

Max's Masterclass: The Art of Prototyping

Learning objective: To understand the importance of prototyping in the design process by evaluating functions, materials, and potential improvements.

Use this writing scaffold to document your design journey. Think like Max the monkey—look at your prototype as a puzzle to be solved and improved upon.

To begin my design process, I created a prototype to test whether my initial idea would function effectively in the real world.

Word bank: furthermore · consequently · functionality · durable · modifications · alternatively · evaluation · ergonomic · in addition · nevertheless

1. Identify the primary purpose of your prototype. What specific problem is your design attempting to solve, and who is the intended user? (2 marks)

2. Describe the materials you selected for your prototype. Justify why these specific materials were chosen over other available options. (3 marks)

3. Explain the testing phase. What happened when you tried to use your prototype, and were there any unexpected challenges? (3 marks)

4. Compare and contrast your prototype with your original design plan. Did you need to make any adjustments during the construction process? (3 marks)

5. Evaluate the success of your prototype. Based on your tests, what modifications are necessary to make the final product more durable or efficient? (4 marks)

6. What might happen if you were to build your product using different materials, such as wood instead of cardboard? Explain your reasoning. (3 marks)

Extension challenge: Max has a budget of £15.00 for his final model. If his prototype cost £3.50 to make, calculate how much he has left for improvements. Then, write a persuasive paragraph justifying why an investor should provide an additional £5.00 to help perfect your design.