

Max's Mechanical Marvels Quiz

Learning objective: To understand the function of simple mechanisms including levers, linkages, and cams.

Help Max the monkey solve these mechanical puzzles! Read each question carefully and write your answers clearly.

Answer Key: 1. A (Mechanism), 2. True, 3. Pivot, 4. B (Levers), 5. False (It changes circular motion into up-and-down motion), 6. Linkage, 7. C (To make work easier), 8. True, 9. Axle, 10. False (The effort is the force you apply).

Word bank: Lever · Pivot · Cam · Linkage · Mechanism · Load · Effort · Axle

1. 1. What do we call a system of parts working together in a machine? A) Mechanism* B) Toy C) Puzzle D) Pattern (1 mark)

2. 2. True or False: A lever is a simple machine that helps us lift heavy objects with less force. (1 mark)

3. 3. What is the name of the fixed point that a lever turns around? (1 mark)

4. 4. Which of these is a type of mechanism used to move parts of a model toy? A) A stone B) Levers* C) A cloud D) A leaf (1 mark)

5. 5. True or False: A cam is used to make things spin in a perfect circle forever. (1 mark)

6. 6. What do you call two or more levers connected together to move parts of a model? (1 mark)

7. 7. Why do we use mechanisms in our designs? A) To make them heavier B) To make them colourful C) To make work easier* D) To make them quiet (1 mark)

8. 8. True or False: A cam is often shaped like an egg or an irregular circle. (1 mark)

9. 9. What is the rod called that passes through the centre of a wheel or cam to help it rotate? (1 mark)

10. 10. True or False: The load is the part of the mechanism where you push or pull with your hand. (1 mark)

Draw: Draw a simple lever system. Label the 'Pivot', the 'Effort' (where you push), and the 'Load' (the object being lifted).



Extension challenge: Max wants to build a moving puppet! Design a simple linkage mechanism that could make a character's arm wave up and down.