

ELC evolves from LEOTC

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Sun Bears
here at

Providers applying for Enriching Local Curriculum (ELC) funding from the Ministry of Education need to show highly customised engagement with schools. Teachers benefit, as the pre-prepared programmes of the past evolve into something new. NZASE Science Communicator Mike Stone talks with three ELC providers.

Wellington Zoo

Charles Wilson and his education team see over 10,000 students a year, in several different ways:

- **Learning Workshops** can cover one of many different topics including caring for animals, animal adaptations and behaviour, primate evolution, speciation, conservation, and New Zealand animals. Students have a session with an educator, set off to explore with an inquiry question to focus their learning, then check in at the end.
- In the three sessions of the **Bush Builders Programme**, students first participate in a hands-on programme at the zoo. Then, with a zoo educator back at school, they explore the plants and animals around them, and plan and carry out a conservation project, such as making a garden or building animal habitats.
- The **Holiday Programme** offers behind-the-scenes practical activities to 40 students a day on its 13 hectare site.
- **Online learning** had a strong uptake during COVID restrictions. but less so now.

The zoo adapts its programmes to the needs of the school, depending on their inquiry. For example, Charles recently co-constructed a new Y13 biology programme with Doug Walker from St Patrick's College in the city.

Together they developed a practical exploration of homeostasis using the school's

thermal imaging camera. The students measured their own body temperature and blood pressure, as well as observing the thermal image before and after running up to the highest land in the zoo. Then Charles let them into the big freezer at the nutrition centre at -19°C , and students took the same physiological measures.

They also used the thermal imaging camera to look at patterns on the giraffe's body. Doug says: "Charles and his team worked with us to research examples of homeostasis related to animals in the zoo (penguins' counter-current mechanism, comparing endo- and ectotherms)."

Animals under anaesthetic provided a good example of when homeostatic systems fail – the steps and technology used to maintain homeostasis for animals undergoing surgery or medical checks was fascinating."

Wellington Zoo is working to engage mātauranga Māori with their programmes, with te taiao and te reo Māori. The Aotearoa-Unique New Zealand programme includes pūrākau and is held in a zoo area called Meet the Locals/He Tuku Aroha, where four pou represent the atua: Tangaroa, Rongomātāne, Tane, and Tūmataunga.

While the main curricular focus is science, a trip to the zoo is also proving useful for Art, Business Studies, Technology, and Spanish and Japanese (with those speakers among education staff).

MOTAT

Julie Baker is an educator at Auckland's Museum of Transport and Technology. She says: "We use pre-visit negotiation and post-

A school holiday group watches sunbears. Photo: Wellington Zoo.



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visit feedback. When a school books online, an educator will contact them to discuss their learning outcomes and together craft a learning experience that will meet their needs. While for some a pre-prepared programme works well, increasingly teachers are asking for aspects to be tweaked, and others are wanting to co-create a new experience for their learners.”

MOTAT has a range of programmes:

- **Onsite visits**, in a dedicated on-site classroom, include a short introductory talk, with most of the time spent in hands-on activities and student-led discussion, and a summation at the end.
- **STEAM sessions with students at school** involve a MOTAT educator with a trailer of equipment and resources to run many different classes for an hour each, or a small group of students for the whole day. This is easy for teachers and works in with their timetable.
- **Online education**; also less in demand now.
- **Hiring kits** by the week, including robotics, electricity, light, magnets and micro:bit.

Hamilton Zoo

This 25 hectare property is on the north-western outskirts of the city. Educator Ken Millwood says, “With the change to ELC funding, we now cater to a broader range – ECE and tertiary as well as schools.

And our educators also work at Wai-whakareke Natural Heritage Park, a 65 hectare restoration project opposite the zoo and at the Waikato Museum, in a more integrated approach that can be helpful to schools.”

For science, schools typically want Ken to look at habitats, classification and adaptations with juniors, and animal behaviour evolution, primates, and speciation with seniors. Some teachers want students to explore conservation, a key focus of all zoos, and others the socio-scientific issue of the purpose of zoos, where ethics and perspectives have changed over time.

When schools book, educators have a conversation about curriculum outcomes. Ken says, “Come to us with an idea and we

will look at it.” As well as Science and Biology, he has worked with students of Statistics, Technology, Media, Visual Arts, Food and Digital Technology, and careers.

Advice

To make best use of field trips for student learning, teachers are advised to talk with the educators beforehand. It is important to be very specific about what teachers need from the field trip, so it can be tailored just for them.

The way these providers work with schools is changing, and they all said to ask if you want something different. Julie says, “We are more flexible than ever before and strive to fit our learning experience to your teaching programme.”

Also, book well ahead as spaces can fill up quickly, especially in the third and fourth terms.



MOTAT’s Design Thinking programmes emphasise empathy, problem definition, iterative design, user acceptance testing and prototyping. Photo: MOTAT.

Ngā Kupu

Ako tuihono – Online or virtual learning

Auaha – To shape, create; creative

Hinonga – Project, enterprise

Kaupapa – Programme, plan, topic

Kaiwhakarato – Service provider

Pakirehua – To enquire; enquiry

Me tiaki – We must look after, protect, conserve [our environment]

Pūtea – Fund

Toro – To visit, explore

Tūhuratanga ā-ringa – Practical investigation.

Te Aka Maori Dictionary and Paekupu



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