



Primary Science Hui Hamilton Programme 10 July, 2019





- 10 July
- Coffee from 8:15
- 9am start
- 5pm finish
- Waikato Diocesan School for Girls 660 River Road Chartwell Hamilton 3210

| 8:15 | Coffee | | |
|-------|--|--|---|
| 9:00 | Welcome/Introductions | | |
| 9:30 | Dr Anne Baker | Jenn Corbitt | Andrea Soanes and Greta Dromgool |
| | University of Waikato | Science Teaching Leadership Programme | Science Learning Hub |
| | Am I getting better at Science? | How to improve science teaching | Developing science pedagogy to |
| | <u>Ideas for assessment</u> | at your school | encourage critical and creative thinking |
| 10:45 | Morning Tea | | |
| 11:15 | Sandy Jackson | Benjamin Moorhouse | lan Milne |
| | Kings School | Department of Conservation | Primary Science education consultant |
| | Hook, Line and Thinker | <u>Teaching science through nature</u> | "Well you know Mr Milne, there is no Planet B" |
| 12:25 | Pop Ups | | |
| 1:00 | Lunch and Pop Up follow up | | |
| 2:00 | <u>Dr Anne Baker</u> | Jenn Corbitt | Andrea Soanes and Greta Dromgool |
| | University of Waikato | Science Teaching Leadership Programme | Science Learning Hub |
| | Am I getting better at Science? Ideas for assessment | How to improve science teaching at your school | Developing science pedagogy to encourage critical and creative thinking |
| 3:15 | Sandy Jackson | Benjamin Moorhouse | lan Milne |
| | Kings School | Department of Conservation | Primary Science education consultant |
| | Hook, Line and Thinker | Teaching science through nature | "Well you know Mr Milne, there is no Planet B" |
| 4:30 | Round Up/Grab& Go | | |

Andrea Soanes

Developing science pedagogy to encourage critical and creative thinking

The goal of science education is to enable students to participate as critical, informed and curious citizens. The Science Learning Hub offers NZ-based quality resources and effective pedagogy to deepen understanding and encourage scientific literacy. This hands-on workshop will explore science and education, how to develop science concepts and capabilities, and encourage critical and creative thinking.

Andrea Soanes is an experienced science teacher, and Kudos award winner 2018 for science education. She is passionate about contextual integrated teaching and learning. Andrea is the project manager for the Science Learning Hub, and alongside a dedicated team, work to support teachers to engage, inspire and build students curiosity about the world around them.

Anne Barker

Am I getting better at Science? Ideas for assessment

Participants will engage in fun and simple activities that enable an exploration of what progress and assessment for primary science in New Zealand could look like.

Anne is an accredited facilitator with the Institute of Professional Learning, Te Whai Toi Tangata at the University of Waikato. She works around the North Island providing science professional learning for primary teachers through either school funding or supporting schools to access Ministry funding for science PLD. Her teaching background includes teaching years 2 – 8 across the curriculum and includes leadership experience as an assistant principal. Currently she is working on her Masters of Education in the area of Science Education and has a passion for science education that is focused on developing science for citizenship.

Benjamin Moorhouse

Teaching science through nature

Nature provides an authentic context for learning and provides schools with the context to connect with their local community in a meaningful way. By providing opportunities to connect with nature, develop conservation knowledge, values and skills, teachers and students become empowered to takeaction for their environment. This workshop aims to build an understanding of why a conservation education journey is worthwhile and how it fits with the New Zealand Curriculum. An interactive session will explore the tools and resources available from the Department of Conservation to support you on a conservation education journey. This will include examples of DOC curriculum linked resources, based on our integrated inquiry learning cycle that supports incorporating conservation education into your school curriculum and help build teachers and students capability to drive change in their community by taking-action for their environment.

The Department of Conservation outreach and education team is made up of education specialist based across the country. Benjamin Moorhouse based in Wellington, Maria Deutsch in Nelson and Annabelle Studholme in Christchurch will be running the sessions for DOC across the country.

Greta Dromgool

Developing science pedagogy to encourage critical and creative thinking

Ko Waipounamu tōku whenua Ko Aoraki tōku maunga Ko Moana Nui a Kiwa tōku moana Ko Ngāti Pakeha tōku iwi

Kia ora, my name is Greta Dromgool. I am a science teacher who has trained and taught at secondary level and have spent several years teaching at intermediate level. I was a participant in the Science Teaching Leadership Programme and have recently retrained in early childhood, with a focus on Mana Aotūroa/Exploration. I currently work for the Science Learning Hub as their PLD Facilitator.

