
Quilt Making 101: Patchwork with Liza Lucy

Chapter 1 - Introduction

Overview

(piano music) - Whether or not you choose to use old clothing or fabric you purchase specifically for making quilts, the process is simple, and it can be very enjoyable. I'm going to show you lots of different kinds of fabrics you can use. I'm going to show you how to prepare them, how to sew the fabrics. I'm gonna show you how to build a basic block using very simple math. And, in the end, we will learn how to piece by hand, and by machine, and how to do applique, both by hand and by machine.

Chapter 2 - Prepping for piecing

Overview of quilting fabrics

- Traditionally many quilts were made from old worn out clothing. It's a make-do kind of craft. We have an abundance of fabric made now for quilters, specifically for quilters and I use mostly those. But will show you other fabrics made for other purposes and tell you whether or not they're good to use. I'm gonna start here showing you modern fabric, this was made for a museum and they are reproduction fabrics. These are prints made from old plates done in an old-fashioned coloring and style, but they are contemporary fabrics, all cotton. These fabrics are from Holland and they are an imitation damask so that it is a flat cotton surface, very beautiful hand and nicely printed for quilt makers. They also do these very faint small prints that are called tone on tones which simply means one color on top of another that is very similar so they appear to be almost solid. I'm most familiar with the fabrics of Kaffe Fassett who I work closely with. These are Kaffe's fabrics. They're beautiful, they're colorful. They have an unbelievably silky hand that we're very proud of, and this is a small scale fabric. It's important in quilt making to use a variety of scales. So you want some small prints and some large. This is typical fabric that is designed by Philip Jacobs and colored by Kaffe, and this would be considered a large scale fabric. The texture of both are the same, it's just the size of the print is different and that's called scale. Very popular with quilters are batik fabrics. These are very colorful fabrics made in a manner similar to tie-dyeing and using wax printing process which I won't get into but just suffice it to say that they're very popular. They can be used with any of the other fabrics. They do not need to be used alone. Their texture is quite silky and the fabric is quite dense. It's just beautiful. I'm really fond of ethnic fabrics and I do collect them. This is a print, an aboriginal print, from Australia. This is an indigo, a real indigo print from South Africa. It comes like this and it's a very stiff and unpleasant feeling fabric, you wouldn't think that this could be used for quilt making. You can probably here it crunch. But after washing it becomes supple and very simple to use. It is delightful stuff. I also do the same thing with these African damasks, which are also crunchy feeling and once washed becomes supple and beautiful to use. It's a damask, a linen and cotton combination, which if you look you can see a pattern woven in and then it's dyed on top. Again, once washed, becomes as beautiful as this. (fabric rustling) This is a Japanese fabric. The technique is called shibori. Again it's indigo, I happen to be a collector of indigo fabrics. One day I'm going to have indigos from every country in the world I hope. And it's done in a process where, simple like tie-dyeing where bits of rice or tiny little things are tied to a white fabric and knotted and then the whole thing's dipped into a dye bath and once the knots are taken out where it had been tied there is no dye. And that's Japanese. I have these two fabrics from Germany. Hand dyed damask linen.

Hand printed linen. This is done with block printing. And these are imitation block printed fabrics. So they're printed just as Kaffe's are, by contemporary machinery but they look to be handmade. Kaffe started his adventure in quilt making with me doing Indian woven fabrics and these are two of those fabrics. These solids are called shot cotton. The term simply means that the color is shot through. So the warp, the thread's going this way are one color and the weft threads going this way are a different color. It has the effect of being almost iridescent and depending on how the fabric is situated, the color shifts. I prefer these to solids because I find that to be very interesting to happen in my quilts. I don't like perfection. I think that my quilts should look human made, not machine made. And the stripes are the same process, the color is woven in it's not printed on top. And these have a huge advantage over stripes that are printed. Now let me show you why. These stripes are printed on white fabric, and they're beautiful colors and love using them. I'm very fond of stripes, but if you turn it over you'll see that the color does not go through. That's because the fabric is printed on one side and is not appearing on the back side. On the woven stripes, the fabric is the same top and bottom. And this is a huge advantage 'cause when you cut your patches it doesn't matter which side is up when you go to sew it. It's always on the right side. Some other things that I have here are contemporary Japanese fabrics. The Japanese do beautiful computer generated design, and these are designed by my favorite Japanese designer Keiko Goke and made in a similar way to all of the other contemporary fabrics. This just happens to be her style and her artwork, and I'm a huge fan, and the texture of her fabric is unsurpassed. I do have a couple of things I generally don't use, but they do have a purpose and I'll use them if the color is right, if the purpose is right. This is a linen napkin and if I have a call for needing a flamingo in a design and I just have to have it and this is what I've got, I will use it. I certainly wouldn't make a whole quilt with this fabric, but if the design calls for it, it'll work. This is a make-do craft. Similarly, this is a home decorating fabric and it's quite thick, this is meant for upholstery. But if the design calls for a ginger gar, and I need a ginger gar and this is the best one I can find, and it probably is, I will use it. T-shirt fabrics are stretchy knit fabrics, but they're very popular with quilters who want to do memory quilts for their children or husbands and in this case, my daughter's theater group. But the fabrics stretch quite a lot and make them really unsuitable for quilting unless they're prepared specially. So to use these fabrics, you do need to get what is called interfacing to iron on the back to make them just as unflexible as the woven fabrics. So t-shirts are something I avoid, but they do have their use and I will use them. I will, in all honesty, use all of these fabrics in the same quilt because it is about color for me and it is about making do. So whether it's large scale or small scale, whether it's dark or light, I will use it if the purpose is right. And so I think that it's important to not concentrate too much on having a consistency of texture across every piece of fabric. I actually am not terribly fond of all batik fabrics, or all shot cotton fabrics in one quilt because there's such richness and variety to be had when you mix them all up. So I'm going to encourage you to let go of some of that perfectionism and use everything but the kitchen sink.

