



Inika - Mystery of the disappearing biodiversity

What was your goal and what did you achieve?

I was originally planning to do something with our creek helping to get rid of the pollution but I wasn't sure how to do that. I was going to do War on Waste making coffee cups but we didn't do that either. In the end I decided to look at the bird species along the creek that goes through our school which is Dry Creek.

I did an Oliphant Science Competition scientific enquiry on it. I looked at how many different species and numbers of birds and then if it was related to some variables of creek health, so I measured phosphates, nitrates, turbidity and pH. Then I looked at housing development and frog noises and whether these variables affected how many birds there were.

I compared it to a study that my Science teacher found which was done in 2010 by Year 7s at our school. I found that there were 35 bird species that they had found in 2009 and 2010 but I only found 27, so there was a lot less. That could have been because of many reasons.

It could have had to do with bird migratory paths and when we did it, compared to when they did it because they did it over two years. We're not sure when they did it, because they hadn't had that written in their report.

Who else did you work with?

We found out that there were less bird species so I tried to involve my school in telling them, but my school is really big and it has around 800 people so it was really hard to involve everybody. I did a Year 1 class, a Year 3/4 class and two Year 7 classes.

With the Year 1s we played some games. We dressed up as an owl and had a look at the features of the bird and why they're important. Then we made telescopes and binoculars out of paper and went to the bridge over the creek that's at our school and had a look at what birds we could see.

With the Year 3/4s we played a game called Bird and Worm, where there was different colour pop sticks scattered about on a big

square of lawn and they had to try find the pop sticks. It was about how it's easier to find the blue pop sticks than the yellow pop sticks because of camouflage, so animals want to be camouflaged to help them to survive easier.

Then we played a game called Bat and Moth. The bats were blindfolded and they had to say 'bat' and the moths had to say 'moth' and get away from them. It was a bit like Marco Polo but the boundary around the outside slowly got smaller and so it was harder for the moths to get away from the bats when area is smaller. That's why it's better to have bigger areas of habitat - when the habitat gets smaller then the numbers of animals decrease because there's not enough space for them to get away.

With the Year 7s, both classes, we made birdhouses. We planned the birdhouses and we started cutting them out of wood - we haven't finished them yet, we're still working on them. Our school has this little nature play forest garden place and so we're going to put them all up in there. We worked in groups. We had to saw up the wood and build them ourselves from scratch. We started with big planks of wood and we had to design our birdhouse, cut it out and sandpaper it, and we haven't finished making them yet.

How have you promoted your project?

I spoke to my teacher about which year levels and the things I wanted to do. My teacher asked about any preferences of classes so we just chose some classes. Then I spoke to their teachers and they said that it was alright to do those activities with their classes, so we arranged times and then did it.

Next steps?

We're still making the bird houses with the Year 7s, and then we're going to hang them up obviously. After I leave the school, I might get people to monitor what sort of birds use each of the homes, and see how it's helping.

Biggest success?

It was probably the way that the Year 3/4s were after we had done it, because we played three different games with them. As well as those two we played a game called the Habitat Game, and after we'd played all three games, when I was saying thank you and goodbye to them, they were always yelling and screaming 'please come back, we want to do this again'. Their teacher said they could play those games for fitness outside without me, so I was really glad that they were taking it on board and really understanding the games, and really enjoyed it.

What did you enjoy most?

Probably after I got the study done because it was pretty hard. We looked in the mornings and the middle of the day and the afternoons and the evening which took up the whole day going out monitoring the birds. It was kind of good after we had finished that I didn't have to keep going out monitoring birds, I mean it was fun but like a lap of Zone 1 to Zone 10 took an hour and a half so it really took up a lot of time.

Your advice to other students?

Split the creek up so that you're working on a smaller area, for example your school. Start trying to involve kids earlier near the middle or the start of the year so that you can get through all of the classes. If you have a big school like me there's 30-31 classes and it would take forever to get through all of them. Share the load with other people.

Please note: this case study was transcribed from an interview. These are Inika's words and opinions.

For this scientific inquiry, Inika won the 2017 Nature Foundation SA Prize R-7 for the most outstanding entry with a nature conservation theme at the 2017 SASTA Oliphant Science Awards.