During the past year SAR has had a booth at several stamp shows across the country. It has been a wonderful experience to meet and talk with our customers. People are good at telling us what they want and a book is what they been asking for the most. This handbook isn’t exactly a major publication, but it’s concise and informative. The content is based on the demonstrations that I have done at several of the shows. The audience took notes, so I figured there must have been something interesting in what I was talking about! If you already have some of our products (and, of course, you have actually used them!) you may find that this handbook will shed a bit of light in some dark places. If you haven’t tried our products yet, this may encourage you to do so. I hope you will find some help, some information, and some inspiration in these pages.

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**PAPER:**
At SAR we make most of our models with 80 lb. cover (or card) stock. A lighter weight cover stock, such as 65 lb., can also be used, especially for the smaller models. The weight of the paper does not indicate its thickness or structural desirability. Smooth, hard papers are usually thinner and sturdier. Thicker papers can be prone to splitting, cracking, or fraying at the cut edges. Knowing its use has a great influence on the paper I choose for a project.

Other types of paper, such as wrapping paper, washi paper, translucent vellum, decorated papers, or printed matter from magazines can be used; but they will require lamination in order to build up enough thickness and rigidity for making models. Very thin papers can be laminated on both sides of a thicker, smooth piece of paper. The simplest way to do laminations will be described later.

**INK:**
We use several different types of ink depending on the project. It helps to use white pigment ink on very dark papers and a medium gray to black ink on light papers. The first time you make a model use a dark ink that will show up clearly. After you are familiar with the pattern pieces you can use an ink that will blend in with the color of the paper. Permanent ink must be used for stamping on plastic and metal.

**METAL:**
Both copper and aluminum have been used successfully in the smaller models. These materials are especially nice in jewelry, where they add weight, texture, style and variety to the artwork. Tooling copper (approx. 26 gauge, available at jewelry supply and craft stores) is especially nice when used in making the heart pendants and lockets because its added weight will help them hang better. Aluminum sheet is most easily acquired in the form of disposable cookie sheets available at your local supermarket. Aluminum foil is not suitable, but soda (pop) cans have been used. The cookie sheets cut be easily cut with both scissors and punches. See below for additional instructions on working with metals.

**PLASTIC AND POLYMER CLAY:**
Our earring kits come with gold metallized vinyl. However, there is no reason to stop there. Metallized plastic is available from sign supply stores. It comes in a rainbow of plain and glittery colors, and can be used in any of the models. It has an adhesive back, and can be applied to one or both sides of a suitable weight smooth paper. To stamp the pattern on the plastic, you need to use a permanent ink, such as Memories™. Polymer clay has been used successfully for jewelry and some of the smaller models.

**CUTTING BOARD:**
A self-healing plastic mat provides a very nice cutting surface. They last for many years if one avoids making cuts into the board that are not vertical. If you don’t cut vertically, you may wind up with angled cuts that cross each other and cause a V-shaped sliver of the mat to come out.

**STRAIGHTEDGE:**
The most useful straightedge/ruler is made of transparent plastic and has one metal edge, such as those made by C-Thru®. The metal edge is very helpful for cutting against when using a utility knife.

**UTILITY KNIFE:**
I like the Olfa® 300 snap-off blade knife for its shape and safety features. This is the type of knife to use with a straight edge. Replacement blades can be found at any hardware store.

**CRAFT KNIFE:**
The craft knife made by Olfa® is comfortable and well-weighted, and has a shorter blade than some other knives, making it easier to control. This knife is made to be held like a pencil, and is not the best choice to use with a straight edge.

**LARGE SCISSORS:**
The Fiskars™ Softouch® Micro-tip scissors are comfortable to use and put much less stress on your hand than standard
loop-handled ones, especially when cutting heavy paper. These are sold as right and left handed scissors, however the blades are the same as those on a normal pair of right handed scissors — it is only the grip that is ambidextrous. If you are left handed and are using a right handed scissors, you need to tilt the scissors so that you can see the alignment between the cutting edge and the line to be cut. Be careful not to look straight down on the upper scissors blade as it is very easy to think that the cutting edge is on the outside of the blade.

SMALL SCISSORS: For detailed cutting on small models, such as earrings, and especially for the slippery metallized vinyl, I like to use the Kai™ N5100 Four Inch Needle Craft Scissors.

HOLE PUNCH: A 1/16” hole punch is useful for making holes to hang the models or to make charms to hang from them. It can also be used in an alternate method for cutting the slots, as will be described later.

GLUE BOTTLE AND PIN: A fine-tipped glue bottle, with a pin to keep the tip open, makes it easier to accurately apply small amounts of glue for those constructions that require it.

PLIERS: A small chain nose or needle nose pliers, preferably with a smooth inside edge and a spring handle, is very useful for handling the pieces when assembling the small models.

