

# Working With Pattern

A Key Stage 2 Teachers' Resource Pack  
featuring a Scheme of Work inspired by  
William Morris

Developed by textile artist Sba Shaikh

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# WORKING WITH PATTERN

This Scheme of Work includes:

- Individual lesson plans (fully differentiated for both your SEN learners and G&T pupils and including key vocabulary lists with definitions)
- Resources, including images and photocopiable worksheets where required
- Lists of additional resources required from schools
- Opportunities for children to benefit from looking at the patterns from different countries and how William Morris was influenced by different art cultures.

Children benefit from looking at the importance of Maths through patterns with printable worksheets. There are lesson plans for Key Stage 2, with worksheets where children can create their own designs using William Morris's methods/forms of creating patterns.

This Scheme of Work covers the following Maths Units for Key Stage 2:

**Ma3** *Shape, space and measures*

**Unit 2D** *Understanding properties of shape*

**Unit 3B** *Understanding measures.*



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This Scheme of Work can also be used for several other subjects.

## **ART & DESIGN**

This Scheme covers the following Art Units from the National Curriculum:

**Unit 3A & 3C** *Evaluating and developing work* (Year 5&6)

**Unit 4A & 4C** *Knowledge and understanding*

**Unit 5C** *Talking Textiles.*

## **ICT**

This Scheme covers the following Unit from the National Curriculum:

**Unit 2B.**

## **ENGLISH**

This Scheme covers the following English Units from the National Curriculum:

**En1** *Knowledge, skills and understanding*

**Unit 1G** and **Unit 1F**

**En1** *Speaking and listening: Group discussion and interaction*

**Unit 3A, Unit 3B** and **Unit 3C.**

This Scheme of Work was developed using the Primary National Curriculum guidelines for Maths:

[www.education.gov.uk/schools/teachingandlearning/curriculum/primary/b00199044/mathematics/ks2/ma3](http://www.education.gov.uk/schools/teachingandlearning/curriculum/primary/b00199044/mathematics/ks2/ma3)) [updated in 2014]



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Page 8 Lesson 3: *What is a 'half drop'?* (To be able to understand and create a 'half drop' pattern)

Page 9 Lesson 4: *William Morris's patterns* (To look at two of William Morris's methods for creating pattern: i) cheques; ii) diamonds)

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# Section 1

## Scheme of Work



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# Working with Pattern: Scheme of Work summary

In this Scheme of Work, students will explore:

- What is a motif
- Creating your own motif
- How a motif can create a pattern
- Basic geometry using triangles
- Different ways of creating a pattern
- One of William Morris's methods of creating pattern
- Building on **Ma3** *Shape, space and measures*
- Building on **Unit 2D** *Understanding properties of shape.*

Learning objectives covered in this Scheme of Work:

Lesson 1: To question, observe and self-assess their work

Lesson 2: To create and understand patterns using basic geometry and colour to develop their ideas

Lesson 3: To be able to create a 'half drop' pattern using their own motif

Lesson 4: To explore two of William Morris's methods of creating patterns

Lesson 5: To be able to understand and gain knowledge about patterns from different countries.



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Lesson topic: What is a motif?

Date:

Foundation Subject: Art/DT/Maths				Class: Y5-Y6	Time: 1h	Term:	
Lesson	Learning Intention (linked to Level Descriptors)	Teacher	Key Vocabulary	Teacher & Pupil Activity (Indicate the groups that will be supported and by whom)	Plenary	Resources	Outcomes/Evaluation
1	To be able to understand what a motif is	Write learning intention on whiteboard.  Put cards on each table with key vocabulary on them.	- Motif - Research	<p><b>Teacher led</b> Tell the children that today they are going to be learning about motifs. (A motif is a single image, shape or symbol.)</p> <p>Show Power Point Presentation, Part 1.</p> <p><b>Questions</b> <i>Where can you find different motifs?</i> (Teacher to give examples where patterns can be found such as snowflakes or honeycomb.)</p> <p><b>Activity 1</b> (Mixed abilities) Write <i>Exploring Motif</i> in the centre of large sheets of coloured sugar paper. Cut images from magazines of motifs and stick around the title.</p> <p><b>Teacher led</b> Draw a square 5cm by 5cm on squared paper provided, then draw your own motif in it.</p> <p><b>Activity 2</b> (Mixed abilities) Children to practise by drawing a 5cm square, then creating their own motif in the square.</p>	Students to feedback on their findings to the class.	- Images from magazines - Scissors - Coloured sugar paper - Glue sticks - Markers - A5 squared paper. - Power Point Presentation, Part 1	<p>Pictures to be taken by teacher, and students to write comments about their experiences.</p> <p>Students to give testimonials about project.</p> <p><b>Success criteria</b></p> <p>I can understand what a motif is.</p> <p>I can observe, evaluate my own work and that of others.</p> <p>I can create a motif.</p> <p>I can conduct research in a group.</p> <p><b>Differentiation</b></p> <p>SEN/EAL: Highlight motif in magazines; Give examples of shapes <i>e.g.</i> star to create a motif.</p> <p>G&amp;T: Redraw motif to fit box twice the size.</p>



Foundation Subject: Art/DT/Maths				Class: Y5-Y6	Time: 1h/1.5h	Term:	
Lesson	Learning Intention (linked to Level Descriptors)	Teacher	Key Vocabulary	Teacher & Pupil Activity (Indicate the groups that will be supported and by whom)	Plenary	Resources	Outcomes/Evaluation
2	To be able to understand what a pattern is.	<p>Write learning intention on whiteboard.</p> <p>Recap: <i>What is a motif?</i></p> <p>Put cards on each table with key vocabulary on them.</p> <p>The following images to be shown/placed on tables: Resource <b>L2b</b>, Resource <b>L2c</b> and Resource <b>L2d</b>.</p>	<ul style="list-style-type: none"> <li>- Motif</li> <li>- Pattern</li> <li>- Rotation</li> <li>- Reflection</li> <li>- 'Half drop'</li> <li>- Geometry</li> <li>- Symmetry</li> </ul>	<p><b>Teacher led</b> Start lesson by recapping last lesson on Motifs. Recap on symmetry.</p> <p><b>Questions</b> <i>What do we know about symmetry?</i> Child to discuss with partner. Teacher takes suggestions and writes on whiteboard as scribe.</p> <p><b>Teacher led</b> (for both Activities 1 and 2) Tell the children that today they are going to be learning about pattern.</p> <p><b>Questions</b> <i>What is a pattern?</i> <i>Where can we see patterns?</i> <i>What patterns are there in nature?</i> <i>What number patterns are there?</i> Child to discuss with partner. Teacher takes suggestions and writes on whiteboard as scribe.</p> <p>After discussion, show Power Point Presentation, Part 2: What is a pattern?</p> <p><b>Activity 1</b> (Mixed abilities) Join the dotted lines of the Triangle pattern template (Resource <b>L2a</b>) to form a pattern.</p> <p><b>Questions</b> <i>What shapes have been formed from joining the dotted lines?</i> Child to discuss with partner. Teacher takes suggestions and writes on whiteboard as scribe.</p> <p><b>Activity 2</b> (Mixed abilities) Colour the triangles using 3 different colours to create a pattern. Look at how colours can sit next to each other and can create a pattern. (No same coloured triangle should sit next to another.)</p>	<p>Share sketches and compare techniques used to create pattern.</p>	<ul style="list-style-type: none"> <li>- Felt tip pens</li> <li>- Coloured pencils</li> <li>- A4 coloured paper (lighter shades) <i>N.B.</i>: Triangle pattern template to be photocopied onto these sheets</li> <li>- Resource <b>L2a</b> (Triangle pattern template)</li> <li>- Resource <b>L2b</b> (Image 1: Snowflakes)</li> <li>- Resource <b>L2c</b> (Image 2: Honeycomb)</li> <li>- Resource <b>L2d</b> (Image 3: William Morris using symmetry and reflection in <i>Brother Rabbit</i> (Morris, 1882))</li> <li>- Power Point Presentation, Part 2</li> </ul>	<p><b>Success criteria</b></p> <p>I can understand and use geometrical shapes.</p> <p>I can create and use different patterns, colours and geometrical shapes <i>e.g.</i> a triangle.</p> <p><b>Differentiation</b></p> <p>SEN/EAL: Use 2 colours.</p> <p>G&amp;T: Look at other patterns that are not the same; Use/create additional patterns with more than 3 colours.</p>





Lesson topic: What is a 'half drop'?

