Counting on Buttons

Materials:
—3/4 yard sturdy material for the pages
—55 buttons of various shapes and sizes (I suggest larger ones for lower numbers, smaller for 6-10)
—various colors of felt, vinyl or other non-fraying material for the shapes to button on
—1 yard length of yard or heavy thread for the 2 button page and the 10 button page.
—thread and ordinary sewing supplies as needed

General instructions:
1/4" seams

Note: this activity book can be adapted to paper pages the child can assemble. As a child grows, quite complex ideas can be discussed from this simple book.

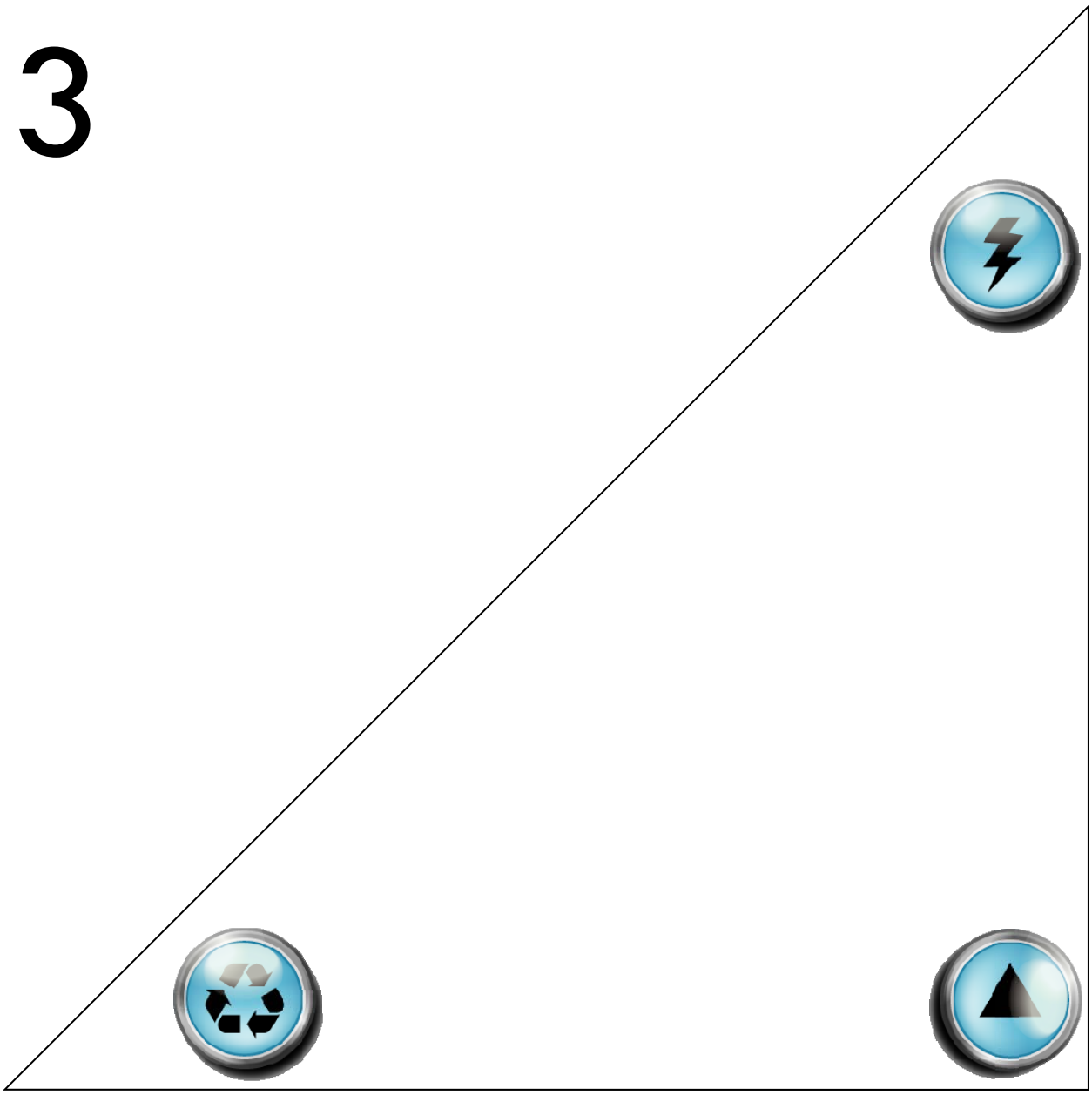
1

1. Sew a large button in the center of the page.]
2. Cut a large circle of felt, vinyl, or other non-fraying fabric, and make a slit in the center to button it onto the page.
3. Write the number 1 in the upper left corner of the page using fabric markers, embroidery, appliqué, or whatever you like—or use a button with a number 1 on it.
4. (math: a circle is one un-ending line, no beginning and no end)
5. For paper, have the child cut and paste a circle and write the number 1. Optional decorate the circle like a happy face, or with polka dots, Christams ball, or whatever. Any of the pages may be traced by the child onto plastic, such as a report cover, for practice in fine motor skills as well as math concepts.