TWEEZERS: An economical alternative to pliers is a good pair of pointed tweezers. Look for tweezers with tips that meet together squarely when closed.

SCORING TOOL: Folds in paper should always be scored first. An embossing tool works well for this. You can also use the curved end of a large paper clip or the tip of a bone folder.

FIRST AID FOR TWEEZERS AND PLIERS: Ideally, these tools should have smooth, flat jaws for gripping materials without leaving marks. If you want to use a pair of pliers or tweezers that has grooved jaws, these can be smoothed by painting them with several coats of clear, hard fingernail polish. For best results work on one side at a time. Position the tool so that the side that you are painting is level. Apply several thin coats, allowing each to dry before applying the next, until enough polish is built up to fill the grooves and coat the surface.

FINE-TUNING YOUR FISKARS: When shopping for a pair of Fiskars™ Softouch® Micro-tip scissors, look for a pair that has a sharp (pointy) point and even tips. If you have a pair that has uneven tips or an overbite (tips that cross when the scissors is closed), you can correct these minor variations.

If the scissors has an overbite, the paper may tear at the end of a cut that is made by closing the scissors. To correct this problem, you can do the following: Cut a small square of duct tape and place it between two coils of the spring. The sticky side of the tape will stick to one of the coils. Take another piece of duct tape the same size, and stick it on the other side of the same coil, so that the two pieces of tape stick to one another. Close the scissors to test for alignment of the tips, and keep adding layers of tape and testing until the tips are aligned when the scissors is closed.

When ending cuts by closing the scissors, as is recommended for cutting the slots, it is important to be able to see precisely where the cut is ending. If your scissors have unequal tips, and the shorter tip is underneath the paper, the cut will end shorter than where it appears to be from the top. If you find that the sliver from cutting the slots is not dropping out, the problem is probably this one. Turn the scissors over so that the short blade is on the top. To make sure that you always use the scissors in this position, mark the handle with permanent or metallic ink so that you see the mark when it is in your hand.

Sometimes the orange lock will slip toward the blade and cause the scissors to lock when you close the points at the end of a cut. To remedy this, turn the scissors over so that the lock is on
the lower handle. If this cannot be done (see short blade remedy above), pull the lock off. Fiskars sells a blade sleeve that will protect the tips and keep the scissors closed when not in use. You can also keep the scissors closed with a rubber band around the handles.

If the tips have wide points instead of long, narrow ones, they can be ground by hand. Find someone who knows how to sharpen a knife on a stone, and have them reshape the tips by hand, not on a motorized wheel.

WORKING WITH PAPER

GRAIN:
When paper is made by machine, the cellulose fibers tend to be laid down in the direction of the movement through the machine. This imparts a grain to the paper, making it easier to bend and crease in one direction than the other. If you have ever made a card and noticed that the paper cracked or came apart at the fold, this could have been due to folding the paper against the grain. For constructions that have a lot of movement of the paper on a fold, it is important to both choose a paper that has good structure and crease it in the direction of the grain.

To find the direction of the grain, hold the opposite edges of the paper gently between your opened palms and bend it carefully by bringing your hands together. By holding the paper this way you will be able to sense the resistance. Turn the paper 90° and repeat. You should notice that it is easier to flex the paper in one direction than the other. The grain runs in the straight, not the curved, direction in the more easily flexed orientation. If you cannot tell which way the grain runs, it probably does not matter. In any case, before embarking on an elaborate project, be certain to test your paper by scoring and repeatedly folding to make sure that the paper will hold up to use.

CUTTING WITH A KNIFE:
I like to use two types of knives for cutting paper: a utility knife and a craft knife. When cutting the outside edges of a card I usually use a straightedge as a guide. A utility knife works best with the straightedge because it is naturally held in the palm of the hand which keeps the blade from twisting; and therefore, the edge of the blade is less likely to cut into the ruler or veer away from it. I put my middle finger on the cutting surface so that it acts like an outrigger to keep the blade perpendicular while cutting. If you are cutting heavy material, be sure to position yourself well above the working area so that you can apply more pressure with less fatigue.

For making more intricate cuts, like the holes in snowflakes, I prefer to use a craft knife that is held like a pencil. People often think that cutting with a craft knife is difficult. Curves can be tricky, but straight lines are actually quite easy to cut. It is also much easier to cut if the blade is as short as possible. Most craft knives come with a long blade that is hard to control. If you have one of these knives, see if the manufacturer supplies shorter blades. They are much easier to use. My personal favorite is the Olfa® craft knife which is perfectly balanced and has a short blade.

Believe it or not, if you have a printed or drawn straight line to cut, it is easier and more accurate to cut the line freehand without using a ruler. Use a utility knife for this (and your outrigger finger) and move your arm, not your hand, when you cut. Michael Jacobs from The Creative Zone taught me this, and with a little practice I was convinced!