Date:

Foundation Subject: Art/DT/Maths				Class: Y5-Y6	Time: 1h	Term:	
Lesson	Learning Intention (linked to Level Descriptors)	Teacher	Key Vocabulary	Teacher & Pupil Activity (Indicate the groups that will be supported and by whom)	Plenary	Resources	Outcomes/Evaluation
3	To be able to understand and create a 'half drop' pattern	Write learning intention on whiteboard.  Put cards on each table with key vocabulary on them.  The following images to be shown/placed on tables: Resource <b>L3b</b> Resource <b>L3c</b> .	- Motif - Pattern - 'Half drop'	<b>Teacher led</b> Today, we shall be looking at <i>What is a 'half drop'?</i> Show Power Point Presentation, Part 3.  <b>Activity 1</b> (Mixed abilities) Draw the motif that you created in Lesson 1 in the first box of the 'Half drop' template sheet provided (Resource <b>L3a</b> ).  <b>Activity 2</b> (Mixed abilities) Repeat your motif on rest of sheet.	Share sketches and compare techniques used to create the effect.	- Coloured pencils - Felt tip pens - Children's motifs created in Lesson 1 - A4 paper coloured paper (lighter shades) <i>N.B.</i> : 'Half drop' template to be photocopied onto these sheets - Resource <b>L3a</b> ('Half drop' template) - Resource <b>L3b</b> (Image 1: Example of a 'half drop') - Resource <b>L3c</b> (Image 2: Example of a 'half drop') - Power Point Presentation, Part 3	<b>Success criteria</b>  I can understand what a 'half drop' is.  I can create a pattern using a motif.  <b>Differentiation</b>  SEN/EAL: Provide motif.  G&T: Develop motif.



Lesson topic: William Morris's patterns

Date:

Foundation Subject: Art/DT/Maths				Class: Y5-Y6	Time: 1h	Term:		
Lesson	Learning Intention (linked to Level Descriptors)	Teacher	Key Vocabulary	Teacher & Pupil Activity (Indicate the groups that will be supported and by whom)		Plenary	Resources	Outcomes/Evaluation
4	To look at two of William Morris's methods for creating pattern: i) cheques; ii) diamonds	Write learning intention on whiteboard.  Put cards on each table with key vocabulary on them.  The following images to be shown/placed on tables: Resource <b>L4c</b> Resource <b>L4d</b> .	- Diamonds - Cheques	<p><b>Teacher led</b> Show Power Point Presentation, Part 4. Show Resource <b>L4d</b> (Image 2: <i>Indian Diapers</i> (Morris, 1875) ).</p> <p><b>Questions</b> <i>What shape is being used?</i> <i>What other names is this shape called?</i> <i>Where can we see these shapes?</i> Child to discuss with partner. Teacher to take suggestions and to write on whiteboard as scribe.</p> <p><b>Activity 1</b> Give out to student's b/w photocopies of Resource <b>L4c</b> and Resource <b>L4d</b>. Children to find the diamond patterns and then to draw the diamond net onto the photocopies.</p> <p><b>Activity 2</b> Give out to children photocopies of Resource <b>L4a</b> and Resource <b>L4b</b>. Children to create a diamond pattern using their own motifs to form a pattern.</p>		Student to feedback on their findings to the class.	- Resource <b>L4a</b> (Diamond template) - Resource <b>L4b</b> (Cheques template) - Resource <b>L4c</b> (Image 1: <i>Snakeshead</i> , (Morris, 1876)) - Resource <b>L4d</b> (Image 2: <i>Indian Diapers</i> (Morris, 1875) ) - Power Point Presentation, Part 4	<p>Pictures to be taken by teacher and students to write up comments of their experience.</p> <p>Students to give testimonials about project.</p> <p><b>Success criteria</b></p> <p>I can understand one of the methods which William Morris used to create patterns.</p> <p>I can critically evaluate my own and others' work.</p> <p><b>Differentiation</b></p> <p>SEN/EAL: Give out the Cheques template rather than the Diamond template.</p> <p>G&amp;T: To join the motifs to create an overall pattern or investigate other shapes that are parallelograms.</p>



Lesson topic: Patterns from different countries

Date:

Foundation Subject: Art/DT/Maths			Class: Y5-Y6	Time: 1h/1.5	Term:		
Lesson	Learning Intention (linked to Level Descriptors)	Teacher	Key Vocabulary	Teacher & Pupil Activity (Indicate the groups that will be supported and by whom)	Plenary	Resources	Outcomes/ Evaluation
5	To investigate patterns from different countries	<p>Write learning intention on whiteboard.</p> <p>Put cards on each table with key vocabulary on them.</p> <p>The following images to be shown/placed on tables: Resource <b>L5a</b> (Images <b>1</b> to <b>8</b>, <b>(i)</b> and <b>(ii)</b> of each).</p>	<ul style="list-style-type: none"> <li>- Research</li> <li>- Think</li> <li>- See</li> <li>- Wonder</li> <li>- Countries</li> </ul>	<p><b>Teacher led</b> Split class into groups of 5, then into:</p> <ol style="list-style-type: none"> <li>a) Presenters</li> <li>b) Time Keepers</li> <li>c) Researchers</li> <li>d) Scribes</li> <li>e) Observer</li> </ol> <p>Allocate one laptop per group. Put images of patterns from around the world on each table.</p> <p><b>Activity 1</b> (Mixed Ability) Each group to write the countries in the centre of a large piece of sugar paper. Students to write headings 'See', 'Think' and 'Wonder' on corners of the paper.</p> <p><b>Activity 2</b> (Mixed Ability) From research, under the above headings, students to write what they saw, what they thought and what they wondered.</p>	<p>Teacher to write headings 'See', 'Think' and 'Wonder' on whiteboard. Teacher to write contributions from each group under these headings.</p>	<ul style="list-style-type: none"> <li>- Coloured sugar paper</li> <li>- Markers</li> <li>- Laptops (Internet)</li> <li>- Resource <b>L5a</b> (Images of patterns from around the world which William Morris was influenced by: <b>1 (i)</b> and <b>(ii)</b> Polynesia <b>2 (i)</b> and <b>(ii)</b> Indonesia <b>3 (i)</b> and <b>(ii)</b> China <b>4 (i)</b> and <b>(ii)</b> Japan <b>5 (i)</b> and <b>(ii)</b> India/Pakistan <b>6 (i)</b> and <b>(ii)</b> Persia <b>7 (i)</b> and <b>(ii)</b> Sub-Sahara and North Africa <b>8 (i)</b> and <b>(ii)</b> South America (the pre-Colombian period) )</li> <li>- Resource <b>L5b</b> (Image 1: <i>Hammersmith</i> rug (Morris,1880); influenced by Chinese art)</li> <li>- Resource <b>L5c</b> (Image 2: Typical Chinese flowery rug)</li> </ul>	<p>Pictures to be taken by teacher and students to write up comments of their experience.</p> <p>Students to give testimonials about project.</p> <p><b>Success criteria</b></p> <p>I can understand that there are different patterns in different parts of the world.</p> <p>I can critically evaluate my own and others' work.</p> <p><b>Differentiation</b></p> <p>SEN/EAL: Give samples of patterns from different countries.</p> <p>G&amp;T: Look at patterns formed by numbers <i>e.g.</i> Maths; Look at modern fashion designers.</p>



