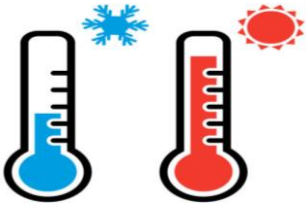


# Tropical Rainforests: Plant Adaptations

What does it feel like in our Tropical Glasshouse?

Temperature (circle the correct image):



Wet or dry (circle the correct image):



Do you like it (circle the correct image):



Plants in tropical rainforests grow all year round, as the climate and amount of light stay constant. They have also adapted to grow in different ways to get the things they need to survive; water, light and nutrients. Find these plants in our Tropical Glasshouse and answer the questions about how they are adapted:



1. Bromeliad - where do these grow? Why?

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2. Banana - are these leaves big or small? Why?

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3. Vanilla - why is this plant `climbing` the wall?

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4. Swiss Cheese Plant - what are the holes in the leaf for?

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5. Croton - why are the leaves different colours?

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6. Monkey Cups - what is special about these leaves? Why?

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7. Peepul or Bo Tree - why are the leaves shaped like this?

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Can you find any of your own adaptation examples (think about what is special/different about them to help them get what they need)?

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# Tropical Rainforests: Plant Adaptations - answers

What does it feel like in our Tropical Glasshouse?

There is a thermometer and a humidity meter near the Vanilla, so students can take readings and discuss their findings. The glasshouse temperature can be at least 26°C, with humidity of 85% (40°C and 100% in the real rainforest). Be aware that students may say the Tropical Glasshouse is dry, as they are not actually getting wet themselves.

Plants in tropical rainforests grow all year round, as the climate and amount of light stay constant. They have also adapted to grow in different ways to get the things they need to survive; water, light and nutrients. Find these plants in our Tropical Glasshouse and answer the questions about how they are adapted:



1. Bromeliad - where do these grow? Why?

These are on the branch over the pond. They are epiphytes or air plants that grow on trees to get closer to the sun for more light. Some capture water as they don't have proper roots.



2. Banana - are these leaves big or small? Why?

Big, to absorb more light for photosynthesis. There are Canary and Wild Bananas in the Tropical House. Both do periodically grow fruit.



3. Vanilla - why is this plant `climbing` the wall?

This is growing up the wall near the central window. It is able to `grip on` and climb, to get closer to the sun for more light.

# Tropical Rainforests: Plant Adaptations - answers



4. Swiss Cheese Plant - what are the holes in the leaf for?

This plant is growing along the right-hand border, as you enter the glasshouse from Reception. The holes allow; light through to the plant's lower leaves; and water through to stop it from pooling and breaking the leaf.



5. Croton - why are the leaves different colours?

There are Croton plants growing around the Tropical House with different-shaped leaves. The coloured leaved absorb more light in the shadier lower layers of the rainforest.



6. Monkey Cups - what is special about these leaves? Why?

These are growing in hanging baskets near the door to the Subtropical House. The leaves are adapted to form `cups` that hold digestive liquid. Small creatures become trapped and are digested, providing nutrients to the plant. These plants grow in poor-quality soil where most others cannot as they get their nutrients from what they digest.



7. Peepul or Bo Tree - why are the leaves shaped like this?

This is the first tree on your left as you enter the Tropical House. The ends of the leaves are tapered into `drip tips` that channel water down to the plant's roots. Many other plants in this glasshouse also grow drip tips.