

## Basic Paper Piecing – a tutorial for beginners

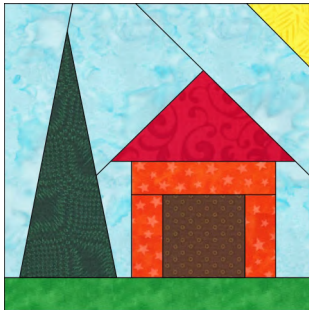
*This tutorial assumes you're comfortable operating a simple sewing machine. Beginner-level quilting experience is helpful but not required.*

### Introduction

**Paper piecing**, also called **foundation piecing**, is a method for accurately sewing quilt blocks by machine without needing accurate templates to cut fabric pieces. Fabric pieces are sewn directly to a printed foundation pattern on the reverse side, away from the quilter. During sewing, the printed side of the foundation pattern is face up so the quilter can follow the printed seam lines. The foundation is (usually) removed after sewing is completed.

It takes a little practice to understand and feel comfortable with the process of paper piecing. Once you “get it,” however, you’ll be able to precision piece quite complex designs that would be impossibly tedious to sew by any other method. And it’s great fun to do!

### Getting Started



Print the House and Pine practice block (last page) onto thin white paper, such as inexpensive copier paper. Though the design is very simple, the different fabric shapes and their sewing progression will be good experience in your first paper pieced block. If you like, print a 2<sup>nd</sup> copy of the pattern, which can be helpful when cutting out fabric pieces.

Gather your scissors, a few straight pins, and some fabric scraps in various colors. A rotary cutter, cutting mat and quilting ruler are also highly recommended, but aren’t absolutely essential for this tutorial. Set up your sewing machine near a sunny window or a bright lamp, and have the iron and ironing board nearby.

Thread the sewing machine as usual with ordinary sewing thread. Set a small stitch length, about 18-20 stitches per inch, or setting 1.5-2.0 on a digital machine. This helps in removing the foundation paper later.

To make sewing and handling easier, trim away the extra paper around the block foundation pattern to within about ½” (the exact measurement isn’t important) of the outside printed line. The pattern is a 6” square, which will be the block’s finished size.

Note that the standard ¼” quilter’s seam allowance is not marked around the block. As you piece, you **MUST leave at least ¼” additional fabric around all block edges**; you’ll trim it down precisely after the block is finished. If you like, mark the seam allowance as a reminder while learning. But I strongly advise you to get used to adding the extra fabric around your blocks without a marked line – it’s a habit quickly developed. (See the last section for why many pattern designers don’t mark seam allowances on their patterns.)

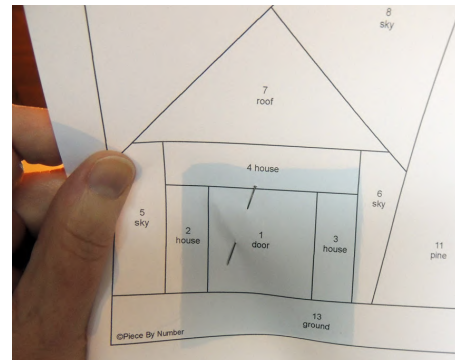
Key points to keep in mind (these will become clearer as you follow the steps below):

- The printed side of the foundation pattern always faces UP when sewing, so you can easily see and stitch along the printed seam lines.
- Fabric pieces are sewn to the REVERSE (non-printed) side of the foundation pattern, which means they're not visible when sewing. When you turn the work over to view the fabric, the printed side of the fabric should be face UP after flipping and pressing each newly added piece.
- The printed foundation pattern is always a MIRROR IMAGE (i.e. reversed) of the final block design. Compare the foundation pattern on the last page with the color image on page 1 to see this.
- The number in each area on the foundation pattern indicates the exact piecing order. Always follow this sequence for best results!

### Let's Paper Piece!

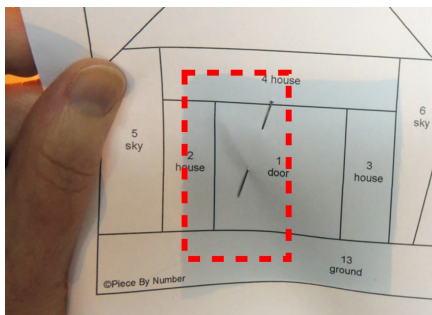
- 1) Cut a fabric piece large enough to completely cover the square marked **1 door**, and **add an extra ½" or so all around for the seam allowance**. The exact size isn't important, but it's better to be overly generous. With a little practice, you'll get better at cutting fabric pieces that are big enough without excess waste.