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# Section 2

## Printable Classroom resources



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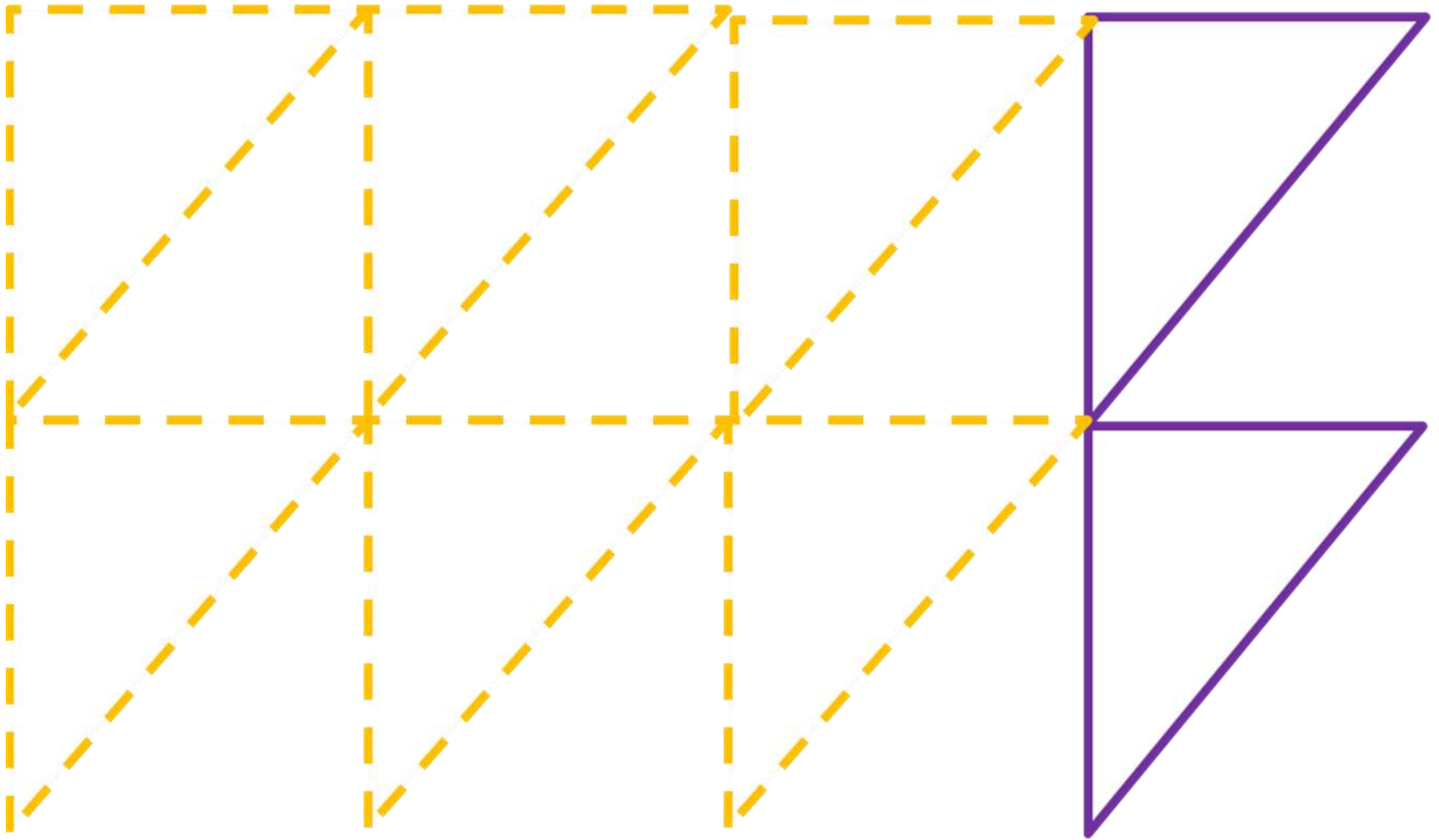
# Resources for Lesson 2

## What is a pattern?



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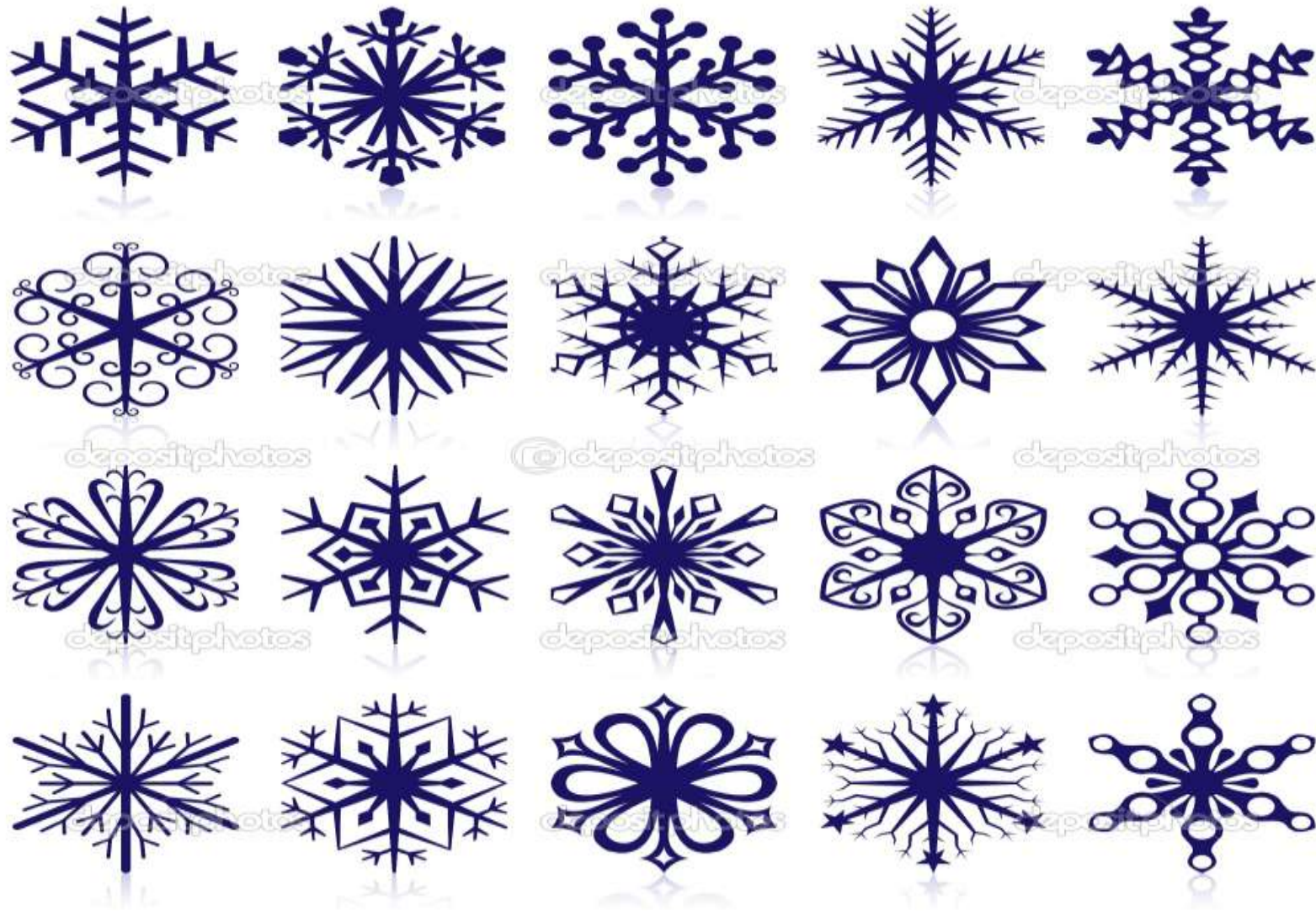


**Resource L2a** Triangle pattern template



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**Resource L2b** Image 1: Snowflakes



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**Resource L2c** Image 2: Honeycomb

