Nova’s Guide to Skeletons and Muscles

Learning objective: To identify that humans and some other animals have skeletons and muscles for support, protection, and movement.

Read the passage carefully and answer the questions below. Use full sentences for your answers.

Nova the barn owl loves looking at the stars, but today she is curious about how we move. Humans, just like birds and many other animals, have a skeleton inside their bodies. This is called an endoskeleton. Your skeleton is made of many strong bones that give your body its shape and provide support. Without it, we would be as floppy as a piece of damp string! Your bones also provide important protection for delicate parts of your body; for example, your ribcage acts like a shield to keep your heart and lungs safe.

However, bones cannot move on their own. To move your arms or legs, you need muscles. Muscles are attached to your bones by tough cords called tendons. When a muscle gets shorter, we say it 'contracts'. This pulling action moves the bone at a joint, like your elbow or knee. By working in pairs—one muscle pulling while the other relaxes—your muscles allow you to jump, run, and wave hello to your friends. Whether you are flying through the sky or playing in the park, your skeleton and muscles are working hard together every single second.

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

1. What are the two main jobs of the skeleton mentioned in the text? (2 marks)

2. What do muscles use to attach themselves to bones? (1 mark)

3. Why does the author use the comparison of a 'damp string' to describe a body without a skeleton? (2 marks)

4. Explain why your arm cannot move if only one muscle is working. (2 marks)

5. Why do you think it is important to keep your bones and muscles healthy? Give one reason. (2 marks)

Draw: Draw a diagram of a human arm showing the bone inside and the muscles attached to it. Label the 'joint' at the elbow.

Extension challenge: Research one animal that does not have an endoskeleton (like an insect or a jellyfish) and write two sentences explaining how it stays upright without bones.