- 2) Hold the foundation pattern up to a strong light or bright window with the printed side FACING YOU, and hold the fabric square with the printed design AWAY from you. Place the fabric piece on the back (non-printed) side of the pattern so that it completely covers piece **1** (door) with at least ¼" fabric past all edges. Use a straight pin to hold the fabric in place. (Some people like to use a dab of fabric glue stick for this instead – use a very light touch!



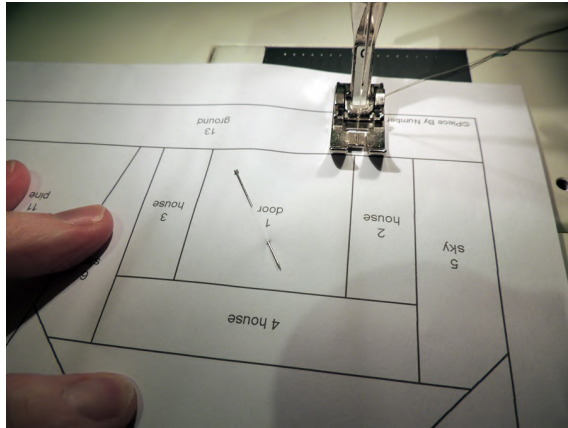
*ABOVE: The area marked 1 door is completely covered by the fabric square, with at least ¼" additional fabric all around for seam allowances. A pin holds the fabric in place on the reverse (non-printed) side of the pattern.*

- 3) Cut a rectangular piece of fabric big enough to cover piece **2**, remembering to add about ½" extra fabric all around.



- 4) With right sides together, place the fabric rectangle on top of fabric piece **1**, aligning the edge about ¼" or slightly more over the seam line joining pieces **1** and **2**. The red dotted line in the photo (left) indicates the general position for fabric piece 2 (*n.b.* here, the square door piece is a

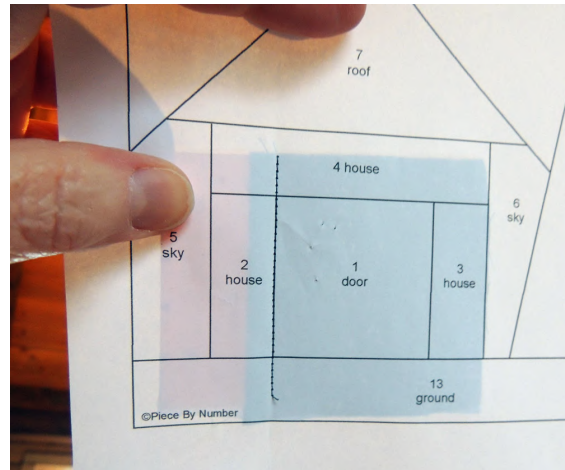
bit too big at the bottom!). As before, hold the work up to the light to help you align the pieces properly.



*ABOVE: Sewing the first seam – start at least ¼ inch before the marked seam line, and end at least ¼ inch beyond it.*

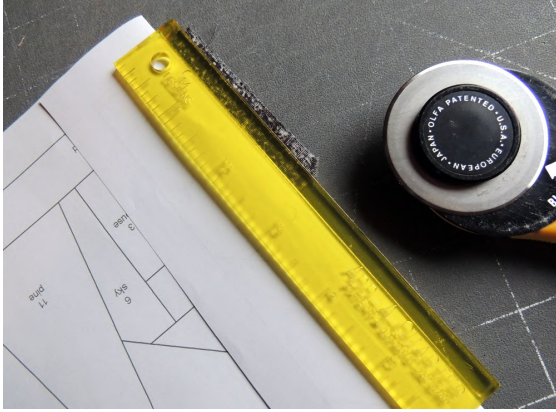
5) With the foundation pattern printed side UP and holding the fabric pieces in place, carefully slide everything under the presser foot. Starting at least ¼” (or 3-4 stitches) before the marked line in the area marked **13 ground**, sew the seam and end at least ¼” (3-4 stitches) past the marked line into the area **4 house**. Do not backstitch. Trim threads closely.

6) Turn the work over to check that the pieces were sewn in place without shifting or folding. Flip over fabric piece **2** so it’s right side up, and use your fingernail to gently crease the fabric along the seam (also called ***finger-pressing***). With the printed side of the pattern facing you, hold the work up to the light to check that fabric piece **2** completely covers area marked **2 house** on the foundation, with at least ¼” extra all around. If not, carefully unpick the seam and try again.

