

How the day works

- All equipment is supplied
- We provide a master copy of worksheets to be run off by school
- Assessment task & extra information supplied for stage 6 excursions
- Risk Assessments supplied
- We provide a USB of extra information and photos
- We provide printed photos from the day
- Students with disabilities are catered for (where possible)
- Large groups of up to 180 can be catered for

Field work techniques and equipment

- Soil moisture meters, soil depth spikes, dissolved oxygen kits, conductivity meters, salinity refractometers, turbidity tubes, pH kits, phosphate kits, thermometers, dichotomous keys, identification charts, laser rangefinders, foliage cover scopes light meters, microscopes, quadrats & transects
- We incorporate group work & independent learning

Excursions offered

- Years 7-12 science excursions
- Tailored IB ESS excursions
- Depth Study/Independent Research Project

See detailed excursion synopsis overleaf

Overnight excursions

Overnight *Ecosystem Dynamics* excursions allow us to visit a different ecosystem on each day; Long Reef rock platform and Camp Kedron bushland or wetland and rainforest from Mt Keira. Students sleep at the site so we can go out at night to spot animals.

Please ask for more information about activities and inclusions.

Prices for 2020

- Year 7 to 10 excursions \$33 per student
- Year 11 and 12 excursions \$35 per student
- Mt Keira, Camp Coutts, Beaky Point and Cattai National Park have an additional cost of \$2 per student.
- There is a minimum charge of \$500 per excursion for small groups. Schools may request to share an excursion with another school to reduce costs (if possible)
- A 10% G.S.T surcharge applies to all excursions
- A 25% holding deposit is required within two weeks of booking

Schools will be charged for the number of students booked unless notified 1 week prior to excursion date.

We plan for a maximum ratio of 30 students to 1 staff member. If you would prefer a small class size, we can try to provide an additional Auseco staff member for \$400 +GST.

Please note

Excursion dates will be held for two weeks without a deposit. Deposits are non-refundable if excursions are cancelled within four weeks of the excursion date. In case of bad weather, an excursion can be postponed on the day.

To book and for further information:

Web: www.auseco.com.au

Email: auseco@optusnet.com.au

Ph/fax: 02 9970 6456



AUSECO

Specialist in Environmental Education



Science Field Studies
2020



Science Excursions

Excursion	Level	Excursion Synopsis	Location	
<u>Living World</u>	YR 7-8 Stage 4	This excursion examines the environmental conditions and diversity of life in the chosen ecosystem. Students describe how producers, consumers and decomposers are related using a local food web. An animal catch and classification gives students an understanding of local fauna.	BUSHLAND WETLANDS RAINFOREST ROCK PLATFORM	Bantry Bay Camp Coutts Camp Kedron Manly Dam Botany Bay Mt Keira Long Reef Narrabeen
<u>Advanced Living World</u>	YR 9-10 Stage 5	Students build on their understanding that ecosystems consist of abiotic and biotic components and communities of interdependent organisms. The cycling of matter through ecosystems such as nitrogen, and the inflow and outflow of energy within food webs is explored. An animal catch and classification gives students an understanding of local fauna.	BUSHLAND WETLANDS RAINFOREST ROCKPLATFORM	Bantry Bay Camp Kedron Camp Coutts Manly Dam Botany Bay Mt Keira Long Reef Narrabeen
<u>Ecosystem Dynamics</u>	YR 11 BIO Stage 6	Students compare population dynamics in various communities within the chosen ecosystem. Study of animal or plant diversity, distribution & abundance, physical & chemical tests. In depth examination of a native producer & animal adaptations to their niche, and biotic relationships between organisms (symbiotic relationships and trophic interactions). Students complete an animal catch to study their animal in detail. Discussion of evidence of past environments (including fossil evidence), and assessment of future change in the chosen ecosystem. <i>*Also tailored for 'Independent Research Project' depth study and 'Investigating Science' project</i>	BUSHLAND RAINFOREST WETLANDS ROCKPLATFORM	Bantry Bay Camp Coutts Camp Kedron Mt Keira Botany Bay* Long Reef* Narrabeen
<u>Biological Diversity & Organisation of Living Things</u>	YR 11 BIO Stage 6	Students will discuss evolution as the driving force for biodiversity, with focus on fossil evidence. The effect of the environment on tree diversity will be studied by comparing physical and chemical conditions along a transect line, whilst also identifying species diversity. The adaptations of two trees and two animals to the local environment will be studied in detail by looking at the organisation of microscopic and macroscopic structures in the organism.	BUSHLAND	Camp Kedron
<u>Independent Research Project</u>	YR 11 BIO Stage 6	An Independent Research orientated, student-led study of the Long Reef Rock Platform or Botany Bay Wetland. Students are provided with a variety of scientific equipment to study their chosen topic. An explanation of how to use equipment and select correct sampling methods is facilitated by Auseco prior to starting. This program is best suited to highly motivated, academic and independent students who are well organised and prepared before the day.	ROCKPLATFORM WETLAND	Long Reef Botany Bay
<u>Earth's Resources & Human Impact</u>	YR 11 E&ES Stage 6	A study of the geosphere over time, including local geology, soil testing, fossils evidence, human impacts on vegetation and water quality, abiotic testing and assessment of management strategies.	BUSHLAND	Bantry Bay Camp Coutts Camp Kedron
<u>Yr 12 Earth & Environmental Science</u>	YR 12 E&ES Stage 6	Modules 5-8: Students examine fossils and their modern equivalents, including a rock platform animal capture and discussions on animal adaptations, linking to ancestral past. Investigation of global and local geomorphic hazards, weather patterns and climate change impacts on coastal areas. Sand mining as a resource, the implications of its unsustainable acquisition.	ROCKPLATFORM ► COASTS	Long Reef ► Collaroy
<u>International Baccalaureate</u>	YR 11-12 Stage 6	An IB orientated, student led study of the Long Reef Rock Platform. Students will study the biosphere, examine abiotic and biotic factors, learn how to sample diversity, distribution and abundance of populations and generate hypothesis.	ROCKPLATFORM BUSHLAND WETLAND	Long Reef Bantry Bay Botany Bay