# Max's Magnificent Prototype Challenge

*Learning objective: To understand the purpose of prototyping in design technology by sequencing the iterative design process.*

Max the monkey is designing a new banana-peeling machine to help his friends. He needs to follow the correct engineering steps to make sure it works perfectly. Read the steps below and number them from 1 to 6 to show the correct order of the prototyping process. Then, write a short sentence explaining why testing is the most important part.

*Word bank: Prototype · Evaluate · Design · Refine · Test · Idea*

**1. 1. [ ] Create a rough sketch of your initial idea. (1 mark)**

**2. 2. [ ] Gather materials and build a quick, simple model (a prototype). (1 mark)**

**3. 3. [ ] Think of a solution to a problem. (1 mark)**

**4. 4. [ ] Make changes to improve the design based on what you learned. (1 mark)**

**5. 5. [ ] Try out your model to see if it actually works. (1 mark)**

**6. 6. [ ] Look at how well the machine performed and identify any mistakes. (1 mark)**

**7. Why is it important to test your prototype before building the final version? (2 marks)**

**Draw: Draw your own invention that solves a problem in your classroom. Label the different parts and show which materials you would use to build a quick prototype.**

*Extension challenge: Imagine your prototype costs £15.00 to make in materials. If you had a budget of £50.00, how many prototypes could you build? Show your math working out.*