

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.

Welcome to Nova's laboratory! Use this fact-file template to record what you have learned about how our bodies move. Think about how our bones support us and how our muscles act like rubber bands to pull our bones. Use the word bank to help you write your scientific explanations.

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

1. The Skeleton's Job: Explain two main functions of the human skeleton. How does it help our bodies? (2 marks)

2. Protection Station: Which specific bones protect our most delicate organs, such as the brain and the heart? (2 marks)

3. Muscle Power: Describe what happens to a muscle when it moves a bone. Use the word 'contract' in your answer. (3 marks)

4. Joints in Action: Why are joints, such as the knee or elbow, important for our movement? (2 marks)

5. Scientific Summary: If humans did not have a skeleton, what would happen to our bodies? Explain your reasoning. (3 marks)

Extension challenge: Nova wants to know how different animals move! Research one animal with an endoskeleton (like a human) and one with an exoskeleton (like a crab). Write a sentence comparing how their structures support them.