



Frog Census Handbook for Schools

Introduction

Searching for local frogs is a great outdoor activity that engages teachers, students, their families and community members. Searching for frogs for a greater purpose is even better!

The Frog Census is a community-based monitoring program managed by Melbourne Water. Through this citizen science program, far more data can be collected on the state of our frog populations than would otherwise be possible.

Frog Census data is valuable because it:

- helps to greatly improve our understanding of the health of our waterways and wetlands
- helps us understand frog population trends
- is used to influence and inform management and planning decisions made by Melbourne Water and other organisations concerning waterway health.

Schools can be involved in the Frog Census in a number of ways, such as:

1. promoting the Frog Census to students and their families as an 'at home' activity in their local area
2. running a school Frog Census excursion as a curricular or extracurricular activity
3. organising a longer-term Frog Census repeated survey program in a specific site in the local area by collecting data for a year or more. This frog monitoring program could be organised with the help of interested groups such as parents and the schools' environment club.

The basics

Frogs are most likely to be found somewhere in close proximity to a waterway such as a river, creek, lake or wetland, but are also found in drier habitats. For schools, you can maximise your chance of hearing (and possibly seeing) frogs by finding the closest known frog habitat. Use the Atlas of Living Australia (<<http://www.ala.org.au>>) or the Victorian Diversity Atlas (<http://www.depi.vic.gov.au/environment-and-wildlife/biodiversity/victorian-biodiversity-atlas>) maps for amphibians to locate likely sites.

The Frog Census App, developed by Melbourne Water, makes frog monitoring easy and provides a great opportunity for Melbourne students to contribute to an important citizen science project (<<https://www.melbournewater.com.au/getinvolved/protecttheenvironment/Pages/Frog-Census.aspx>>). The app can be used on both Apple and Android devices.

If you have the Frog Census app, follow the prompts in the app to record and submit your data to Melbourne Water. Be sure to read the safety and field hygiene sections on the app first.



The endangered Growling Grass Frog (*Litoria raniformis*)
(Photo by Richard Akers)

If you don't have the Frog Census app, you can download the Frog Census flyer and datasheet from the Melbourne Water Frog Census web page at https://www.melbournewater.com.au/getinvolved/protecttheenvironment/Documents/Frog_Census_Flyer_Datasheet_2016.pdf. Record frog calls and send the Frog Census datasheet and sound files to Melbourne Water as per the instructions below and on the web page:

Recording frog calls is simple and easy to do. Make your recording using a digital recorder, such as a voice recorder or mobile phone. Extra information about the site needs to be recorded on a Frog Census datasheet.

At the beginning of your recording state the date, time and location of your site so that it can easily be matched with the corresponding datasheet. It may be easiest to write these details on your Frog Census datasheet first and then read from that. For ease of organisation, fill out a different datasheet for each site you visit. Note the weather conditions (including temperature) and anything else significant at your site such as litter, pollution or wildlife sightings.

Take a 3–5 minute recording at the waterway site using your recording device. If no frogs are calling at the site, simply note down a record of 'no frogs'. Recording the absence of frogs is as useful as their presence when it comes to monitoring frog populations.

With reference to the frog call resources provided, write on your datasheet which species you think are calling. Try to estimate how many frogs are calling and tick the appropriate box on your datasheet..

When you have completed your recordings you can email digital files of calls and datasheets to <frogs@melbournewater.com.au>. Digital files are best sent as mp3 format. You can use a free file converter such as <<http://audio.online-convert.com/convert-to-mp3>> if your recorder saves as a different file type.

More information can be found at our website: <http://frogs.melbournewater.com.au/>

You don't have to know the species of the frog calls that you record. After you send us your recordings we will send them to a professional ecologist for identification. This ensures that a high level of quality control is upheld. Once your recordings have been identified we will send you a brief report outlining which species of frogs you recorded and how many individuals were calling.

Your data will also be forwarded to our Frog Census website map and to the Atlas of Victorian Wildlife database. This database is used to make decisions about the status of native animal populations including threatened species nominations

The optimum time to record frog calls is at dusk on warm still nights just after or before it rains. To maintain consistency, begin recording at least 30 minutes after sunset.

When conducting surveys avoid heavy rain and breezes stronger than 20 km/h, as these are not optimal conditions for frogs to call and can make recording difficult. During the November season, try to avoid temperatures below 12°C. Check the Bureau of Meteorology website (<<http://www.bom.gov.au/>>) before heading out.

