STITCH ANATOMY SERIES

Mosaic Knitting Lesson
by Suzanne Bryan

About Mosaic Knitting
The mosaic stitch pattern is a subset of slipped stitch patterns, the difference being that the yarn is always carried across the wrong side of the work when working mosaic patterns. Many slip stitch patterns incorporate stranding the working yarn across the right side as well as the wrong side to create interesting color designs. In mosaic knitting the strands are always carried across the wrong side.

The technique of Mosaic Knitting was invented and the term coined by Barbara Walker. In Barbara Walker's A Treasury of Knitting Patterns first published in 1968, she presents several Mosaic type stitch patterns in the chapter on Color-Change Patterns. The directions were given as line by line and not in chart form and the designs have not been labeled as Mosaic Patterns. In her next volume - A Second Treasury of Knitting Patterns first published in 1970, she dedicates an entire chapter to Mosaic Patterns. This is the first time that she uses the term Mosaic to describe the stitch patterns. The instructions are still given line by line. Then her next volume was titled Charted Knitting Designs: A Third Treasury of Knitting Patterns first published in 1972, and it is here that for the first time the now standard method of charting Mosaic Patterns is seen in chapter 8, Mosaic Patterns. She then goes on to add a chapter – Mosaic Samplers, chapter 2 in her volume A Fourth Treasury of Knitting Patterns published in 2001, (originally published as Sampler Knitting in 1973), a culminating volume dedicated entirely to Mosaic patterns – Mosaic Knitting, originally copyrighted in 1976, published by Schoolhouse Press in 1997.

Mosaic Techniques
Mosaic knitting incorporates two (or sometimes more) colors into the knitted work. Only one color is worked across the row at a time. In fact, that color is worked for two rows, a right side row and a wrong side row, before changing to the next color, which is then also worked for two rows. Every two rows the color will change to the one not being used. The yarn not being used is left hanging at the right edge of the work. When changing from one color to the next, the just used color is allowed to hang to the front and the unused color is picked up from behind. This allows the colors to twist around each other at the right selvedge and to create a nice even edge. You will notice that these color changes create little stripes along the selvedge and are very easy to use to count the number of rows that have been worked – each stripe accounting for two rows or one garter ridge. While knitting across a row, various stitches from the previous row are slipped purlwise according to the pattern, pulling the color from the row below up into the current row. This is what creates the two color patterns.


**STITCH ANATOMY**

*continued from page 9*

It is very simple and even a very new knitter who has mastered only the knit and slip stitch can create these beautiful designs.

Mosaic patterns that are worked only with knit stitches create a garter stitch type fabric that is very dense yet elastic. The row to stitch ratio is 2 rows (or one garter ridge) to 1 stitch which is very convenient and allows for very geometric designs. Each two rows account for one color change vertically and each stitch allows for one color change horizontally – creating perfect little squares. (See Swatches 1 and 2)

Mosaic patterns can also be worked in a Stockinette fabric and in that case the row to stitch ratio does not produce perfect squares, but vertical rectangles. The row to stitch ratio will not be the same as a true Stockinette, but will be tighter due to the drawing in effect of the slipped stitches. Stockinette mosaic patterns are more dense than regular Stockinette and less pliable and elastic – not as dense as double knitting, but much more dense than regular Stockinette fabric. (See Swatch 3)

Mosaic patterns can also be worked with a combination of Stockinette and garter stitch which creates very interesting effects and depending on the ratio of garter stitch to Stockinette stitch will give a fabric somewhere between the garter stitch mosaic fabric and the Stockinette mosaic fabric.

**Charts and symbols**

Mosaic charts are very simple to read once you understand the layout. Notice that each row on the chart represents two rows of knitting – one row going from right to left and then another row going from left to right. You can tell this by looking at the numbers going from the bottom to the top on each side of the chart. On the right side the numbers start with 1 and are all odd, while on the left the numbers start with 2 and are all even. This makes the chart very easy to work, since you only have to read the first row of a set of two rows from the chart as you are knitting, and then can follow the work on your needle to work the second (or even) row. The first column of squares lets you know which color you will work for those two rows – for example in row 1, the first square is black. That lets you know that you will only be working with the yarn you have chosen for the black squares; all the white squares in that row represent slipped stitches. Row 3 starts with a white square, so you know you will only be working with the yarn represented by the white squares, and that all the black squares represent the slipped stitches.

