Post-visit teacher notes

We hope that the teaching session at Kew assisted in developing the skills and knowledge of your pupils and provided them with an insight into the amazing plants and world-leading plant science at Kew.

Following your visit, you can use the post-visit activity to further support your pupil's learning.

Your pupils could answer the exam-style question on the following page and then use the mark scheme to check their answers.

Royal Botanic Gardens Kew

Post-visit pupil activity

? Have a go at the **exam-style** question:

Students at Kew gardens are studying plants that grow in different biomes.

a) The students predict that the rate of transpiration might be lower in the rainforest, compared to plants living in a temperate biome. Suggest why they might think this.

[3 marks]

b) The students examined the leaves of plants growing in a dry environment. Suggest and explain **two** ways that plants living in these conditions limit transpiration.

[4 marks]

Question	Marking Guidance	Mark	AO	Comments
a)	1. Rainforest is humid so there is a lower water potential gradient than in a temperate environment; 2. Slower diffusion, meaning lower rate of transpiration. 3. Might be darker in the rainforest so stomata are more likely to be closed.	3	AO1	Allow converse statements e.g. Temperate biome is drier so there is a higher water potential gradient than in the rainforest.
b)	1. Thick cuticle; 2. Forms a waterproof barrier. 3. Rolling up of leaves; 4. Traps a region of still air, which becomes saturated with water vapour, lowering the water potential gradient between the inside and outside of leaf. 5. Hairy leaves; 6. Traps still, moist air, lowering the water 7. Stomata in pits or grooves; 8. Still moist air is trapped next to the leaf, reducing water potential gradient. 9. Reduced surface area to volume ratio; 10. Small circular/needle-like leaves mean there is lower surface area compared to volume.	4	AO2	Max 2 marks for stating 2 adaptations. Max 2 marks for explanations of adaptations.