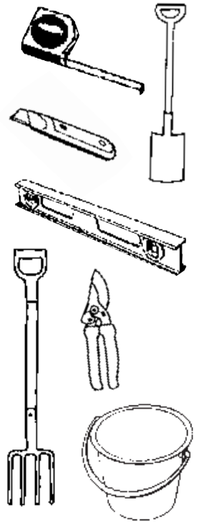
MIGHTY TOOLS FOR YOUR MITREPLAN



Tape measure
Shovel or spade
Spirit level
Utility knife
Gardening tools
Bucket
Fine fish net (aquarium tank net)
Frog identification information

✓ MIGHTY HELPFUL CHECKLIST

		ORDER
	POND	
	Plastic/fibreglass pond shell, or	
	PVC/butyl rubber pond liner	
	River sand (2 or 3 bags for a 1.5m pond)	
	Bush rock	
	Hollow logs	
	Hardware	
	Reinforcement fabric (heavy wire mesh) for drowning protection. A98 is adequate, but an offcut of any reo mesh will do the job.	
	Other materials	
	Local native plants and grasses	
	Insect attracting plants	
	Aquatic plants	

Verbal quotes are indicative only. Written quotes on materials are available upon request from your Mitre 10 store.

MIGHTY HELPFUL HINTS TO MAKE THE JOB EASIER

- Place a garden light near the pond to attract insects.
- Frogs eat insects like moths, spiders, mosquitos, cockroaches and flies. They also eat snails and slugs.
- Avoid using insecticides around the garden – if there's no insects, there's no frog food, and if there's no frog food, there's no frogs.
- By creating a balanced ecology in your garden you should find other wildlife taking up residence, such as blue tongue lizards and a wider variety of birds.
- If you choose to install a pond pump, have a licensed/registered electrician install a weatherproof powerpoint near the pond.
- Frog hiding places, such as hollow logs, may also provide refuge for other animals. Wear heavy garden gloves, boots, long sleeves and pants when you move logs or rocks – they may contain spiders or snakes.

IMPORTANT: Not all Mitre 10 stores stock garden life etc.

Build a frog pond

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Your local MITRE 10 Store is:

MITREPLAN PROJECT PLANNER

Build a frog pond

- **An easy-to-follow guide to achieving a perfect result.**
- **Outlines all the tools you will need for the job.**
- **Includes a materials checklist.**

PLEASE NOTE:
Before starting this project or buying any materials, it is worth your time to read all steps thoroughly first to be sure you understand what is required.

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Frogs are much more than cute creatures

Frogs are essential members of the ecology. They fill a unique niche in the food chain, but have been noticeably absent from many localities in recent years. Their presence is now widely considered to be an indicator of the health and balance of a local ecology.

Apart from that, kids just love them! They grow from tadpoles to frogs quite quickly, and they're a great way to help children learn how to care for other living things.

It's fairly easy to create a small environment that will attract frogs and help them to thrive. There are only a few essential items to consider, and you need not spend any money at all!

Step 1: Location

Caution: Frog ponds are deep enough for a child to drown. Locate it within a fenced pool area, or fix strong steel mesh close to the surface of the pond water.

Think carefully about the location of your frog pond. You need a spot for a pond about 1.5 metres across and about 600 to 700mm deep. It should be in semi-shade. Aim for no more than one third of the pond to receive sun. Sunshine is essential for algae growth, and algae is essential for healthy tadpoles and frogs.

You'll need space to grow plants densely and overhanging the pond.

The chosen position should be somewhere out of reach of cats and dogs, if possible.

Be careful not to locate the pond under a tree with poisonous leaves or sap, or trees that flying foxes visit regularly.

Step 2: Pond structure

You can make your pond in many ways and from many materials, as long as it will hold water. The quickest way is probably a pond shell made from hard plastic or fibreglass. Pick one up from your local Mitre 10 garden centre and simply set it into the ground. A cheaper alternative is a PVC or butyl rubber pond liner. These require a carefully dug hole, as the shape of the hole forms the shape of the pond. Dig the shape and size you want, but about 50mm deeper than the finished pond.

You can use the "waste" soil removed from the pond to build up the ground level around the pond. This will help to prevent ground water from flowing into the pond (possibly bringing fertilisers and pesticides with it), and save you some digging too!