Prepping fabric

- Many of you have come to quilt making after having learned to sew, as I did. As a matter of fact, I had to have my home economics teacher's words removed surgically from my brain before I could even make a quilt. The conventions for sewing are more difficult to me than making quilts. Quilting is a lot simpler. So I'm going to go through the various conventions that were true for sewing that you don't need to pay attention to anymore and the ones that you'll have to pay attention to make beautiful quilts. I'm also going to show you how to take care of these fabrics before you even start

cutting. So, we'll begin with these ethnic fabrics which I tend to collect. These indigos. And these must be pre-washed before you make a quilt. I don't always pre-wash but in the case of ethnic fabrics such as this one or those woven in India which are woven under some primitive circumstances so that they often will have, you know, bits of matter on them. These I do wash before sewing. I don't always prewash contemporary made printed fabrics. I admit to some laziness, this is a preference. If you prefer to wash them and be absolutely certain they're going to be colorfast, absolutely do. If not and you're lazy like me go right ahead and risk it. Most of my quilts are scrappy quilts so if I had any problems with color bleeding I would never know it. These South African fabrics, similar to the Japanese ones, must be pre-washed because they are so stiff and crinkly. And when washed become very soft and supple and you can make them into beautiful, soft quilts. When I do prewash, I hand wash usually in my kitchen sink. If you have a washing machine that's fairly new and has a very gentle cycle then you can wash in your machine but too much agitation will cause the fabric to fray and will be very hard to deal with. I remove the fabric damp from washing or from the spin cycle and I take it to my ironing board and I finish it dry with my iron. I like this product very much, it's called Mary Ellen's Best Press. And I don't normally endorse a product. I'm not associated with them in any way. Even if I don't prewash some of my fabric I'll often use this product to put a nice stiff hair on the fabric, making it much easier to cut. Where you have a good, stiff fabric it's very easy to get a nice, clean cut for your patches. When I go to the store to buy fabric, I tend to buy half yards. Sewers, garment sewers, care very much about grain. Grain is how a fabric is woven, which you can see on the back most easily. There's a warp and a weft. Vertical threads and horizontal. And the diagonal is called the bias. These are things you must take into account when sewing garments not so much for quilting although there are times when it does matter. If you notice and you pull the fabric along the bias it stretches quite a lot. This is desirable when you're going to be making your binding, not so much when doing your patches. Although when you cut triangles you will be dealing with bias and stretch, so something to keep in mind. The reason I talk about it now, is that when you go to the store to buy fabric to make a garment you will notice that they usually tear the fabric so that's it perfect along the grain when you go to sew your clothing. But when you go to a store, a quilting store, you will find that they will cut the fabric with a rotary cutter. It may be somewhat off grain and that's just fine. This is a quarter yard of fabric, that means that the fabric is a full 44 inches wide which is the usual width for quilting fabric. There is some variety. And it nine inches this way. So, it's 44 by nine. Frequently, people will be buying what is called a fat quarter. Now, a fat quarter is also a quarter yard but it's cut differently. This is 44 inches wide fabric is cut 18 inches which is a half yard and then split down the middle. So the pieces are 18 inches by 22. This is a desirable cut often for applique if you wanna use it for your background for a block and sometimes for fussy cutting. Although I personally prefer the regular quarter because usually on a regular quarter I can get two images that are identical, sometimes more. One, two, three on this one on this rose. This is something I like to do 'cause I like to repeat images over and over, especially when I'm fussy cutting. So, my preference is for a regular quarter but many other people disagree with me. Your mileage may vary. My most frequent purchase is a half yard. I find that I get the best of both worlds that way, so I can have a piece that is 18 by 44. The full width and I get the best of both worlds that way. It's my favorite cut. As a curiosity, I added this to show what happens, which you do not wash the shibori, this is how it comes from the... And once expanded, and washed, and ironed it looks more like this. Let's move this aside and show you some other differences between quilt making and patchwork. When you sew clothing you use a different seam allowance than you do for quilting. This is my favorite machine, it's a Bernina