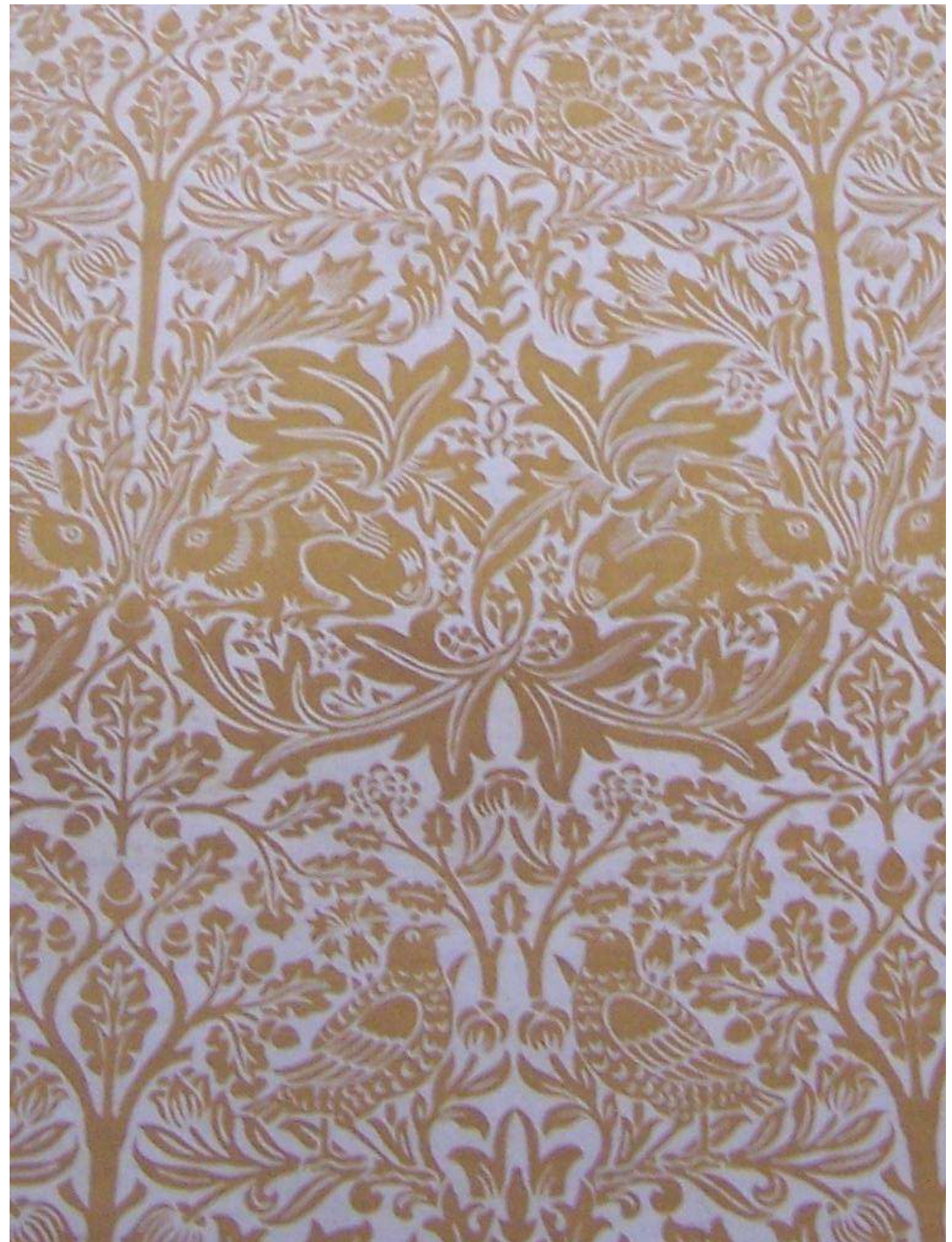


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**Resource L2d** Image 3:  
William Morris using  
symmetry  
and reflection in *Brother  
Rabbit* (Morris,1882)



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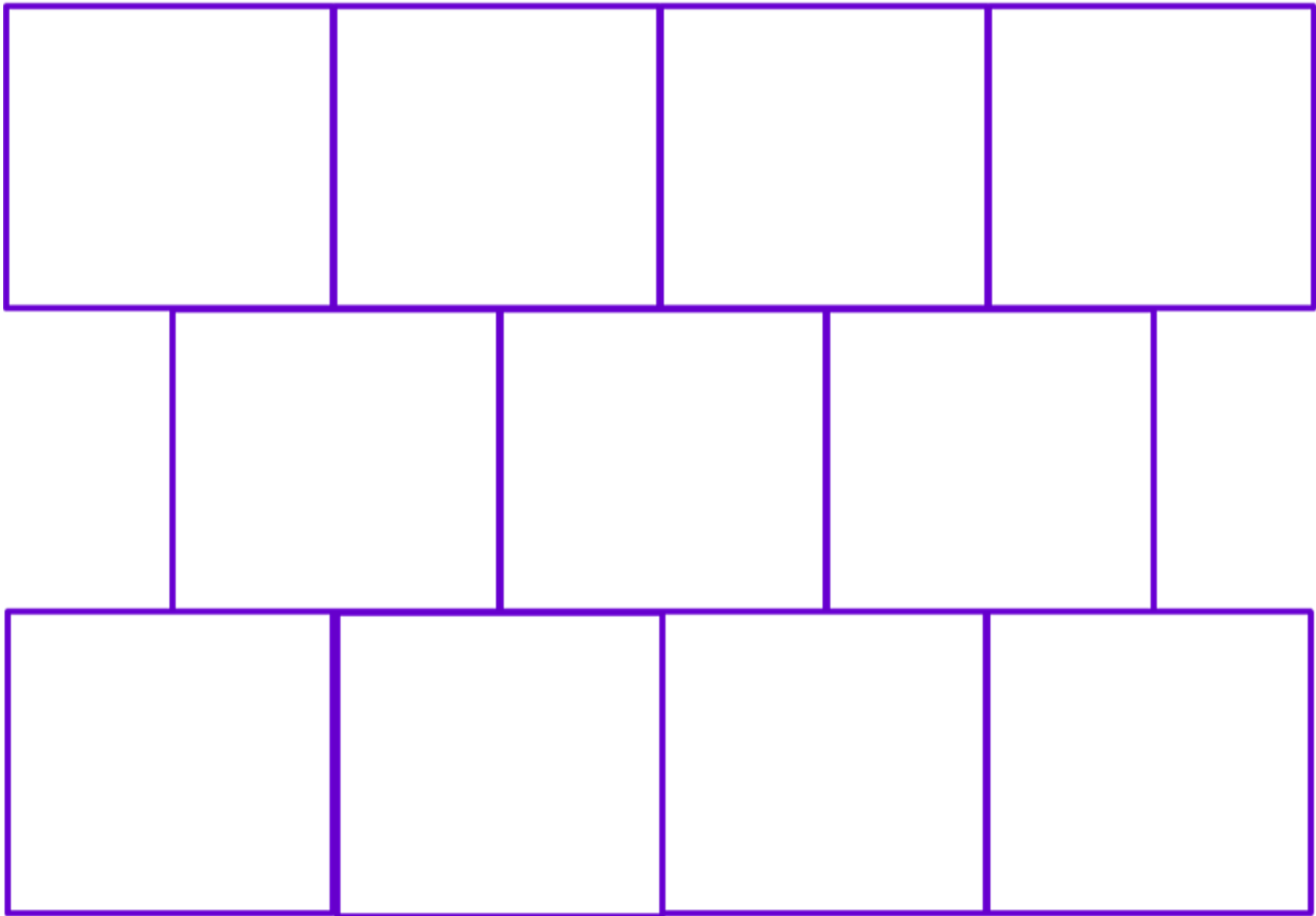
# Resources for Lesson 3

## What is a 'half drop'?



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**Resource L3a** 'Half drop' template