2

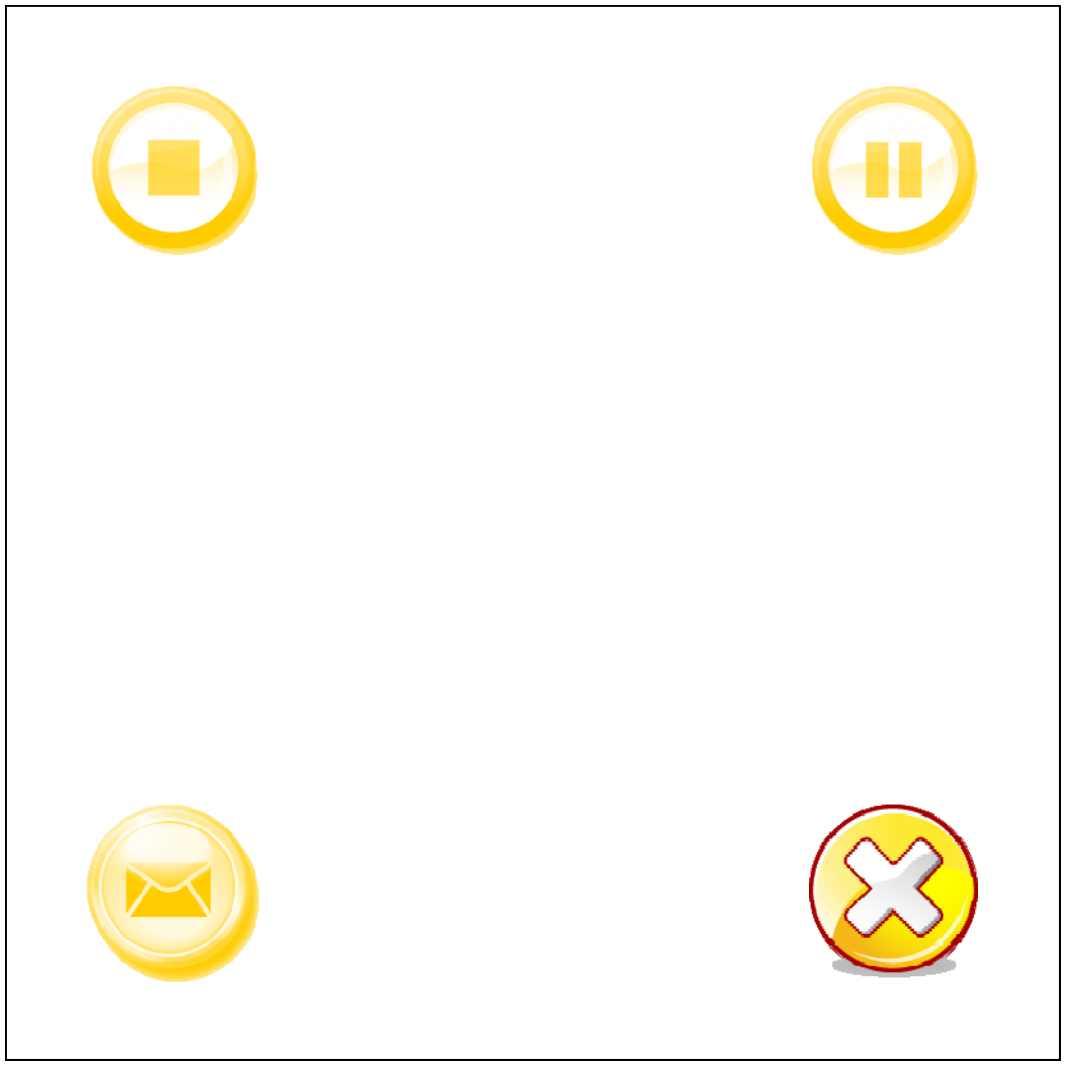
1. Sew fairly large buttons on the page.
2. Tie a string, yarn, or cord to one of the buttons (under it). When the child plays with this page, have him run the string from one button to the other in a line. He may wrap the end of the string around the second button to anchor it until next time. (math: connect 2 points to create a line)
3. OR: cut an oval to button onto the two buttons. An oval is a line that rotates around two points/focii.
4. Write or attach a number 2 in the upper right corner of the page., similar to the previous page.
5. For a paper page, have the child draw two dots and connect them, or, cut and paste an oval with two focii (optional decorate as a face, with stripes, or as an Easter egg, etc.), count and write the number 2.

