

# Engaging with Nature

Frog pond - taking action module for teachers



Government of  
South Australia



Natural Resources  
Adelaide and Mt Lofty Ranges



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*Can you identify all of the frogs featured in this resource? Hint: this little frog is very common.*

## About this resource

The purpose of this resource is to help you go about planning and developing habitats to support frogs in a school or kindergarten setting, and to consider how this process can be incorporated into the curriculum to enhance student learning and empowerment.

As there is no 'one size fits all' for frog ponds, this resource does not give you every single bit of information or step-by-step instructions for building a pond. Instead, this resource poses questions that you will need to consider, investigate, and answer to get the best learning and environmental outcomes for your students and your site.

We have provided some links and suggested resources to help you undertake the research, but the decisions you make will depend on many factors including your geographical location, environmental issues, budget, school policies, access to resources and desired outcomes. We suggest you also consider how this project can be a stimulus for the shift towards making sustainability an integral part of your school or kindergarten and how you can promote the educational value of sustainability.

We wish you all the best with your project.

## Why have a frog pond?

Since the late 1970s it has become apparent that many frogs around the world are undergoing major population declines. There are many suggestions as to why this is the case, including disease, pollution, impacts of feral animals and climate change, but one major factor in their decline is habitat loss.

Most frogs require an environment that provides them with shelter, a steady supply of food and access to clean, fresh water. However, humans have significantly modified many of the areas where frogs used to be found in great abundance, so any action undertaken to enhance conditions for frogs is of great benefit.

A frog pond can also help to raise the awareness of the public for the need to protect the environment and can be a focus for learning in schools, kindergartens and community spaces.

Once developed, a pond has significant learning benefits (for example, study of life cycles, food webs and other aspects of ecosystems), but the planning and construction of the frog pond can also be a great vehicle for student voice and allows for collaboration between students, teaching staff, families and the wider community, enabling them to take action on locally relevant issues.

In addition, a frog pond can provide habitat for a wide range of other animals, including birds, skinks and aquatic invertebrates which can also be incorporated into teaching.



## Where to start?

### Doing some research

#### *Investigate the issue*

- Frogs around the world are disappearing. Why?
- Does it matter if frogs disappear? Why? Who/what might frogs be important to?
- What do frogs need?
- What other spaces or learning opportunities would a frog pond allow or be associated with (surrounding garden, biodiversity plantings, bog garden, butterfly garden etc)?
- Who do you need support from for the project to go ahead (governing council, grounds committee, science teachers, grounds/maintenance person)? Who else in the school or wider community can help us?
- What frogs are found in our region? Where can we find this information?
- What frogs do we want to attract? Do they have special needs?

#### Useful links

- 🕒 [NRM Education - frogs teacher information pack](#)
- 🕒 [NRM Education - other biodiversity curriculum resources](#)

#### *Audit the issue*

- Do we have frog habitats at our site? If so, what condition are our frog habitats in? How do we decide?
- Do we have frogs at our site already? If so, what are they? Do they have any special needs/habitats we need to maintain?
- Do we have space to create new frog habitat? Is the location suitable? What are the site's issues (proximity to neighbours/buildings/underground services, aspect (shading/sun etc), availability of water)?

#### Useful links

- 🕒 [Native frogs of Adelaide and the Mount Lofty Ranges](#)
- 🕒 [Frogs of Australia website - Adelaide](#)





### *Investigate options*

- Do we actually need to take action?
- What action is possible/what are the options? – Would a bog garden be of greater benefit than a pond?
- What can we make the pond/bog garden out of?
- What are the implications of taking action? – Will there be increased bushfire risk/snakes/mosquitoes etc? How can we discourage pests or minimise risks?
- How can you involve the whole site in this project? How will you move your efforts in sustainability from individuals to groups?

## What next?

### **Gathering support**

#### *Permission and standards*

- Who is going to make the decisions? How will you model democratic processes in your school or kindergarten?
- Who do we need to ask for permission to create a frog pond on school grounds? Principal and/or grounds committee?
- Obtain permission to create the pond.
- Investigate and follow school/council/DECD guidelines and policies.
- Establish a working group, if you don't already have one, to drive/guide the project.