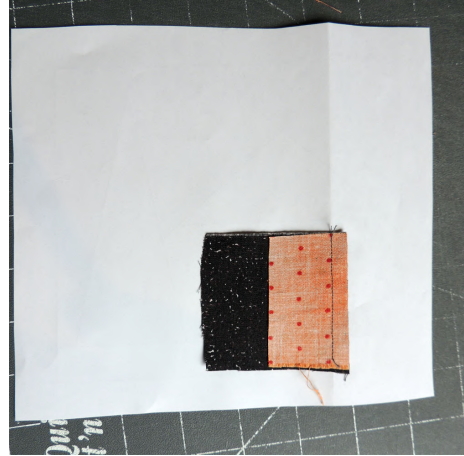


*ABOVE: Holding the work up to the light, it’s clear that the new piece (orange) indeed covers the area marked “2 house” with more than ¼ inch past the top, bottom and left side.*

7) If everything looks good, trim the excess seam allowance to ¼” with a rotary cutter/ruler or scissors. To trim with a rotary cutter and ruler, first fold back the paper foundation along the seam you just sewed. Then align a quilting ruler with the ¼” mark on the paper fold, and trim the excess fabric with your cutter (*see photo below*). Take care not to cut the paper foundation pattern!



*ABOVE: The excess seam allowance is about to be trimmed with a rotary cutter, with the paper pattern folded out of the way. The Add-A-Quarter™ ruler shown is very handy for trimming seam allowances to exactly 1/4" but any quilting ruler will work fine.*

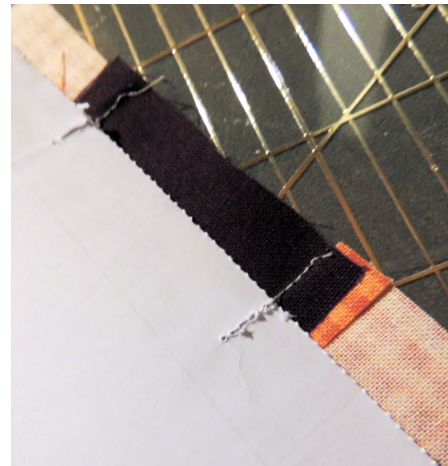


*ABOVE: Piece 2 sewn in place, after trimming, but before flipping and pressing with a dry iron.*

- 8) Flip back the fabric rectangle again right side up, and press the seam with a DRY iron. Don't use steam, as it can distort the foundation paper. After pressing, you can use a straight pin to hold the newly added piece as flat as possible to the foundation until it's anchored in place by sewing an adjoining fabric piece.
- 9) Repeat this process for piece 3. After sewing each seam, always flip the fabric piece right side up, hold up to the light to check the placement (unpick and redo if needed), trim seam allowances, and press open with a dry iron.

- 10) Cut a rectangle for piece 4, which spans the first three pieces. Sew it in place as before. When trimming the seam allowance, you'll need to gently rip the paper foundation a tiny bit to free it from the stitching of the first two seams (see photo). When using a small stitch length, you don't need to worry if a little stitching becomes undone because your last seam crosses over these previous two seams and holds them in place.

*RIGHT: To free the seam allowance from the paper to which it was sewn, it's necessary to gently rip the paper before trimming the seam allowance.*



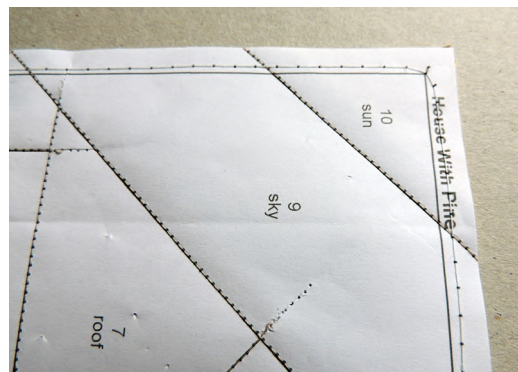
- 11) Starting now with piece 5, many of the remaining pieces will be a bit trickier to cut because they are either asymmetric, sharply angled or both. If you printed an extra

copy of the block, you can cut out the various pieces to use as rough templates for cutting your fabrics. When cutting fabric pieces for these more unusual shapes, remember **fabric WRONG side up, printed side of pattern RIGHT side up**.

For this first block, don't worry about fabric grain when cutting pieces. Leave plenty of extra fabric (1/2" or so) around the pieces for seam allowances. This may seem wasteful at first, but keep in mind it's more wasteful to cut a piece too small and have to cut a new one.

12) Continue adding the rest of the pieces to the block, following the steps above. After each addition, press well with a dry iron. After you've sewn the last piece, give the entire block a good pressing on the fabric side.