3



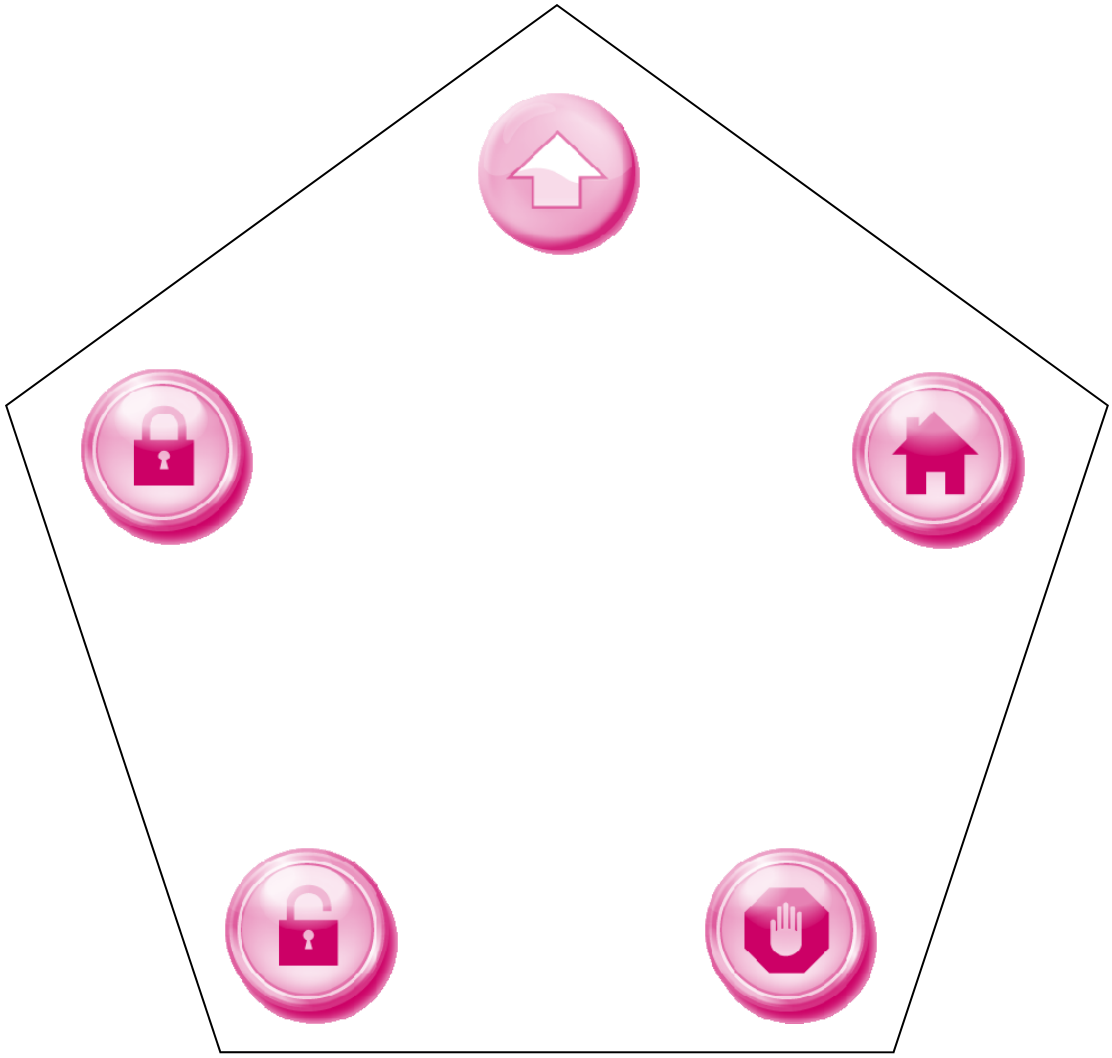
1. Sew 3 buttons on the page.
2. Cut a large triangle, and make slits for button holes to attach it to the page.
3. Write or attach a number 3, as before.
4. (math: connect three points to make a tri-angle—3 corners, 3 sides)
5. For a paper page, have the child cut and paste a triangle (you may choose to use one shaped like a traffic sign or an evergreen tree—or use 3 stacked triangles to make an evergreen tree), optionally decorate it, and write the number 3. Count 3 corners, 3 sides, or 3 triangles.

4



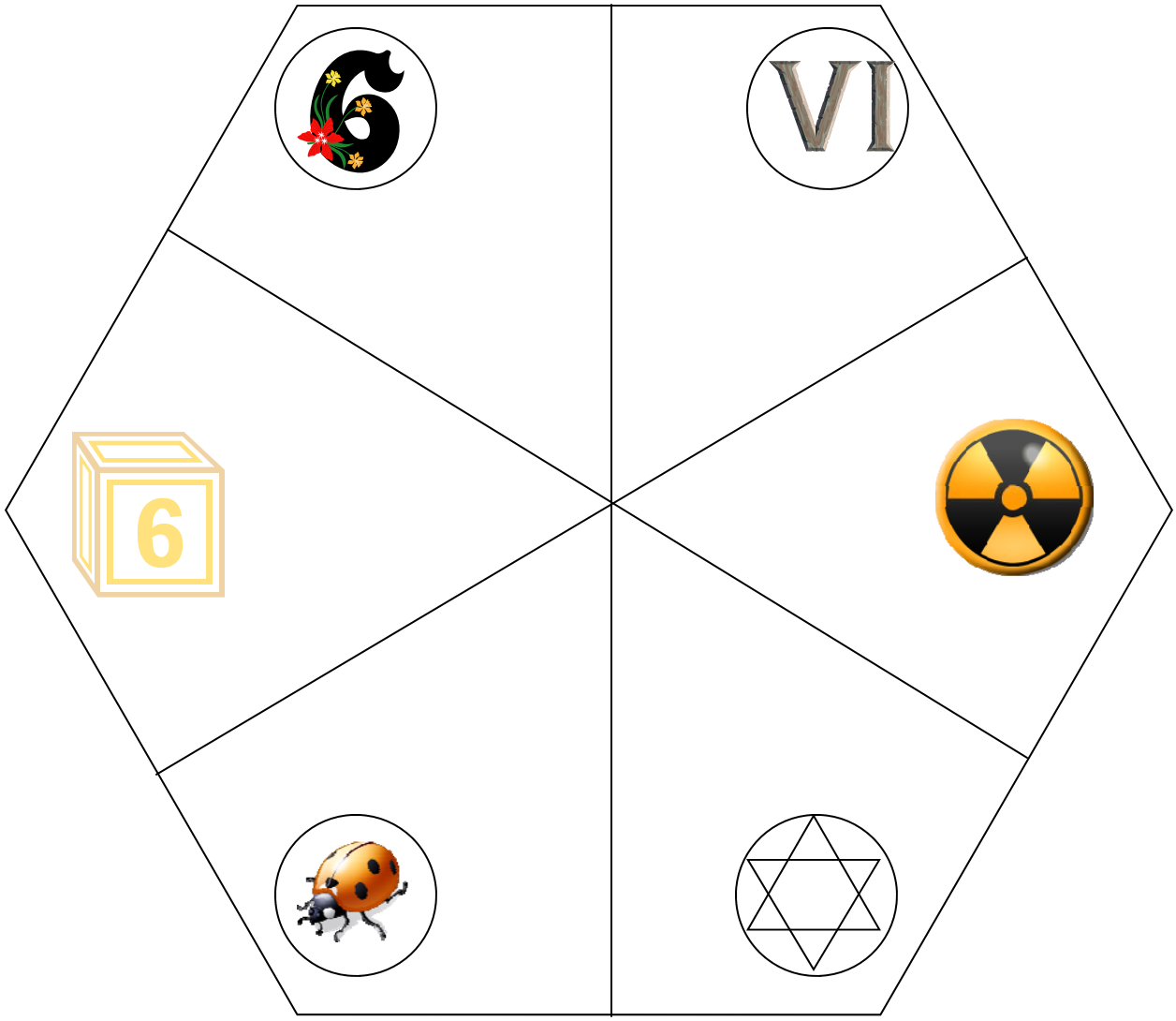
1. Sew 4 buttons on the page as if corners of a square or rectangle.
2. Cut a large square or rectangle to fit, and make buttonhole slits.
3. Write or attach a number 4, similar to previous pages.
4. (math: 4 L-shape (right angle) corners and 4 sides makes a rectangle; if the sides are the same size, it is a square.—if the corners are not right angles, it is still a quadrilateral: 4-sided figure; "quadri'" meaning 4, "lateral" meaning side)
5. For a paper page, have the child cut and paste a square or rectangle, decorated it as a window or other object, and write the number 4. Count four corners, four sides.