machine and it's quite high tech and I love everything it does. You don't have to have this fabulous a machine to make beautiful quilts. In fact, my grandmother's Featherweight is one of the most perfect machines for doing really beautiful patchwork seams. You can also just use a needle and thread by hand and I will show you how. But in the mean time let's look at the difference between the seam allowance for patchwork and sewing garments. If you look on this machine, and most sewing machines, you will see that there's a line that marks $\frac{3}{8}$ of an inch. That's the usual seam allowance for sewing clothing. A quarter inch seam is the convention for making patchwork. If you don't have a specialized quarter inch foot or a mark on your machine for a quarter inch you can take several Post-it notes and place it on the bed of your machine one quarter inch from where your needle will hit the fabric and tack it down. And you'll use that as the guideline for moving your fabric through the machine. There are couple other differences between sewing garments and sewing patchwork. For garment sewing using a polywrapped cotton thread is generally what is used. For patchwork, we use 100% cotton thread. I've heard that the theory is that you don't want your thread stronger than the material that is being sewn. So, since we generally use 100% cotton fabric, 100% cotton thread is what is used in patchwork. We also don't need to match the color to each patch. That would be insane. So I tend to use just these kinds of colors, neutrals. So if my quilt is primarily pale I use a pale one and so on. But neutral grays, taupes, cocoa colors are my usual threads. Once in a while, there'll be a black or a dark navy blue if my quilt is quite dark. The last convention that is quite different between patchwork and sewing garments is in pressing. In sewing garments, generally the seam allowance on the back is pressed open so that the two layers where the seam has been sewn is pressed open. In patchwork, you press to one side. Ideally, it should be pressed as beautifully as this block is with no kind of twists or turns but that's not always practical. You do press to one side, except sometimes when you've got a star where there are a lot of seams coming together and then you'll press them open. Because remember, in the end, you take the top, the batting, and the backing and do a quilting stitch. And if they are far too many layers it becomes too difficult to do.

Cutting fabric

- Learning how to cut your patches well will save you a great deal of time, and it's not hard to learn, but do practice. You can make a quilt using a scissor and a pencil and no other equipment. After all, that's how our great-great-grandmothers did it. When I started making quilts, I started with this rotary cutter, this ruler, and this mat. And I used just those three tools for probably my first 10 quilts. Just like in any other craft, you can start with simple tools, and the sky is the limit. You can end up with thousands of dollars in equipment, and your quilts won't get any better, but they may get easier. I do recommend one more ruler for my use, and that is the 60 degree diamond cutter. That's because I make quite a lot of quilts with that ruler. If you're not going to be sewing diamonds, it is unnecessary to have this ruler. I had said before that my favorite cut is a $\frac{1}{2}$ yard. Every patchwork pattern's going to tell you what size to cut your patches. We're gonna start with basic squares, because everything you do is going to be a variation on that. I have prepared this fabric by pressing it flat. It's my favorite size, a $\frac{1}{2}$ yard. I will fold it, now it's two layers, to make it into four layers. I never cut more than four layers at a time. This is a rotary cutter; it's to be respected. It is nothing more than a round razor blade, and can do a lot of damage. It's also a great tool. This one opens by pulling down on one side, exposing the razor blade. Many others operate differently, but essentially they're all the same. I tell my students that you may not put this down after using until it is closed. Leaving it open on your table is a scary thing to do. So we're gonna cut this $\frac{1}{2}$ yard. It's now four

