

Year 4 Design Technology Assessment: Textile Treasures

Learning objective: To evaluate understanding of textile properties, functional design, and construction techniques.

Read each question carefully. Use the word bank to help you express your ideas clearly. Show your working for any calculations.

Max the monkey is designing a sturdy pouch to store his collection of maths puzzle cards. He has a choice of fabrics: thick felt (a natural wool blend), thin polyester (a synthetic fabric), or heavy-duty denim. He needs the pouch to be strong enough to hold fifty cards, which weigh 250g in total. He also wants to add a button to ensure the cards stay safely inside.

Word bank: template · seam allowance · properties · durability · running stitch · aesthetic · fastening · synthetic · natural · reinforce

1. Identify one natural fabric and one synthetic fabric from the word bank or your own knowledge. Explain why a designer might choose a synthetic fabric over a natural one for a school bag. (3 marks)

2. Max decides to use denim for his pouch. Based on the passage, why is this a suitable choice for his specific needs? Use the term 'durability' in your answer. (2 marks)

3. If Max buys a metre of fabric for £4.50 and a pack of buttons for £1.25, calculate the total cost. If he pays with a £10 note, how much change should he receive? (3 marks)

4. Why is it important to use a 'seam allowance' when joining two pieces of fabric together? What might happen to the pouch if the seam allowance is too narrow? (3 marks)

5. Describe the process of a 'running stitch'. Why is it sometimes necessary to 'reinforce' a seam at the beginning and the end? (4 marks)

6. Max wants his pouch to look unique. Explain how he could combine different colours or textures to improve the 'aesthetic' of his design without compromising its strength. (2 marks)

7. Extended Writing Task: Evaluate the design process. If you were designing a textile product for a specific purpose (such as a pencil case or a phone sleeve), justify your choice of materials and fastenings. Consider the balance between the product's function and its appearance. (8 marks)

Draw: Draw a labelled diagram of your proposed textile product. Include arrows to show where the seams are located and clearly mark where your chosen fastening (e.g., button, zip, or velcro) will be attached.



Extension challenge: Greater Depth Challenge: Compare and contrast the properties of woven fabrics versus non-woven fabrics (like felt). Justify why a manufacturer would choose to use a non-woven fabric for a disposable item versus a woven fabric for a garment. What might happen if you attempted to sew a heavy-duty zip onto a very lightweight, loosely-woven fabric? Total: /25