

# 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 elevator 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.*