Nova’s Skeleton and Muscle Investigation

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

Nova the owl is studying how her friends move! Use the word bank to complete the sentences below. Once you have filled in the blanks, match the description to the correct part of the body by writing the letter next to the function.

Word bank: skeleton · muscles · joints · protection · support · contract · relax

1. 1. The _____ provides a framework for the body, giving us _____ and shape. It also provides _____ for our delicate organs, like the ribs protecting the heart. (3 marks)

2. 2. We can move because our _____ are attached to bones by tendons. When one muscle works to move a limb, it will _____, while the opposing muscle will _____. This is why we call them antagonistic pairs. (3 marks)

3. 3. Where two bones meet, we have _____. These allow our bodies to bend and rotate. (1 mark)

4. 4. Match the following (Write the letter next to the term): A) Skull, B) Ribcage, C) Femur. Function: ( ) Protects the brain, ( ) Protects the lungs and heart, ( ) A long, strong bone in the leg. (3 marks)

5. 5. Why is it important that our skeletons are made of many bones rather than one single solid piece? Explain your reasoning. (2 marks)

Draw: Draw a diagram of an arm bending at the elbow. Label the bicep and tricep, and draw an arrow to show which muscle is contracting and which is relaxing.

Extension challenge: Research what would happen to our movement if we had no joints. Write a short paragraph explaining how your daily life at school would be different if your spine was one solid, rigid bone.