5

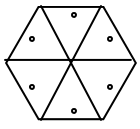
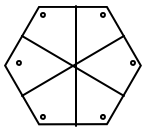


1. Sew 5 buttons on the page in the shape of a pentagon.
2. Cut out a pentagon to fit, and make buttonhole slits.
3. Write or attach the number 5 in the upper left corner, as previously.
4. (math: a shape with 5 corners/angles and 5 sides is a pentagon)
5. For a paper page: have the child cut and paste a pentagon, optionally decorate it with 5-point star stickers or other, and write the number 5.

6

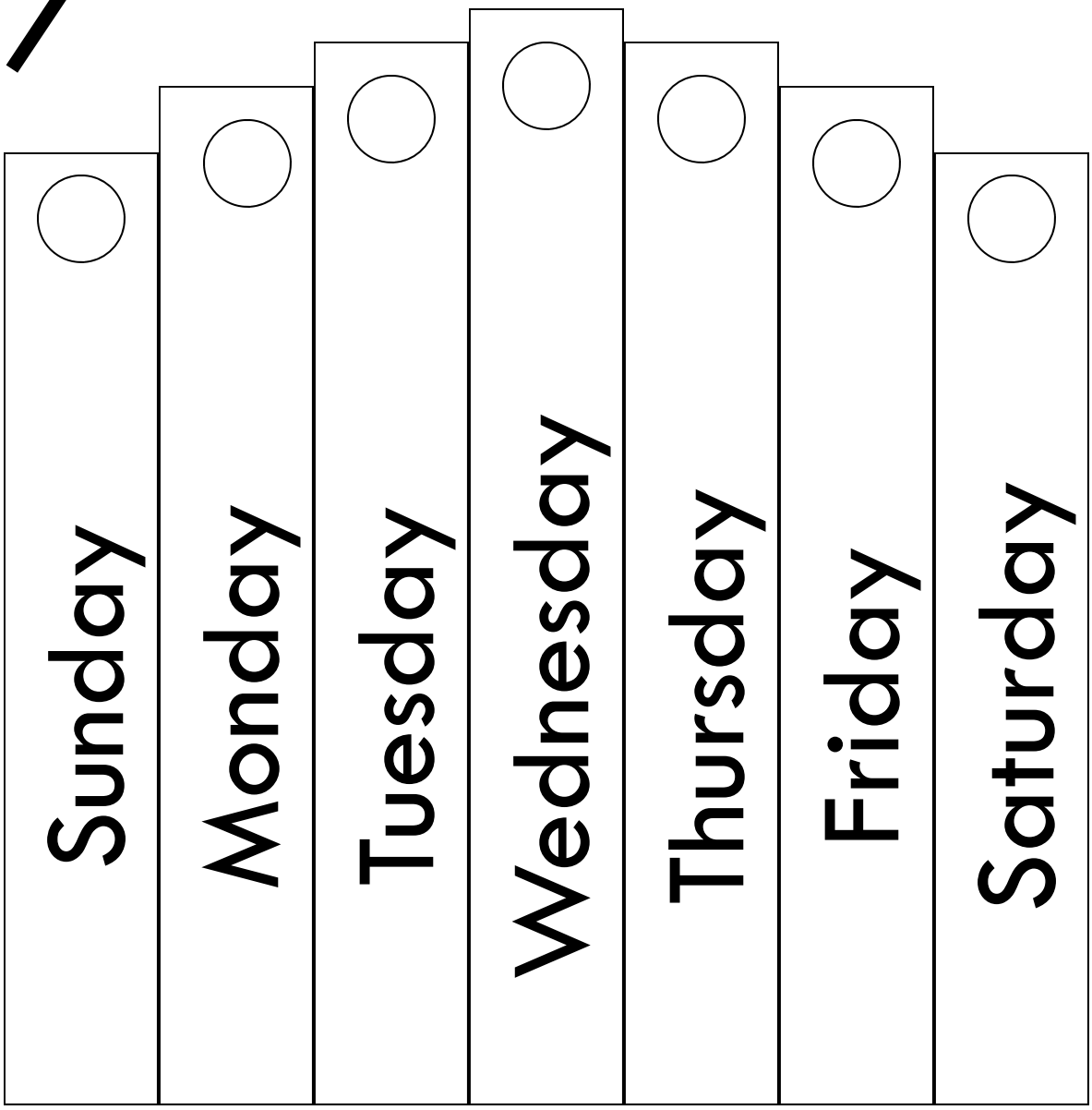


1. Sew 6 buttons on the page in the shape of a hexagon.
2. Cut a hexagon to fit, and make buttonhole slits (or, 6 triangles to fit, or 6 "kite" shapes to fit)