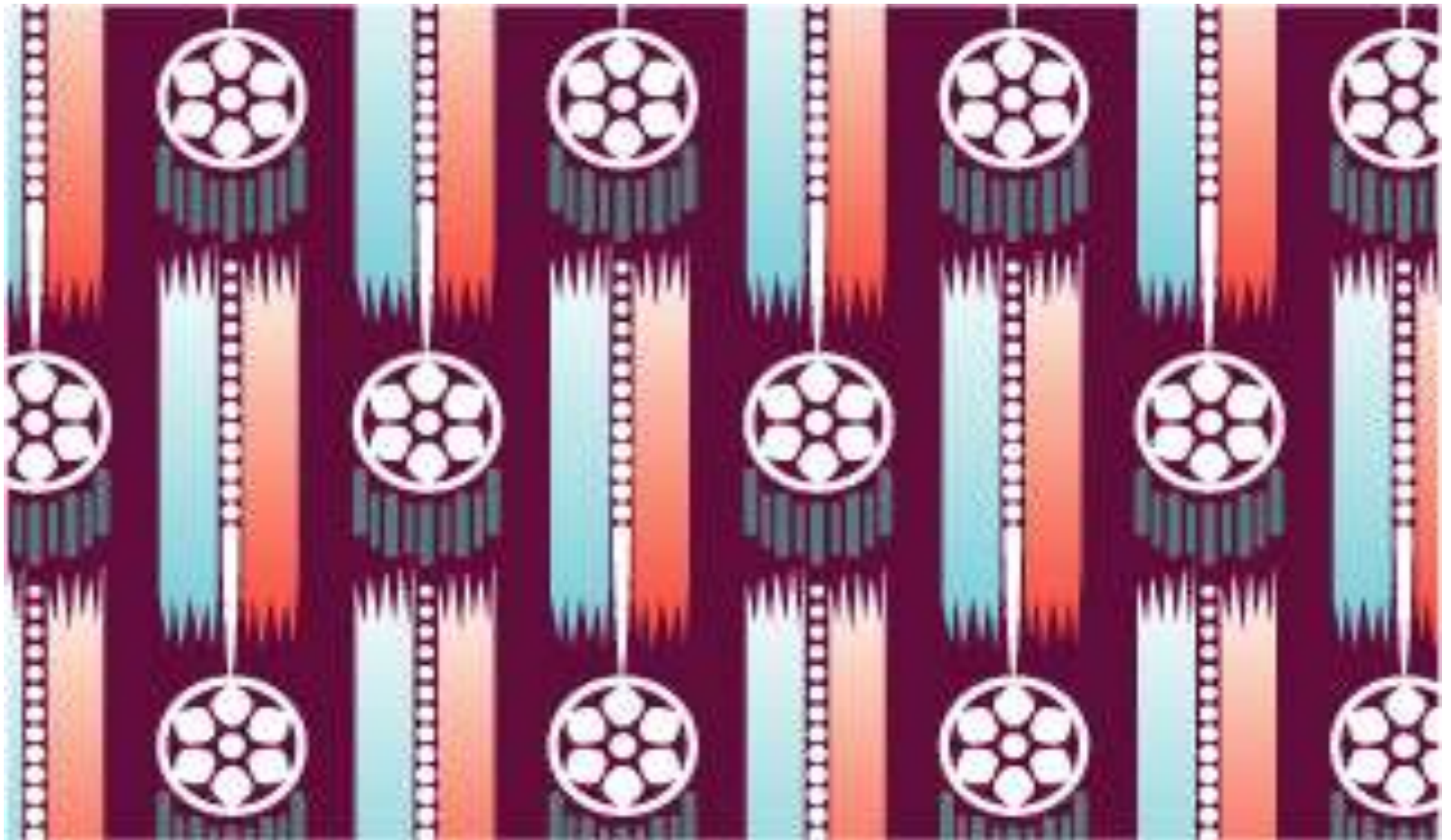


**Resource L3b** Image 1: Example of a 'half drop'



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**Resource L3c** Image 2: Example of a 'half drop'

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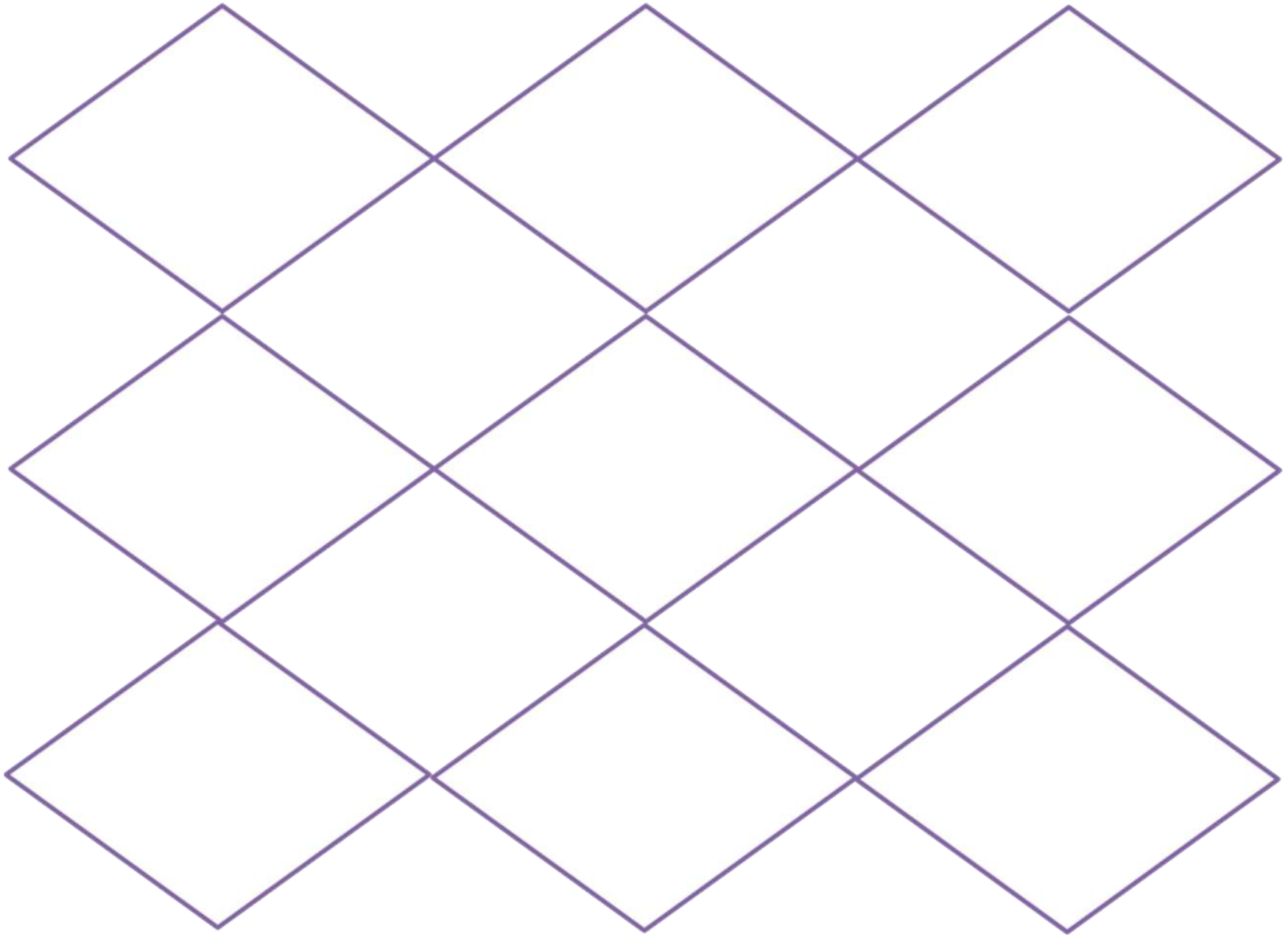
# Resources for Lesson 4

## William Morris's patterns



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**Resource L4a** Diamond template


**Resource L4b** Cheques template



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**Resource L4c** Image 1: *Snakeshead* (Morris, 1876)



**Resource L4d** Image 2: *Indian Diapers* (Morris, 1875)



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# Resources for Lesson 5

## Patterns from different countries



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**Resource L5a** Image 1(i): Polynesia



