



GRID DESIGN



1. Create a new grid. A good size is about 25x25 cells.



2. Use the line tool to draw diagonal lines.

3. The diagonal lines need to be in colour bands. Draw several lines of 'reds', then move to a different colour. Repeat this until you reach the corner.

Note: all the colours in the Grid Magic colour palette are the industry standard 'named colours'. Hover over the colour to find out its name. There are no spaces in the colour names - this is so computer programs can 'read' them.



4. Use the symmetry tool to make some symmetrical tiles.

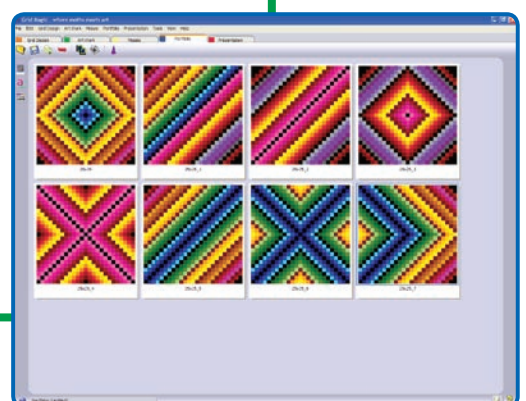
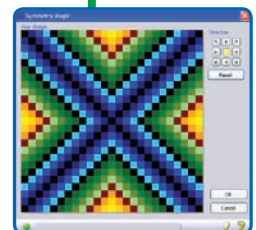
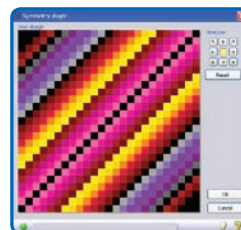
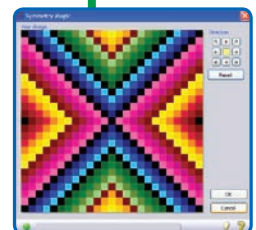
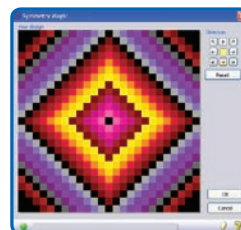
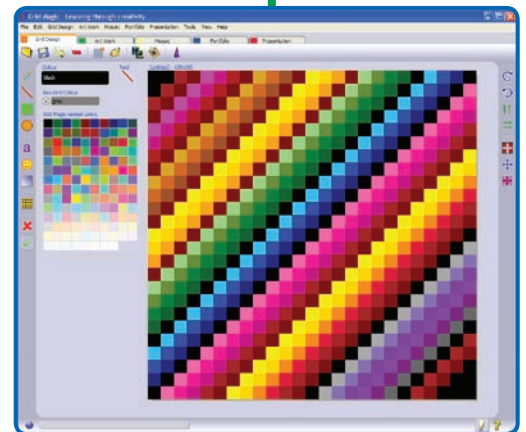
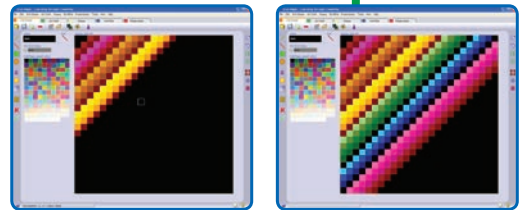
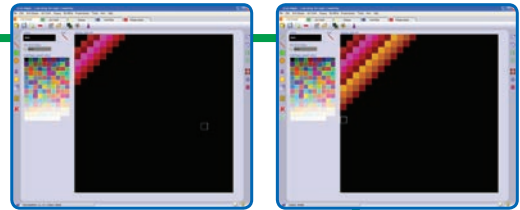
How many different symmetrical tiles can you make?

Can you find patterns with:-

- no lines of symmetry
- one line of symmetry
- two lines of symmetry
- four lines of symmetry



5. Send your different symmetrical tiles to **Portfolio**. At the end of the lesson, save your **Portfolio** as **DiagonalLines.gmport** in your folder.





Art Project: Level:

Diagonal Lines Beginner

Maths skills:

- diagonal lines & parallel lines
- grid properties
- co-ordinates
- symmetry

ICT skills:

- the line tool
- mouse skills
- colour palette
- 'Windows' colour names

Art skills:

- colour matching & colour differentiation skills
- the colour spectrum
- colour relationships

Definition:

A diagonal line is a straight line connecting the opposite corners of a square, rectangle or other polygon.

Progression:

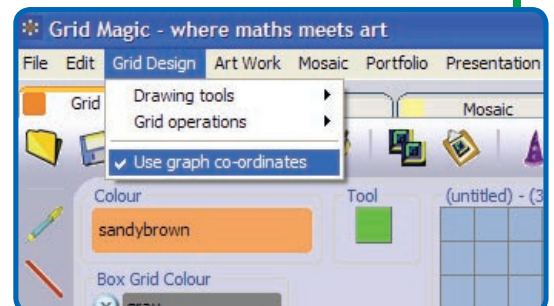
Follow this activity with the Level 2a 'Diagonal Lines Patterns' Art Project.

Grid Size and Shape: This Art Project is most effective using a square grid creating diagonal lines at 45° , as the lines are smooth. A rectangular grid will produce a jagged diagonal line (though this will create interesting art work).

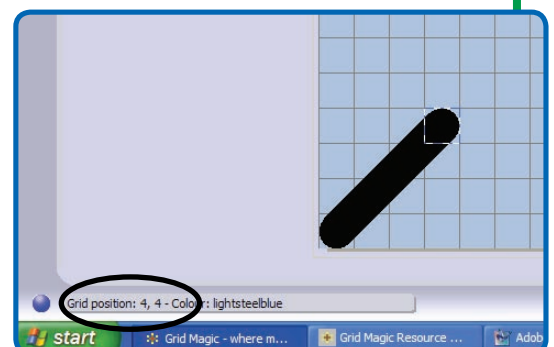
Technical Point: Make sure you've set gridmagic to use 'graph co-ordinates' - set this under 'Grid Design' on the menu bar.

Teaching Point: Observe the pattern of the co-ordinates of the main diagonal (from the bottom left corner to the top right corner). They are:- (1,1), (2,2), (3,3), (4,4), and so on, whatever grid size you start with. What's the pattern for the co-ordinates of the other main diagonal? (this will vary depending on the size of the grid you start with).

Setting 'graph co-ordinates'



Observe the co-ordinates pattern



Printing: You can print your pattern straight from **Grid Design**, or send it to **Presentation** first for a 'professionally finished' effect.