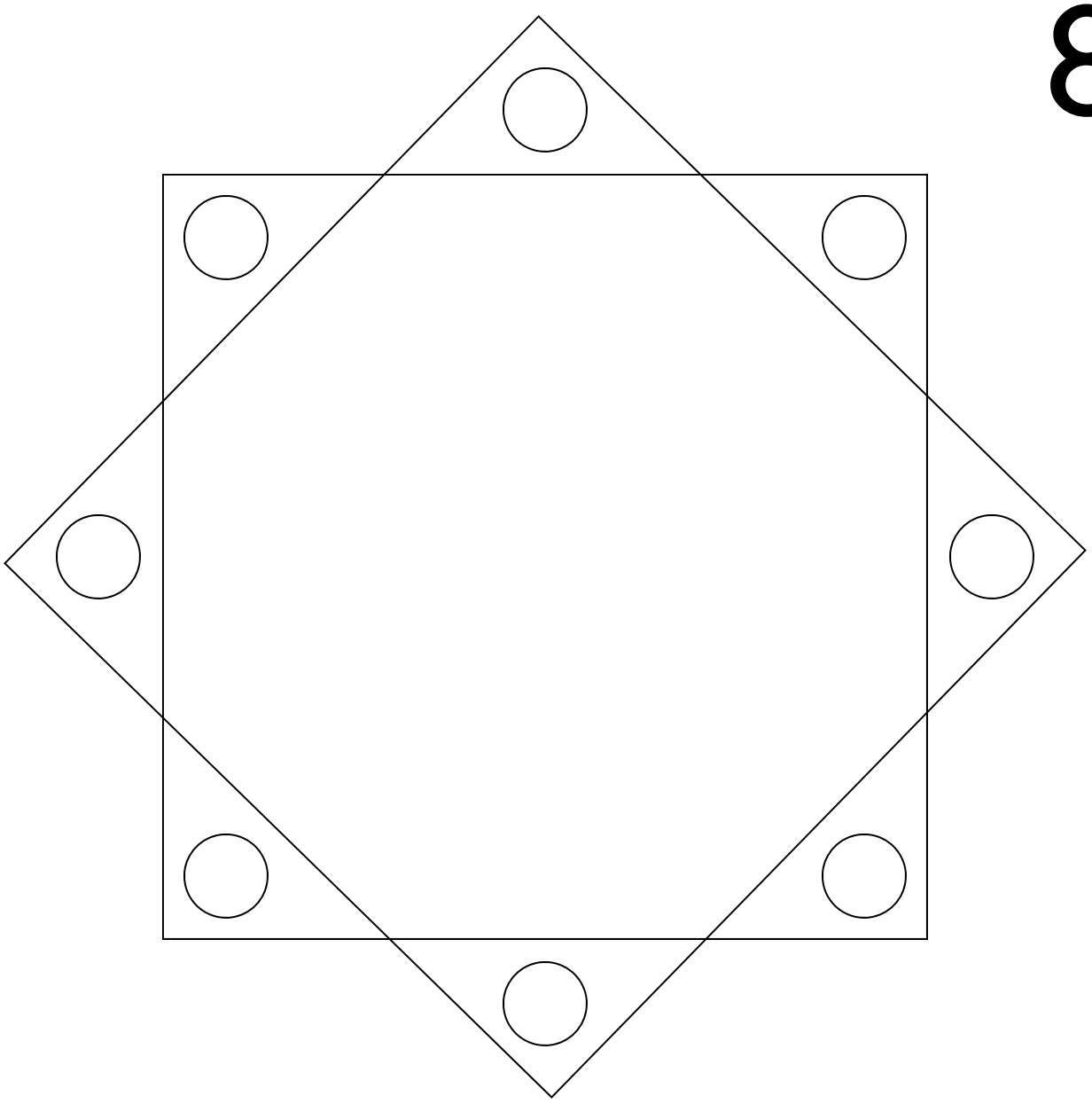
3. Write or attach a 6 in the upper right hand corner.
4. (math: a figure with six corners/angles, and six sides is a hexagon. A block has 6 sides. A six-point star can be made with two overlapping triangles. VI is the Roman numeral for 6. Science: insects have 6 legs.)
5. For a paper page: have the child cut and paste a hexagon, draw lines criss-crossing from corner to corner, so that you have 6 triangles. In each triangle draw or paste something that has to do with the number 6.