Before starting the chart you will need to work one row of the color you have chosen for the white squares – that will allow you to have white stitches to slip in that first black row. Without that first foundation row the black row would just be all black because there would be no white stitches to slip.

There are only two colors – black and white – for the squares. You can choose which colors you want to use for each. You can use a darker color for the black squares and a lighter color for the white squares (See Swatch 1) – or you can reverse that completely and use a light color yarn for the dark squares and the dark color yarn for the white squares for a completely different look (See Swatch 2).

Notice that there are vertical red lines on each side of the chart. These mark the beginning and end of one multiple, which can be repeated as many times as you wish for your project. The squares on the outsides of those lines are the edge stitches and will only be worked once for each edge, no matter how many times the interior design is repeated. Across the top of the chart it says “Multiple of 14 plus 3”. This means that the main design is 14 stitches across and that there are three edge stitches - one on the right and two on the left. If you wanted to repeat this multiple 5 times, you would cast on 73 stitches: 5 x 14 + 3.

The chart is read from the bottom up starting in the bottom right corner, reading from right to left and then back from left to right on the same row, move up a row and repeat. The design can also be repeated vertically. After finishing row 28, start back at row 1 and repeat as many times as you wish. In our little gauge sampler we worked the design twice.

**With yarn in front or with yarn in back?**

So how are these stitches worked? Following the above chart as an example, using cream color for the white squares and teal blue for the black squares we will knit a sample that works the pattern twice vertically and horizontally. Start by casting on 31 stitches with the cream, 14 x 2 for the pattern and 3 for the edge stitches and then knit one row. This will be the foundation for starting the pattern. Then starting with row 1 drop the white yarn in the front and then starting with the teal yarn, k3, sl1, k1, sl1, k5, sl1, etc. across the row. Remember to work the slip stitches purlwise. Once you are at the
end of the 1st row, turn the work and work back following the stitches on your needle. You will knit the teal and slip the cream just as you did in row 1. At the end of row two, drop the teal yarn to the front and pick up the cream yarn from behind ready to start the next row.

When working the slip stitches on the odd numbered rows (RS) always hold the working yarn to the back of the work (wyib). This means that when you come to the stitch that is to be slipped, hold the working yarn in the back, slip the stitch purlwise and then knit into the next stitch in the usual manner. When working on even numbered rows (WS) always hold the working yarn to the front (wyif) when slipping the stitches. When you come to a stitch that is to be slipped, bring the working yarn back from the back to the front, slip the stitch and then take the working yarn back to the back to knit the next stitch, all the while being sure to leave just the right amount of yarn stranded across the slipped stitch(es) so that the stitches are not too crowded or so that there is not too much slack in the strand. There should be just enough slack so that the stitches that are being slipped can stay in their correct approximation to each other without being crowded. You can check the tension of the stranding after you have done a few rows. Stretch the fabric a bit from side to side – everything should stretch at the same tension. If it is too tight on some rows, be sure to loosen up the tension of those strands. You can loosen up the stranding by moving the stitches on the right needle a little further from the point after slipping the stitch and before working into the next stitch. If there are gaps between the stitches, the tension of the stranding is too loose and you need to tighten it a bit. This can be done by working more closely to the tip of the right needle after slipping the stitch and before working into the next stitch. Continue working following the chart from bottom to top and repeat the pattern one more time up to row 26. Finish by knitting one row of cream and then binding off in pattern with the cream. Your swatch should be square. The height and width should be equal, all sides being of equal length.

Circular vs Flat
Mosaic knitting can be worked circular as well as flat. When working circular the edge stitches on the chart are omitted. You will start with the first square of row 1 right after the first red line and will work the repeat for the desired number of times and then just move to row 2 without working the last two or first edge stitches. All slips will be worked with the yarn held to the back for every row. If the pattern is to be worked in Stockinette, all rows will be knit. If the pattern is to be worked in garter stitch, every other row will be purled. Remember that, when purling, the yarn will need to be taken to the back before a slip stitch and then returned to the front to continue purling. Patterns with combinations of knits and purls can also be used with these same techniques.

Gauge
One very interesting aspect of Mosaic knitting is that the gauge for all the patterns will remain the same as long as you are using the same needles and yarn. You can move from one pattern to another and maintain the same stitch and row gauge. If you change from garter stitch patterns to Stockinette patterns or a combination of the two, the row gauge will change, but the stitch gauge will remain the same.

