

Investigating Pattern

Activity Sheet Teachers' Notes:

Key Stage 2

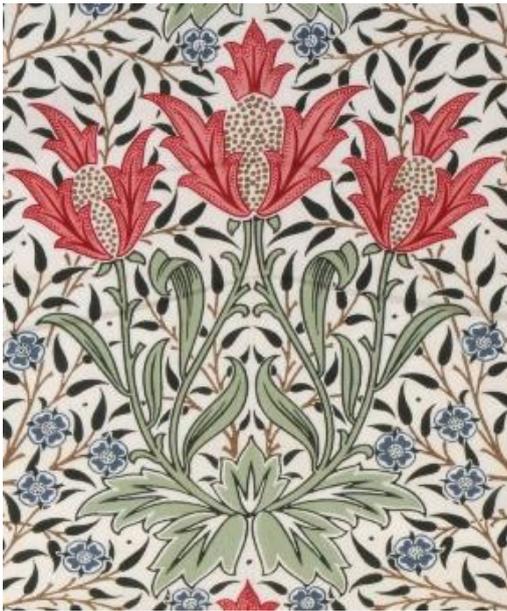
Galleries 2, 3, 4 and 5



WILLIAM
MORRIS
GALLERY

1. SPOT THE SYMMETRY

This activity sheet deals with line, reflective or mirror symmetry. Symmetry occurs when one half of an image is a reflection of the other half. The "line of symmetry" is the imaginary line where you could fold the image and have both halves match exactly. Years 5 and 6 may also be familiar with rotational and translational symmetry.



This is a detail from *Bourne* fabric situated in *Morris & Co*, Gallery 3. It is on the right hand side of the door leading out to Gallery 4.

Pupils are asked to complete one of the thistle-like shapes. The line of symmetry is the dotted line down the middle so they need to copy the other half exactly.

How many other designs can you see that use mirror symmetry like this? There could be any number – some with vertical and/or horizontal lines of symmetry.

An obvious example is the *Flowerpot Embroidery* on the same wall as *Bourne*. This design is created by simple mirror symmetry.

2. REPEATING PATTERNS

Lily and Pomegranate (1886) by William Morris, on the wall opposite.

How many lines of symmetry are there? Get pupils to look carefully at the whole design including the faint pencil drawing.

Clue! What are the long straight lines drawn in pencil on the design?

Morris has drawn in 3 vertical guide lines; the design repeats symmetrically on either side of these.

Can you spot where the pattern starts to repeat itself?

Watch for this tulip head at the top. Where do you see it appear again?

There is a coloured tulip top right and bottom right of the coloured section.

Draw an arrow to it on the illustration. This is the start of another repeat unit.

Explain that every pattern has a repeat unit. Some are more difficult to work out than others.

Why do you think he has only coloured part of the design and left the rest in pencil? Because all other parts of the design are repeats of the coloured section – either as mirror symmetry or as translations (i.e. repeated in another area but in the same relative position). This section of the design gave all the information the wood block printer or weaver needed to work out the required colours.



3. INSPIRATION FOR PATTERNS FROM OTHER CULTURES

Look round the displays in Gallery 4. Which country did Morris admire as the 'holy land' of pattern design? Circle the right answer.



← Photo: Detail of Persian carpet owned by Morris now at the V&A. He was respected as an expert in Middle Eastern carpets.

Pakistan

Persia (modern Iran)

Paraguay

Paris

Here are some design motifs from Middle Eastern designs which Morris often borrowed. Tick each when you have found a similar one in Morris's designs.

The **palmette** represents the leaves of a palm tree.

The **lotus flower**, similar to a lily, is important in oriental traditions as a symbol of beauty and purity.

Ogee curves or arches are very familiar forms in mosque architecture.

An **arabesque** can be any intertwining, curling line pattern, usually forming S-shapes and inspired by creeping plants.

Open the top drawer opposite the door from Gallery 3 into Gallery 4, *The Workshop*.

Find printed textiles from another country whose designs Morris admired. Which country? India.

Discuss what Morris would have liked about the designs? What do pupils like?

4. FRAMEWORKS FOR PATTERNS

Look for examples of other frameworks. Tick when you have found an example of each.

Squares/chequers

Example: Yellow squared-pattern of *Longden* tiles (in the fire place in Gallery 2) or *Trellis* (Gallery 2).

Diamond net

Example: *Indian Diaper* (on the left of the *Indigo* section in Gallery 4).

Diagonal branch

Example: *Wandle*, one of his River series prints (on window wall, Gallery 4).

5. Finally draw a detail of the William Morris pattern which you like best.

What's the name of this design?

Encourage pupils to read labels and sort out the various bits of information provided.

Can you work out where its repeat unit is? Refer back to section 2 on Activity Sheet.

Circle the repeat unit in your drawing if your drawing includes it. In some designs the repeat unit is very large and hard to work out. Encourage pupils to look round and spot other repeat units.