

From Bush Blitz TeachLive 2017

into the school grounds

In May 2017, Lisa Smyth, STAQ member and teacher from Dimbulah State School P-10 in far North Queensland, joined four other teachers on a seven-day Bush Blitz TeachLive expedition to the Victoria-Bonaparte Bioregion in the far-southwest corner of the Northern Territory. Before departing on the expedition, Lisa said her main objective was to acquire new field skills that she could bring back to the classroom. She did just that.

After her Bush Blitz TeachLive experience, Lisa trialled a mini bush blitz in the Dimbulah State School grounds with her Year 7s. They:

- identified an area of the school to survey
- measured and marked it out
- drew a grid pattern of it on grid paper, calculating scale
- drew a birds-eye view of the vegetation on the site
- gathered soil samples
- conducted acidity tests on the soil samples in the science laboratory
- learned to use a clinometer to measure an angle
- learned to use this angle and trigonometry to calculate the height of trees
- made aspirators
- caught crawling insects with the aspirators
- folded rectangles into triangular pouches to hold samples of flying insects
- learned to catch flying insects with butterfly nets
- learned to wet mount slides
- learned to use microscopes
- viewed the specimens under microscopes.

While the above list is easy to read, Lisa noted that much teaching and learning was involved in the list of activities. The task of making aspirators was one that involved the

whole school and community. Students firstly negotiated with the school principal to be allowed out of the school grounds during school time to go to the local hardware store. They then went to the hardware store to buy the equipment, which also involved explaining their purpose and requirements to staff. Back at school, they negotiated with the manual arts teacher to get holes bored into the lids of their aspirators. "That simple task of making an aspirator was a massive learning opportunity for them, and one they relished", Lisa said. "The mini blitz went for two weeks, but in future I would devote an entire five-week unit to a bush blitz."





Students Brooklyn Brown and Alicia Westwood wrote the following report about the mini bush blitz for their school newsletter.

At the end of term 3, Year 7 did a mini bush blitz, inspired by Ms Smyth's Bush Blitz TeachLive expedition in the NT. We did our mini bush blitz for our science and geography lessons for two weeks, so we were out of the classroom most days.

First of all we decided on the area to blitz. We decided to do 20 x 20m in the scrubby bush corner of the school, near the council yards. We used flagging tape and a long measuring tape to mark out our bush blitzing area.

After setting out our area, we took samples of the soil in different places under different shade levels. We then headed back to the classroom to test how acidic the soil was. First, we put in a few drops of indicator, and then we sprinkled a powder called Barium Sulfate over the indicator-covered soil. The colour of the soil after testing will match one of the colours on the testing sheet. We found out that our soil was mostly a bit acidic.

Then we made aspirators to use for catching small insects. We made the aspirators with 8 mm clear pipe, Chux cleaning cloths, a rubber band and small food containers. Look at the photos

to see us using them. You use them by putting the longer piece of pipe over the insect and sucking on the shorter piece of pipe to suck the insect into the container.

To stop us from sucking the insect up our mouths we attached a small piece of Chux with a rubber band to the bottom of the shorter pipe. We caught green ants, flying insects and some small spiders.

Next we used the butterfly nets to catch butterflies and other flying insects. When we had caught them we put them into envelopes so we could have a look at them under microscopes back in the laboratory. We made the envelopes by getting rectangular pieces of paper then folding them into a triangular envelope.

Then we used clinometers with a special mathematical formula to measure the height of trees. The clinometer needs to be held at your eye, at a 45° angle to the top of the tree. Then we measured how far we were away from the tree. This distance plus the height of our eye from the ground gave us the height of the tree.

Overall, we had a Blitzing good time! We all learned new skills that could become useful in the future.

Using her Bush Blitz TeachLive experience, Lisa also devised units on ecosystems and biodiversity for her science classes. Also, since the expedition, Lisa has acquired a beautiful nature museum to display in her classroom. Students from all grades (and their parents) have brought her wasp nests, dead snakes (preserved in vinegar in jars), beetles and bugs, snake skins and most interestingly, a parasite found "crawling out of a preying (sic) mantis's butt". Lisa said: "I definitely achieved my biggest goal of getting students and our rural farming community to think science is fun and nature is awesome."

You can read about the experiences of all the teachers who have participated in the Bush Blitz TeachLive program since 2013 on the ASTA website http://asta.edu.au/programs/bush_blitz_teachlive/bush_blitz_teachlive_-_past_expeditions

Bush Blitz is a national partnership between the Australian Government, BHP Billiton and Earthwatch Australia that aims to discover, document and describe the unique flora and fauna of Australia. www.bushblitz.org.au

Bush Blitz TeachLive gives teachers an opportunity to participate in a Bush Blitz expedition, working as research assistants for leading scientists in the field by helping to document plants and animals and discover new species. <http://bushblitz.teachlive.org.au>



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