

# Brisbane Botanic Gardens

## Mt Coot-tha

includes and supports  
Australian Curriculum objectives

Brisbane Botanic Gardens, Mt Coot-tha offers exciting, outdoor learning experiences for school children.

- Lessons are developed by our expert team of environmental educators to suit specific early childhood, prep, primary and secondary year levels.
- Lessons incorporate **Education Queensland and Australian Curricula** and cross-curriculum priorities.



### Our lessons explore:

- science
- geography
- health and PE
- art
- languages
- senior biology
- sustainability
- Indigenous history and culture.

### What we offer.

A lesson in the botanic gardens isn't just teaching outdoors. It offers your students an irreplaceable, hands-on experience, where they can see science theory in action or explore geographical concepts through observing the plants and animals that live in our many unique habitats. It's a special place – with plants from around the world and living examples of ancient and rare species. Our trained educators will engage your students in an educational experience they will never forget.

### What teachers are saying about our lessons.

"Just wanted to say another massive thank you for the excursion. We haven't stopped raving about it. Seriously, it was beyond our expectations. Not only were you experts in your respective fields, but you were awesome teachers as well. The kids were receptive and engaged and the learning experiences were perfectly tailored to suit our needs. It was an invaluable trip for the kids and something they'll remember for the rest of their lives." *Year 4 Teacher.*

"Thank you for a wonderful day! The students were completely engaged and it met the curriculum needs perfectly." *Year 2 Teacher.*



## Australian Curriculum Biological Sciences – Lessons for Years Prep – 6

Take your students out of the classroom and into the real world in our unique, botanical laboratory. Put science concepts into practice as your students investigate plant adaptations first hand, dig in the leaf litter for invertebrates, or gather biotic and abiotic data to explore the environmental relationships between a habitat and the organisms that live within it.

Year level and topic	Content overview
<b>PREP</b> <b>Our senses and the living world</b>	Students use their senses to explore and observe the world of living things (plants and animals) in the botanic gardens. Through hands-on activities students investigate the needs of these living things and come to understand how their needs are met.
<b>YEAR 1</b> <b>Living things and their habitats</b>	Students explore a variety of habitats within the botanic gardens. Through exploration and observation links are made between the needs and external features of living things and their habitats. Students consider what makes a healthy habitat and the possible effects of habitat change.
<b>YEAR 2</b> <b>Life stages</b>	Using habitats found in the botanic gardens students investigate living things found here. Students consider how living things have a series of life stages and that their needs may change as they grow.
<b>YEAR 3</b> <b>What's living in the gardens?</b>	In a hands-on approach, students investigate and observe both living (plants and animals), and non-living things in various botanic gardens' habitats. Observation and investigation opportunities are available for students to collect data and then identify and group things according to characteristics of living, non-living or once-living things.
<b>YEAR 4</b> <b>Habitat relationships</b>	Students investigate various plant and animal interactions and relationships that are present in habitats found in the botanic gardens. Particular roles of living things (producers, consumers, decomposers) are examined. The positive and negative impacts that humans have on living things are also considered.
<b>YEAR 5</b> <b>Adaptations in the gardens</b>	Using various plant and animal habitats found within the botanic gardens, students develop an understanding of the functions of various adaptations found on the plants and animals living there. Students investigate how features of these habitats influenced the development of these adaptations.
<b>YEAR 6</b> <b>Investigating the gardens</b>	Students participate in a field study using a botanic gardens' habitat. They identify the features of, and investigate and collect data for that habitat and then relate this information to the types of living things found there. Students are encouraged to use the data collected to create a habitat profile.

## Australian Curriculum Biological Sciences and Biology – Lessons for Years 7 and 10 – 12

Where else would you explore the diversity of plant life, but at the botanic gardens? Your students will use dichotomous keys to classify the plants and animals living in the gardens, travel back through the millennia to investigate botanical evolution by examining plant morphology using living specimens or investigate how plant DNA can be used to classify plants based on their evolutionary history (cladistics).

Year level and topic	Content overview
<b>YEAR 7</b> <b>Classifying plants and animals</b>	Students investigate botanic gardens' habitats and participate in activities designed to develop an understanding of scientific classification (plant and animal) and how the use of dichotomous keys assist with this classification process.
<b>YEARS 10-12</b> <b>From algae to angiosperms</b>	Use living plant specimens to explore plant evolution from algae through to angiosperms. Phylogenetic analysis of morphological and anatomical data allows students to understand the cladistical approach to classifying plants.
<b>YEARS 11-12</b> <b>Investigating Cladistics – real world applications</b>	Building on 'From algae to angiosperms' students firstly examine the morphology and then the DNA sequences of a selection of plant species in order to construct cladograms representing the evolutionary relationships between them.



## Australian Curriculum Geography – Lessons for Years 1 – 4

Make geography one big adventure. With plants and plant habitats from all corners of the globe, the botanic gardens is the perfect setting for your students to travel locally and 'overseas' exploring the concept of place. Students can gather data to create a map, investigate the impact of climate on plants and animals (including humans) or identify the natural, managed and constructed features of a place.