**Resource L5a** Image 1(ii) Polynesia



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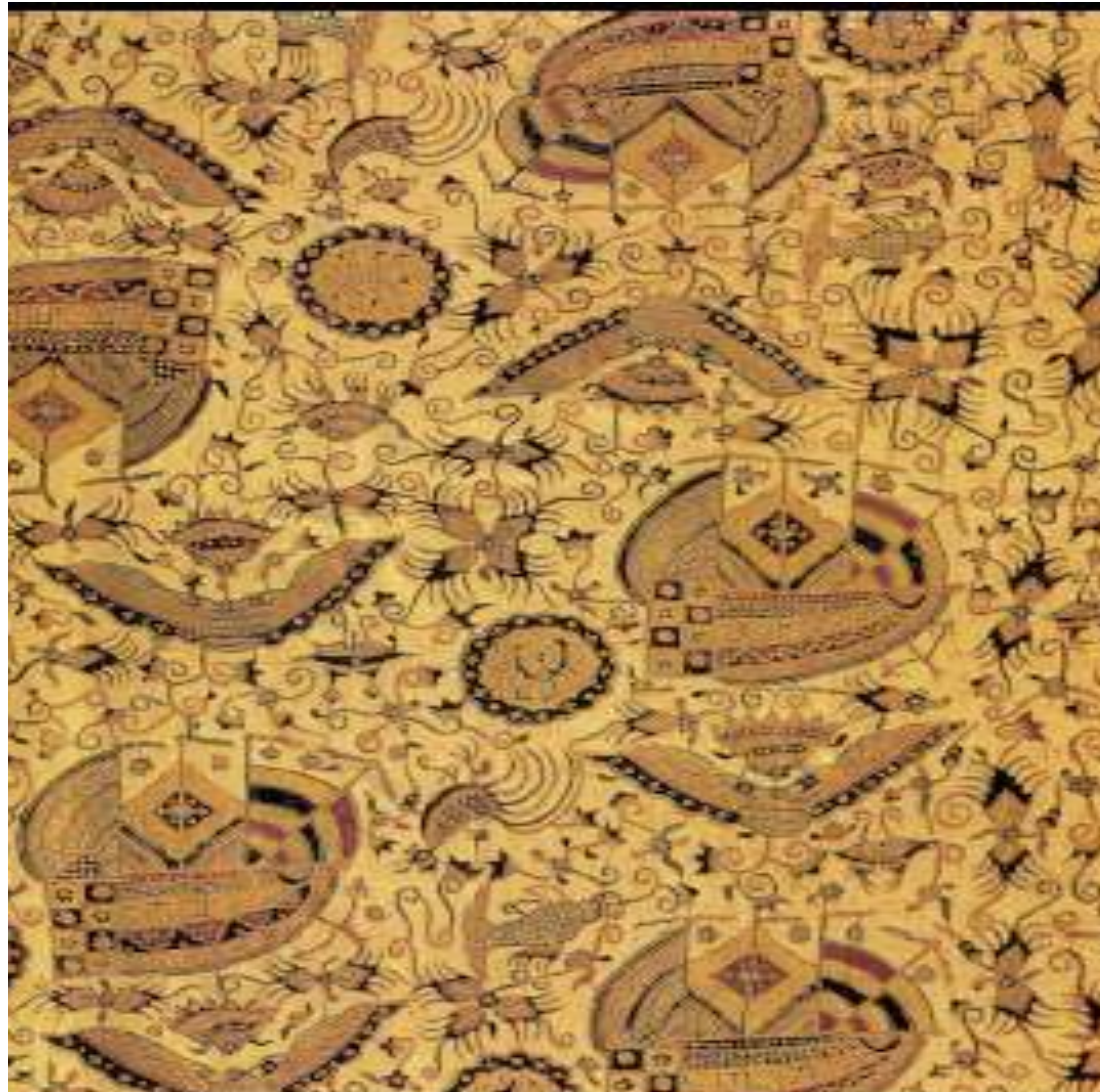


**Resource L5a** Image 2(i): Indonesia



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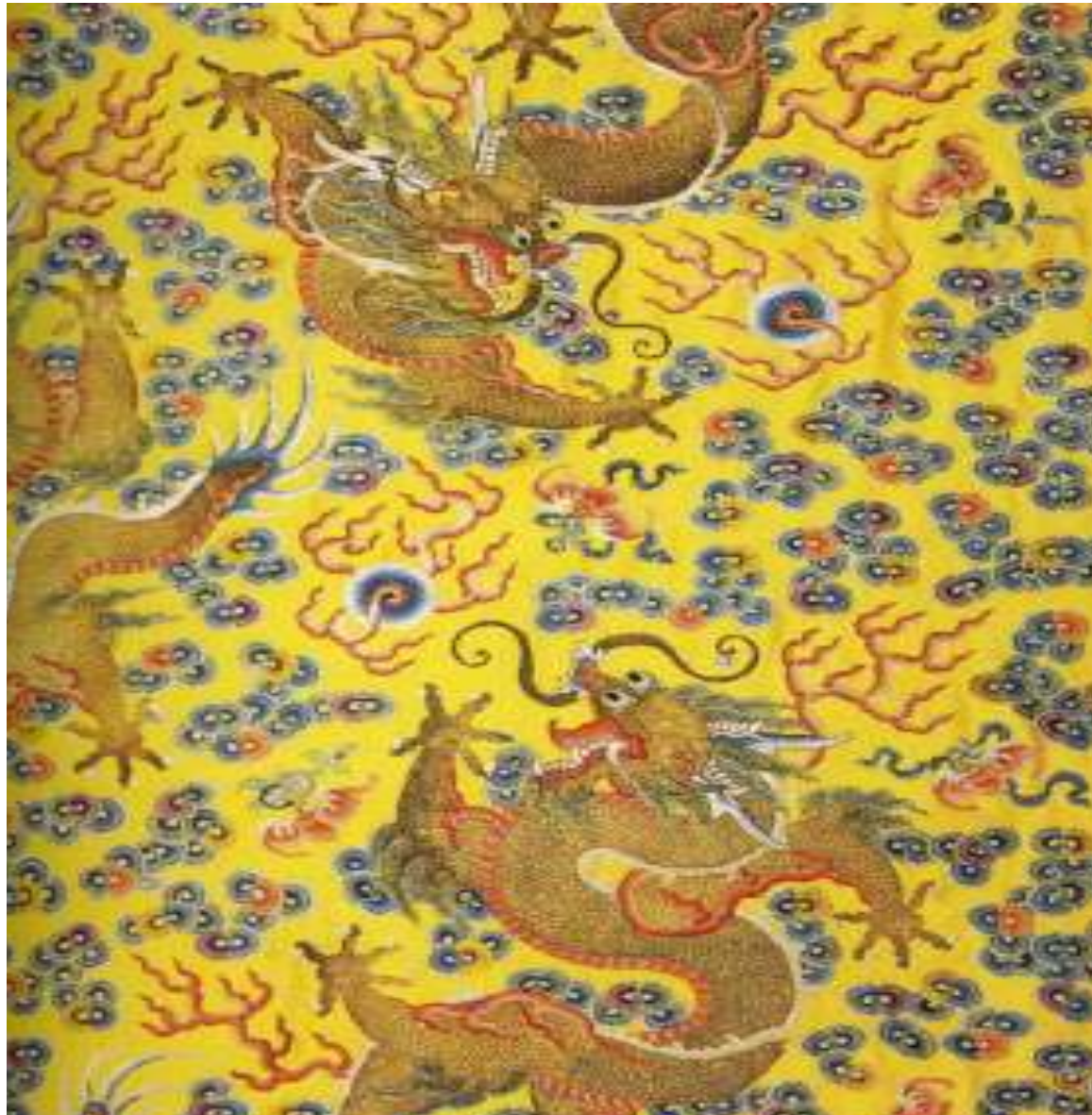