SCISSORS:
There are some special things that you can do to make very controlled cuts with scissors. First and foremost, it really helps to rough cut anything that has curved edges. I usually cut about 1/4” outside the line. It is also very important to turn the paper, not the scissors, when you cut. Turning the paper is all the easier after you have rough cut the shape, so that you are not wrestling with a big piece of paper while trying to make accurate cuts.

When you come to a place where the direction changes sharply on an inside corner, close the tips of the scissors to end the cut right at the corner. When you make the turn use just the tips of the scissors to begin the next part of the cut. This will minimize the flexing (and potentially crinkling) of the paper and it’s faster...
than skipping a sharp turn and cutting it from the opposite direction later.

It helps to control your cutting with scissors if you rest the lower blade on your fingers underneath the paper. I have noticed that most people don’t do this. Try it – you’ll be surprised!

People often ask if they should cut to the inside or the outside of the pattern edge line. It depends on the effect you want to achieve. If you are using white ink on a dark paper you may want to leave the lines on as a decorative element. Otherwise you will probably not want the lines to show. I cut the two large center pieces very carefully to leave as little of the lines as possible since they cannot be hidden on these pieces, which are seen from both sides. All the other pieces can be turned over when assembling the model so that the lines face inward and can’t be seen.

CUTTING SLOTS:
On the (some assembly required)™ models it is usually necessary to cut several slots. These are slots, not slits! A properly cut slot requires three cuts: the two sides and the short top end. The stamped thick slot line is removed completely. A good slot is 1/32” to 3/32” wide, depending on the size of the model and the weight of the paper that is used. The slots can be cut with either a knife (I like to use a utility knife for the larger models and a craft knife for the small ones) or scissors. I usually cut the slots with scissors.

When using scissors, I cut along the right edge of the slot and end the cut by closing the scissors. Then I cut along the left edge of the slot in the same way. The sliver of paper usually curls down a bit and sticks out below the main piece of paper. I remove the sliver by turning the paper 90° counterclockwise. Then I use the tip of the scissors to cut across the end (just like cutting any inside corner). Resist the temptation to turn the paper over when cutting the end of the slot. If you cut from the back, the cutting edge of the scissors will be about 1/6° away from the end of the sliver. This will always leave a little piece of paper at the end of the slot which will get in the way when you put the model together.

Another way to cut the slots on the large models is to punch a 1/16” hole exactly at the end of the slot. Cut along each side of the stamped slot line up to the hole. The most important feature of the slots is their length. They must be cut accurately for the model to fit together properly. If you are working with kids or people who may have trouble seeing well, using the punch technique will help to insure success.

LAMINATING PAPER:
You can greatly increase the range of papers that can be used for the SAR models by laminating together several layers of thin paper. This also allows for some two-sided special effects. Usually gluing two pieces of paper together is sufficient, but if two layers seems to be too thin you can just add more layers until the desired thickness is achieved. A very thin paper should be laminated onto both sides of a sturdy, smooth, center paper. When doing your first laminations start with smaller pieces of paper.

The paper should still be flexible after gluing (especially when making the Eggs), so white glue is not a good choice. I find that a spray glue, like Krylon® 7010, works very well. It is very important to use the proper technique when applying spray glue. If it goes on unevenly there will be places where the solvent has not evaporated enough and others where it has evaporated too much. This can lead to insufficient adhesion and separation and ugly splotches if you are working with a translucent paper. If you press the nozzle and spray continuously back and forth, there will be more glue where you make the turns or move the spray slower.

This is the way to do it smoothly. Aim the can at a spot to the right of the upper right edge of the paper and depress the nozzle to start the spray beyond the edge of the paper. (Put down a large area of newspaper behind the paper you are spraying!) Move the spray smoothly across the paper and release the nozzle. Start the spray again beyond the left edge of the paper and move the spray across to the right. Repeat the spray-release-spray-release technique as you work your way down the paper. Then repeat this pattern moving up and down, working from left to right. I learned this technique when I worked as a picture framer, and yes, if you do a lot of spraying your index finger will just
about fall off – pace yourself. The extra effort in this technique is worth it.

Let the solvent in the glue evaporate for a few minutes until the glue becomes tacky, and is no longer gooey, before sticking it down. To stack the pieces together, lay one piece on a smooth, clean surface with the glue side up. Hold the other piece, glue side down, by two diagonally opposite corners. Let the center of the paper sag gently. Lay the closer corner down onto the other piece, and lower the top piece down moving from the first corner to the other. This will minimize the trapping of air between the two pieces of paper and creating bubbles. Smooth the paper down, working from the center out toward the edges. It takes practice to do this well. Start with small pieces of sturdier papers as you develop a feel for the technique. Trapped air bubbles can usually be remedied by piercing them with a pin to let the air out and then smoothing them down.