layers thick. And the first thing that needs to go is the selvage. That's the edge of the fabric that is unusable. What you do is take your measuring tool and put it on top of the fabric that you do wanna keep, not the part that you're gonna cut away. Now, the best way to cut the selvage off is to have it on my right side. For people who are left-handed, it would be the opposite. So I turn my work around so that the part that I'm going to cut away is on my right side. You'll notice that I don't have the fabric lined up with the mat and the ruler, and that's because you only need to use one of the measuring tools. So I'm gonna put my ruler so that there's a straight line right on the fold, and then I'm going to open my blade and push the blade away from me, keeping my fingers safely away from the cutting edge. And it's gone. And I close the blade. I'm leaving the ruler on the fabric and turning it back around to the way I started. We're pretending that the pattern we're making today tells us to create a three and 1/2 inch patch. That will include that seam allowance. The instructions when they say, "Cut three and 1/2 inches," really mean cut three and 1/2 inches. So I'm going to move the ruler one, two, three, and 1/2 inches so that the three and 1/2 inch mark lines up with the left hand side. And I'm going to cut away from myself and remove the fabric that we're not going to use. We're now going to cut this into three and 1/2 inch squares. I'm moving my ruler over, lining up this left hand edge, and cutting away the uneven edge. And it's gone. I'm now gonna move my mat again without touching my ruler, 'cause it stabilizes the fabric. Find three and 1/2 inches this way. Line it up. And I've got a three and 1/2 inch square. In fact, I have four of them. And they're identical. I have already cut the squares, and I wanna show you how to cut a three and 1/2 inch diamond. As I mentioned, I like to use diamonds quite a lot. So I've prepared another three and 1/2 inch strip that I cut the same as I did before. And I'm going to switch rulers. This is the 60 degree ruler, and it's marked similarly. Harder to see 'cause the numbers are black. And I'm putting it on the three and 1/2 inch mark on the bottom. I'm cutting away an edge, and that's now gone. And now I'm taking it and putting the three and 1/2 inch line right on the bottom and lining up so that the edge of the rulers hits this point, and I'm cutting again. And now I have four identical 60 degree diamonds. This shape, this diamond is commonly used in tumbling blocks patterns. Also, Kaffe and I tend to use diamonds quite a lot. We do a lot of quilts with just diamond shapes that repeat across rows, and I think they're very effective. I'm gonna show you a couple of other usual cuts that are made from squares. You all know this is a square, and that is probably 90% of what you're going to use when you make quilts. The other shape that is commonly used is a triangle. And to make a half square triangle, you cut a square in half. Now, I've marked this with a dark pencil line so you can see how you would cut this. What you do is you take your ruler. On the 45 degree line, put it in one corner, line it up, and then you cut from corner to corner, making two half square triangles. You'll use a lot of these. The last thing that you will use in most of your quilts is the quarter square triangle. Cutting a square into quarters. Again, you place your ruler from corner to corner, cutting once, and then very carefully, without touching the fabric, you cut in the opposite way corner to corner. And the result is four quarter square triangles. You're going to find on the market a lot of gimmicks and gizmos to make this easier. Honestly, I think this is the easiest way. It's the most precise way for me. And I still haven't found anybody can do it quicker than I do, so I recommend doing this the old fashioned way just the way I showed you. Last but not least, we're going to talk about preparing applique shapes. Applique is a little bit more freeform than piecing. And generally people use templates for their shapes. You can buy template plastic, which is this translucent plastic, to cut your templates or your shapes. You trace them from the pattern in your book or the pattern that you buy for applique. Some people use freezer paper, which is the old fashioned paper that you use to wrap meat. It's plastic on one side and plain white paper on the other. Whatever you prefer is fine. And you will cut

your shapes by drawing. And it's very hard to see here, so I'm gonna show you two ways. So you place your template on fabric. You draw around with a pencil or a chalk and although it's hard to see, my mark is right here. This is one way to prepare applique pieces for hand applique or needle turn applique. Another way to prepare is to use what is called fusible web. Fusible web is a kind of web that is a glue that activates when ironed, and it makes the fabric quite stiff and easy to cut. Now, when you use fusible web, you have to use your applique pattern in reverse. That's because you're drawing on the wrong side of the fabric. So here's our fabric. We have applied the web, which is attached with a piece of paper, ironed it on, and you can see it doesn't work. That's because, remember, we have to do in reverse. So you place it in reverse, draw around just the way you did for the hand applique needle turn method. For both of these, you're going to cut using scissors. For the needle turn hand applique, you're gonna cut 1/4 to 1/8 of an inch beyond your drawn line. For the fusible raw edge applique, you're going to cut right on the line. Both cases you're going to use very sharp scissors.

Applique

- Applique is a type of quilt-making. You usually choose to do applique when you've got very, very curvy shapes that could not be accomplished by piecing by machine two geometric pieces together. So most applique is quite curvy. Quite curvy shapes that are applied, applique, to a background fabric. This is a typical applique pattern, known as princess feather, and in this case the applique method was done by raw edge applique by using a fusible web. I'm gonna show you how to do raw edge machine applique the way it was done on this princess feather. This is a template that I made for my applique pattern. I used fusible webbing, and there are many brands. It's a glue-like web fabric that is between two pieces of paper. So here's the webbing, and this is the paper. You iron the fusible web to the back of the fabric you wish to use, using the instructions that come with the web that you purchase. They're different for each brand. I have applied that web to the back of this fabric. I've drawn my template in reverse on the back of the webbing. And then I am going to cut this out on the drawn line. Once I have done that, I will peel the paper back on the applique and I will adhere, by ironing, the cutout leaf onto the background, which will make my block. So I've already cut this out. I have fused the applique to the background, and these are different stitches that you can use to applique your piece onto the background. Every machine is different and you're going to need to experiment a little. You'll also need to decide if you want this to be a contrasting or matching thread. This is a design decision that you'll make. I've used here, this is a buttonhole stitch, a satin stitch, and this is a zigzag stitch. Your machine may have hundred of stitches that you can choose from. Now, you can do machine applique with raw edge the way I showed you, or my preferred method is slower. And it's done by hand. I showed you before, that you draw on the right side, cut out using your scissors, about 1/8 to a 1/4 inch beyond your drawn line. Just eyeball it, it does not need to be precise. Once you've cut around the entire piece you need to applique to your background. Now, there's lots of ways of preparing this, I like to baste with a contrasting thread, right on my drawn line. Most people like to use tiny little applique pins. Which are short sewing pins that can be placed along the work, every few inches. In any case, whether you baste it on or whether you use pins, the applique stitch is the same. I like to use what is called the straw needle. It's a very, very fine needle. And it's very long and it's easy to hold. I like to use silk thread because it disappears. The idea with hand applique is to not see the stitches. It's the obvious of when you use a machine stitch, which is decorative. What I do is I put in a basting stitch that's easily seen, right on the drawn line, and as I go and do my applique work, I remove a