Before making a recording, it is important to test your device to see that it is functioning properly and capable of picking up frog calls amongst ambient noise.

Conducting a repeated survey program

If your school would like to contribute frog data on a site or a number of sites over a twelve month period or longer, it is a good idea to structure the monitoring program to ensure that the data from each monitoring event is comparable. Not only are you contributing Frog Census data, you are also collecting longitudinal data from the site/sites that students can analyse.

For a more systematic frog survey, you might consider including a site that has suitable frog habitat but only a few occurrence records. It may be that people just haven't been there at the right time. In any case, the data will be useful for students to compare the different sites over time.

Melbourne Water recommends surveying in April, August, October and November. The site/sites should be visited two or three times during these monitoring periods, for a minimum of eight visits per year.

For repeated surveys, you should record for five minutes (the maximum recording time on the Frog Census app). Even if you hear no frogs it is still very important to make the recording for five minutes. Maintaining a set time for all recordings provides standardised data for more accurate analyses.

Arrive at the survey site at least 30 minutes after sunset and finish before 1 am. Wait 5 minutes after arrival to allow frogs to become accustomed to your presence.

Stand about 10 to 20 metres away from the waterway or wetland, as frogs that are very close can cause distortion to the recording and can make it difficult to discern other species or individuals nearby. If there is traffic nearby that could impact on the recording, put your back to the traffic and the recorder in front of you to block as much unwanted noise as possible.

You should record both weather and temperature each time the site is visited. Habitat information (e.g. vegetation type and condition, water body type and size) should be recorded at least once per year.

Submit the recording via the Frog Census App *or complete a datasheet for each site as above*. A summary of the methodology is provided in the checklist below.

Field Hygiene

The spread of chytrid fungal disease is a major threat to amphibians globally. To ensure you don't spread this and other potentially threatening pathogens, please follow these recommendations:

- Stick to paths when available. Avoid walking through mud if possible.

- Use a stiff brush to remove any mud that may be stuck to shoes or clothing

- Use methylated spirits or bleach to disinfect shoes or contaminated clothing. After a few minutes you can rinse off the disinfectant

- Wash down vehicles if there is mud on tyres

- Do not handle frogs. They are protected wildlife and disturbing them may stress individuals as well as increase the risk of spreading disease between frogs.

Safety Guidelines

For your own safety, when participating in the Frog Census program, please follow these simple safety recommendations:

- Take care of yourself and do not take unnecessary risks

- Don't go to your sites alone. Work in groups of two or more.

- Avoid high risk weather conditions, such as flooding and extreme fire danger days

- Provide your destination and activity details to another person prior to going out in the field.

- Carry a mobile phone with you

- Limit your recording sites to areas within public land

- Bring a map of the area you are going to

- Wear appropriate clothing and footwear for fieldwork (flat, sturdy shoes and long pants)

- Dress according to the weather conditions. Take extra clothing for changes in the weather.

- During daylight hours protect yourself from the sun (hat, long-sleeve shirt and sunscreen)

- Carry water with you

- When working at night carry a torch

- To avoid insect bite use insect repellent and/or covered clothing

Beware of snakes in long grass and near waterways. Should a snake bite occur seek medical attention immediately.

If an incident occurs whilst participating in the Frog Census please report this to Melbourne Water by phoning 131 722.

Emergencies should be immediately reported to the authorities (police, fire, ambulance etc.) on 000.

Repeated survey checklist

- If possible, conduct call surveys at each site at least twice during each of the following months:
 - April
 - August
 - October
 - November
- Check weather conditions are optimal for recording e.g. wind speed less than 20 km/h; no heavy rain
- Check that the recording device is working and the Frog Census app is installed
- Follow field hygiene recommendations and safety guidelines before visiting site
- Arrive at site at least 30 minutes after sunset and finish before 1am
- Wait 5 minutes after arrival to allow frogs to become accustomed to your presence
- Record date, time and location on data sheet (if required)*
- Stand 10–20 metres away from waterway or wetland to record
- If there is nearby traffic, put your back to the road and hold recorder in front of you. Begin 5 minutes of recording. *At start of the recording state name, date, time and estimate the number of frogs, identify species and any other relevant details (if required)*