ATTACHING PAPER:
Some of the SAR models require gluing. White glue (Elmer’s, Sobo®, and many other brands) makes a strong bond and allows for adjustment of positioning before it sets up. A little bit of glue goes a long way! The most common problem with gluing is applying so much glue that it runs past the area where it is supposed to be and sticks something together where it shouldn’t be stuck. If you use a lot of glue it also takes longer to set up. The bottles that glues usually come in deliver too much glue. A bottle that has a fine tipped nozzle is a much better container. (If you use one of these keep a long pin handy as the tip will clog frequently.) Another option is to put some glue on a toothpick and use that for more precise application.

GLITTER:
A simple method for dressing up some of the models is to cover them with glitter. It’s an easy way to make an ornament. Before assembling the model, use a spray glue like Krylon® 7010 to coat one side of each piece. Have your glitter ready in a shallow tub that is wider than the largest piece of paper that you want to cover. Take each piece and lay it on the surface of the glitter, pressing it to make sure it is completely coated. Shake out the piece and lay it on protective paper, glitter side down. When all the pieces have been coated on one side repeat the process on the other side. To keep the glitter from shedding too much, the pieces can be sealed with an acrylic spray sealer or hairspray.

PUNCHED CHARMS:
You can make delightful little charms with very simple materials. Punches that are usually used for cutting paper will also cut heavy aluminum foil very well. Use a disposable cookie sheet to make these charms. Begin by cutting off the outer rim of the cookie sheet. To avoid having the charm stuck on the hole punch, I like to punch the small hole before punching out the shape. Working near the edge of the piece of aluminum, punch some holes with a 1/16” hole punch. Take the punch that you want to use for the charm and set it on your work surface upside down so that you can see exactly where you are cutting. Put the metal into the punch and move it around until you see one of your little holes. Position the hole where you want it to be and punch out the shape.

The punched out piece of metal will not be flat. Aluminum can be easily flattened with the back of your fingernail. To finish your charm you can add some color with fingernail polish (see below).

COPPER:
The look of a finished heart locket, pendant, or pin can be enhanced by making one or more layers of the piece out of copper instead of paper. Tooling copper is too tough to cut with paper punches, but it can be easily cut with scissors. To stamp on copper it is necessary to use a permanent ink. Let the ink air-dry before cutting out the piece. After cutting the metal, the ink can be removed with 90+% alcohol (if you have managed to resist the temptation to speed the drying of the ink with a hair drier or heat gun). Like the punched charms, the piece of cut metal will not be flat. Roll a cylindrical object such as a pen over the piece, turn it over and roll again. Flip the metal over as many times as needed to flatten the piece. You can also add texture by using a cylindrical object that isn’t smooth.
The copper can be sealed with clear or translucent fingernail polish. You can also use the technique described below to apply a thicker coat of colored polish. When it has dried it will look like enamel.

**FINGERNAIL POLISH:**
You can add color to aluminum, copper, and paper by applying one or more coats of fingernail polish. The techniques for doing this with metal and paper are very different.

This is how you can make an enamel-like finish on metal. First, clean the metal by wiping it with 90+% alcohol. Working on a level surface, use a pin to hold the piece of metal down and dab the polish onto the metal so that it beads up and covers the entire surface without running over the edges. Let this dry for several hours or overnight. Repeat on the other side.

You needn't confine the use of fingernail polish to metal. It can have stunning effects on paper too. When working with paper the method of application is different. Paint on a liberal, but even, first coat of polish. The paper will soak up most of this and the surface will be bumpy. After the polish has dried apply another coat and let that dry. Keep building up coats until you get the look you want. Two coats are usually sufficient when working with metallic polishes that have a lot of pigment in them. Coating the paper with polish has the added advantage of making it more durable.

**METALLIZED VINYL:**
This material in gold is wonderful to use when making jewelry where it can be made to look convincingly like the real thing. This illusion is accomplished by being able to remove all traces of its true construction.

The vinyl comes with an adhesive backing and it is quite thin so it needs to be laminated to another support such as a heavy smooth text weight paper. Use the same method described above to stick the vinyl to the paper.

You will need to use permanent ink when stamping on the vinyl. It's a good idea, especially if you have a fresh ink pad, to lightly stamp the pattern first on a piece of scrap paper and then stamp on the vinyl. This will help to minimize both slipping when you stamp and dry time while you wait. Resist the temptation to apply heat to speed things up. You may damage the plastic and you will definitely set the ink so that it cannot be removed.

After cutting out the pattern pieces you can remove any leftover ink. Put some 90+% alcohol on a soft cloth and wipe the plastic gently until the ink comes off. Be careful not to use too much alcohol as it may loosen the adhesive.