few stitches, push that thread out of the way, and then I take my needle, tuck it in, so the drawn line is where I'm going to sew, place my needle into the background, and come up, just grabbing a couple threads about an 1/8 of an inch down, and pull through. I'll do it again. I lace the needle into the background, go about 1/8 of an inch up, catch a couple threads, and pull it through. And you can see that my stitches have all but disappeared. Once again, I'm going to sweep the seam allowance behind. I'm going to place my needle into the background, go about 1/8 of an inch behind, catch some threads in the appliqué and pull up. And you do that until you've put your leaf onto the background fabric and your block is completed. This is called needle turn appliqué. It's my preferred method. You may choose to use any number of ways to appliqué, it is a beautiful technique and I think you'll enjoy it.

Chapter 3 - Piecing Techniques

Block piecing

- Machine piecing is going to be the most common technique you're going to use in making patchwork quilts. I'm going to make a nine patch block. It's the simplest block you can make. It takes five squares, five patches of one fabric, and four patches of another. I'm going to start by taking two fabrics, two squares, one of each, and I'm gonna put them face-to-face, and edge to edge, lined up perfectly. And you may choose to pin. I don't I find that they hold just fine. I'm going to move it under my foot. Place the edge right along the outside of my quarter-inch foot, my special foot. And I'm going to begin to sew. If you notice, I've got a very bright yellow thread. I wouldn't normally use this, but I was hoping that you may be able to see it more easily with a thread that's this bright. I'm going to start sewing the seam. I will not do a back stitch. It's unnecessary in quilt making. (sewing machine whirring) when I reach the end, I'm not going to take it off the machine or cut the thread. I'm going to pick up my next pair of patches. Place them edge to edge, just the way I did the last ones. I'm going to place the next pair right against my presser foot. Then just going to press on the pedal and continue to sew. This is called chain piecing. Because the pieces are chained together. I'm now picking up my third pair. Placing them together exactly the same way. And adding it to my chain. At this point, I'm going to remove the chain of three pairs from my machine, cut the thread, and put them back over here. Where you can see that they open up just so. You now have a choice. It's very easy to cut apart the chains, add this fabric to here, this one to here, and this one to here, making three rows. I'm going to do it in a more advanced way. I think it's easy. You may choose to cut the chains apart and do it the way I described, making three rows. But, give this a try. I'm now going to add this piece to here, this one to here, and this one to here, without cutting the chains apart. So, I pick up the first one. I'm going to place it edge to edge, just as I've done before. Place it under my presser foot. And sew. Open the second one. Pick up its last piece for that row. And, chain. And now the last one. To get the patches to line up nicely, this is where you may want to use pins. You're going to place the edges together. And then, where there is a seam from before, you're going to push the one on top toward your left, and the one on the bottom the opposite direction. And they will nestle together once you have folded one in one direction and one in the other, place your pin. Do it again here. Take the block back to your machine. And let's sew those two rows together. When you get to the pin, stop. You do not want to run over your pin. I like to use my seam ripper to help guide at this point. You may use your fingers or a pin or a special tool called a stiletto. I remove the pin. I hold my work with my seam ripper point, and continue. And now remove it from the machine. Repeat the same thing, putting the last two together. However, this time we're gonna pay attention to the seam allowances on the back. This is when you may choose

to press, iron your piece. If you notice, the seam allowances are going in this direction on this row, and in this direction on that row. So, when we put the last pair together, it's important to make sure the seam allowance is going in this direction, and this is going in the opposite. They're nestled together, and you place your pin to stabilize. Do it again for your final seam. Sew these two rows together exactly as you did those. Remove your block, finished, from your machine. And you've got a nine patch.

Other piecing techniques

- I'm gonna show you some other simple piecing that you will commonly do in doing quilts.

Remember I said a half square triangle is made of cutting a square in half. I'm going to show you how to make a half square triangle block. I'm going to sew these two together along the long edge, and we'll make a two color square. Going to line them up perfectly, just as you did with the squares.

If you choose, place a pin to stabilize. Place the point under your presser foot, using your quarter inch foot as a guide, and sew. You can chain piece your half square triangles. Now, one thing about half square triangles that intimidates a lot of people, is that this is a bias edge, which makes it quite stretchy. If you're very careful and you don't tug on it, as it feeds through your machine, they will come out perfectly, as you can see. It squares up beautifully. You do a similar kind of sewing with quarter squares, only instead of sewing along the long leg of the triangle, you sew on the shorter leg.