### **Useful links**

- ◉ [Department for Education and Child Development policy for creating ponds and wetlands](#)





### *Money, fundraising and donations*

- Consider social, environmental and educational costs and benefits, as well as economic. How can you ensure that you choose the most sustainable options?
- Write a list of all the things you will need to build your frog pond. For an example, see table below.
- Brainstorm where you could get these things from.
- Remember to ask for donations from council, local businesses and/or parents before purchasing.
- Find out how much things are going to cost.

Item	Source (purchase, donation)
Additional soil	Purchase at \$...
Mulch	Council donation
Plants	Purchase (\$.... tube)
Tree guards and stakes	Reuse
Gravel for pathway	Purchase at \$
liner or pre-fabricated pond	Purchase at \$...
Sand for base	Purchase at \$...
Solar pump	Purchase at \$...

You will need to work out how to pay for the things you need. Do you have an existing budget for your environment group? Can you ask for funding from your school? Can you ask for funding from other organisations e.g. Rotary Club or local business sponsor? Can you apply for a grant? Are you allowed to hold a fundraising event?





## Designing your pond

### *Choose the type of frog pond*

- What sort of pond or bog garden are you going to make?
- What do you want it to look like? Size, shape, waterfalls/cascades or other special features etc.

### *Determine materials needed*

- What are you going to build the pond out of? UV resistant plastic liner, prefabricated pond, bathtub etc?
- Are you going to have signage or artwork associated with the pond?

### *Map your site*

- Firstly draw a map of your area. Write on your map the rough measurements of the area.
- Mark on the map any existing features that you are not going to change.
- Draw in your pathway.
- Consider if you are going to have any seating and mark this in.
- Mark in any special features (e.g. bird bath or art work).
- Consider drainage.







### *Select and source plants*

- We recommend only using local native plant species. Investigate why this is the case.
- Investigate the plant species local to your area. Choose ones that are suitable for a frog pond/bog garden and which are available to buy/can be sourced locally.

### **Useful links**

- 🕒 [Local plant catalogue](#)
- 🕒 [Adelaide & Mt Lofty Ranges - native plant species master lists](#)
- 🕒 [Adelaide & Mt Lofty Ranges - interactive vegetation map](#)
- 🕒 [Local plant growers list](#)
- 🕒 [Australia's virtual herbarium](#)

### *Name your pond*

- Consider how you can highlight the cultural dimension of sustainability in your project.
- For example, decide on a name for your frog pond. This makes your garden unique and different from the rest of the school grounds. If you choose an Aboriginal name for your frog pond it is important, and respectful, to seek approval from local Aboriginal elders.

### **Useful links**

- 🕒 [University of Adelaide - Kurna Warra Pintyanthi](#)







## Building your garden

### *Plan action*

- Create a timeline for the development and maintenance of the pond (the growing a project tree tool at the end of this document may aid this process).
- Consider how you can build quality relationships beyond the school community to achieve the vision. Seek volunteers and organise a working bee.

### *Prepare the site*

- Clear existing materials, plants, boulders, structures.
- Dig holes.
- Prepare the soil for new plantings etc.
- Lay a sand base if required.

### *Infrastructure*

- Install the pond/lining and any pipes, pumps etc.
- Arrange rocks, logs etc.

### *Plant the site*

- Plant local native species.
- Mulch and water the plants etc.

### *Celebrate your successes*

- Celebrate completion of the pond and/or when frogs move in.
- Share via newsletter/assembly etc.







# The future

## Maintaining your pond

*Undertake planned (or unplanned) maintenance*

- Weeding, repairs to damaged items, cleaning etc.

*Plan additional action/upgrade*

- Additional planting, improvements etc.
- How can you maintain a commitment to Education for Sustainability?

*Embed your pond into school curriculum*

- Monitoring – What is the water quality? Are frogs or pest species moving in?
- Additional learning/use of space – How else can you use the pond to personalise and connect learning for your students (science, art, mathematics, literacy and numeracy, ICT etc)?

