Tropical Rainforest

What is a Tropical Rainforest Environment like?

Hot / **Warm** / **Cold**	**... most of the time**
Wet / **Moist** / **Dry**	**... most of the time**
Light / **Dark**	**... under the canopy**
Lots / **Few**	**... nutrients in the soil**

1 Sketch one of these leaves. How does the size, shape and surface of this leaf benefit the plant in a rainforest?

Size — Large - absorbs light under canopy

Shape — Heart - rain runs off drip tips

Surface — Waxy - rain runs off

2 These bromeliads are perch high in canopy trees. How do they get :

...water? — rain is channelled down leaves into pool in centre

...nutrients? — leaves, bugs etc fall into pool and rot

...into trees? — birds eat berries and excrete seeds into trees

3 Look up. What part of the plant has been adapted to catch insects and why does it need to?

Leaf is modified to look like a flower and trap bugs because there is so much competition for good soil, plants find other ways of getting nutrients.

4 Flowers are colourful in all parts of the world but why are *leaves* often colourful in tropical rainforests?

One theory is that light colours reflect light and dark colours absorb light. This is related to the light intensity of different habitats in the rainforest.

Arid Desert

What is an Arid Desert Environment like ?

Hot / **Warm** / **Cold**	**... during the day**
Hot / **Warm** / **Cold**	**... at night**
Wet / **Moist** / **Dry**	**... most of the time**
Light / **Dark**	**... in the open**
Lots / **Few**	**... nutrients in the soil**

5 What 3 adaptations can you see in cacti that :

... collect water? Spines, hairs or dimple in centre

... store water? Swollen stem

... stop water being lost? No leaves (low surface area to volume ratio)

6 Describe 3 ways being hairy can help a cactus survive:

1 Catch dew/rain	2 Keep warm at night	3 Avoid sunburn

7 Some cacti have a system of many shallow roots near the surface. How would this benefit the plant?

Shallow roots can absorb rain water before it evapourates.

8 Other cacti and desert trees have a few extremely long roots. How would this benefit the plant?

Long roots tap into deep underground streams and aquifers.