

A Local Ecosystem

Buffalo Creek Reserve - Yr 11 Biology



School name:

School phone:

Organising teacher - first name:

Organising teacher - last name:

Email:

Mobile:

Excursion program list:

Start time:

Finish time:

1st excursion date:

Approx student numbers:

Number of classes:

Grades:

Participating staff and email addresses.:

Teacher checklist

Location – Buffalo Creek Reserve, eastern side of Pittwater Road, East Ryde.

Bus access - give supplied access information to driver. No bus entry into Buffalo Creek Reserve. Please note council parking fees now apply.

Cost - DOE \$18.00 per student, no GST.
Non Gov School Cost: \$28 per student (GST free, minimum charge \$550)

Bring - essential items only: [student worksheets](#), clipboard, medications, food, plenty of water, sunblock, hat and raincoat in a small backpack. There are no shops near the study site.

Clothing - sports uniform recommended. Hats and sturdy closed shoes essential for all visitors.

Preparation - the online *A Local Ecosystem* course must be completed before attending the fieldwork excursion. It is available through [iTunes U](#) or as a PDF download on the [resources page of the Field of Mars EEC website](#).

Staffing - Classroom teachers are expected to be involved in all activities including rugged bushwalking.

Extreme or wet weather - this may result in the excursion being modified, postponed or cancelled. This includes days predicted to be above 35°C, high winds, extreme bush fire danger and dust storms.
Ph: 98161298

Cancellations - less than two weeks notice \$100. This does not apply to cancellations due to weather.

Medical or special needs - please notify EEC staff.

Limited bin access - students and teachers are encouraged to use 'nude food' containers.

Student welfare - students will be outdoors all day. It may not be suitable for students who have been recently unwell.

Excursion learning activities

Abundance

In the mangrove forest the students will use quadrats along a belt transect as part of a scientific study to investigate the relationship between distribution and abundance of crabs near the boardwalk.

Distribution

In the dry sclerophyll forest the students will investigate the relationship between fire and plant diversity along a transect line, including the measurement of abiotic factors.

Adaptations and Interrelationships

During the fieldwork, students will be shown examples of relationships between species in the local environment, trophic interactions and the various ways native plants and animals have adapted to their environment.

Pre-Excursion Learning Activities

The excursion is supported by a choice of online coursework which contain pre-excursion activities that should be completed before the excursion as they cover essential curriculum content and skills necessary for the fieldwork activities and assessment.

You have a choice of iTunes U (app) or online course (PDF download).

Pre-Excursion activities – iTunes U course (app) or online course (web)

This course and associated fieldwork program supports learning outcomes from the NSW Board of Studies Stage 6 Biology syllabus. It supports part of the topic A Local Ecosystem, there is some additional content in the topic that is not covered by this course and excursion.

The students will need a minimum of 2 hours to complete the course. The course contains videos, fact sheets, maps, images, resource links, ebooks and extension materials.

The iTunes U course will always contain the most up-to-date and comprehensive resources and materials for the course.

Any updates or new resources will be instantly updated on IOS devices. The course suits the flipped classroom model or can be used as in-class lessons.

To access iTunesU, an iPad, iPod Touch or an iPhone is needed and with the [iTunes U app](#). For more information on iTunes U visit [iTunes U](#)

A Local Ecosystem enrolment link:
<https://itunesu.itunes.apple.com/audit/COHVPH7A2>

Manual enrolment code - K8S-BEL-2A3

If an IOS device is not available, an interactive PDF version of this course can be downloaded from the resources section of the Field of Mars EEC website <http://fieldofmarseec.nsw.edu.au/resources/secondary/>

Biology Stage 6 A Local Ecosystem content

Students:

- choose equipment or resources and undertake a field study of a local terrestrial or aquatic ecosystem to identify data sources and:
- measure abiotic variables in the ecosystem being studied using appropriate instruments and relate this data to the distribution of organisms estimate the size of a plant population and an animal population in the ecosystem using transects and/or random quadrats
- collect, analyse and present data to describe the distribution of the plant and animal species whose abundance has been estimated describe two trophic interactions found between organisms in the area studied
- identify data sources and gather, present and analyse data by:
 - tabulation of data collected in the study
 - calculation of mean values with ranges
 - graphing changes with time in the measured abiotic data
 - evaluating variability in measurements made during scientific investigations
- gather information from first-hand and secondary sources to construct food chains and food webs to illustrate the relationships between member species in an ecosystem
- process and analyse information and present a report of the investigation of an ecosystem in which the purpose is introduced, the methods described and the results shown graphically and use available evidence to discuss their relevance.

Citing the iTunes U Course

Spiers, P (2014). A Local Ecosystem: Bio2014, Field of Mars Environmental Education Centre (Version number) [iTunesU course]. Retrieved from <https://itunes.apple.com/au/course/a-local-ecosystem/id785091020>.

Citing the online (PDF) course

Spiers, P (2014). A Local Ecosystem: Bio2014, Field of Mars Environmental Education Centre. Available at <http://fieldofmarseec.nsw.edu.au/resources/secondary/>. (Accessed [date]).

