Exploring the Emerald Canopy: A Rainforest Journey

Learning objective: To understand the structure and importance of tropical rainforests, and to interpret geographical information from a non-fiction text.

Read the passage below carefully. Use your geographical knowledge and the information provided to answer the questions. Ensure your answers are written in full sentences.

Finn the dolphin is taking a break from the ocean to explore the world's tropical rainforests. These incredible ecosystems are found near the Equator, where the climate is warm and wet all year round. A rainforest is organised into four distinct layers. At the very top, the emergent layer features giant trees that rise above the rest. Below this is the canopy, a thick blanket of leaves and branches that acts as a roof for the forest. The understorey is a dark, still environment where plants have adapted to low light. Finally, the forest floor is the base, covered in fallen leaves that decompose quickly in the tropical heat.

Rainforests are vital for the planet's health because they produce oxygen and store carbon. They are home to over half of the world's plant and animal species, making them the most biodiverse places on Earth. However, these forests are under threat from deforestation. When trees are cleared for farming or timber, this unique habitat is destroyed. Protecting these green lungs is essential for our future, as they help regulate the global climate and provide medicine for millions of people.

Word bank: emergent · canopy · understorey · biodiversity · deforestation · ecosystem · photosynthesis

1. Identify two features of the climate in the regions where tropical rainforests are found. (2 marks)

2. Name the four layers of the rainforest described in the text. (2 marks)

3. Why is the canopy layer described as acting like a 'roof' for the forest? (2 marks)

4. Based on the text, why might the forest floor be a difficult place for some plants to grow? (2 marks)

5. Do you think the protection of rainforests is the responsibility of the whole world or just the countries where they are located? Justify your opinion. (3 marks)

Draw: Draw a cross-section of a rainforest, clearly labelling the four layers: emergent, canopy, understorey, and forest floor.

Extension challenge: Research one animal that lives in the canopy layer and one that lives on the forest floor. Write a short paragraph explaining how each animal has adapted to its specific layer.