7



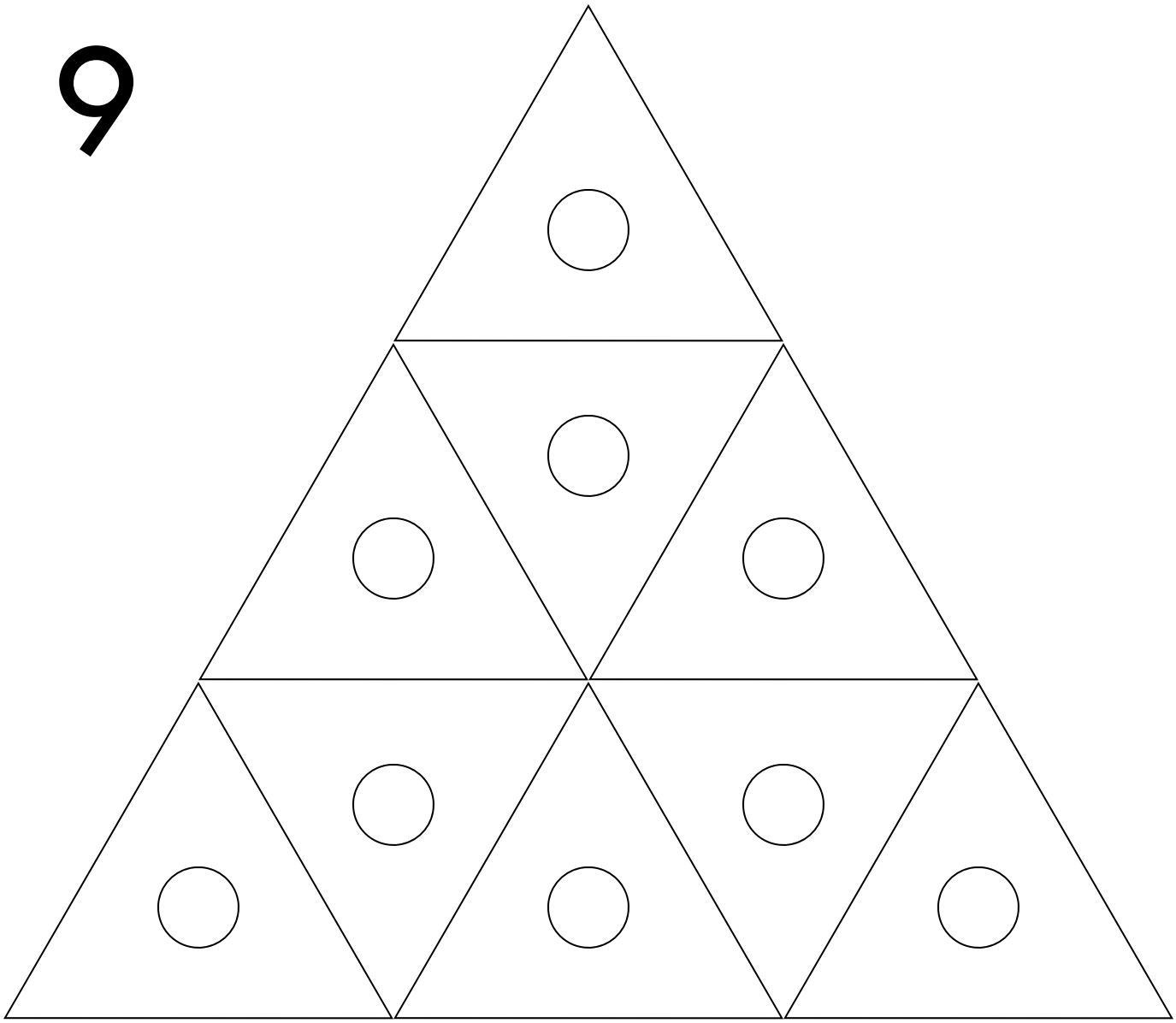
1. Sew 7 buttons on the page—optionally in a line for the days of the week, or for the 7 colors of the rainbow (red, orange, yellow, green, blue, indigo, violet), or over the whole page to button on shapes, balloons, or flowers.
2. Cut 7 shapes or tabs of different colors and make buttonhole slits—write the days of the week on the tabs, if desired.
3. Write or attach a number 7 in the upper left corner.
4. For a paper page: have the child cut and paste the colored tabs, shapes, or flowers onto the page. Write number 7. Opt. sing or say a song or rhyme of the days of the week.