Ian Milne

"Well you know Mr Milne, there is no Planet B"

Listen to your children: Help them share their stories because they want to make a difference. This talk shares an analysis of some of the significant learning and teaching developments that were experienced when the presenter accepted an invitation to provide in class support for the seamless integration of science, mathematics, literacy and technology into a blended learning schools generic inquiry programme. The year started with all classes exploring the theme "Learning to learn". The goal of "Learning to learn scientifically" was adopted to place an emphasis on teaching and learning through inquiry.

The teaching and learning experiences implemented have been used by the presenter to continue to review and shape his rationale for Creative Exploration, an interactive, organic and collaborative approach to inquiry learning in science. Creative Exploration highlights the significant role, aesthetics experiences of the natural world and the resulting sense of wonder play on further inquiry. Rationales for; the changes to both the teacher and children's learning roles, core curriculum concepts, skills and attitudes including cultural perspectives are identified and discussed as exemplars of children learning scientifically in a blended learning environment are shared, modelled and explored.

lan is a semi-retired primary science educator, primary teacher and more importantly a grandad. Ian has been involved with primary education for more than 50 years. Since 2010 Ian has continued to follow his passion for promoting and supporting science learning and teaching in primary school classrooms. He provides in school professional development based around in-class support, teacher modelling and working with science champions in Auckland primary schools. Currently he is providing in-class support and mentoring of the teaching of science in four schools.

Throughout his career Ian has strongly supported teacher's organisations and has actively supported the setting up and running of primary science and mathematics teachers support groups. He is a past President of the NZ Association of Science Educators (NZASE) 2002 -2006, the National Director of NZASE/TRRC primary science conferences 2003 to 2009. He has recently held the office of the chairperson of the ICASE standing committee for Pre secondary and Informal Science Education. He was a member of the editorial board of the ASE journal Primary Science from 2006 to 2013 and for

the last five years has been an active member of the editorial board of the Journal Science Teacher Education. In 1998 Ian was made a life member of the Primary Mathematics Association and in 2011 was made a life member of Auckland Science Teachers Association. In 2008 he was awarded the inaugural NZASE Peter Spratt Medal for sustained contributions to New Zealand science education.

Jenn Corbitt

How to improve science teaching at your school

This workshop explores the Science Teaching Leadership Programme and how it has improved students' science engagement and achievement in schools. Participant teachers will share their stories of success.

Jenn Corbitt is one of the coordinators of the Science Teaching Leadership Programme. She has a wide range of experience in education from the classroom to policy development.

Sandy Jackson

Hook, Line and Thinker

A hands-on workshop to explore simple practical activities to engage students and get them thinking about Science.

This is a chance for you to experience some interesting and thought-provoking experiments that you may not have seen before, using simple and easy-to-find equipment. They are sure to make your students go 'Wow' as you all have fun doing Science.

Notes will be provided, describing how to carry out each activity, explaining the Science behind it and suggesting the equipment needed, as well as where it can be obtained.

These activities can be used for a single lesson or as part of a unit. They may also be used to encourage writing, develop observational skills and to start discussions. These activities, along with your own inherent teaching skills, can make Science a regular feature in your classroom."

Sandy Jackson is a specialist Science teaching at King's School in Auckland. While trained as a secondary biology teacher she has taught primary science for the last 19 years. Sandy is an active member of the Auckland Science Teachers Association, representing primary schools. She is also a founding member of the NZ Association of Primary Science Educators, and has run several activities for teachers during Primary Science Week. As coordinator of the Auckland City Science and Technology Fair, for more than 15 years, she has regular contact with many primary and secondary teachers in the Auckland city region.

Links to....

| Department of Conservation | https://www.doc.govt.nz/ | |
|---|---|--|
| House of Science | https://houseofscience.nz/ | |
| Kings School | https://kings.school.nz/ | |
| New Zealand Council of Education Research (NZCER) | https://www.nzcer.org.nz/ | |
| Participatory Science Platform | https://www.curiousminds.nz/funding/participatory-science-platform/ | |
| Royal Society Te Apārangi | https://royalsociety.org.nz/ | |
| Science Learning Hub | https://www.sciencelearn.org.nz/ | |
| Science Teaching Leadership Programme | https://royalsociety.org.nz/what-we-do/funds-and- opportunities/science-teaching-leadership- programme/ | |
| Sir Paul Callaghan Science Academy | https://www.scienceacademy.co.nz/ | |
| TRCC | https://trcc.org.nz/ | |
| University of Waikato | https://www.waikato.ac.nz/ | |
| Young Ocean Explorers | https://www.youngoceanexplorers.com/ | |

Front Cover Photo: 2018 Prime Minister's Science Teacher prize winner. https://www.pmscienceprizes.org.nz/previous-winners/2018-prime-ministers-science-teacher-winner/