

Name: _____ Date: _____

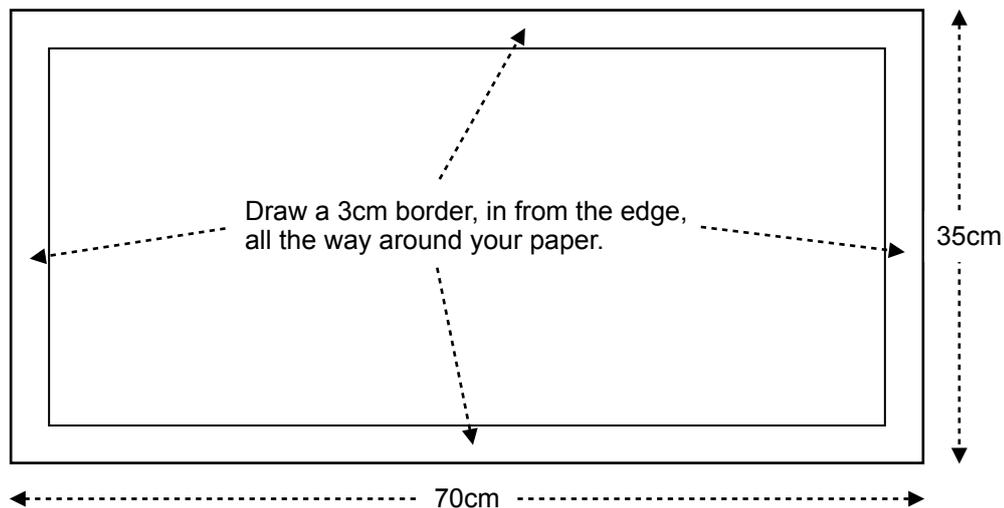
How to Build Your Own Checkerboard

Materials Needed:

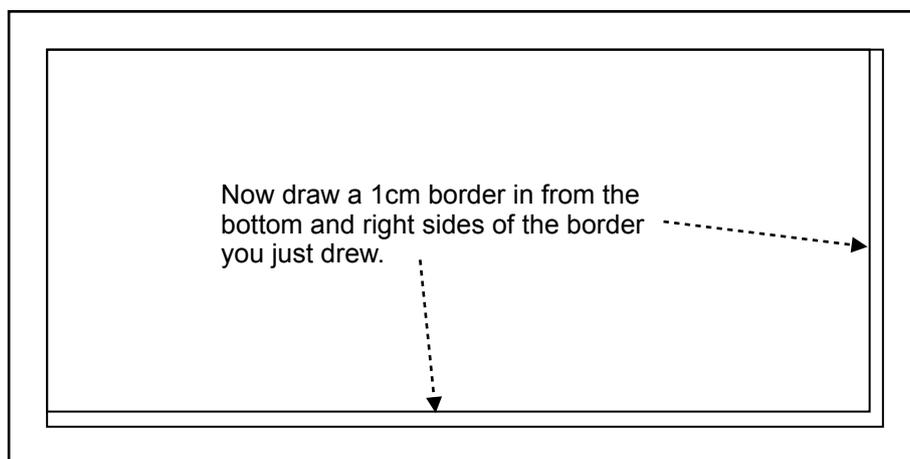
- 36 coloured paper squares: 12 green, 12 blue and 12 red (*supplied*)
- large sheet of pre-cut white paper, 70cm long by 35cm wide (*supplied*)
- glue stick
- small ruler and a metre ruler if you have one
- black pen and pencil
- brown or black watercolour paint and brush
- scrap paper or an old cloth sheet to glue and paint on
- art shirt to protect your clothes

Directions:

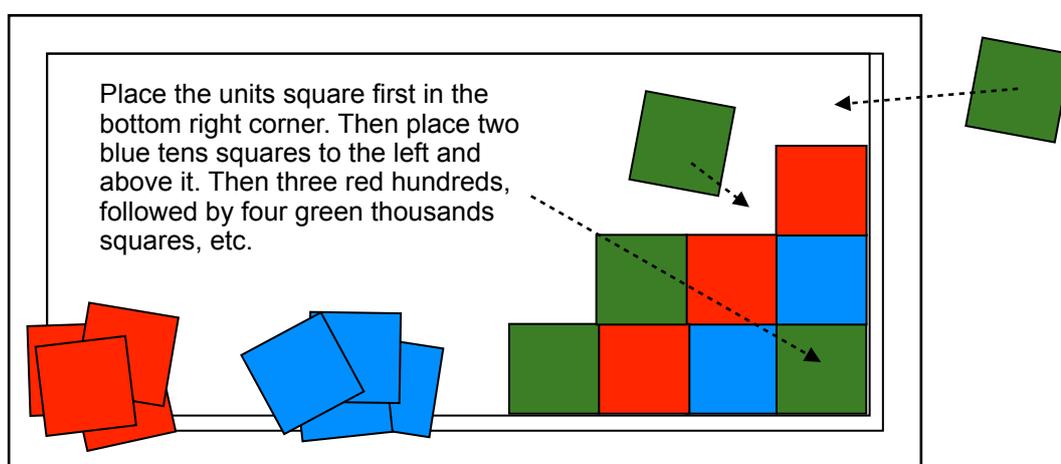
1. Unroll the large sheet of pre-cut paper. Check that it measures 70cm by 35cm. This will be the background for your checkerboard.
 - a. If the paper is larger than this, choose the straightest short side to measure from and use your metre ruler to measure the bottom long side and draw a small mark at 70cm. Now measure the top long side the same way. Draw a line along the opposite short side to connect these two marks. Carefully cut straight along the line with scissors.
 - b. Now choose the straightest long side to measure from and measure 35cm from each end of the long side. Once again draw a line to connect these two marks. Carefully cut along the line as straight as you can with scissors. Check that your paper is now 70cm by 35cm.
2. Now measure a 3cm border in from all four sides. Make a few marks at 3cm in from each edge to make sure your border is the same width all around. When you've measured around all four sides, use your metre ruler (or another long straight edge that you can find at home) to connect the marks.



- Now you need another 1cm border along the bottom and right sides where you will write the value of the squares. Use your shorter ruler to measure and draw marks 1cm up from the line you just drew along the bottom edge, and also 1cm in from the line on the right side. Connect these marks with your straightedge.



- You should be left with a space in the middle of your paper that is 63cm by 28cm. Now take the green, blue and red coloured squares and start placing them on the board, starting from the units square on the bottom right corner. Every time you place a square to the left or above any other square, the square you place should be ten times the value of the square to the right or below it.



- When you have placed all 36 coloured squares, adjust them so that they all fit together evenly. Then start gluing them down. Cover the back of each square with glue, but use scrap paper so you don't get glue on the table. Place the glued squares back in the same place without disturbing the ones that haven't been glued yet.
- Once all the squares have been glued, write the value of each square in the 1cm border. Label the units square on the bottom right with a "1" underneath and to the right. Next label the blue tens squares with a "10" on the bottom and next to the blue square on the second row. Continue with "100", "1,000", "10,000", "100,000" and "1,000,000" along the bottom and "100" and "1,000" up the right side.
- Finally, paint the 3cm border all the way around the outside of your checkerboard. Use brown to look like a wood frame, or black because there are no black bead bars.