Good morning. I'm here today to talk to you about the Backyard Explorer program and how that relates to taking Biodiversity Assessments. Biodiversity Assessments can be done in your school community or in your local community.

That **local issue** could be something to do with the school and the way it's operating, or it could be something to do with a local community or local land-owners. One of the ones that I’ve come across that I thought was of interest, is one where the school had a problem with the kids riding their bikes through a garden area near the school grounds.

So a biodiversity assessment could be used to actually go ahead and do an assessment of that area to see what the impact of the bike riding is on that particular garden.

So the second point you need to come to is what is the **research question** and the research question is a ‘what is’ question. So you might ask the question, ‘What is the impact of the bike riding on the school garden?’

The next point that you need to do is to do a background study of the area. Now the **background assessment** is really just observation. In that time you will consider some of the **macro-creatures** that are in that area: the birds; the reptiles; things that you can see. You'll also consider the **plants**: what sort of plants; and density of plants; and so on that is in the area as well. So all these observations can be done, sometimes with the help of some expert from your local area; perhaps an indigenous person or perhaps a person from the local society for growing Australian plants; those sort of people. They are very helpful in terms of assessing the background for your study area.

The other measurements that you take will be around the things like **abiotic conditions**. The abiotic conditions of course are: the humidity; the air temperature; the wind speed; soil temperature. All those sorts of abiotic factors need to be also measured as part of your study. The second part of your measurements will be to do with the **biotic factors**. Now I’ve already mentioned some of the macro-creatures that you can already see but let’s not forget the ones that you can’t see or don’t see very readily and these are the **invertebrates**.

Now to perform your biodiversity assessment or to measure the bio-health of the area that you’ve chosen, you need to now select another area nearby which doesn’t look very disturbed; one that has very little human impact on it. This second area is the one that you will use to compare your chosen area with an area that you believe to be reasonably healthy. So it’s a **comparative study** and it’s very important that you understand that a comparative study is the only measure that you can take to determine biodiversity health.

So having chosen that second area, it is now time to come up with your **research hypothesis**. The research hypothesis is a cause-effect statement and it will be something like, ‘the impact of the bike riding in the garden is to reduce the biodiversity or the bio-health of that area’.

Now designing your research comes down to two main things that you need to consider. The first is that the evidence that you collect has to be **verifiable**. Verifiable evidence is evidence that you can point to, so it is being collected and it is being stored in such a way that other people can verify that you have actually collected that evidence in that particular location. You then need to decide on what we call how you are going to make your methodologies **repeatable**. Now it’s important that they are repeatable so that you can get a fair comparison from one area to another. So whatever methods you use in one area, you use exactly the same methods in the second area. Now the details will be covered in other videos.

November 2010