

Skeletons and Muscles: The Body in Motion

Learning objective: To identify the functions of the skeleton and understand how muscles work in pairs to create movement.

Read each question carefully and use your knowledge of the human body to provide clear, scientific answers. Use the word bank to help you with your spelling and terminology.

Word bank: skeleton · support · protection · muscles · joints · contract · relax · biceps · triceps · femur

1. Nova the owl is explaining that the skeleton has three main jobs. Identify two of these functions and explain why they are important for the human body. (2 marks)

2. Max the monkey is looking at his arm. Explain what happens to the biceps and triceps when he bends his elbow to lift a heavy object. (2 marks)

3. Why are joints, such as the knee or elbow, essential for the movement of our limbs? (2 marks)

4. The femur is the longest bone in the body. If a person's femur measures 45cm, and they grow by 5% over the next year, how long will the bone be in total? Show your working out. (2 marks)

5. Compare an exoskeleton (like that of a crab) to an endoskeleton (like a human's). What is one key difference between the two? (2 marks)

Draw: Draw a diagram of a human arm. Label the biceps and the triceps. Use arrows to show how the muscles change when the arm is bent.



Extension challenge: Research a 'ball and socket' joint and a 'hinge' joint. Write a short paragraph explaining which one allows for a greater range of movement and why.