

Design Technology Assessment: Levers and Pulleys

Learning objective: To identify and describe how levers and pulleys work to help us lift and move objects.

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

Max the monkey is building a machine to help him carry his heavy fruit. He uses a wooden plank and a stone to make a lever. He also uses a wheel and a rope to make a pulley system. These machines make his work much easier.

Word bank: lever · pulley · load · effort · pivot · wheel · rope · lift

1. 1. What is the name of the turning point that a lever rests on? (1 mark) (1 mark)

2. 2. Max wants to lift a heavy basket. What do we call the force that Max uses to pull the rope? (2 marks) (2 marks)

3. 3. Look at a pulley. What part of the pulley does the rope go around? (2 marks) (2 marks)

4. 4. Why is it easier to lift a heavy load using a lever instead of lifting it with your hands? (3 marks) (3 marks)

5. 5. Max needs to move a large pile of bananas. Describe how he could use a pulley system to help him. Use these words: rope, wheel, lift. (5 marks) (5 marks)

6. 6. Design a simple lever. Draw your design below. Label the 'load', the 'effort', and the 'pivot'. (12 marks) (12 marks)

Draw: Draw a seesaw. This is a type of lever! Label where the person sits (the load) and where the pivot is in the middle.



Extension challenge: Total: /25. Think of a real-life example of a lever you use at school (like scissors) and explain how it helps you.