

The Ladybird Trail



The Winter Gardens is just like a giant greenhouse, with over 350 different species of plants growing under one roof. These plants have different colours, shapes and sizes that make them special.

Find 6 ladybird pictures in the Winter Gardens and discover what the plants need to grow and stay healthy. Use the colour coded questions on this sheet and the Winter Gardens map to help your group to explore.

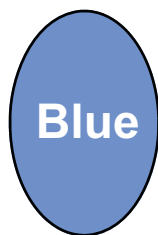


Plants sometimes smell nice

- 1. Ask the children if they can find any colourful flowers.**
- 2. Do the flowers smell?**
- 3. Why do some flowers smell nice?**
To attract insects, animals and birds to visit them and feed on the nectar inside the flowers.
- 4. Do you know any creatures that feed on nectar inside flowers?**
Children might know bees and butterflies. Also birds and bats feed on flowers in some tropical or desert countries. These creatures help the plant by carrying pollen from one plant to another. This pollinates the plant which may lead to fertilisation and the development of seeds or fruit.
- 5. How many different colours of flower can you find?**
Look for the yesterday, today and tomorrow flower (*Brunfelsia calycina*). It has purple, lilac and white flowers on the same plant. The name comes from the way the flowers change colour over three days, from purple to lilac to white.



Brunfelsia flower



Plants need water to drink

- 1. Do plants need water to survive?**
YES, just like people. Plants need water to grow and stay healthy.
- 2. We drink water through our mouths. Which part of a plant drinks up the water?**
Most plants take in water through their roots. Some rainforest plants called bromeliads collect water in the vases formed by their overlapping leaves. Look for the stilt roots on the Screw Pine (*Pandanus utilis*) which help the roots to breather when the tidal water rises.
- 3. How do plants inside the gardens get water?**
Through leaky pipes in the soil - they release water slowly so the plants always have the right amount. The gardeners also water the plants each morning. Special fogging nozzles are used to create mist in the Fern Gully.
- 4. Some plants that live in dry places store water in their juicy stems. Can you find any plants with juicy leaves or stems?**
The desert bed is full of plants with spiky, juicy leaves which are full of water. They use their spines as defence to discourage animals from eating them, and stealing the precious water inside!



Screw Pine

Red

Leaves are different shapes

Different plants have different size and shape leaves.

1. **What colour are leaves?**

Usually green, but they can be pink, purple or multicoloured! Some have different colours and patterns. Look for the plant *Calathea zebrina* which has striped leaves. These help to share out the sunlight by letting some light through to leaves underneath.



Calathea zebrina

2. **Why does a plant need leaves?**

Leaves are where the plant catches sunlight to make its food.

3. **Compare leaves growing in the Winter Gardens**

Ask the children to work in pairs and look carefully at leaves. Can they describe the shape, colour, and texture of leaves?

Orange

Plants need light to grow

1. **What material is the Winter Gardens built from?**

GLASS - this allows light through. It also makes the greenhouse warm by trapping the sunshine inside.

2. **Which is the sunniest place in the gardens?**

The south side where the desert plants grow. The North Walk and Fern Gully areas are more shady and get less sunshine.

3. **Why do plants grow up towards the sky?**

Plants grow towards the sun or a source of light. The leaves catch the sunshine and change it into energy to help them grow.

Green

Some plants are big and some are small

1. **Can you find a really tall plant in the Winter Gardens?**

Explore the Winter Gardens in small groups to find the tallest plant. Can you find its name on the black label? It might be helpful to look at the plants from the Tree Top Walk to help you choose. The plant with giant leaves beside the lift is a banana plant, the bamboo plant is the tallest. Now try and find the smallest plant growing in the Winter Gardens. A good place to explore is the Fern Gully, where tiny mosses and lichens grow.

Dark Orange

Some plants are good to eat

Lots of plants grow in the Winter Gardens that give us food to eat. For example, banana, orange, grapes, lemon, sugar, coffee, tea, pepper, ginger

1. **Do the children know any plants that provide food?**

2. **Can you find any plants that provide food (beds 5, 6 and 8).**

The banana plant beside the pond produces fruit. The supermarket bed has tea, coffee and sugar plants.

3. **Ask each member of your group what their favourite fruit is.**

4. **Why should we try and eat more fruit?**

To keep us healthy. Fruits contain fibre and lots of important vitamins and minerals.



Banana plant