| Sam Johnson and the Blue Ribbon Quilt, by Lisa Ernst (supplemented with Eight Hands Round, by Ann Whitford Paul) |  |
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| Parts of the Lesson | Materials Needed |
| I. Pre-Activity (Pre-assessment) Have children color four copies of a quilt pattern. See if they can extend the pattern. Share repeated borders with the group to show variations. | I. Make photocopies of at least three easy quilt patterns. Each child makes at least 4 repetitions of a pattern. <br> Markers for coloring each square using exactly the same colors. |
| II. Read the Book (Talking points) <br> I. This is a book about a man who likes to quilt, but the ladies quilting group won't let him join. What do you think about that? <br> 2. Read "Sam..." <br> 3. Ask if anyone noticed the borders on the pages (hard to see from far away). Borders are quilt patterns that are repeated over and over. <br> 4. Briefly show Eight Hands Round and quilts made by sliding a pattern 9 times. | II. Read the book(s). <br> I. The book "Sam Johnson..." for reading the story. <br> 2. The book "Eight Hands Round," torn apart so pages can be shared at tables. Explain that this is a paper back book, a reference book, and we bought it to tear apart. Not usually a good idea to tear apart your own books. (You may want several copies of the book so each table gets at least $5-6$ pages to use.) |
| III. Do the Math (Activities) <br> I. Presenter models slides, turns and flips of a design. <br> 2. Use one mirror to see reflections of a quilt square or to look for lines of symmetry. <br> 3. Use two mirrors on left and right of a quilt square, to see infinite repetitions. <br> 4. Tape two mirrors together so you can make a right angle at one corner of a quilt patch. Compare the reflected design to the quilt shown in book, made by sliding the design. <br> 5. Look at other objects besides quilts. As the angle gets smaller, you see more repetitions. | III. Do math activities: <br> I. Presenter uses 12 pre-made copies of a quilt design (Maple Leaf works well) to show the difference between sliding the design, rotating, and reflecting. <br> 2,3. Each child needs one then two little plastic mirrors approx. 2" $\times 3$ ". Continue to use pages from Eight Hands Round to see repeated and reflected designs. <br> 4. Small pieces of masking tape to make "folded" mirrors by taping 2 mirrors together. <br> 5. Small objects to place in the angle formed by the folding mirror. (pennies, paper clips, candies, small flowers or leaves, etc). |
| IV. Wrap Up (Debrief) <br> Ask children what they learned about sliding turning and reflecting a design. | IV. Wrap Up - Take home photocopies of a "quilt sampler" to color and use with mirrors. Remind them to look for other designs in wallpaper, rugs, quilts, etc. |

