

Environmental Audit - Biodiversity

The audit focus is to survey the school grounds to assess the level of biodiversity of flora and fauna found within the school. Biodiversity is the web of life. There are a variety of living things that are found within the school coexisting with the activities of students and teachers. These include the trees, shrubs, smaller plants and grasses, as well as birds, mammals and small invertebrates such as spiders and insects. The aim is to quantify the area of the school covered by vegetation and to assess the amount and diversity of habitats which could support a variety of species. Students will be encouraged to devise strategies to increase the level of biodiversity in the school grounds.

Introduction to the audit - Why is auditing biodiversity important?

It will help your school:

- * **increase biodiversity** - Australia has one of the highest levels of species extinction on earth!
- * **increase aesthetic appeal of the school grounds** - This will make the school an attractive place for students and teachers to work and play.
- * **provide an opportunity to focus on environmental education** - School grounds are an invaluable learning resource for integrating environmental education into KLA's.

Procedure

A. Base Map investigation

Students will work in teams where possible, to cover the entire school grounds. Any areas of grasslands, bushland, and garden beds will be marked out on a base map which should have X and Y coordinates. Students can use tape measures or trundle wheels to help complete this task.

B. Habitat Health Survey.

This survey will highlight the health of habitats found within the school. These habitats are the foundations upon which biodiversity is built and are important indicators of the potential level of biodiversity to be found. A selected number of habitats will be targeted for further investigation. Students can use Table 1 to complete the survey which will indicate the habitat health of up to six survey sites. On the table:

1. Mark in the area being surveyed in column one (Map Ref.)
2. Tick the presence of (or cross for the absence of) the items listed. You may wish to refer to a common weed chart if needed.
3. Write a comment about the general complexity of the habitat in the comments column.

B. Vertebrate and Invertebrate Survey

This survey will determine the level and variety of fauna to be found in and around the school grounds. Students can use the tables provided to record the presence (or evidence) of various fauna in the six survey sites already covered. Students may wish to use the invertebrate identification charts to classify the animals found. Students may also wish to use a magnifying glass to complete this exercise. This activity will help students identify animals using evidence, and to identify correlations between plant and animal diversity.

C. Bird Survey

One of the most obvious examples of vertebrates animals found in most schools are birds. School grounds generally contain a variety of habitats, have many layers, are reasonably large, and have an abundance of native plants. These elements are conducive to attracting a variety of bird species. A field guide or bird chart will be helpful in completing this exercise.

Table 2: School grounds vertebrate animal survey

Date: _____ School _____ map Reference _____ Temperature _____
 Audit Group _____

Mammal Species	Evidence	Tally	Status N=Native I= Introduced	Behaviour / habitat notes eg sleeping, calling, hiding, hunting, perching ,agressive, mating etc
1				
2				
3				
4				
5				
Reptile Species	Evidence	Tally	Status N=Native I= Introduced	Behaviour / habitat notes eg feeding, resting, aggressive, moulting, hiding, moving, swimming, mating etc
1				
2				
3				
4				
Amphibian Species	Evidence	Tally	Status N=Native I= Introduced	Behaviour / habitat notes eg feeding, resting, aggressive, hiding, moving, calling, perching
1				
2				
3				

Evidence: D = Direct sighting - animal was observed

E = Evidence of animal -eg scratch marks, droppings, fur, feathers, digging, nests etc

Table 3: School Grounds Bird Survey

Date: _____ School _____ Map Reference _____ Temperature _____
 Audit Group _____

Bird Species	Evidence	Tally	Status N=Native I= Introduced	Behaviour / habitat Notes eg sleeping, calling, hiding, hunting, perching ,agressive, mating etc nesting, flying etc
Australian Magpie				
Noisy Miner				
Eastern Mynah				
Crimson Rosella				
Eastern Rosella				
Sparrow				
Currawong				
Australian Raven (crow)				

Evidence; **D = Direct sighting - animal was observed**
 E = Evidence of animal -eg scratch marks, droppings, fur, feathers, digging, nests etc

Table 4 School grounds invertebrate animal survey.

Audit team _____ Date: _____ Time: _____

Area surveyed: _____ Temperature: _____

Invertebrate Group	Grassland Tally	Bushland Tally	Garden Tally
Ants			
Centepede			
Millipede			
Beetle			
Spider			
Springtail			
Amphipod/ Ground Hopper			
Flies			
Snails			
Slugs			
Slaters			
larvae			
Termites			
Cicada			
Mosquito			
Tick			
Cricket			
Earwig			
Other			

Status I= Introduced
N= Native

Summary of findings and recommendations.

A. Base Map Investigation

Proportion of the school grounds that are:

a Hard surfaces	_____	%
b School buildings	_____	%
c Grassed areas	_____	%
d Bushland	_____	%
e Garden beds	_____	%
Total	100	

B. Habitat Health Survey

For the areas surveyed, comment on the general level and variety of habitats which support biodiversity. Identify the areas of the school grounds that are already contributing to increased biodiversity, include any features that are already in place.

Other comments / findings

C. Vertebrate survey

Total number of Mammals _____

Total number of Reptiles _____

Total number of Amphibians _____

D. Bird Survey

Total number of birds _____

Total number of native birds _____

Total number of introduced birds _____

E. Invertebrate Survey

Total number of invertebrates _____

F. List any strategies or modifications to the school grounds which could help increase the level of biodiversity within the school.