Year level and topic	Content overview
<b>YEAR 1</b> <b>Exploring a local place</b>	Students investigate the Temperate Garden Lagoon and its surrounds. Engaging in activities that assist them to identify and explore the natural, managed and constructed features of this place, students conclude by collectively creating a map highlighting these features.
<b>YEAR 2</b> <b>Exploring special places in the gardens</b>	Students visit three special places within the botanic gardens. At each location they explore the place and gather data, including the key features of each one. This data is then used by the students to create a mud map about one of the places visited.
<b>YEAR 3</b> <b>Places are both similar and different</b>	Using directions and map-reading skills, students locate and investigate three climate types (arid, temperate and tropical) within the botanic gardens. The features of these climate types, adaptations of endemic plant species and the needs of people who live there are explored.
<b>YEAR 4</b> <b>Plants are important everywhere</b>	Students explore the botanic gardens to locate three different plant species native to South America, Africa and Australia. After learning where these plants grow and how they are important to the people in these countries, students explore a plant of unknown origin, considering possible uses and how it might be sustainably grown and used.

## Other Australian Curriculum areas and Cross-curriculum Priorities – Lessons for Early Childhood and Years Prep – 12

Jumpstart your students' imagination and creativity with a field trip to the botanic gardens. Take inspiration from the shape, colour, form and texture of leaves and flowers, or create botanical masterpieces from found materials. Explore Aboriginal or Japanese culture through their use of plants for aesthetic and practical purposes; get active and healthy by making your own garden for school; or explore the historical role and importance of the botanical gardens to the development of Brisbane.

Year level and topic	Content overview
<b>EARLY CHILDHOOD- PREP</b> <b>Sensorama</b>	Explore the exciting world of plants using language and the senses of smell, sight, touch and sound. Students create and take home a fragrant potpourri sachet to remind them of their botanical explorations.
<b>YEARS PREP-6</b> <b>Hands-on art</b>	Students explore shape, line, colour and texture in hands-on art activities that focus on nature as a source of artistic inspiration. (Years Prep-3). Students examine the artistic possibilities of using natural images and vegetation. They experiment with patterns, balance, structure and contrast through sketch and making their own creations from natural materials. (Years 4-6).
<b>YEARS PREP-6</b> <b>Aboriginal games, arts and crafts</b>	Students try string-making and painting and play a selection of traditional Aboriginal games. Students also view Indigenous arts and crafts and learn how they are made, what materials are used and their cultural significance. <b>Note: adapted to suit the age/year level of the class.</b>
<b>YEARS 2-12</b> <b>Aboriginal use of rainforest plants</b>	Investigates how specific plants are/were used by Aboriginal communities for food, tools and medicines. Students examine and taste some bush foods and consider the diverse role of plants in Aboriginal culture.
<b>YEARS 4-12</b> <b>Japanese Garden</b>	Examines the cultural significance of Japanese gardens and investigates the overall effect of the design features. Students use the setting as inspiration for Japanese sumi-e painting and haiku poetry.
<b>YEARS 3-4</b> <b>The active and healthy garden</b>	Students learn about sustainable gardening, create a vegetable and herb container garden for their classroom and use fresh herbs/vegetables to create a healthy snack. Includes a walk through the Kitchen Garden looking at the worm farm and compost heap, picking fresh herbs and tasting some seasonal produce.
<b>YEAR 4-5</b> <b>City Gardens time traveller</b>	Step back in time as students explore the history of Brisbane through the City Botanic Gardens and its vital role in the establishment of the Colony of Brisbane. Enjoy the convict role-play and then discover some of the historically significant plants still living in the gardens today.



### Lessons:

- involve exciting hands-on activities for students, in a unique setting
- are offered Tuesday to Friday at 9.30am, 11.30am and 1.30pm
- are conducted at the Botanic Gardens, Mt Coot-tha, with selected lessons available at the City Botanic Gardens
- are 1.5 hours in duration for Early Childhood to Year 6 and two hours in duration for high school
- come with suggestions for pre-visit and post-visit activities
- are regularly evaluated and updated based on teacher feedback.



### For further information and to book a lesson:

Visit [www.brisbane.qld.gov.au/schools](http://www.brisbane.qld.gov.au/schools) for current prices, lesson-specific curriculum information, to check lesson availability and complete an online booking form.

For any enquiries, or to discuss the most suitable lesson for your class, contact the Education and Interpretation Coordinator, Brisbane Botanic Gardens.

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### NEW for 2017 - Classification for Years 10-12

#### From algae to angiosperms: Investigating Cladistics – real world applications:

- engages students in a millennia-long trip through the evolution of plants, from single-celled green algae to complex, flowering angiosperms
- provides living examples of the major loci of evolutionary change in plants, allowing for a close-up inspection of plant morphology
- introduces the concept of phylogenetic analysis and clades.
- uses real world DNA sequences to construct evolutionary relationships between a group of plant species
- investigates the impact of phylogenetic analysis on traditional plant classification
- explores how science as a body of knowledge can change with the introduction of new information and technological advances.



**Lessons in the Gardens is another way Brisbane City Council is achieving a clean, green city.**

Why not combine your lesson with a visit to the Planetarium? Phone (07) 3403 2578 or visit [www.brisbane.qld.gov.au/planetarium](http://www.brisbane.qld.gov.au/planetarium)

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 Information**  
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