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Eco-Snapshot

SCHOOL ENVIRONMENTAL AUDIT data collection templates

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## **Biodiversity audit**

A biodiversity audit includes school grounds surveys to identify the features of the grounds, their use and habitat assessments. Information gathered during this process can inform the school community on future planning.

## **School grounds features and usage**

Go outside to observe how each area of the grounds is used. On a site map of the school use symbols, photographs and annotations to record observations. A site map can be downloaded from the department's Asset Management Directorate, or draw map in the space in **Table 1.**

## **Transect**

A transect is a useful tool to record what is living in the school grounds. It records the plants growing along a cross section of an area. Four transects will be conducted (one per group at a different site) for comparison. Record on **Table 2**.

Procedure

1. Run a 30m measuring tape along the outer edge of an area, marked into 5m sections. Everything along this 30m line will be recorded.
2. On the blank page provided, mark the distances on the line that represent the length of the string line. Mark in height.
3. In groups, each working in an allocated section, plot the largest plants first. Sketch the plants growing along the line and their approximate heights. Name the plants or give them descriptions. Note any animals or other signs of life, for example, nests and termite trails.
4. Combine each section plotted to provide an overall representation of the transect line.
5. Analyse the results and discuss observations of the number and type of living things in different kinds of vegetation.

## **Macroinvertebrate survey**

A macroinvertebrate survey records the invertebrates living in the school grounds. The methods of conducting a macroinvertebrate survey include observation, tree shakes and leaf litter hunts. Use identification charts to name invertebrates found. Record data on **Table 3.**

## **Vertebrate sightings**

Use identification charts, ID apps and bird call recognition, plus scats and tracks reference book to record sightings and evidence of vertebrates in the four allocated sections of the school. Record on the checklist, **Table 4.**

## **Biodiversity Health Checklist**

Use the checklist on **Table 5** to rate the whole school grounds in areas such as weeds, habitat for animals, litter and trees. The assessment also includes a section where you are asked to rate the school grounds based on presence of fauna in the school. Use your collated data on invertebrate and vertebrate surveys to determine your rating.

**Table 1**: Map the features of the school and mark how the grounds are used by people, plants and animals. Include significant trees that would make important habitat for animals.

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
|  | Legend  |
| Scale: |

1. Locate 4 areas on your map (30m x 30m) of the school grounds where you will conduct a fauna survey and a habitat assessment. Label Site 1,2,3,4.

**Table 2**: Transect 30m) of Site. \_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

**Table 3: Macroinvertebrate data sheet**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Macroinvertebrate** | **Count at Site A** | **Count at Site B** | **Count at Site C** | **Count at Site D** |
| Beetle larvae and beetles |  |  |  |  |
| Ants and termites |  |  |  |  |
| Bees/wasps |  |  |  |  |
| Bugs |  |  |  |  |
| Cockroaches |  |  |  |  |
| Earwigs |  |  |  |  |
| Grasshoppers |  |  |  |  |
| Crickets |  |  |  |  |
| Butterflies, moths and caterpillars |  |  |  |  |
| Flies, mosquitoes and craneflies |  |  |  |  |
| Preying Mantids |  |  |  |  |
| Stick Insects |  |  |  |  |
| Thrips |  |  |  |  |
| Millipedes |  |  |  |  |
| Centipedes |  |  |  |  |
| Mites |  |  |  |  |
| Pseudo scorpions |  |  |  |  |
| Earthworms |  |  |  |  |
| Flatworms and leeches |  |  |  |  |
| Slugs and snails |  |  |  |  |
| Spiders |  |  |  |  |
| Amphipods |  |  |  |  |
| Slaters |  |  |  |  |
| Others |  |  |  |  |
| TOTAL |  |  |  |  |

1. Which site had the highest number of macroinvertebrates? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Which site had the highest diversity of macroinvertebrates? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Table 4: Vertebrate sightings data sheet**

|  |  |  |  |
| --- | --- | --- | --- |
| Animal (or evidence of) | Site (A,B C or D) | Where located, eg in gum tree | What was it doing?  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

a) Which site had the highest number of vertebrates? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Which site had the highest diversity of vertebrates? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Table 5: School Biodiversity Health Checklist**

How does your school environment’s biodiversity rate?

|  |  |  |  |
| --- | --- | --- | --- |
| **Biodiversity Category** | **Description** | **Points**  | **Your Score** |
| **Number and quality of trees** | No trees over 10 m | **0** |  |
| Less than 10 trees over 10 m | **1** |  |
| 10 – 20 large trees | **2** |  |
| 10 – 20 large native habitat trees  | **3** |  |
| >20 large trees with mixed native and exotic | **4** |  |
| >20 large habitat trees, majority native | **5** |  |
| **Understorey & Vegetation Structure (excluding lawn areas)** | Very few shrubs or ground covers  | **0** |  |
| Small amount of cover with shrubs and groundcovers | **1** |  |
| moderate coverage with understorey plants | **2** |  |
| Extensive areas of school grounds covered by shrubs and groundcovers | **3** |  |
| Extensive areas of school grounds covered by native shrubs and groundcovers | **5** |  |
| **Environmental Weeds** | Invasive weeds throughout school grounds | **0** |  |
| Some weeds present throughout school grounds, with no action taken | **1** |  |
| Weeds present, but with action taken to control | **2** |  |
| No problem weeds present. | **4** |  |
| **Organic Litter** | No leaf or organic litter | **0** |  |
| Small amounts of organic litter present | **1** |  |
| At least 10% of school grounds covered with organic litter | **2** |  |
| Moderate amount of organic litter present. | **3** |  |
| >25% of school grounds covered with organic litter | **5** |  |
| **Logs & Rocks** | No logs or rocks present | **0** |  |
| A few logs or rocks present | **1** |  |
| 2-5 logs or rocks/ha | **2** |  |
| >5 logs or rocks/ha | **4** |  |
| **Additional Habitat Features** | Ponds present | **2** |  |
| Wetland area | **2** |  |
| Birdbath | **1** |  |
| Greenwaste system | **2** |  |
| Worm farm/compost | **2** |  |
| Limited pesticide & herbicide use | **2** |  |
| Others | **1** |  |
| **Total Score** |  |

**Summary report – prepare for action**

Use the data collected from the 4 sites in the school to consider the following:

Potential Issues

* Where did biodiversity score very low?
* Are there physical factors that are known to be affecting biodiversity

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## Potential solutions

* What areas need to be protected?
* What areas can be improved?
* What plants and habitat features can be planted and installed?