STATION 6 - States of water

Students have watched 'the water molecule' video pre-visit and/or have a preliminary understanding that H20 exists in nature as a solid, liquid and gas, depending on the water molecules level of agitation and proximity to one another. Using a data logger they record and graph the temperature as they heat a block of ice in a clear kettle predicting, observing and considering the changing states of water.

STATION 7 - Sea to fresh water

Students use an evaporative still to convert seawater to freshwater. Predicting what they think will happen in the Still and using a reflectometer they measure the salinity before and after the condenser. They then relate this to the processes of the water cycle.

STATION 8 - Make it rain

Students are challenged to reflect on the basic processes of the water cycle i.e. evaporation and condensation as they make a cloud and attempt to harvest precipitation. Using a fog machine, humidifier and ice they test their hypothesis about changes in temperatures and surfaces.

FOR MORE INFORMATION AND BOOKINGS VISIT
www.watersciencelab.com.au

Inquire about the "Working Scientifically" Teacher Professional Learning Course. It is designed to inform and engage participants in implementing scientific investigations with their students, meeting the outcomes of the science curriculum. This course contributes 10 hours towards BOSTES Registered Professional Development.

www.watersciencelab.com.au
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Phone 6689 5286

"The water lab was brilliant - just what those inquiring minds and hands on beings needed. A truly excellent day and a great way to engage children at this time of year and inspire passion about the environment!"

Michelle Slee Principal Clunes Public School

WATER LAB
Hands On H_2O

The Lab environment with the sophisticated equipment raises the students expectations of themselves and raises the benchmark

Robyn Sanderson Dunoon Public School

The Water Lab

The Water Lab sets the scene for real water science investigations with sophisticated equipment, open student led challenges and strong links to local water issues and sustainable water use.

It is designed to meet Stage 3 & 4 Science Syllabus outcomes. Students work in collaborative research teams, using a Scientific Investigation Form to undertake Fair Tests, guiding them to make predictions and record their methods, observations and results.

A website supports student and Teacher learning and provides a platform to promote water science interest, understanding and engagement well past their visit to the Water Lab.

The Lab is situated at Dorroughby Environmental Education Centre, 2101 Dunoon Road and is a joint project of the Centre and Rous Water.

> *The Teacher PL day helped all staff to do more science. It is more hands on and more investigative. The Parents are now coming along to Science*
>
> **Murwillumbah Public School Teacher after the Professional Development Day**

LAB STATIONS

STATION 1 - Groundwater

Students reflect on recent rainfall with the wireless weather station and on the geology of this area to predict how far down they think the water table is at the Water Lab bore. Then using a tape they measure and record the ground water depth. A groundwater sample is also collected for analysis in the Lab at Station 3.

STATION 3 - Which water?

Students get unknown water samples (e.g. dam, rain, town, bore or seawater) and predict which water they think is which. Using a data logger they analyse the samples for pH and electrical conductivity and compare and contrast them to known water. Reflecting on their results they consider the differences between the water types and therefore suitable uses.

STATION 4 - Dirty water

Students test the turbidity of a 'dirty' water sample. Using a hand held carbon micro filter they purify the sample, re-testing and reflecting on the differences. Then from a variety of natural and artificial materials they design and test their own water filter. Connections can be made to the difficulty of 10% of the world's population in accessing clean drinking water.

STATION 5 - 'Njabai' and Indigenous fishing

Students have read Njabai: Widjabul Buderam (Water: A Widjabul Creation Story) before they visit the lab and discuss its main concepts about Indigenous water use and conservation. *"Water is the most precious gift that we have had and still must be used sparingly to help everything that lives for future generations"*, Aunty June. At this station, they propose a hypothesis regarding the action of native plant material used in Indigenous fishing. After preparing leaves they use a data logger to test the dissolved oxygen and consider whether these are real effects or whether some other mechanism is responsible. This Station also demonstrates the application of scientific knowledge from Indigenous people to the current day.