Spread clean sand in the hole to a depth of about 50mm. The sand helps prevent the liner from puncture against sharp stones. Lay the liner in the hole and half fill with water to hold it in position while you finish off the edges. Hold the liner down around the edges with sand, stones and hollow logs. This not only keeps the liner in place but provides lots of hiding places for the frogs. Place a rock, hollow pipe or log in the bottom of the pond to provide hiding places for tadpoles. Birds such as herons, cranes and kingfishers will check out your pond and try to catch the tadpoles and frogs, so they'll need lots of hiding places.

There's no need for a filter or pump. While clean and aerated water is a good idea, there's a chance that your pump will ingest tadpoles. If you're very keen to filter the pond, use fine flyscreen to make sure the tadpoles can't be sucked in.

Step 3: Plants

Plants will play an important role for the frogs. Grow tall grasses (not lawn) up to the pond edge and allow them to overhang into the pond water. Use local grasses and plants that frogs are already at home with. Frogs need the protection and vantage points that low-growing plants offer, as they will use these plants to call from during the mating season.

Grow a diverse range of plants including trees and shrubs, sedges, ferns, grasses and ferns. Also plant a few insect attractors to help provide food for the frogs. Ask for advice about local types at your Mitre10 Garden Centre.

Aquatic plants can be placed in the pond to provide tadpole shade and hiding places as well as a spawning location for adult frogs. These are simply grown in pots placed on the floor of the pond. If the pond is too deep for a particular plant, sit it on bricks or pavers to adjust the height.

Take care with mulch around the pond, because pine bark can be too acidic. Instead, use leaf mulch or compost.

Step 4: Water

Ordinary tap water may kill tadpoles, due to its chlorine content. Use rainwater, if available, to top up the pond. Tap water can be used if you let it stand for 5 to 7 days. This will allow enough time for the chlorine and other chemicals to dissipate. Alternatively, add water-neutraliser or water-ager.

Step 5: Getting started

Local frogs will eventually find your pond. They manage to travel considerable distances during the night. Resist the temptation to head into the bush and take frogs from their natural habitat, after all, you're trying to increase the number of frogs in the wild.

On the other hand, catching a few tadpoles from a local creek won't disrupt the balance much, because few tadpoles survive to maturity in nature anyway. In a creek you may find a mixture of tadpoles – some large, some tiny, some plain-coloured, some spotted. Catch a mix of tadpoles, but leave plenty in the local environment. Put them in a clear plastic bag three-quarters filled with water they were swimming in and seal it well. When you get them home allow the bag to float in the pond for 10 minutes to allow the water temperature in the bag to equalise, then undo the bag and release the tadpoles into your pond.

You might also find frog eggs floating in "rafts" of bubbles in a creek or pond. You can also take some of these but, again, leave plenty in the natural environment. Transport and treat them the same as for tadpoles. The eggs should hatch in a few days.

Never take frogs, tadpoles or eggs (or any other animal) from a National Park or Wildlife Refuge. You should also check with your local wildlife authority about keeping frogs, because they are protected in some states and you may need a permit to keep them.

Cane toads can be a problem. If you live in a cane toad area you can use chicken wire to keep them away from your pond. Avoid the possibility of breeding them by being selective about eggs and tadpoles: cane toad eggs are black and laid in long "strings" of clear jelly, whereas most frogs lay eggs as a mass of foam or clumps of jelly. They also lay many more eggs (up to 35,000) and their tadpoles are very dark, they congregate in schools, and they have a short tail relative to their body.

Step 6: Raising tadpoles

There's not much to do except feed them the right things. If algae is growing in your pond it will supply both food and oxygen – so don't feel tempted to clean it out!

A little variety of food choice is necessary for a thriving tadpole population. They will eat decomposing vegetable matter that simply falls into the pond, but to be sure they don't start cannibalising each other, feed them regularly.

Lettuce is a good food for tadpoles. Wash the lettuce well, boil it, drain and cool. Roll the lettuce into small balls and feed it to the tadpoles judiciously. The lettuce can be stored in the freezer. Don't over-feed them or the pond may become stagnated.

Don't be tempted to add fish to the pond. Many fish will eat frog eggs and tadpoles, and compete with them for food and air. An exception is the Pacific Blue-Eye, which will live harmoniously with tadpoles and help control mosquito lavae.

In excellent, warm conditions a tadpole can develop into a frog in as few as 16 days, but in cool locations it can take up to a year.