

Zara's Festive Pattern Workshop

Learning objective: To explore the use of geometric patterns, symmetry, and colour theory in seasonal art, inspired by the mathematical beauty of snowflakes and traditional festive designs.

Zara the zebra has been studying the intricate patterns found in winter nature. Use the word bank to help you describe the visual techniques Zara uses in her festive artwork. Follow the questions below to design your own symmetrical seasonal masterpiece using colour theory and geometric shapes.

Word bank: Symmetry · Primary colours · Geometric · Contrast · Tessellation · Cool palette · Radial balance

1. Zara wants to create a snowflake pattern. Explain why 'radial balance' is the most effective technique to use when drawing a snowflake. Justify your answer using the properties of a circle. (3 marks)

2. Compare and contrast the use of a 'cool palette' (blues, silvers, whites) versus 'primary colours' (red, yellow, blue) in a Christmas art piece. Which creates a more traditional festive mood and why? (3 marks)

3. If you were to create a wrapping paper design using 'tessellation', what geometric shape would you choose to ensure there are no gaps between the shapes? Explain your reasoning. (2 marks)

4. Zara is selling her handmade cards for £2.50 each. If she uses 'contrast' by placing gold ink on dark green card, explain why this makes the design more visually striking to a customer. (2 marks)

5. What might happen to the visual impact of a symmetrical design if you accidentally changed the pattern on only one side? Describe the effect this would have on the viewer. (2 marks)

6. Justify why using a ruler and a compass is essential for achieving perfect 'geometric' precision in festive star designs. (2 marks)

Draw: In the space below, create a festive design that features a perfectly symmetrical snowflake at the centre. Use at least three different geometric shapes within your pattern and apply a 'cool palette' to your background to make your central design stand out.



Extension challenge: Design a 'Festive Pattern Tile' that could be repeated perfectly to cover a wall. Write a short paragraph explaining the mathematical rule you used to ensure your shapes tessellate, and describe how you have used colour contrast to highlight the main focal point of your design.