

# Max's Fitness Challenge: Understanding Physical Wellbeing

*Learning objective: To identify the components of physical fitness and understand the physiological effects of exercise on the human body.*

Read each question carefully. Use your scientific understanding of the human body to provide detailed, well-reasoned answers.

Max the monkey is preparing for the Great Jungle Games. He knows that being fit isn't just about moving fast; it is about understanding how his muscles, heart, and lungs work together to maintain peak performance during physical activity.

*Word bank: cardiovascular · stamina · flexibility · muscular strength · heart rate · respiration · recovery · endurance*

**1. Max notices his heart rate increases significantly during a sprint. Explain why this happens in terms of the body's need for oxygen. (2 marks)**

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**2. Compare and contrast 'muscular strength' and 'muscular endurance'. Give an example of a physical activity that primarily develops each. (3 marks)**

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**3. Why is it essential to include a 'cool down' period after intense exercise? Justify your answer by considering how the body returns to a resting state. (2 marks)**

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**4. If a person consistently exercises over several months, what physiological changes might occur in their cardiovascular system? Explain your reasoning. (3 marks)**

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**5. What might happen to an athlete's performance if they completely ignore flexibility training? Explain the potential impact on their physical movement. (2 marks)**

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**Draw:** Draw a diagram of the human body highlighting the heart and lungs. Use arrows to show the path of oxygenated blood circulating to the working muscles during a heavy workout.



*Extension challenge: Design a 7-day fitness plan for a fictional athlete. Your plan must include a balance of cardiovascular, strength, and flexibility training. Justify why each type of exercise is included in your weekly schedule.*