Fabric and Texture
Mosaic fabric worked with garter stitch is the samedenseness as regular garter stitch. When worked with Stockinette or a combination of Stockinette and garter stitch, the fabric is much denser than regular Stockinette but not as dense as garter stitch. The garter stitch fabric has the very nice property of lying flat, while the Stockinette mosaic stitch has a very strong curl (much more curl than regular Stockinette due to the slipped stitches) that will need to be blocked to lie flat. Garter Mosaic stitches have a very rich nubby feel and look, which works well for jackets, pillows, purses or other garments where a thick fabric is desired. Worked in finer weight yarn, mosaic patterns can be used in sweaters, hats, socks and other lighter garments. Mosaic patterns also look very nice felted.

Color
Most patterns are worked with two colors, one for the dark and one for the light. But there are no rules saying that you can use only two colors. Changing colors can create very interesting effects as in the second mosaic pillow pattern included with this article. Rather than using a variety of colors, a yarn was chosen that has long color repeats. The effect is very striking. Variegated and metallic yarns also look interesting when worked against a contrasting solid yarn. When using multicolored yarns with a solid it is best that the variegated yarn does not contain any of the solid color or you will lose stitch detail as that same color from the variegated meets the same color in the background solid color.

Blocking
Mosaic fabrics can be blocked as regular garter or Stockinette fabrics. The garter stitch mosaic patterns work well without blocking, as they will lie perfectly flat without any coxing.

Solving Common Problems
When incorporating a mosaic pattern into another fabric, such as plain Stockinette, there may need to be stitch number adjustments to accommodate the difference in stitch gauge between the mosaic fabric and the plain Stockinette. Be sure to work gauge swatches for both fabrics to check the stitch and row gauge before you start.

When working increases or decreases care must be taken in maintaining the pattern as the stitch that is on the top of the increase or decrease will be the one showing up as the pattern. As an example you may want to use an sk2 instead of a k2tog in order to get the stitch of the right color on the top or vice versa. With increases you will need to be aware of which color (and row) the increases are being made in. They will only need to be made in the RS rows. For example if you want the increase to be in the dark color, it will need to be made in a row where the dark color is the working yarn, and vice versa with the light color.

continued on page 12
Mosaic Pillow Lesson
There are two patterns for this lesson, both for 14" x 14" pillow forms. The pillows are both knit flat in mosaic garter stitch as the front panels of the pillows and the back panels are knit in Stockinette. Each step in the pillow patterns will have a following explanation.

Mosaic Pillow #1
by Suzanne Bryan

Yarn Symbol: (4) Medium
Level of Experience: Easy

Finished Measurements:
Front Length: 14"
Front Width: 14"

Materials:
Lion Brand LION WOOL (3oz/85g, 158yds/144m, 100% Wool):
2 skeins Winter White (A)
S. R. Kertzer REJUVENATION (3.5oz/100g, 220yds/201m, 100% Wool):
1 skein Jade (B)
Size 6 (4.0mm) needles or size needed to obtain correct gauge
Tapestry needle
14" x 14" pillow form

Gauge:
In Mosaic St, 22 sts & 44 rows = 4'/10 cm.
In St st, 21 sts & 29 rows = 4'/10 cm. To save time, take time to check gauge.

TECHNICAL TIPS
Yarn Choice
Most smoothworsted weight yarns would work for these pillows. One solid color with a contrasting color, which can be a solid or variegated yarn. The gauge is a little tighter than recommended on the ball bands in order to make a more durable pillow. This is accomplished by going down one needle size from what is recommended.

Making a Gauge Swatch
(See gauge worksheet included with this article)
The most important measurement in knitting is gauge. Be sure to make a gauge swatch, even if you are using the recommended needle and yarns. Your gauge may be a little different and can result in a pillow top that is too large or too small. For a pillow, a little too small can be corrected by stretching the pillow top over the pillow form, but a too large pillow top will sag and look sloppy.

In the chart that follows the white squares are color A and the black squares are color B.

Pillow Front
With B, CO 79 sts.
Rows 1 & 2 (RS): K 2 rows.
Rows 3 & 4: With A, k1, sll, k until2 sts rem, sll, k1.
Rows 5 & 6: With B, k2, sll, k across until 3 sts rem, sll, k2.
Rows 7 & 8: With A, *k1, sl1, rep from * until 1 st rem, k1.
Rows 9 & 10: Same as rows 5 & 6.
Rows 11 & 12: With A, (k1, sl1) 3 times, knit across until 6 sts rem, (sl1, k1) 3 times.
Starting with chart on Row 13 cont in pat, work the red inset 3 times horizontally then work chart to the left of the inset one time. Cont working the inset three times horizontally, then end with rows above inset once.
Bind off in pat with color B and weave in ends.