## Useful links

- ⦿ [Linking the Australian Curriculum with NRM Education resources – Biodiversity \(Foundation to Year 2\)](#)
- ⦿ [Linking the Australian Curriculum with NRM Education resources – Biodiversity \(Years 3-6\)](#)
- ⦿ [Linking the Australian Curriculum with NRM Education resources – Biodiversity \(Years 7-10\)](#)





## Further reading

### **Frogs, reptiles, mammals & how to restore their habitat (Volume 1)**

Sturt Upper Reaches Landcare Group Inc (2011), Sturt Upper Reaches Landcare Group Inc

This guide has been written by local people, for local people — whether you are new to the Sturt Catchment region, a long-time landholder or a local student. It is for everyone who enjoys the privilege of having wildlife living around them, and who wants to learn more about local species and what we can do to protect them. We hope our guide inspires you to begin, or energises you to continue, helping to conserve our local native fauna.

### **Frogs of South Australia 3rd edition**

Michael Tyler and Steve Walker (2011), Michael Tyler and Associates

This third edition of *Frogs of South Australia* has been written to help all naturalists who are keen to contribute to the knowledge of South Australian frogs. The previous edition was published in 1977 and 22 different frog species were listed; the third edition includes a total of 27 different species. Since the previous edition, knowledge of South Australian frog fauna has increased every year, but much information is still unknown concerning frogs in remote areas. The detailed maps show where particular species have been found. Thus, if a species is located elsewhere it is important that this be reported to complete the locality data for each species.

### **Attracting frogs to your garden. Creating an ideal habitat for native frogs in your own backyard**

Kevin Casey (1996), Kimberley Publications

A complete guide to 'frog-scaping', the increasingly popular art of transforming your backyard or property into a welcome habitat for local native frogs. It offers practical advice on the essentials of enjoying frogs in your garden, including raising tadpoles, frog friendly plants, frog-spotting, frog photography, providing food, shelter and moisture for your frogs, attracting native birds and other garden wildlife, constructing a backyard frog pond, native frog identification tips, frog calls and mating, amphibians as predators and prey.

### **Frog ponds for gardens: how to set up a pond that provides suitable conditions for local frogs in South Australia**

Steve Walker (2003), EPA South Australia.

This booklet covers the following topics: What are the benefits of frogs? Why set up a frog pond? What should the pond be made of? Where can I put a pond? What about pollution? What do I need to watch out for? What are the benefits of a bog garden? What plants should I have in the pond? How do I keep the garden healthy for frogs? What about mosquitoes or fish? Where do I get the frogs/tadpoles? A frog is not just a frog! What do I feed frogs and tadpoles in a pond? What else can I do?

🕒 [Download the booklet here](#)







## Bonking in the garden - a guide to making your garden frog friendly

Gerry Marantelli, ALCOA frogwatch and Amphibian Research Centre

The why, how, and what of frog-friendly gardening for Melbourne. Although having a Victorian focus, much of the information is applicable in Adelaide and the Mount Lofty Ranges.

⦿ [Download the booklet here](#)

## A frog's life game

*(Primary Years game available for loan or purchase from NRM Education)*

Steve Walker (2004), NRM Education

Learn all about the many dangers experienced by frogs during their lives in this educational and entertaining life cycle board game. Includes board, game cards (eggs, tadpoles and adults), spinner and instructions.

