In 2016, UNE piloted an outreach and engagement initiative – the Discovery Bus - that took hands on activities in STEM out to schools in the New England region. The response was overwhelmingly positive after visits to over 3,500 students in 3 months. The Discovery Voyager program was launched in April 2017, and has gone from strength to strength since.

The UNE Discovery Voyager is a user-pay program that expands STEM to STEAM, and employs 11 dedicated and skilled facilitators who travel northern NSW inspiring students from 4 through to 16 years old. The program includes 16 experiential activities and a theatrical performance that align to the NSW curriculum as well as UNE’s research strengths across a range of disciplines, but more importantly, interdisciplines.

As Voyager activity sessions start in schools each day, teachers watch curious students run around the garden with magnifying glasses marvelling at the natural environment, explore the physics of sound, pull rabbit bones from kinetic sand, and hear explosions, gasps and cheers from the chemistry space. Teachers sometimes forget some students are there as they silently peer in awe down a microscope at a whole other world. The team role model creativity and unfettered curiosity about the world around us. They confirm a bright future for young children who are confident to explore outside a small town.

The Voyager philosophy is one of cultivating curiosity, creativity, collaboration, confidence and a can-do attitude; encouraging a love of learning from a young age, and opening up diverse worlds of opportunity to young regional, rural and remote Australians.

In the past two years, the Voyager team and the experiences they facilitate have proven to be a significant and welcome addition to the classroom, and expansion of the curriculum taught by teachers in schools in northern NSW. As the program leader, I am proud to be leading this passionate and highly skilled team who pass on their excitement for learning to the children of NSW. I look forward to all the inspiring ways UNE Discovery will become a part of a regional childhood education into the future.

Yours in STEAM,

From the Program Leader, Dr Kirsti Abbott
Evaluating our impact
The Discovery Voyager feedback survey for teachers revealed that 100% of the schools visited would, or already have, scheduled a Voyager visit into their annual budget and curriculum programming every year. Many of these schools ensure that every student in the school partakes in the experience.

Teachers report that students are still talking about the Voyager activities up to three months after a visit, and some teachers have crafted their programs around these activities. At Farrer Memorial Agricultural High School, the Year 9 science teacher has continued investigating and mapping the soil types at the school since the visit in May 2017.

Teachers report children coming away from our activities “a lot wiser”, “inspired” and “excited to learn”.

We understand that measuring inspiration is hard, and is often overlooked as we strive to assess more tangible outcomes. But inspiration awakens us to new possibilities by allowing us to transcend our ordinary experiences and limitations, many of which are reinforced in our traditional schooling system. Inspiration can propel a person from their experiences and limitations, many of which are reinforced in our traditional schooling system. Inspiration can propel a person from apathy to possibility, and transforms the way they perceive their own capabilities.

Over time we will be able to measure the impact Voyager experiences have in schools through increasing engagement with UNE, participation in other UNE activities, enrolments, and continued loyalty to UNE as a choice of education provider for life. And we’ll do our best to capture inspiration.

UNE Natural History Museum education program
The UNE Natural History Museum offers 30-minute expert guided tours of the museum that attract local school and community groups as well as visitors from as far away as Dubbo. In 2018, UNE Discovery aided in the development of an interactive education program that now offers a choice of six play-based 45-minute facilitated activities to students from preschool age through to Year 10. In the Museum students can undertake a Discovery Voyager activity (Living Latin, Science Meets Art or Palaeontology Puzzles) or one of three activities developed exclusively for the Natural History Museum.

The new programs are Adaptive Arthropods, Form and Function and Dichotomous Keys, all aligned to the school curriculum and that utilise specimens and displays in the museum to encourage students to explore and discover the museum more deeply than is afforded by a tour alone.

In 2018, at least 126 students participated in tours and education programs. Tours were also conducted for community groups including University of the third Age, St Vincent de Paul and Armidale Regional Council. Discovery has facilitated biological illustration sessions, where taxidermy specimens and articulated skeletons have been set up as subjects for drawing.

The Natural History Museum represents a great opportunity for our communities to engage with artefacts of research and teaching, and understand something of the human desire to collect, document and preserve life on earth.

A day in the life of the Discovery Voyager team
8am – the Voyager team are heading to Guyra. They load up the 4.5tonne ISUZU Pantech truck with microscopes, rocket makers, insect nets, exercise bikes, soils and more. They jump in and journey northward.

8:40am – Piling out of the truck, the team see bright and smiling faces beaming at them through the fence. “Are you a REAL scientist?” “I can’t wait for today!” Always eager to engage, students help us unload for the day, and show us to our Discovery Voyager spaces.

9:15am – Welcome! The team introduce themselves, their specialties, and the activities they will be facilitating for the day. Everyone is encouraged to ask questions; questions about our careers in science, about the activities, and about how and why we are passionate about learning. From biologists to physicists; exercise scientists – everyone has a different story. Discovery begins!

10am – students reluctantly stop one activity and move to the next, and rotate twice more through stimulating and challenging experiences.

