PE Assessment: The Science of Warming Up

Learning objective: To understand the purpose of a warm-up and identify the physical changes that occur in the body before exercise.

Read each question carefully and write your answers in the spaces provided. Ensure you use your knowledge of how the human body prepares for physical activity.

Max the monkey is getting ready for a big game of tag. He knows that jumping straight into a sprint is not the best idea. Before he starts, he spends five minutes doing light jogging, arm circles, and side-steps. Max explains to his friends that warming up is like getting a car engine ready before a long drive; it helps the body move smoothly and safely.

Word bank: Pulse · Muscles · Flexibility · Oxygen · Heart rate · Injury · Blood flow · Dynamic stretches

1. Identify two reasons why it is important for Max to perform a warm-up before playing tag. (2 marks)

2. What happens to your heart rate during a warm-up, and why is this change helpful for your body? (3 marks)

3. Max suggests doing 'dynamic stretches' instead of 'static stretches' (holding still) during a warm-up. Explain what a dynamic stretch is and give one example. (3 marks)

4. How does warming up the muscles help to prevent injury during exercise? (3 marks)

5. If Max is feeling cold on a chilly morning, why should his warm-up be slightly longer than on a hot day? (4 marks)

6. Design a 5-minute warm-up routine for a class of children. List the activities in order and explain how each activity helps prepare the body for intense physical movement. (5 marks)

7. True or False: A warm-up should make you feel completely exhausted before the main activity begins. Explain your reasoning. (5 marks)

Draw: Draw a diagram of the human body showing two different dynamic stretches that help prepare the muscles for a game of football.

Extension challenge: Total: /25