

Design Technology: Mechanisms Assessment

Learning objective: To understand how levers, linkages, and pivots work to create movement in moving pictures or models.

Read each question carefully. Use the word bank to help you spell tricky words. Write your answers in the boxes provided.

Max the monkey is making a moving picture for his maths project. He uses card, split pins, and paper fasteners to help parts of his picture slide and turn. He needs to make sure his parts move smoothly without getting stuck.

Word bank: pivot · lever · linkage · movement · fixed · mechanism · card

1. 1. What is the name of the part that allows a lever to turn or move? (1 mark) (1 mark)

2. 2. Max wants to connect two pieces of card so that when he pulls one, the other moves too. What is this system called? (2 marks) (2 marks)

3. 3. If a lever is too long, it might bend. Name one material that is strong enough to use for a moving part. (2 marks) (2 marks)

4. 4. Describe what happens to a lever when you push one end down. (3 marks) (3 marks)

5. 5. Max made a moving picture, but the card is catching and will not slide. Suggest two ways he could fix this problem. (4 marks) (4 marks)

6. 6. Design a plan for a moving card model. Write a short explanation of how your mechanism will work. (5 marks) (5 marks)

Draw: In the space below, draw a simple lever mechanism using a pivot and a piece of card. Label your parts.



Extension challenge: Total: /25. Imagine you are teaching a friend how to make a pivot. Write two simple sentences explaining the best way to attach a split pin so it moves easily.