And I'm going to show you that by doing two sets just like that, you can make a block that turns into an hourglass. And that's using quarter square triangles. Let's go onto 60 degree diamonds. The Rosita quilt that I showed you in the Anatomy of a Quilt video, you used 60 degree diamonds, just like this. And they were arranged so, to make a chevron kind of shape. The way we're going to sew these together is by sewing this one to this one, and this one to this one. These are tricky. I highly recommend drawing your seam allowance on the backs of these diamonds, until you get a feel for it and develop an eye and you can do it without drawing. I've taken a quarter inch ruler, placed it along the edge, and drawn so you can see the intersections. Now normally, this could be done with a pale pencil or chalk, but I did them darker so that you could see them. Take your needle.

At the intersection, place it through. These fabrics are right sides together. And then, look on the bottom side where I have also drawn, and place the needle right through that intersection. Pick up your piece and align the straight edges. Once you've done that, take another pin and pin the two pieces together. Remove the pin that you put through the pivot. Do it again on this end. Put the pin through the pivot. Grab another pin. Don't throw it, stabilize it. And take the pivot pin. Now, you're going to take both pieces to your machine. Place the two pieces under your needle, using your quarter inch foot, and sew. Remove it from your machine. When you open it up, you will see that you've got a straight line all the way through, from one color to the next, on both sides. And you'll have this funny little dog ear sitting out. People have a tendency to think that if they just line them up perfectly and sew, they're going to open up and give you the straight line. It won't happen.

Because of the quarter inch seam, the two diamonds need to be offset the way I showed you. If you do it this way, you will have a perfect diamond piecing. So, one last technique. Which is by far the trickiest seam I know of for quilt making, is called the Y seam or inset seam. This is a block that's a variation of one called Attic Window traditional block. Made with two pieces. The square on one side and angled on the other. And then a square is inset in. The reason it's called a Y seam is the seam is here, here, and here, like the letter Y. I'm going to make it using these fabrics. I've already cut two of these shaped fabrics. I've drawn the seam line again so you can see what we're doing. And the first thing I'm going to do is sew the long angled seam. Again, a quarter inch. This time, I'm

going to put the machine needle into the pivot point to start, not the edge of the fabric. We're gonna take a stitch. And take a back stitch. And then forward again. To the end. And remove it from the machine. Take your pins out. And in this case, we're going to open the seam and finger press. Finger pressing means just using your fingernail to set the seam. You could take this to an iron, but I think this is sufficient. Now, open your block up. What we're gonna be doing is sew from the end to this spot, we're gonna place the needle down in our machine, and then we're gonna pull this around, line it up, and sew the rest of the way. And if I'm lucky, it's going to work fine. Place it under your presser foot. Quarter inch seam, as always, from the very end. And sew. Remember, we're going to drop our needle right there. Leaving the needle down, pick up the presser foot. And now, manipulate this around. Use your tools. Line up the square with the piece under it. Takes a little tugging. It's not hard to do. Flatten it all out. Put your presser foot down, and finish the seam. Let's see how it turned out. If I'm lucky, it's okay. Oh, not bad. I've done it better than this. I've done it worse. It does take some practice. Kate and I did a design called Hankridge of Corners, which is very popular, and after making 10 or 20 or a few hundred, I've gotten pretty good at this technique. There are other ways of doing this seam, but I find this to be the easiest and certainly the fastest. If you'll look, it's a nice Y shape. And the back is going to lay nice and flat, which is important when you go to quilt it. So, you'll press this and move on and make a few hundred more, and you'll know how to make this block. Once you've done squares, half square triangles, quarter square triangles, diamonds, and Y seams, you'll be able to do just about any block there is in quilt making.

Chapter 4 - Foundation Piecing

String and paper piecing

- There are a couple kinds of foundation piecing. That means sewing fabric to either a cloth, or most often, paper that is not used on the top of the quilts. There are a couple reasons for doing it. The first I'm going to show you is for using small, waste fabric. And the other is going to be for precision, this one is not. So, long pieces of fabric like this, often taken from the hems of dresses traditionally, were called strings. To use strings, people often made fabric from sewing the various strings together. So what I've done here is, I've sewn all these strings to this piece of paper, and I will show you how by sewing on the last string. I'm gonna place the fabric right-sides together, as close as I can to a straight edge. I'm going to put it under my presser foot, and I'm going to make the stitches shorter. Smaller stitches. Your machine may work differently than mine. For this one, I just push a button to make smaller stitches. This is because you're going to remove the paper in the end, and it's a lot easier if it's been perforated quite a lot. (machine whirs) You do not have to do a perfect quarter-inch seam, just as close as possible. (machine whirs) Remove it from the machine, press your string down, trim it off. This is not precise. Once you've got a desired size of assembled fabric, you can now cut a shape from this. You may recall, in *The Anatomy of a Quilt*, seeing a long diamond pattern that Kaffe and I had done, and the half-square triangles were cut from a string-pieced foundation fabric just like this. So, let's cut a square from this. I know, let's cut a diamond. Even more fun. Once we've got it all cut, you're going to turn it to the reverse side, give the paper a bit of a press, and gently remove it. And you'll remove it from the entire block. And it'll be a beautifully-striped, string-pieced square. So the next type of foundation piecing, commonly called paper piecing, is this. This is a pattern Kaffe and I did called Penance. It is a square that is divided into these funny oblong triangles. These are very hard triangles to piece the way we have done before, so using foundation paper is the best way to get a really sharp, long piece. What we do is cut the fabrics we're going to use into large strips. This is a bit wasteful, and you're just going

