Science Assessment: Skeletons and Muscles

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

Read each question carefully. Use your scientific knowledge to provide clear answers. Good luck!

Nova the owl is observing the forest animals. She notices that her friend Leo the lion uses his legs to run, while Bea the honeybee uses her wings to fly. Nova wonders how they stay upright and how they move so quickly.

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

1. Name two important functions of the human skeleton. (2 marks) (2 marks)

2. What is the name of the bone structure that protects the brain? (1 mark) (1 mark)

3. Explain why we need joints in our bodies. What would happen to our movement if we did not have them? (3 marks) (3 marks)

4. Max the monkey is swinging from a branch. Describe how his arm muscles work together to create this movement. Use the words 'contract' and 'relax' in your answer. (4 marks) (4 marks)

5. Look at the ribcage. Which organs does it protect and why is this protection important? (3 marks) (3 marks)

6. Compare an animal with an internal skeleton (like a lion) to an animal with an exoskeleton (like a beetle). How do they differ in how they support their bodies? (2 marks) (2 marks)

7. Imagine you are a scientist like Nova. Write a paragraph explaining why a human would not be able to stand up or move without a skeleton and muscles. Describe the 'partnership' between bones and muscles. (5 marks) (5 marks)

Draw: Draw a simple diagram of a human arm. Label the 'bicep' muscle and a 'joint' (like the elbow).

Extension challenge: Total: /25