8

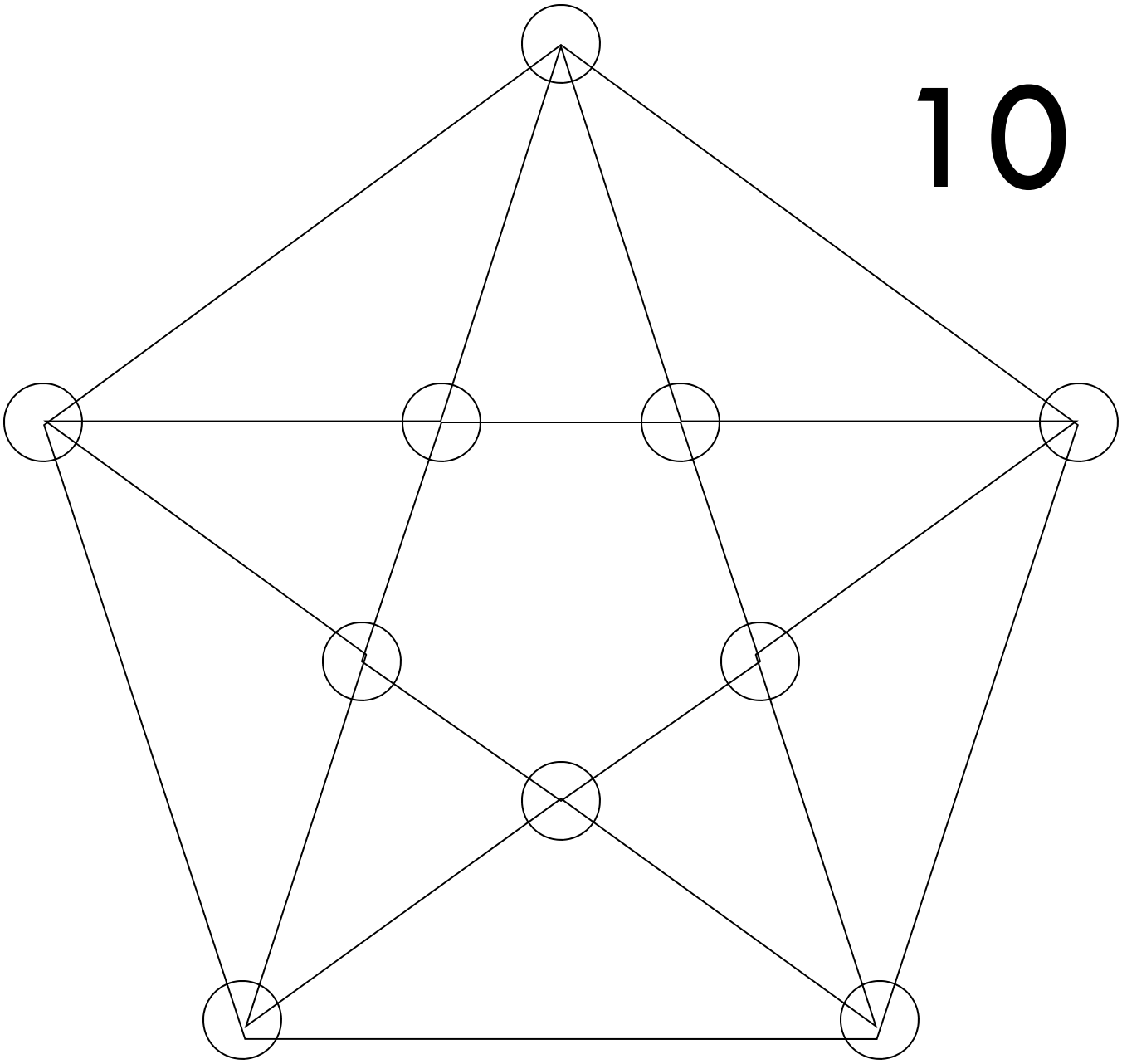


1. Sew 8 buttons on the page such that they can make 2 squares, as shown.
2. Cut two squares to button onto the page, and cut buttonhole slits.
3. Write or attach number 8 in the upper right corner.
4. (math: two overlapping squares can make an octagon, or an 8-point star. 2x4=8)
5. For a paper page: have the child cut and paste , or trace, two squares to create a star/octagon. Decorate with glitter or as desired. Write number 8.

9



1. Sew 9 buttons on the page, as shown.
2. Cut 9 triangles of three or more colors, and cut a buttonhole slit in each one to button onto the page.
3. Write or attach a number 9 in the upper left corner.
4. (math: experiment with the shapes you can make with the triangles; experiment with subtraction and addition, such as, taking away the 3 corner triangles—note that a hexagon is left. Experiment with division and multiplication by making 3 groups of 3 triangles.)
5. For a paper page, have the child cut and paste 9 triangles, after experimenting in math, as suggested above. Write number 9. (Opt., use different wallpapers, wrapping paper, or other materials for the triangles.)

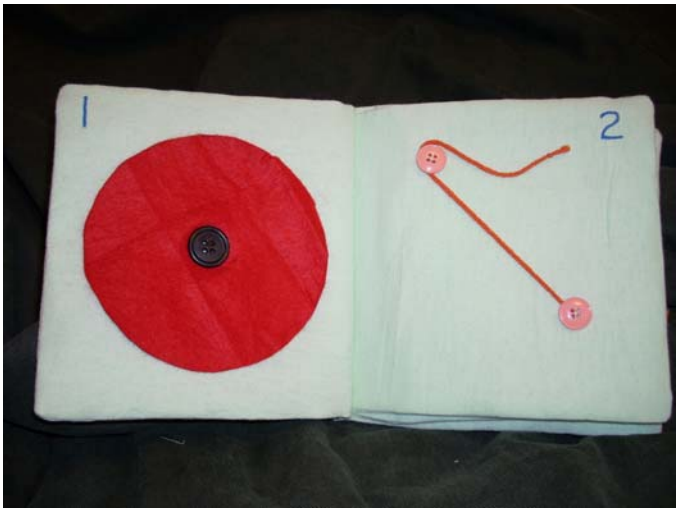


1. Sew 10 buttons (opt. silver or gold) in the position of the points (both inner and outer) of a star on the page.
2. Attach a piece of string, yard, or cord long enough to make a star by stringing it around the buttons, or, attach 2 strings to string around the inner and the outer pentagons. (note the one string used to make the star could alternately be used to make either the outer or inner pentagon).
3. Write or attach number 10 in the upper right corner.
4. (math—A line around the inside of a star is a pentagon; a line around the outer points of a star is a pentagon. Two fives equal 10, 2x5=10.)
5. For a paper page, have the child trace the star and the pentagons, and color/decorate the figures as desired. Or, on a pre-printed page (showing the inner and outer points of the star), have the child stick stickers where the buttons would be, and trace the lines between—first the star, then the pentagon, or vice versa.