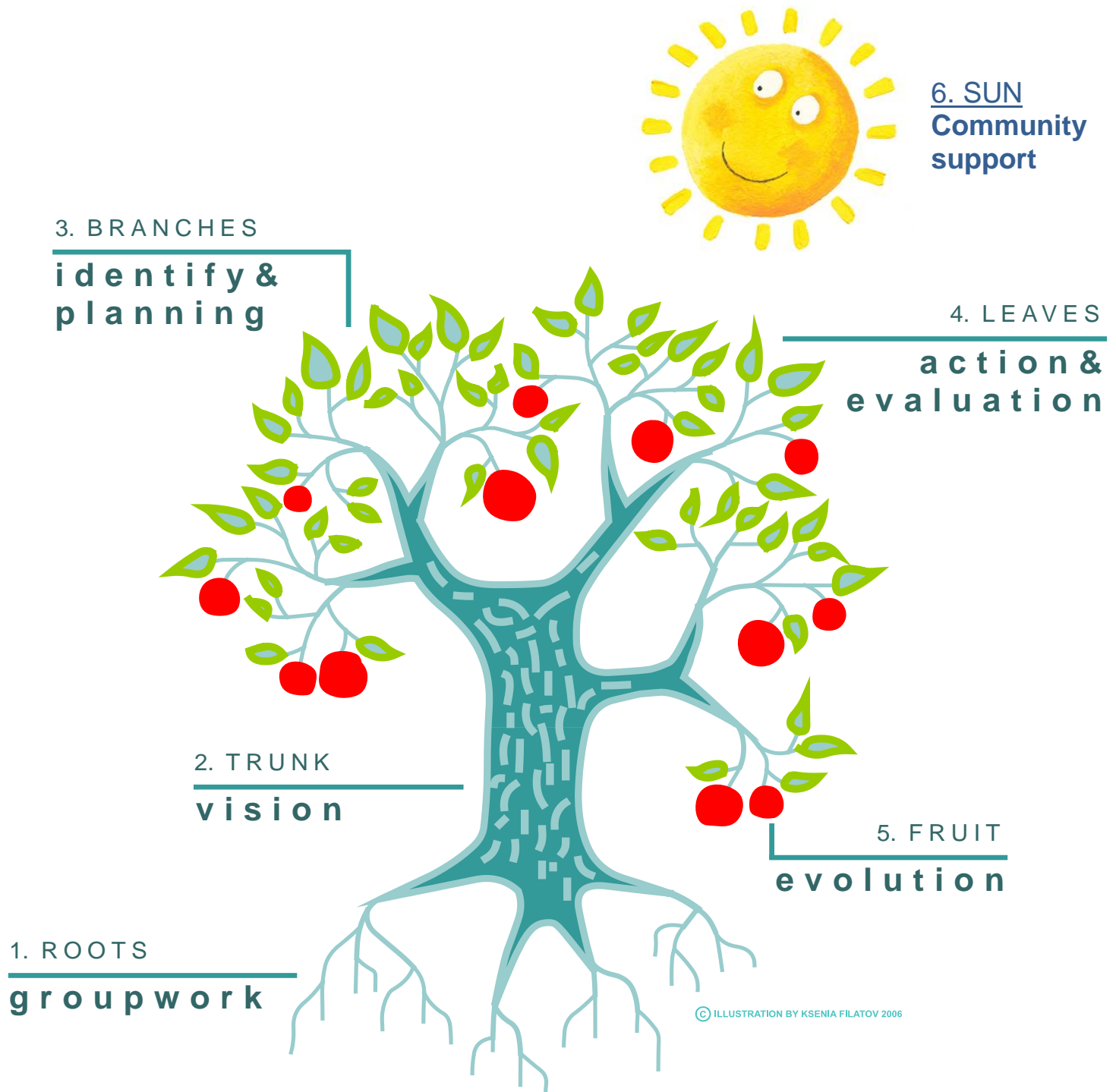
## Other online resources

- ⦿ [How to plant local native plants](#)
- ⦿ [Creating a wildlife friendly garden](#)
- ⦿ [Frog friendly gardens](#)
- ⦿ [Creating a habitat garden](#)
- ⦿ [Using landscape elements](#)





## Appendix - growing a project tree



# growing a project





# Guiding questions for growing a project



- What will your group feel like?
- How will it work?
- Do you have meeting norms?
- Does the group work together well?
- How can the group improve?



- Why are you doing the project?
- What will it look like?
- What are the benefits of your project for the environment, community and school?



- What do you need to find out before you start?
- What challenges might you face?
- What kind of support will you need and from who/where?
- What resources will you need and how will you get them?



- What steps do you need to take?
- Who is responsible for each action?
- When do the actions need to be done by?
- How will we know if we have achieved your goals and vision?



#### **Future Plans:**

- What do we want to do next?
- How could you extend or expand the project?
- Could you help another group setup a similar project at another school?
- Is the project ongoing? Who will look after the project once it is completed?
- How will the group continue?



- Who could provide feedback on your project tree? Staff, classes, experts, NRM Ed.
- Who should you keep informed of your project's progress? Parents, general public.
- Who can help you do your project? Parents, classes, community groups.
- Who should you invite to the celebration? All of the above, special guests; mayor, local celebrities.
- How will you celebrate your successes and achievements?





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