DESIGNER NOTE
This mosaic pattern looks best with whole blocks of the pattern completed. In order to center the pattern on the pillow top and to keep the pattern whole the plain rows were added around the margins to frame the pattern in the center.

Pillow Back
With A, CO 75 sts, work in St st until piece meas 13 1/2". BO in pat. Weave in ends.
Finishing
Because the pillow front is worked in Mosaic garter stitch it lays very flat and does not need blocking. If desired the pillow back can be blocked, being careful to keep its original dimensions. Place the pillow top and back together with wrong side facing, the tops and bottoms matched. Seam one side using mattress stitch keeping the two pieces aligned. In the pillow sample there were 22 garter ridges along the front edges of pillow top and 29 rows on the pillow back per 4”. The back has 7 more rows than the ridges on the front per 4”. In order to keep the front and back even as seaming, it would be best to have a ratio of 3 front ridges to every 4 back rows. Using the mattress stitch, seam 1:1, 1:1, 1:2 along both sides. Then seam the bottom. Will need to know the stitch gauge of both pieces. The stitch gauge for the pillow top is 22 stitches and the pillow back is 21 stitches per 4”. A ratio of 22/21 stitches, which can be worked by seaming the 21 stitch pillow back stitch with 2 pillow front stitches, across the seam using Kitchener stitch. Place the pillow form inside and work the seam across the top the same as the bottom. Secure all tails and hide inside pillow form. (The Pattern Basics section in this magazine has instructions on Kitchener stitch.)

Please check your stitch and row gauge and adjust accordingly using the above as a guideline. Your row gauge may be very different on the St st pillow back; check carefully before starting the side seams.

Mosaic Pillow #2
by Suzanne Bryan

Yarn Symbol: (4) Medium
Level of Experience: Easy

Finished Measurements:
Front Length: 14”
Front Width: 14”

Materials:
Lion Brand LION WOOL (3oz/85g, 158yds/144m, 100% Wool):
2 skeins Winter White (A)
Noro KUREYON (1.76oz/50g, 120yds/110m, 100% Wool):
1 skein #226 Recls/Teal/Olive/Magenta (B)

Size 6 (4.0mm) needles or size needed to obtain correct gauge

Tapestry needle
14” x 14” pillow form

Gauge:
In Mosaic St, 22 sts & 44 rows = 4”/10 cm.

Pillow Front
In the chart that follows, black squares will be worked with Color B and white squares will be worked with Color A.

If you switched colors in this chart, using A for black squares and B for white squares, the resulting fabric would look exactly the same.

With A, CO 75 sts. Set up row - knit.

With Color B work Chart starting with Row 1 and RS; right side edge sts once then mult 5 times, then left side edge sts once. Work Rows 1-36 four times, then rows 1-5 once more. With A, k one row. BO in pat. Weave in ends.

Finishing
Because the pillow front is worked in mosaic garter stitch it lays very flat and does not need blocking. If desired, the pillow back can be blocked, being careful to keep its original dimensions. Place the pillow top and back top with WS facing and tops and bottoms matched. Seam one side using mattress stitch keeping the two pieces aligned. In the pillow sample there were 22 garter ridges along the front edges of the pillow top and 29 rows on the pillow back per 4”. The back has 7 more rows than the ridges on the front per 4”.

Gauge WORKSHEET

<table>
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<tr>
<td>Number of Stitches Per Inch:</td>
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<tr>
<td>Number of Stitches in 4”:</td>
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Multiply the number of stitches per inch. Do not round off the number:

| Number of Rows Per Inch: | |
| Number of Rows in 4”: | |

If you are getting fewer stitches than the recommended gauge, try using a smaller needle size.

If you are getting more stitches than the recommended gauge, try using a larger needle size.

In St st, 21 sts & 29 rows = 4”/10 cm. To save time, take time to check gauge.
In order to keep the front and back even as seaming, it would be best to have a ratio of 3 front ridges to every 4 back rows. Using the mattress stitch, seam 1:1, 1:1, 1:2 along both sides. Then seam the bottom. Because the top and bottom have the same st count, the seam can be worked stitch for stitch in Kitchener stitch. Place the pillow form inside and work the seam across the top same as the bottom. Secure all tails and hide inside pillow form. (The Pattern Basics section in this magazine has instructions on Kitchener stitch.)

References