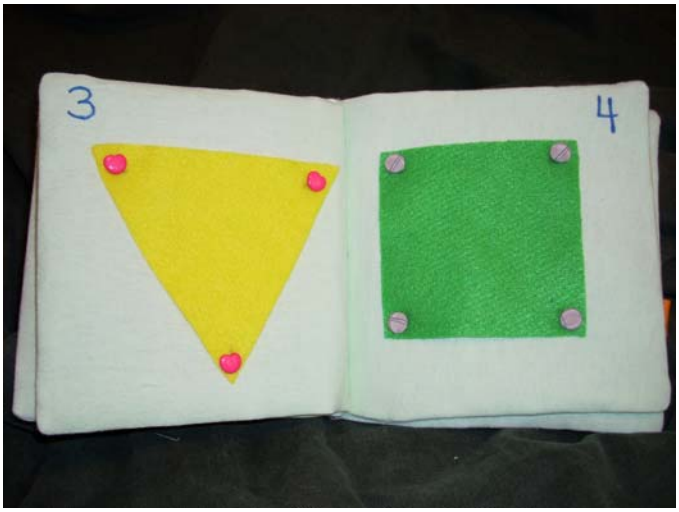
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Back cover: optional, write the numbers 1-100 in 10 rows of 10 (10x10=100), to show the pattern of numbers. (all the numbers in the first column end in 1, all the numbers in the 2nd column are 2, etc.) Practice counting by 1, 2, 3, 5, 10, 20. Use a plastic report cover and a dry erase marker to circle the numbers as you count—note the patterns, such as skipping one number, skipping 2 numbers, etc. To add or subtract 1 or 2, move right or left one or two columns (except on edges)—to add or subtract 10 or 20, move up or down 1 or 2 rows (except the edges). Later, circle the multiples of each number, 1-12 or 15. Notice if there is a pattern in the circles on the page. Paper pages may be used similarly.

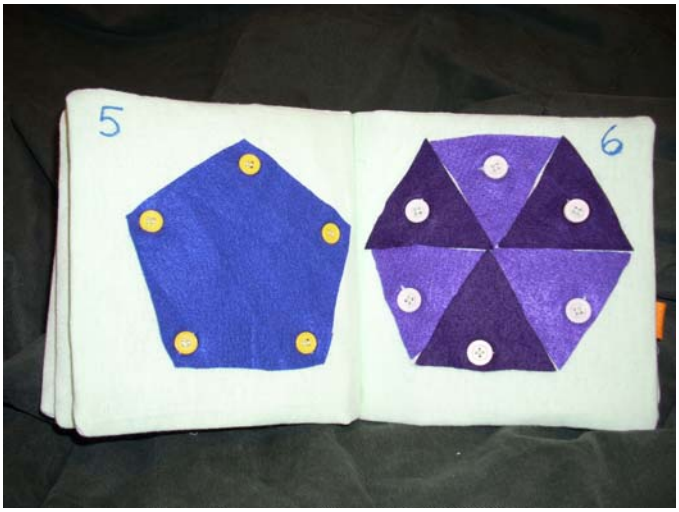
Front and Back covers. Book may be bound with bias tape or otherwise. as desired.



Pages 1 and 2. Any big buttons will do.



Pages 3 and 4. Use buttons of coordinating, or contrasting color.

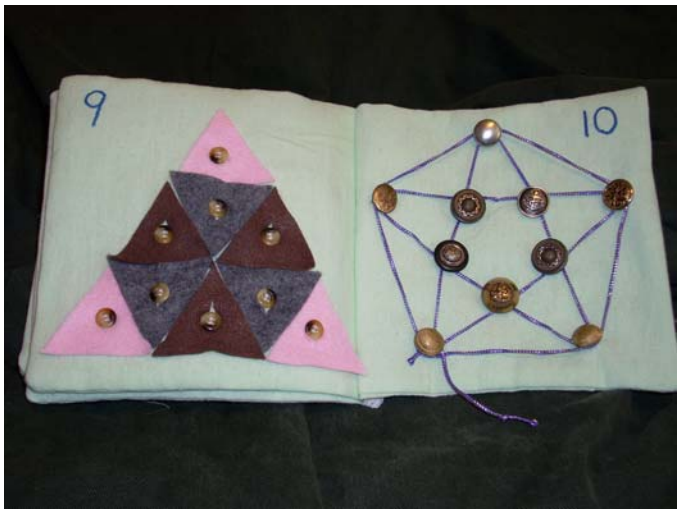


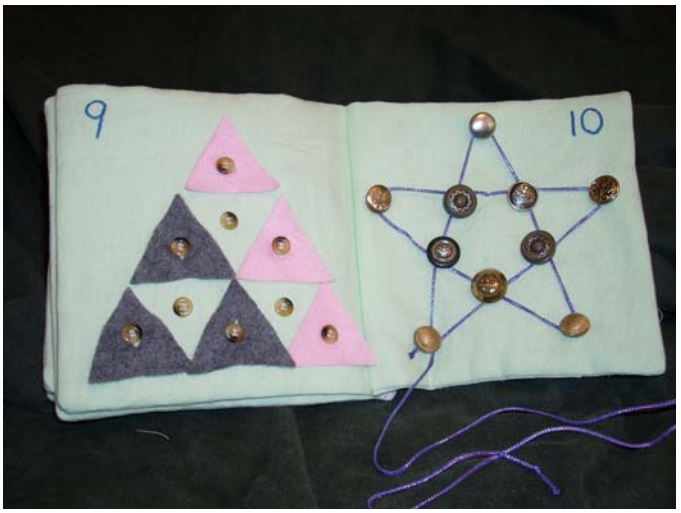
Pages 5 and 6. Use matching buttons, or a mix.

Pages 5 and 6—showing that pages can be used with only the buttons, or that the triangles of the hexagon can be rotated into a star form.

Pages 7 and 8—showing a couple of options.

Pages 7 and 8—showing that under the rainbow of colors can be the days of the week, Additionally, some experiments in patterns and vocabulary that the book offers for discussion, such as "before", "after", "first", "last", "beginning", "middle", "end", "weekdays", "weekends", "inside", "outside", "squares", "8-point star" (if string lines were drawn between buttons), "circle" (if a circumference of curved lines between buttons), "octagon" (if a circumference of straight lines between buttons).





Pages 9 and 10—showing some of the many possibilities for experiments in shapes and patterns. Note not just the patterns of the triangles, but of the buttons outside of the triangles. Any of the pages may use firmly attached strings instead of button-on shapes to show the figures.