**Resource L5a** Image 2(ii): Indonesia



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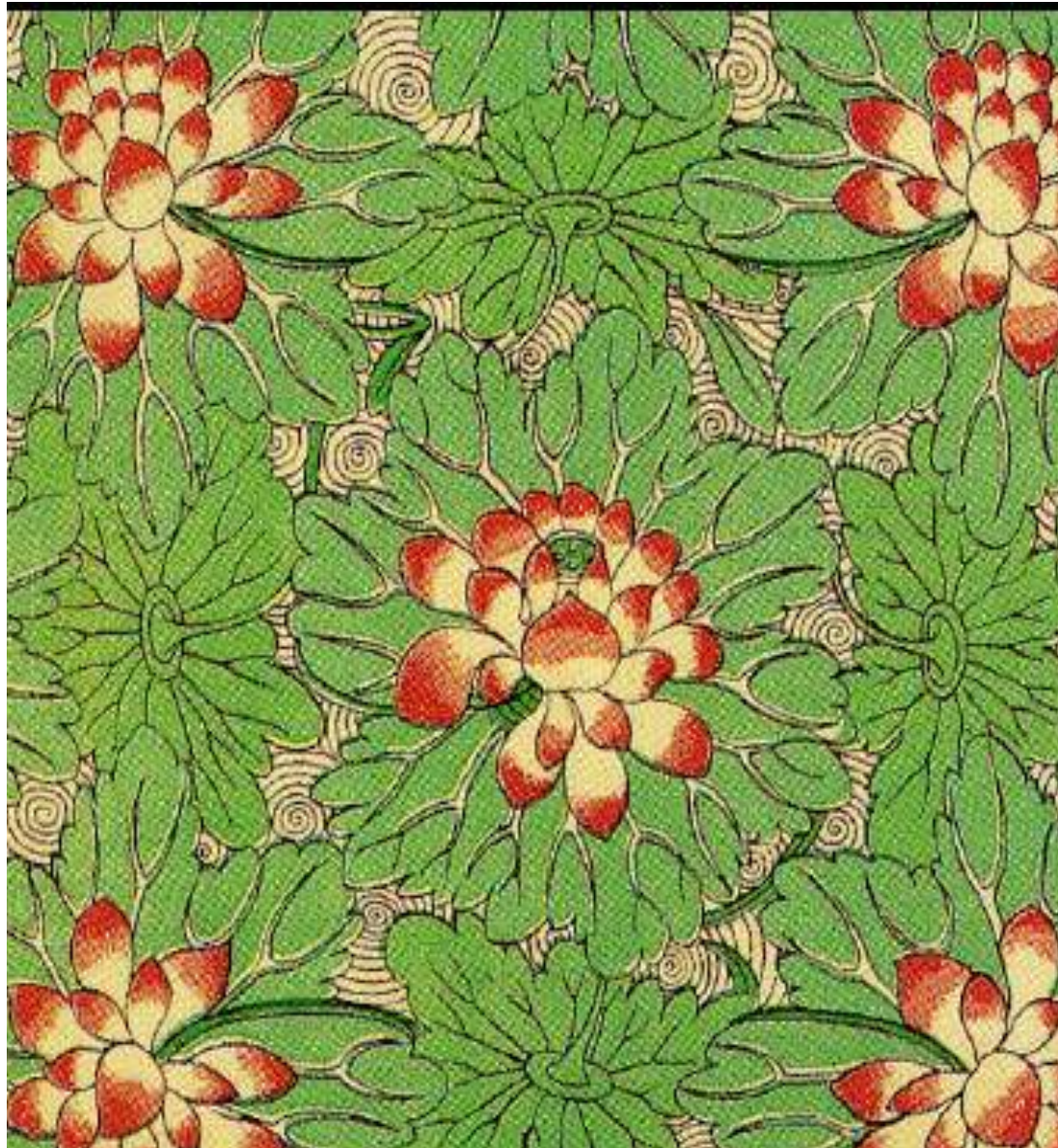


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**Resource L5a** Image 3(i): China



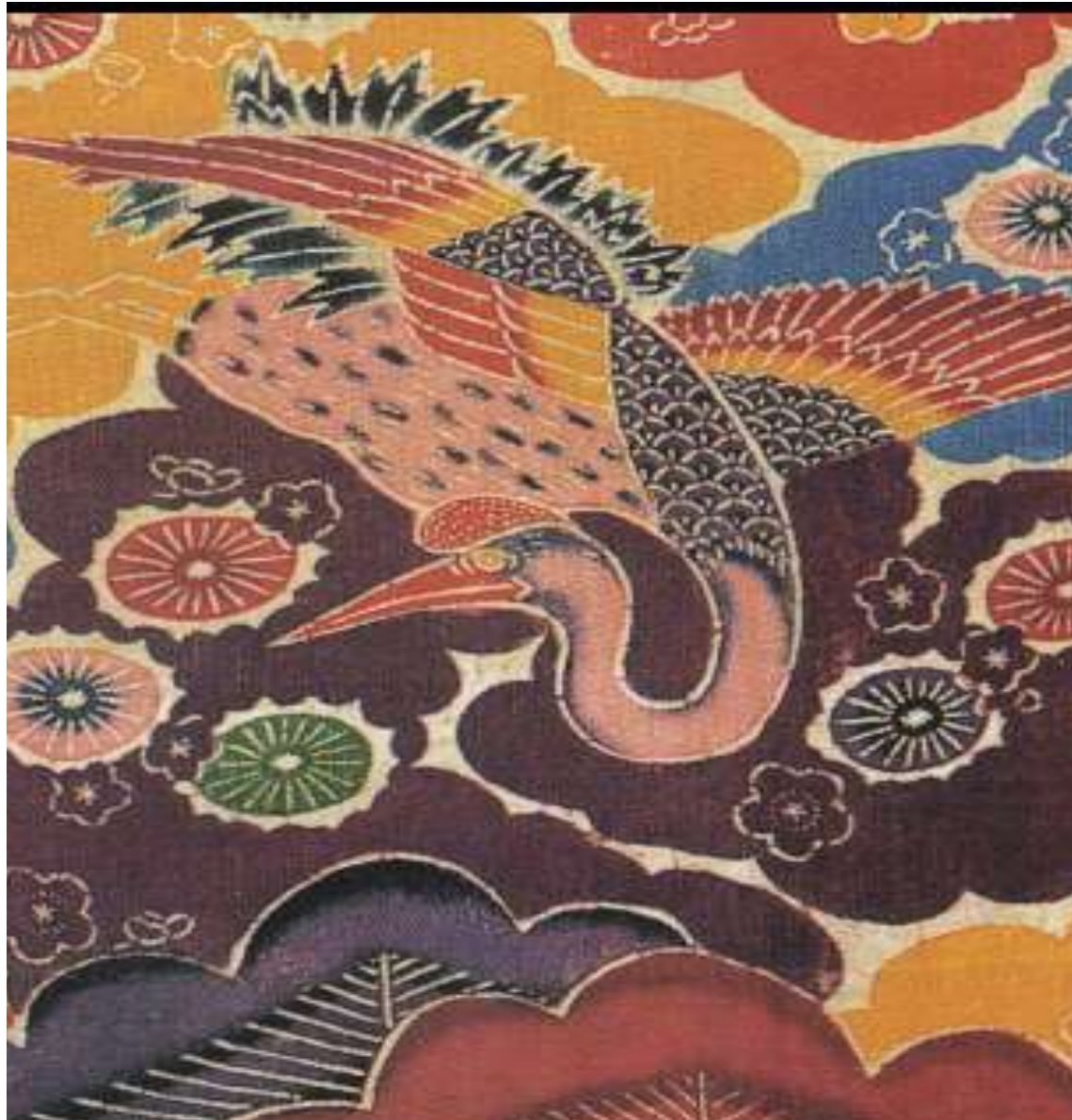


**Resource L5a** Image 3(ii): China



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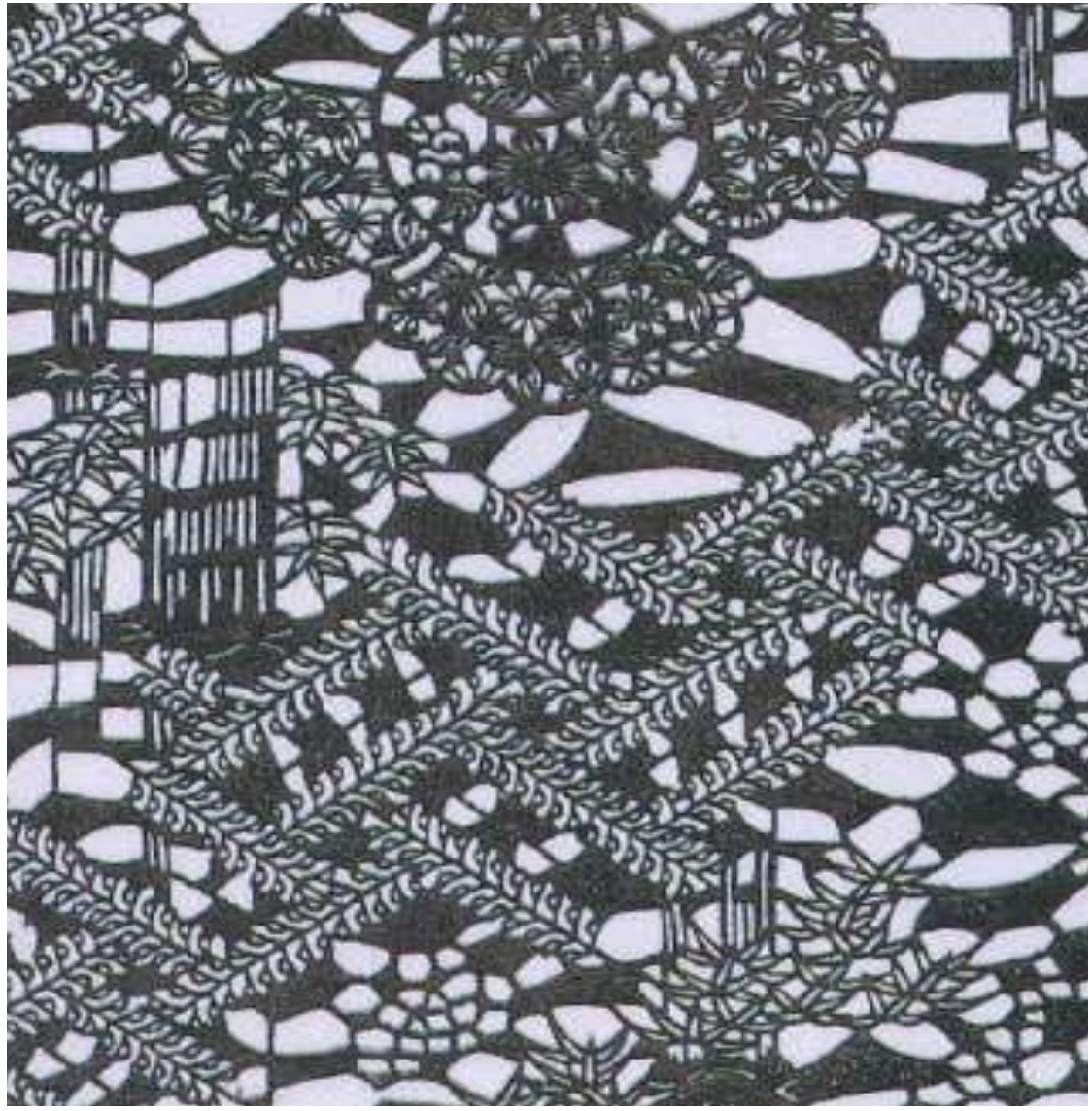