to have to adjust to wasting fabric. You're going to place the first fabric, which in this case is going to be this spot on the number one position, covering the lines. And here's the tricky part, you're doing it on the reverse side. The lines need to be facing you to sew. So we're putting it here, and doing a little back-and-forth to make sure that it's going to be larger than the part that it needs to cover. In this case number one. Number two is this orange fabric, and I've already placed it here. You're going to place the number two fabric, which is the orange fabric, front-to-front with the number one fabric. And you've gotta make sure it's going to cover this triangle once it's sewed. The words are hard, but just watch what I do and I think you'll get it. So, I've lined up the orange fabric, which will be sewn to the blue fabric on that black line. I flip back and forth to make sure it's going to work. Lemme show you. The seam will be here, and I have made sure that it's going to work. I've stabilized it with a pin. You're going to take this to your machine, and place it so that you sew on the black line. Go a little beyond it. Again, with a smaller stitch than normal, and we're going to sew right on the pencil mark. You're gonna find that you're going to make a lot of mistakes when you first do this technique. I know I have, I still make mistakes because it's about mirror images. So just be patient with yourself, be willing to try it out. (machine whirs) (machine whirs) And go beyond a little bit. Take it off your machine. We've sewed on the line. We're going to turn it over. With a sharp pair of scissors, we're going to trim away about a quarter-inch beyond the sewn line. Again, this does not need to be precise. Open it up. We've got a beautiful seam. So, next will be another piece of the blue, which you're going to line up by looking at the seam number three, the one between two and three, and it will go roughly here. And I've cheated a little by getting it ready, and I've already sewed it here. Did it exactly the same as I did before. I sewed on the line between two and three, I'm now going to trim it away, and once I've done that, I've got an absolutely beautiful, perfect point. And you do this now for the fourth, fifth and sixth piece until you're completely covered. You trim your block a quarter-inch beyond the last line, and there it is. A perfect Penance by Kaffe Fassett.

English paper piecing

- We have one more kind of foundation paper work to do. It's called English paper piecing and it's how we make this kind of hexagon flower. You can do other shapes, but this is the most common for English paper piecing. You need several things, you need to cut or buy precut forms which are paper stock, stiff paper stock, of the hexagon you want to use. And you need some fabric, and here's what you do. For the one inch hexagon. Some people cut a hexagon out of fabric that's only about a quarter inch bigger all the way around. I like to use a square, it works fine. So I've cut a two and a half inch square for a one inch hexagon. One inch, by the way, is a side, it's not the measurement across, but it's the measurement a side. And you take a pin. And pin the paper to your square. There are two ways of basting, this is my preferred method. It doesn't pierce the paper, but you can baste right through the paper. Fold the fabric firmly over an edge, hold it, and now fold the next edge. So you've got kind of a tight corner there. With a needle and just thread that you're going to waste so it's not going to be expensive thread, sew through once, twice, securing that folded corner. Take your thread and push it aside, turn counter clockwise, old it down, and now turn the next edge of the hexagon. This time we're only going to backstitch once. Pull it taught. Turn. Hold it down firmly, fold over on the next edge, take a stitch through the corner. I'm not going through the paper, just the layers of fabric. Pull it taught. And repeat until you get to the end. Fold, fold, stitch. And now the last one. Fold it down, and this time you're gonna secure it where you started. I take two stitches. No need to knot. And cut it off. Now you can remove the pin. In this case