1200pm – as the activities come to a close, student helpers carry equipment back to the truck, asking questions, thanking the team and sometimes offer big hugs. The teachers often come to thank us and comment on the buzz of science chatter filling their classrooms. We are constantly reminded just how important and formative it can be to show another world of curiosity and exploration and even if the students don’t become scientists, we’ve shown them a way of thinking, asking questions, and exploring the world around them, that they can carry with them into the future.

Our team
The Discovery Voyager team are 11 highly skilled scientists, educators, communicators and arts practitioners dedicated to engaging with children and young people in new ways. The team uses growth mindset language to cultivate confidence and a can-do attitude in schools, and model curiosity, creativity and collaboration in our approach to education.

Led by Program Leader Dr Kirsti Abbott, the 2017-18 Voyager team was:

- Dr Siobhan Dennison, team manager and conservation geneticist. Currently enrolled at UNE in a Masters of Teaching.
- Dr Jean Holley, schools liaison and insect ecologist. Currently writing research papers with UNE insect ecology lab.
- Matt Pine, facilitator and sports scientist. Currently managing the UNE Elite Sports Academy.
- Sarita Perston, facilitator and chemist, communicator and tall ship sailor.
- Anita Brown, facilitator and ex-high school teacher, actor and drama teacher. Currently co-director of Two Sticks Theatre Company.
- Phil Spark, facilitator, astrophysicist and children’s discovery program developer.
- Andrea Jaggi, facilitator, activity developer and biomed major. Currently completing a Masters of Teaching at UNE.
- Chris Smidt, facilitator and ex-high school teacher and principal. Currently leading outdoor survival, leadership and adventure masterclasses for the Australian Defence Force.
- Will Smidt, facilitator and actor and music teacher. Currently studying a Diploma in precision agriculture through UNE.
- Steve Tremont, technical officer and ant para-taxonomist. Currently teaching first aid and outdoor education for TAFE NSW.
- Ivanah Oliver – facilitator and soil scientist. Currently completing a PhD in soil ecology at UNE.
School visits

Visiting regional, rural and remote schools in Northern NSW is the primary function of the Voyager program. Since April 2017, the Voyager team have visited 197 primary and high schools, central schools and Steiner schools during Terms 2, 3 and 4. Sixty two of these schools have been repeat visits, and Voyager has returned three times to seven schools.

Just over 73% of the visits were to students from Kindergarten to Year 6. In 2017 the most frequently booked activities were Palaeontology Puzzles and Curious Chemicals, and in 2018 it was Dynamic Bodies and Curious Chemicals, and in 2018 it was Dynamic Bodies and Curious Chemicals.

Campus visits and festivals

The Discovery Voyager team invited schools to experience the UNE campus in Armidale and to visit the Smart Farms, Natural History Museum and elite level sports science laboratories. The team also facilitated play-based experiences at local, regional and national festivals and open days. In 2017 and 2018 the Voyager team participated in:

- Colabs Art and Science initiative, Western Sydney (2017)
- Black Gully Music Festival, Armidale (2017)
- Far Out Science, UNE Armidale (2017)
- Ag-Quip Agricultural Field Days, Gunnedah (2017, 2018)
- Science on the Road in partnership with the Australian Museum, Tamworth (2018)
- Vice Chancellor’s Open Days, UNE Armidale (2017, 2018)
- HSC Booster Days, UNE Armidale (2017, 2018)
- Oorala Aboriginal Centre Experience Days, UNE Armidale (2017, 2018)
- Minerama Gem and Fossicking Festival, Glen Innes (2018)
- World Science Festival, Brisbane (2018)
- Royal Easter Show, Sydney (2018)

Support and sponsorship

The Voyager program is proudly supported by Telstra. Telstra provided connectivity in remote areas for the Voyager truck, as well as donated, through UNE Discovery, a Maker Party in a Box kit to Armidale City Public School. The kit contains STEM-focused technology valued at $10,000, and has enhanced the school’s recently created Maker Space, where Voyager team members can develop activities alongside primary school students.

Testimonials

“Once again this year, the UNE Discovery Voyager team provided our 520 students with four days of engaging hands on activities that stimulated participation and discussion. We would love for this experience to become a permanent part of our Science program.” – Westdale Public School

“Our students thoroughly enjoyed the practical activities and using unique equipment that school could not possibly have. We have now experienced every activity on current list so hope that new ideas and activities keep being developed overtime.” – Newling Public School

“Curious Chemicals was a highlight because of fire, explosions and noise! Science of Soils was also enjoyed because they got their hands dirty.” – Liberty College Tamworth

“The students enjoyed all the sessions. Curious Chemicals was exciting because it involved in the learning. All sessions were enjoyed.” – Coonabarabran High School
To book Discovery Voyager email une-discovery@une.edu.au
To learn more contact Dr Kirsti Abbott
UNE Discovery Program Leader
p  0466 726 525
e  kabbott6@une.edu.au

unediscoveryvoyager.org.au