

Max's Mechanical Garden Challenge

Learning objective: To understand how simple mechanisms, specifically levers and linkages, can create movement in a mechanical toy.

Max the monkey is designing a mechanical garden display! Look at the parts in the word bank and the descriptions below. Decide whether each description relates to a pivot, a lever, or a linkage. Fill in the blanks to complete the sentences explaining how Max's garden works.

Word bank: pivot · lever · linkage · stiff card · split pin

1. Max uses a _____ to attach two pieces of card together so they can move freely without falling apart. (2 marks)

2. A _____ is a rigid bar that rests on a fixed point. When you push one end down, the other end moves up. (2 marks)

3. The _____ acts as the 'joint' or the centre point that allows the moving parts to rotate. (2 marks)

4. If Max wants one part of his garden toy to move when he pushes a different part, he needs to connect them with a _____. (2 marks)

5. Why is it important for Max to use _____ instead of paper when building his mechanism? Explain your reasoning. (2 marks)

Draw: Draw a simple design for a garden gate that opens using a lever. Label the pivot point and the part you would push to make it move.



Extension challenge: Imagine you are building a mechanical flower that blooms when you pull a tab. Write a short plan describing which materials you would use for the petals and how you would arrange your pivots to make the flower open wide.