Nova’s Skeleton and Muscle Investigation

Learning objective: To identify and describe the functions of the human skeleton and the role of muscles in movement.

Nova the barn owl is studying how bodies move! Use the terms in the word bank to label the functions of the human body and complete the sentences below. For the final part, explain how the skeletal and muscular systems work together as a team.

Word bank: Skeleton · Muscles · Joints · Protection · Support · Antagonistic pairs · Contract · Relax · Tendons

1. Nova wants to know how we move our arms. When one muscle in a pair starts to _____, the other must _____. What is the name for this way of working together? (3 marks)

2. The skeleton provides _____ for our organs (like the heart and lungs) and gives our body _____ so we don't collapse like a jelly. (2 marks)

3. What connects our muscles to our bones, allowing them to pull the bone and create movement? (1 mark)

4. Why are joints essential for the human skeleton? Give an example of a joint in the body. (2 marks)

5. If humans did not have a skeleton, how would our movement change? Describe your thoughts using scientific vocabulary. (2 marks)

Draw: Draw a diagram of a human arm showing how the bicep and tricep muscles work together. Label the bones, the muscle pair, and the joint at the elbow.

Extension challenge: Research a different animal skeleton (such as a bird or a fish). Write a short paragraph explaining how its skeleton is adapted to its specific habitat, compared to a human skeleton.