 1 inch to turn under at frame. Turn this under and tack muslin in place on chair frame just slightly above line for upholstery fabric. Space tacks about 1 inch apart. Miter corners to fit smoothly around corner posts and arms.

9. Cover the back of the piece using similar technique as used in the seat. Often, the back does not need extensive work—simply tightening the webbing, smoothing the padding, and covering the back with muslin is all that's needed.

10. Pad and cover the arms, wings, and other parts of the piece as needed.

For the arms, a strip of webbing on the inside of the arm frame, either from front to back or top to bottom, will reinforce this area. Tack burlap on arm and sew padding to it with long stitches. Cover padding with upholstery cotton or other filling and hold it firmly in place with muslin. Put muslin in place and slip tuck to outside of the bottom of arm frame. Stretch muslin up over the arm, bring close in under outside curve, and tack in place on underside of arm. Keep the grain straight and pull muslin between the back and the arm and slip tuck to the back of the arm. Cut and fold muslin to fit around shaped area on front of arm and slip tuck it in place.

When both arms are finished and are smooth, even, firm, and the same size and shape, trim the muslin. Turn under 1 inch and tack it in place permanently.

For the wings and other parts, put edge rolls in place. Cover the inside with burlap. Sew padding to burlap, and cover with upholstery cotton or other fiber filling. Stretch muslin over padding and slip tuck on back of wing frame. When parts are smooth, even, firm, and the same size and shape, trim the muslin. Turn under the edge and tack it permanently.

What steps will you follow in applying padding?

What kind of padding will you use?

11. Put on the outside cover.

Cut and fit top cover with the same care you used with the muslin. Fitting the muslin provides good experience before working with the more expensive top covering. Old upholstery fabric may be a guide to cutting out the new covering if no major construction changes have been made. When the old cover is not available, measure carefully over muslin for each piece. Allow at least 1 inch for seams and edge finishing. Block out the pieces from these measurements. Center any design that may be in the fabric.

Use upholstery pins to hold fabric in place until each piece is cut and trimmed to fit. If cording or welting is used as a finish on edges or in seams, make and sew it in place before tacking fabric on chair. Cording for places that can be tucked may be made with strips cut on straight grain. Cording for detachable cushions or other curved areas should be made from a continuous bias strip.

Place cording on wrong side of fabric and in center of strip. Fold so edges meet. Using zipper foot, baste-stitch on right side close enough to the cording to hold it in position. Be careful not to stretch either bias strip or cording.

Use cording in the same places as on the original cover. Begin with the seat. If there is a separate cushion, you can make covering for the seat in two
pieces. Fabric on the under part of seat may or may not be the same as the top covering. Measure for the front part or apron so that fabric extends back past the front arm posts about 2 inches on top of the seat and on sides. Cut, fit, and sew in darts. Sew cording on front bottom edge. Measure for back of seat. This piece must be wide enough to tack to back of seat frame. Sew together the front and back pieces of seat.

... Use No. 6 tacks and tack lower front edge of fabric to frame. Tack through cardboard strip. Turn this covering back and pull the seat piece through under the arms and the back and tack to seat frame.

... Cut and fasten inside pieces of arms, wings, and back the same way as the muslin cover. Put outside pieces on last. Tack and sew by hand.

... On wings, sew cording to front and top edges of outside wing piece. With raw edges turned under, pin this piece in place and sew along corded edge using a curved needle with strong linen sewing twine. Tack back edge to back of frame. Put the outside arm pieces on next. If the frame of the chair is exposed at bottom and bottom edge of covering is finished with a cording, tack covering in place along edge of frame. Pin the top and front edge in place and sew, using a curved needle. Tack the back edge to the back of the frame.

... If the frame at the bottom of the chair is not exposed, turn side and back pieces up and tack in place under the arm and at the top of the back frame. Tack through a ½-inch cardboard strip to insure a smooth, even edge when covering is turned down over it. Turn these pieces down and tack them on the bottom of the chair.

... Cut a piece to fit the front of the arm, edge piece with cording, and sew in place. If the front arm piece is flat, you may cover a thin board, then tack it on as a finish.

... The last piece to go on is the cover on the back. Measure and cut this piece to fit exactly, allowing a ¾-inch turnunder on all sides. Mark the line for this turnunder with chalk. Beginning at the bottom on the left-hand side, pin the cording on the chalk line, then sew cording to the back piece on the inside of the chalk line.

... Turn the chair upside down and tack a piece of muslin or similar fabric over the bottom. Turn under the raw edge of fabric. Keep the fold and small tacks back at least ½ inch from the outside edge. Begin at the bottom and tack the lower edge in place. Bring the cover up over the back, turn under the raw edge, and pin in place.

... With a curved needle and strong sewing twine, sew the back in place across the top and down both sides with a blind-stitch under the cording.
To cover a separate cushion—cut a paper pattern if the cushion is irregular, such as T- or L-shaped. You can use the original cover as a pattern if no changes in size or shape have been made.

—Measure cushion from front to back and from side to side, adding 1 inch for seam allowance. Measure around the four sides of the cushion to get the length for the boxing. Cut this piece as wide as the depth of the cushion, plus a 1-inch seam allowance on each side. Cording will be twice this length for both the top and bottom edges of the cushion.

—Cut the cushion pieces on the straight of the fabric and center any design in it. Sew cording to the boxing on the seamline of each edge. Put the cushion top and boxing in place on the cushion, right side out.

—Pin the top and boxing together, keeping the line of cording on the edge of the cushion and the design and grain of the fabric straight. Remove the cover and sew close to the cording. Replace the cover and pin it to the other side in the same way. Be careful to mark the corner location on the grainline on the boxing. Do not pin across the back. Leave this open to remove cushion. If the cushion is large or irregular in shape, leave the cover open around one corner. Remove the cover and sew. Turn the right side out and put the cushion into the cover. Sew the open edges together by hand, using matching heavy duty thread or linen twine.

In what order will you cover the different parts of your piece?

What are some special challenges your piece offers in covering it?

12. Stand back and admire your work, and take pride in your accomplishments! Take an “after” picture if possible to see the progress you’ve made. Then clean up your work area, and enjoy your re-entered reupholstered piece of furniture!

Recording Your Upholstered Project

You will want to keep accurate record of your progress in completing your recycling project. Record what you did, how you did it, when you did it, how much it cost, etc. on the record sheet at the end of this book. Also, you will want to include “before” and “after” pictures as well as pictures of your work in progress.

PICTURES

ATTACH YOUR “BEFORE” PICTURE HERE

ATTACH YOUR “AFTER” PICTURE HERE
### MY RECYCLING RECORD

<table>
<thead>
<tr>
<th>Steps In Completing My Project</th>
<th>Date Completed</th>
<th>Time Spent</th>
<th>Materials Used</th>
<th>Challenges Encountered</th>
<th>Results</th>
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