**Resource L5a** Image 4(i): Japan



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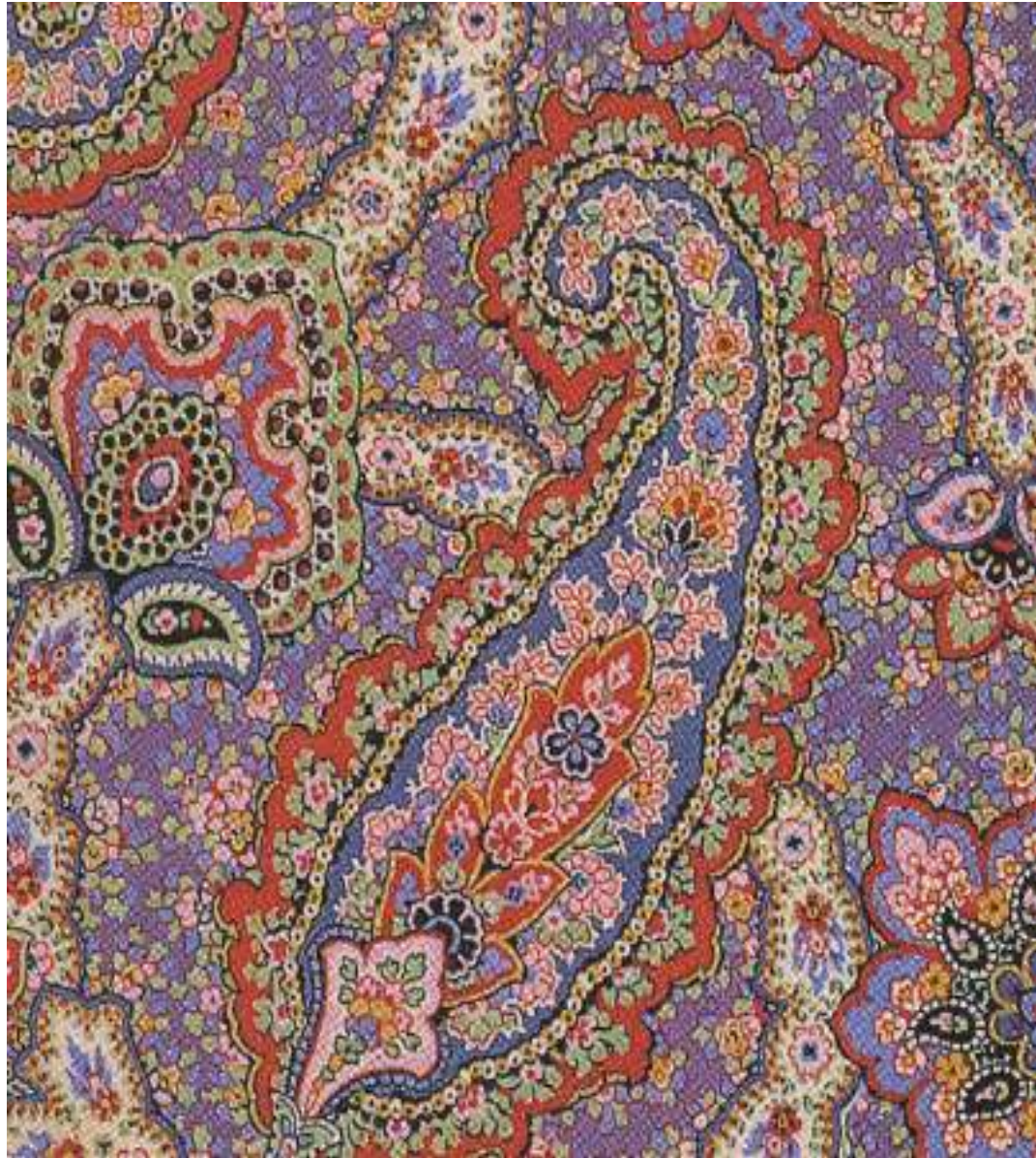


**Resource L5a** Image 4(ii): Japan



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**Resource L5a** Image 5(i): India/Pakistan



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**Resource L5a** Image 5(ii): India/Pakistan



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**Resource L5a** Image 6(i): Persia



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**Resource L5a** Image 6(ii): Persia



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**Resource L5a** Image 7(i): Sub-Sahara and North Africa



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**Resource L5a** Image 7(ii): Sub-Sahara and North Africa



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**Resource L5a** Image 8(i): South America  
(the pre-Colombian period)



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**Resource L5a** Image 8(ii): South America  
(the pre-Colombian period)



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**Resource L5b** Image 1: *Hammersmith* rug (Morris, 1880); influenced by Chinese art



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**Resource L5c** Image 2: Typical Chinese flowery rug



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For further information, check the following websites and books:

[www.education.gov.uk/schools/teachingandlearning/curriculum/primary/b00199044/mathematics/ks2/ma3](http://www.education.gov.uk/schools/teachingandlearning/curriculum/primary/b00199044/mathematics/ks2/ma3))

[www.marxists.org/archive/morris/works/1881/hints.htm](http://www.marxists.org/archive/morris/works/1881/hints.htm)

[WILLIAM MORRIS: THE DESIGNER - William Morris Gallery](#)

<http://panayota-theodore.blogspot.co.uk/2012/04/examples-of-different-types-of-repeats.html>

[www.dummies.com/how-to/content/understanding-wallpaper-pattern-repeats.html](http://www.dummies.com/how-to/content/understanding-wallpaper-pattern-repeats.html)

[www2.rgu.ac.uk/subj/ats/teachingweb/textiles/print/p9.htm](http://www2.rgu.ac.uk/subj/ats/teachingweb/textiles/print/p9.htm)

<http://katysaustin.wordpress.com/2012/08/01/danny-boyle-the-refurbished-william-morris-gallery-and-grayson-perry/>

[www.vam.ac.uk/content/articles/c/consuming-south-asian-textiles/](http://www.vam.ac.uk/content/articles/c/consuming-south-asian-textiles/)

<http://www.slideshare.net/elemICT/world-patterns>

<http://www.slideshare.net/leadranach/what-is-a-pattern>

Repeat Patterns - *Peter Philips and Gillian Bunce*

1000 Patterns - *Drusilla Cole*

Oriental Rugs 'An Introduction'- *Gordon Redford Walker*

*Please note that all resources can also be photocopied in black and white. William Morris images are copyright of the William Morris Gallery. Images from other sources have various copyrights and may only be used for educational purposes.*

With thanks to Melissa Quinn for the editing and proofing of this resource.



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