



Welcome to The Calyx and inBLOOM! You'll find a stunning array of plants that boast flowers in every colour of the visible spectrum, and beyond! Use this guide to explore the features and adaptations of the breath-taking living world of flowers.

Why do plants have colourful flowers?

QUESTION

Why do plants have colourful flowers? Investigate and discover more about colour on the large exhibition signs.

ANSWER

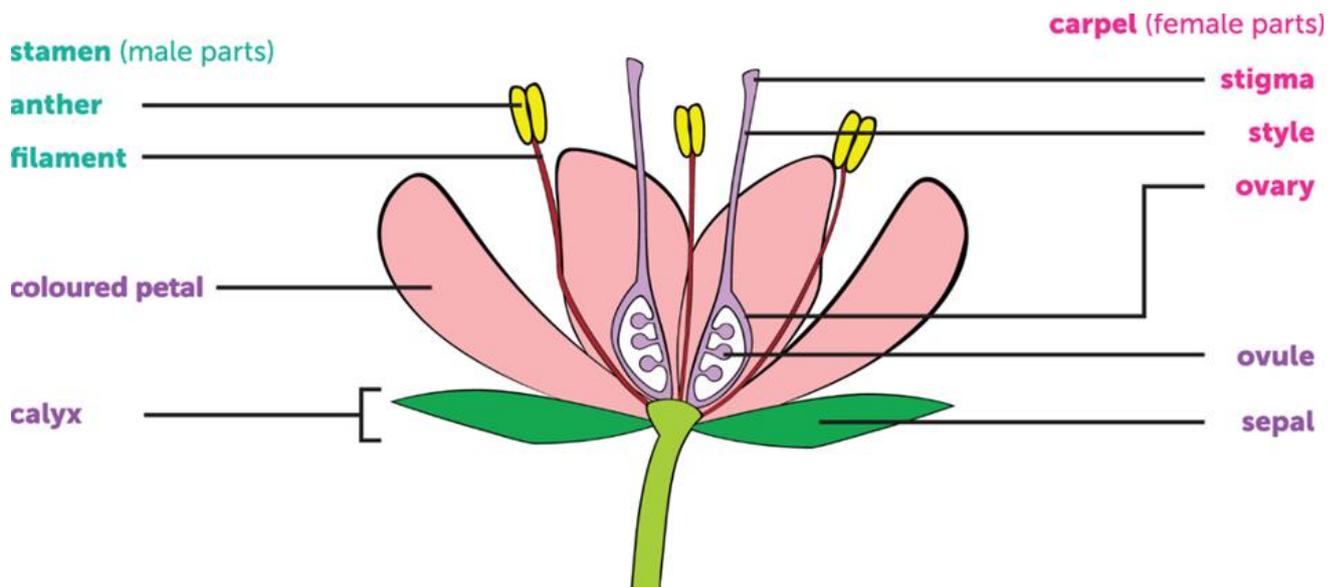
Every flower is a machine designed for reproduction and survival. Competing for attention, they signal brazenly to bees, bats, birds and other pollinators using colour, shape and scent. Plants need to stand out in this gorgeous crowd, so they get pollinated and can produce more amazing plants and flowers!

