Grade 5 Science Assessment: The Circulatory System

Learning objective: To identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels, and blood.

Read each question carefully before writing your answer. Ensure you use scientific vocabulary where appropriate. You have 30 minutes to complete this assessment.

Nova the barn owl is observing how living things transport vital materials around their bodies. She knows that the circulatory system is like a busy transport network, constantly moving essential supplies to where they are needed most and removing waste products.

Word bank: heart · blood vessels · oxygen · nutrients · carbon dioxide · arteries · veins · capillaries · circulatory system · pump

1. 1. What is the primary function of the human heart within the circulatory system? (2 marks) (2 marks)

2. 2. Name the three main types of blood vessels found in the human body. (3 marks) (3 marks)

3. 3. Explain how blood changes as it travels through the body. What is picked up and what is dropped off? (4 marks) (4 marks)

4. 4. Why does your heart rate increase when you exercise? Link this to the needs of your muscles. (3 marks) (3 marks)

5. 5. Max the monkey notices that some people have different health habits. Describe two lifestyle choices that can help keep the circulatory system healthy. (4 marks) (4 marks)

6. 6. Extended Writing: Describe the journey of a drop of blood starting from the heart, traveling to the lungs to collect oxygen, and then moving to the rest of the body. Why is this cycle essential for survival? (5 marks) (5 marks)

7. 7. Bea the honeybee asks: What is the main liquid component of blood that carries cells and nutrients? (1 mark) (1 mark)

Draw: Draw a simple diagram of the heart and label the four chambers (left atrium, right atrium, left ventricle, right ventricle).

Extension challenge: Total: /25. Research Task: Find out what happens to our pulse rate when we are resting compared to after sprinting for 60 seconds. Why do you think there is a difference?