

Max's Mechanical Invention Planner

Learning objective: To design and evaluate a simple mechanism using levers, linkages, or cams to create movement.

Max the monkey loves solving puzzles. Use this template to plan your own mechanical creation. Think about how your mechanism will move and which materials you will need to make it work. Remember to consider how your design will solve a specific problem!

Word bank: mechanism · lever · linkage · cam · pivot · movement · input · output · structure · friction · design

1. The Challenge: Describe the problem your invention will solve. What is the moving part supposed to do? (2 marks)

2. Mechanism Choice: Will you use a lever, a linkage, or a cam? Explain why this mechanism is the best choice for your design. (3 marks)

3. Materials List: List the materials you need. If you were buying them at a shop, what would they cost in pounds and pence? Estimate the total price. (2 marks)

4. Step-by-Step Plan: Write down the order of your construction. How will you attach the moving parts so they pivot smoothly? (4 marks)

5. Evaluation: After testing your design, what worked well? If you could change one thing to make the movement smoother, what would it be? (3 marks)

Extension challenge: Create a labelled diagram of your mechanism. Use arrows to show the direction of the input force and the resulting output movement.