I'm using a fine silk thread, you could use a fine cotton thread, as well. And I like go back to the straw needle that I use for applique because it's long and quite thin. So for this flower I've chosen this center and I've chosen these petals. And I'm going to sew the petals to the center in sequence. So I'm going to sew this one to here, this one to here, this one to here, this, this, and this. And I'll show you how to do a basic whip stitch. You're going to take them and put front sides together and I'm going to sew along this edge. So I line them up nicely. I have a knot in the end of my thread this time, and I'm just going to push through, catching a couple of threads from both hexagons. And so I'm over catching a couple threads 'til you get to the end. I'm not sewing through the paper, I'm just catching the very edge threads of the hexagons that I basted. I like to take a second stitch in the corner. And then pick up the next petal and move on. So again, front sides together. And whip stitch to the end, two stitches at the corner, pick up the next petal. And I do this until all six petals are attached to the center. To sew the petals to each other, first you need to pop the foundation paper out of the center. And I've already done that because this is a finished flower. So pop this out by cutting the basting thread and pulling it out. And then you can easily fold, whip stitch the petals together one at a time. Until you have a six petal hexagon flower. Grandmother's flower garden is the name of a quilt that uses these flowers, it's very traditional. And in the case of grandmother's flower garden, usually there's a single fabric, often green, 'cause afterall it's a garden, that separates the flowers from each other on the quilt. I don't want to do my quilt that way so I'm going to nestle my flowers edge to edge like so. Once I've decided how to arrange them it gets a little tricky because I don't want to remove the papers until I've surrounded a hexagon. So I will sew this edge to this one, this edge to this one, and manipulate it a bit to sew that to this edge and then I will pop the papers out of the surrounded hexagon by removing the basting stitches and they pop out so easily. So this is foundation paper piecing English style. I think this is the most fun of the three techniques I showed you on foundation, probably because it's so portable. So those of you who are sitting on bleachers watching soccer games or flying long distances can easily take your English paper piecing with you. It's very portable, enjoyable, and so simple to do.

Chapter 5 - Block Adjustments

Adjusting block sizes

- I'm gonna teach you some math. Don't panic. I find that quilt makers constantly come to me and say I've got a drawing of a six inch block, but I want to make it 10 inches. How do I do it? And they panic. It's very simple. I'm gonna teach you three numbers that will get you through almost every block. This is called a variable star. It's the simplest of the star blocks and it has the three shapes that you'll use the most often. This is a computer electric quilt drawing. It's easier to see than my hand drawing, but they're identical. This is a block that is two, four, six, eight inches finished. Most of the time, people get messed up thinking they have to consider seam allowance before they can even draw the quilt. Let me just say this clearly. You don't even think about the seam allowance until the very end. Not on any piece. Forget seam allowance, it doesn't count. We have squares in the corners and one in the center and we know this is an eight inch block so this square must be two inches if you visualize a line going through here. Two, four, six, eight inches. On every square there will be a 1/4 inch seam allowance all the way around. So every time you need a square, in this case two inches, you will add the magic number, 1/2 inch. So for every square you're going to add 1/2 inch. This is a four inch square, just trust me. It's a four inch square and so we're gonna add a 1/2 inch. These are our cutting measurements so this is going to be four and this is gonna be 2 1/2 inches to cut. The other two shapes are triangles. These triangles, these small ones and we're gonna

use this fabric, are $\frac{1}{2}$ square triangles. Now how do I know that they're $\frac{1}{2}$ square and not $\frac{1}{4}$ squares? Half squares have the straight grain going on the short sides. So remember we cut a $\frac{1}{2}$ square triangle by taking a square and cutting it in half. It's a $\frac{1}{2}$ square triangle. This $\frac{1}{2}$ square triangle we know the leg is only two inches. Whenever you've got a two inch leg on a $\frac{1}{2}$ square triangle, the magic number is $\frac{7}{8}$. So this is a two inch leg we add $\frac{7}{8}$ and to make that triangle we cut a $2\frac{7}{8}$ inch square and bisect it. So I'm gonna just put these here so you can see their position. The last piece is this one. This is a $\frac{1}{4}$ square triangle. How do we know that this is a $\frac{1}{4}$ square and not a $\frac{1}{2}$? Basically they have a right angle so you would think that it's the same. But the difference is on the outside of blocks you don't want a bias edge, which means the grain of the fabric has to be on the straight grain here. So the magic number for $\frac{1}{4}$ squares is $1\frac{1}{4}$. $1\frac{1}{4}$ and I know that that length is four inches. Remember this is a four inch square so this must be four. So this is four plus $1\frac{1}{4}$ and you cut $5\frac{1}{4}$ inch square which is attached to my sleeve and so this was a $5\frac{1}{4}$ inch square. I cut it both ways and now it will fit here. Now every time you do a $\frac{1}{4}$ square triangle cut from one square you get four and in fact we only need four for this quilt. We know we need one, two, three, four of these. We need eight of these, which means you cut four squares and bisect them. One square here, one here, one here and one here to make eight $\frac{1}{2}$ squares. And then you cut one center. Now you'll notice that when I lay them on top of my drawing they're very clumsy and that's because the seam allowances are already in our cut pieces and they will come together perfectly to make that exact block. Patchwork blocks use mostly these three shapes, squares, $\frac{1}{2}$ square triangles and $\frac{1}{4}$ square triangles. There are three numbers. You draft a block, finished size. Then when you break it into the components, any square add $\frac{1}{2}$ inch and that is your cutting measurement. Any $\frac{1}{4}$ square triangle you add $1\frac{1}{4}$ inches and cut into four triangles from each square. Any $\frac{1}{2}$ square triangle you add $\frac{7}{8}$ inch, make a square and bisect from corner to corner once. It's really simple, I hope you give it a try.