Nova’s Skeleton and Muscle Challenge

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

Read each question carefully. Nova the owl is testing your knowledge of how our bodies stay upright and move! Use the word bank to help you if you get stuck.

Answer Key: 1. A (Support), 2. True, 3. True, 4. B (Joint), 5. Tricep, 6. False (they pull, not push), 7. Protection, 8. Femur, 9. B (Antagonistic), 10. Tendon.

Word bank: Joint · Antagonistic · Femur · Protection · Support · Contraction · Bicep · Tricep · Skeleton · Ligament

1. 1. What is the primary function of the skeleton? A) Support* B) Digestion C) Breathing D) Sleeping (1 mark)

2. 2. True or False: The human skeleton provides protection for delicate organs like the heart and lungs. (1 mark)

3. 3. True or False: Bones are attached to other bones by ligaments. (1 mark)

4. 4. What do we call the point where two bones meet? A) Muscle B) Joint* C) Nerve D) Skin (1 mark)

5. 5. When the bicep muscle contracts to lift the forearm, which muscle must relax? (1-word answer) (1 mark)

6. 6. True or False: Muscles can push bones to make them move. (1 mark)

7. 7. The skull acts as a helmet for the brain. Is this an example of support or protection? (1 mark)

8. 8. What is the name of the longest and strongest bone in the human body? (1-word answer) (1 mark)

9. 9. Muscles work in pairs to create movement. What is this type of pair called? A) Symbiotic B) Antagonistic* C) Kinetic D) Elastic (1 mark)

10. 10. What structure attaches a muscle to a bone? (1-word answer) (1 mark)

Draw: Draw a diagram of a human arm. Label the bicep and tricep muscles, and draw an arrow to show which way the arm moves when the bicep contracts.

Extension challenge: Research why our bones are stronger and denser than the bones of most birds. Why do you think humans need such strong bones compared to Nova the Owl?