13) **OPTIONAL:** Return to the machine and set the stitch length to a long stitch (4-5 per inch). Sew a line of basting in the seam allowance around the entire block, about 1/8" away from the printed edge. I find this step greatly improves the neatness of my finished blocks and simplifies sewing them to other blocks or borders, but many quilters don't bother with this step.



14) Trim the fabric and paper foundation to a true 1/4" all around the printed edge. A rotary cutter and ruler is perfect for this task, though scissors are fine, too. You may wish to have a separate, dedicated cutter for trimming paper pieced blocks, because paper dulls the expensive blades much more quickly than fabric.

*ABOVE: The basting stitching is just outside the edge of the block. Here, the seam allowance has already been trimmed to exactly 1/4" past the block edge. The block is now ready to be sewn to other blocks, sashing, or otherwise finished.*



Congratulations - you've just finished your first paper pieced block!

Leave the paper foundation in place until after sewing the block to other blocks or borders. The paper stabilizes any off-grain edges until they're secured by being sewn to other fabric.

I hope sewing the House and Pine block gives you confidence to continue with other paper piecing projects. Many books and on-line tutorials for paper piecing are available. If you don't quite understand the process after trying this one, someone else's explanation may "click" better for you. My website page <http://piecebynumber.com/links/> lists several excellent paper piecing how-tos, including a couple YouTube videos. Of course, internet links come and go, so don't forget to search on Google and YouTube to see what's currently available.

### More Useful Information:

The following tips will greatly help you refine your paper piecing skills.

- **FOUNDATION MATERIALS (REMOVABLE):** Thin, inexpensive copier paper is most commonly used for foundation patterns. But there are other options such as onion-skin typing paper and plain newsprint (NOT printed newspapers, as the ink can smudge onto your fabric, iron and ironing board.) Quilt shops carry specially designed foundation material that can be run through a computer printer. They're extra-thin to facilitate fabric placement and removal of the foundation after sewing. Many quilters swear by these specialty materials, though others find their expense greatly outweighs their relative convenience.
- **FOUNDATION MATERIALS (PERMANENT):** Muslin or non-woven interfacing can be used as foundation material that remains in place after sewing. Permanent foundations are great for projects expected to get heavy wear, such as tote bags, pillow tops, and computer covers. They can, however, be challenging to mark with sewing lines – use a waterproof thin-line marker for best results. Some quilters successfully run lighter-weight materials through a home printer after ironing them to freezer paper cut to standard letter size, but try this at your own risk!
- **PRINT SIZE ACCURACY:** Before starting to cut and sew, always check the printed size of paper foundation patterns to ensure they're the stated size. Over the years, computer printers have become much more consistent in printing images true to size, but it may be necessary to adjust your specific printer's settings if patterns are printing off-size.
- **RESIZING PATTERNS:** Paper piecing patterns are easily resizable when printing or photocopying the foundations. Many block patterns include a table of resizing percentages to help you enlarge or reduce patterns to various sizes. Here's the general formula to calculate the correct resizing percentage (note that the desired and actual finished block sizes must be in the same measuring system, i.e. inches or centimeters):

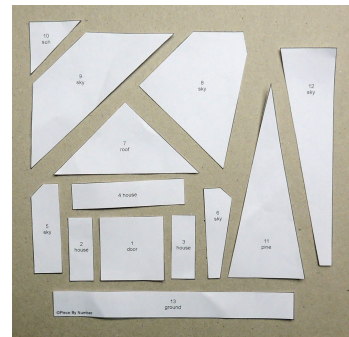
$$\frac{\text{desired finished block size (inches or cm)}}{\text{actual finished block size (inches or cm)}} \times 100 = \text{resizing percentage}$$

- **SEAM ALLOWANCES AROUND BLOCKS AND SECTIONS:** Many paper piecing patterns do not have the ¼" seam allowance marked. This allows quilters to enlarge

or reduce the size of the patterns to suit a particular project. If a  $\frac{1}{4}$ " seam allowance is marked, and then the pattern is, for example, enlarged at 200%, that original  $\frac{1}{4}$ " seam allowance is now  $\frac{1}{2}$ "! For this reason, many designers omit the marked seam allowance to avoid possible confusion for quilters when sewing with resized patterns.

- **ADDITIONAL PATTERN MARKINGS:** In addition to the numbers for the piecing order, some patterns (such as the House and Pine block) indicate what each piece is (e.g. door, leg, stem, nose) or its recommended color. More often than not, however, you'll need to plan this all out before sewing. It's wise to mark your color choices directly onto the foundation patterns to help avoid errors in fabric placement when sewing.
- **FABRIC GRAIN:** Because paper piecing involves sewing fabric to a stabilizing foundation, accurate fabric grain placement is less of a concern with this method than other types of patchwork. However, it's always a good idea to keep grain in mind for particularly larger pieces of fabric (i.e. more than about 4x4").