LOOK

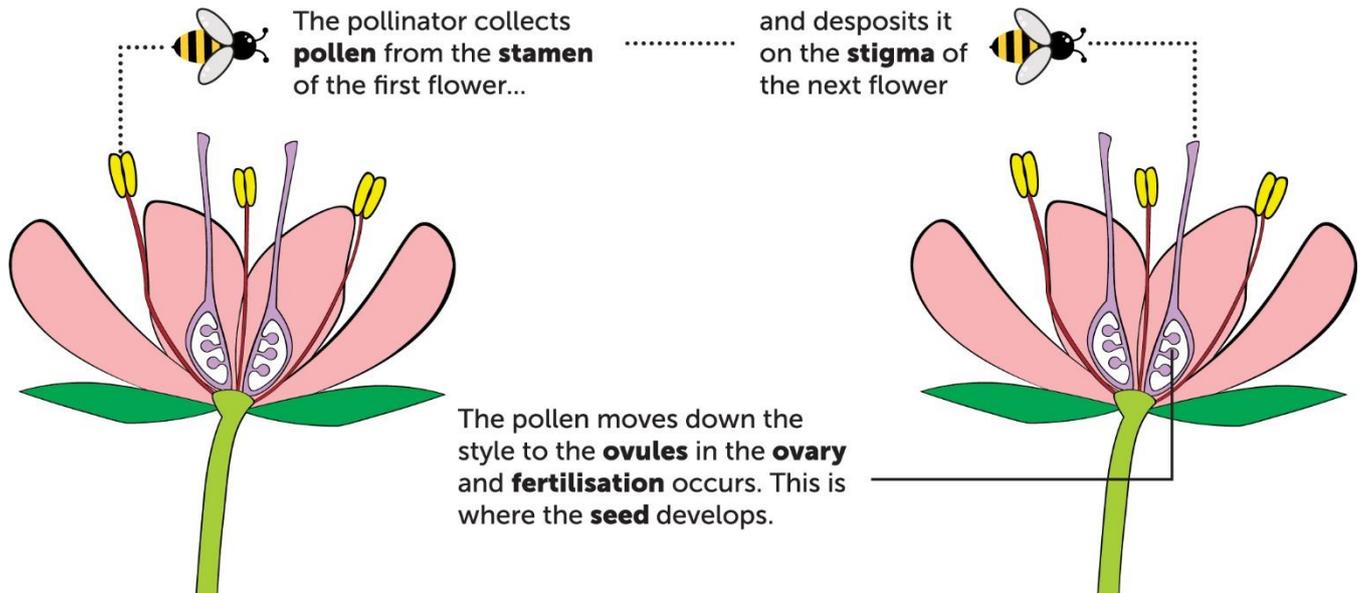
How many different colours do you see? What features do these flowers have to attract a bee, bat or a bird?



Flower Anatomy



Pollination



Why do different colours attract different living things?

BACKGROUND INFORMATION

Pollination is conducted by vectors – they are either biotic (living) such as mammals, lizards, birds and insects, or abiotic (non-living) such as wind and water. This display presents flowers in their various colours because different pollinators are often attracted to different flowers according to colour. Colour or smell is used by the plants to indicate to the pollinators that they will find a food reward of nectar or pollen if they visit that plant.

ACTIVITY

Investigate which pollinators are attracted to which colours? Which animals are attracted to red flowers, blue, yellow and even white flowers?

QUESTION

Why would nocturnal animals be attracted to white flowers?

ANSWER

White flowers tend to be the most visible at night because they reflect all the colours in the light spectrum



Do all plants have flowers?

90%
of plant
species are
flowering
plants

Non-flowering plants such as mosses, ferns, cycads and conifers usually have green reproductive structures. The critically endangered, but world-famous Wollemi Pine has large green female cones and smaller reddish male cones.

This living dinosaur has been on the planet for thousands of years and the Royal Botanic Garden's scientists are working very hard to ensure it survives for thousands more. Click [here](#) to find out more!



Can you spot the Wollemi Pine?

How do colours make us feel?

FUN FACT

Green is good for you.
Looking at 'green' views
of nature boosts
concentration and lowers
stress

QUESTION

Why do people have their favourite colour?

ANSWER

Different colours have been proven to cause different responses in people. For example, when looking at the colour red it increases your pulse rate and blood pressure, but when looking at blue it has the opposite effect.

Have you ever wondered why we give red roses on Valentine's Day?

One of the Largest Vertical Green Walls in Australia

QUESTION

How many plants do you think are in the green wall?

ANSWER

More than 18,000 individual potted plants. Each is sitting in a pot inside a tray which can be watered from the top of the wall. The water then drips down the back of the wall to each potted plant.

QUESTION

How many butterflies and flowers can you see in the green wall? Clue: Use a device such as a phone screen to look at the wall and make the images stand out more clearly or look at the sign in the middle of the room that maps out what images.

STEM SOLUTIONS

Click [here](#) to watch the video of the design and production of one of the largest vertical gardens in the Southern Hemisphere! Discover the many ways Vertical Green Walls can be used in our schools and suburbs to help us and the environment!



What is 'disgustingly unique' about the Tongue Orchid?



Can you see how the Tongue Orchid got its name?

QUESTION

If you are a flower like the Tongue Orchid, that is pollinated by flies how would you attract them to come and visit?

ANSWER

This flower releases a smell like rotting meat! It is so pungent and revolting that it can be compared to the most disgusting smell you can ever imagine. Consequently, Flies think it's their lucky day and visit the flower ready for a big feast. They are sadly disappointed but not the orchid who is happily pollinated by its visitors!

There's heaps more to see and do at the Royal Botanic Garden, Sydney!

- What's looking its best? View the [Must See](#)
- Visit <https://www.rbgsyd.nsw.gov.au/learn/living-learning> to discover online activities and resources for families, schools and communities.

