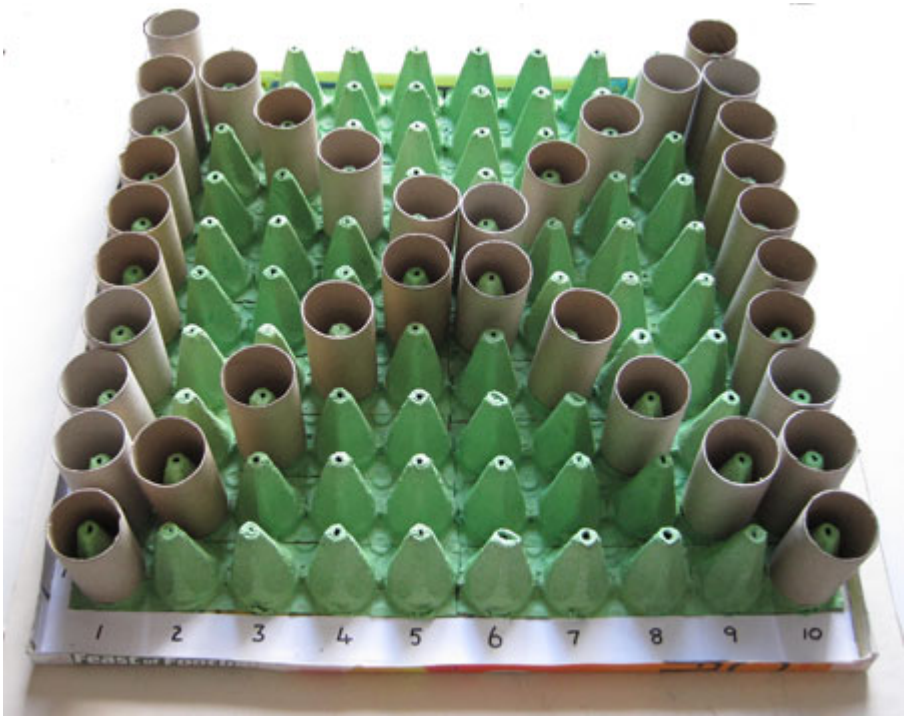
4. Counting Board

The Counting Board can easily be made from recycled materials. As well as the learning process involved in following instructions, measuring, and cutting out; using the board will enable physical contact with numbers, building up confidence in many basic maths concepts.



This Counting board is made from egg boxes, cardboard tubes and a square of stiff cardboard from a large carton. Cones are arranged as a 10 x 10 grid and tubes can be placed in any combination on the rows and columns. The board can be used for counting, multiplication, learning place values and other basic maths activities. The completed board and tubes can be coloured, as required.

4a. Making the Counting Board.

Materials:

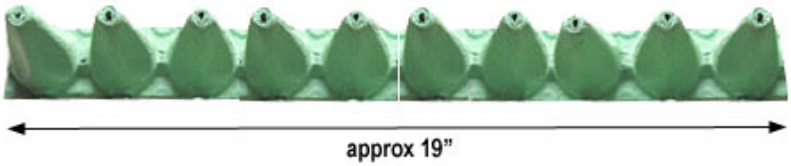
1. Enough empty egg boxes for 100 cones (20 egg boxes were used for the counting board shown).
2. A piece of strong cardboard for the base about 21 inches (52cm) square. This should allow a margin of about one inch (2.5cm) all round, to place numbered strips on. The exact size will depend on the size of the egg box cones.
3. Cardboard tubes that fit snugly over the cones. These should be cut into 3 inch (7cm) lengths. Tubes from bathroom or kitchen tissue rolls could be ideal.
4. White copy paper for the numbered strips around the edge of the board, (different strips can be made for different activities).
5. PVA Glue, Craft scissors, Rule, Marker pen.

Cutting the cones.

Cut strips of cones from egg boxes as shown until there are enough strips for a 10 x 10 square of cones.

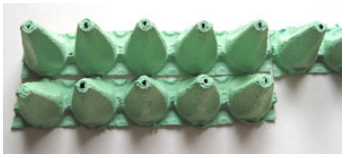
The cardboard base.

To decide on the size of the cardboard base, place a row of ten cones end to end, and measure their total length. Add 2 inches to this length to find the width and length of the base. The 10 cones shown below measured 19 inches, so the base was made 21 x 21 inches. The square base is 1 inch bigger all round, to allow numbered strips to be placed around the edges.



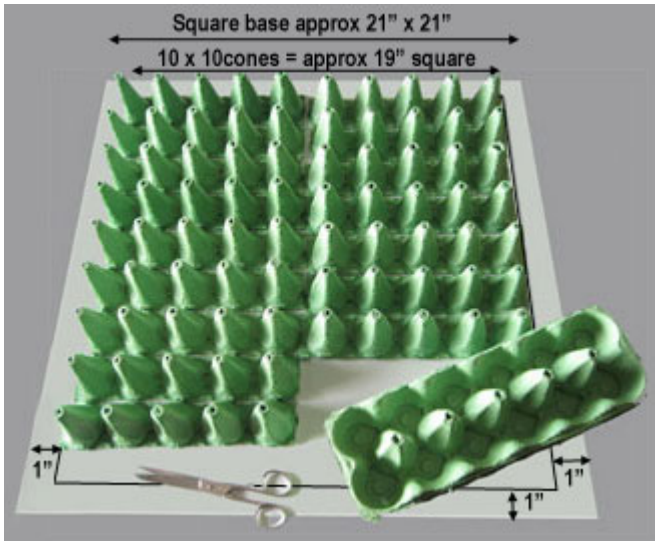
Gluing the cones in place.

Draw a line 1 inch (2.5cm) in from each side of the cardboard base, using these lines as a guide; carefully glue the first row of cones in place, making a straight row of ten cones. Repeat to make ten rows down.



Make sure when gluing the cones in place that they are evenly spaced in lines across and down.

Finishing the square of 100 cones, 10 along the top and 10 down the side. In the photograph (right) there are still another 20 cones to cut out and glue in place to complete the grid.

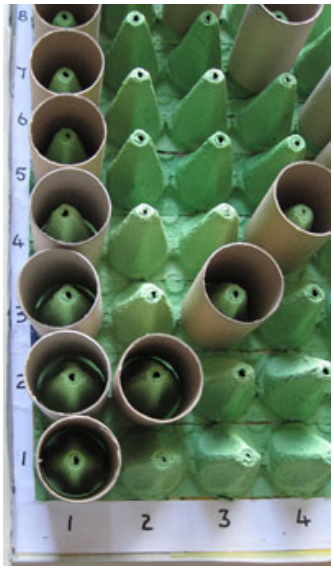


4b. Finishing the Counting Board.

The tubes.

Once the cones are glued in position, find cardboard tubes that fit snugly over them. Cut as many 3 inch (7.5cm) lengths from the tubes as required and pop over the cones.

The number strips.



On the Counting board detail (right), strips of paper have been numbered, and placed along the front and side edges to give values to the rows and columns. Several different number schemes can be used for different number topics, such as learning addition, multiplication and the place value of columns, as well as the recognition of physical quantities.

The tubes and cones could be painted, however they were purposely left unpainted here to help show the construction of the counting board.