- **CUTTING FABRIC FOR MULTIPLE BLOCKS:** If you are sewing several of the same block (or even only one block of a particularly detailed design), you can minimize fabric waste and speed up your sewing by cutting an extra printed foundation pattern into its component pieces. Use these as rough "templates" to cut out the required number of fabric pieces before sewing. Remember to place the **printed side of pattern template RIGHT side up on the WRONG side of the fabric**. As always, leave plenty of extra around these templates for seam allowances. This method also helps with cutting pieces more accurately on grain.



*ABOVE: House and Pine block pattern cut into pieces for use as rough templates to cut fabric.*

- **SEAM ALLOWANCES WHEN PIECING:** Seam allowances may be graded to minimize bulk or show-through of a darker fabric under a light one. An exact  $\frac{1}{4}$ " seam allowance isn't strictly necessary – slightly more or less still does the job. If precision is important to you, you can buy specialty rulers (like the Add-A-Quarter™ ruler shown on page 4) at most quilt shops for trimming paper pieced seam allowances to a consistent  $\frac{1}{4}$ " with a rotary cutter.
- **MULTI-SECTION DESIGNS:** Many paper piecing blocks require several sections to form the complete design. Each section is paper pieced individually, and the outer seam allowance is basted (optional) and trimmed to  $\frac{1}{4}$ ". The sections are then sewn together in the particular order specified in the pattern instructions. Pierce through the marked end points of the seam with straight pins and at several points along it to accurately align sections when preparing to sew them together.

If accurate alignment of pieced sections is crucial to the design, pin together carefully as above, and sew the seam first with a machine basting stitch. Check your work. It's easy to remove the basting if you need to! When everything is properly

aligned, re-sew the seam over the basting with a small stitch length as usual. There's no need to remove the basting stitches.

- **MISTAKES:** Eventually and inevitably, you WILL need to rip out a seam. Take your time and *carefully(!)* unpick the stitches with a seam ripper or straight pin, trying not to tear the foundation pattern. It's usually possible to simply re-sew the seam after repositioning the fabric, and the paper will hold. Transparent tape can be used if the foundation tears too much. Take care not to touch the tape directly with the iron, however, as the heat may melt it.
- **REMOVING FOUNDATIONS:** When a block is completed, it's usually recommended to leave any removable foundation material in place until after the block has been sewn to other blocks or borders. The foundation stabilizes any off-grain edges until they are secured by being sewn to other fabric. (However, some quilters prefer to moderately spray-starch their completed blocks for stability and to remove the foundation *before* sewing to other blocks or borders – this may work better in some situations.)

Don't try to rush removing foundation papers. Consider saving this task for when you're relaxed with nothing much else to do, such as while watching TV or riding in a car or train. First remove any basting stitching from the perimeter of the block. Starting from the outside edges and working inwards, fold each paper piece back along the seam line and crease with your fingernail to weaken it slightly, then gently tear it away from each area. Now you can see why a small stitch length is recommended -- it perforates the paper more thoroughly, making it easier to rip away. Have a small bag or container handy for all the threads and paper bits, as it can get a bit messy!

- **EMBELLISHING PAPER PIECED BLOCKS:** Some blocks, such as picture blocks, need additional details such as eyes, noses, legs, etc. to be added by embroidery or applique. The printed foundation can help you accurately mark for these after all piecing is complete. Use a bobbin thread color which matches the fabric you're marking. With the printed side of the foundation pattern facing UP, machine stitch along the marked line(s). Remove your work from the machine and pull thread ends to the back of the work (foundation side).

Now there's a slightly visible line that will be covered when you embroider or applique over it. For small areas of embroidery, the paper foundation can also act as a stabilizer. But for larger areas and for machine applique, you'll want to remove the foundation paper and use a stabilizer material such as Stitch-n-Tear™.

See my blog post for more information <http://piecebynumber.com/mini-tutorial-machine-applique/>

If you have any questions or comments about this tutorial, or you'd like to share a finished project, please contact me at [maddocks.beth@gmail.com](mailto:maddocks.beth@gmail.com). My website [piecebynumber.com](http://piecebynumber.com), has many resources for paper piecers, including free patterns, tips and ideas on various aspects of paper piecing, and a regularly updated blog. I hope you'll stop by and see what's new!



# 6" House With Pine

