

Key Questions

- What are the implications of the arrival of cane toads in the NT?
- What can be done to reduce toad numbers?

Suggested Activities

5.1 Toad free zone

The activity sheet contains a range of questions for students to answer using the 'making your yard a toad free zone' brochure. It will provide students with information they can then use to reduce the number of toads around their home.

5.2 Toad Trap

Students use their knowledge about cane toads and follow a step by step process (outlined on the activity sheet) to design a cane toad trap. It might be useful for students to use the internet to research range of cane toad traps currently available (eg. www.frogwatch.org.au) to get some ideas or to use for comparison with their own design.

5.3 Toad Poster Starters

The activity sheet lists facts relating to cane toads which are grouped under four key topics.

Students could use the facts provided to construct a poster, PowerPoint slides or basic webpage, or as a basis for further research (which would be ideal for a group project). The students could undertake research using reference books, pamphlets and/or the internet. If findings are presented as a poster or on PowerPoint slides, this could be presented to the whole class.

5.4 The Cane Toad in the NT

The aim of this activity is for students to be able to identify the impact of cane toads.

After a class discussion, students are to record 'impacts' on their activity sheet. Middle and lower primary students could use the sheet to record 'impacts' using a brief description/explanation or a few words or by drawing a picture.

Upper primary students could use the activity sheet to record findings from research on the impacts of toads (either using recent articles (in newspapers or research updates like Savannah Links) or the internet.

The key impacts of toads include:

- Native animals poisoned (eg. mammals such as quolls, reptiles such as crocodiles and monitors, fish etc)
- Decline in the number of native animals (through poisoning and/or competition)
- Toads prey on native animals
- Compete with frogs for resources (toads breed more frequently, lay more eggs, eats more etc)
- Frog numbers decline
- Pets poisoned
- Nuisance to humans

5.5 Mind Mapping

Students use the image of a Death Adder that has been poisoned by a cane toad as the central theme for a mind mapping exercise. On completion, students could choose one of their ideas and explain it to the class or the person sitting next to them.

5.6 Toad Action

Ideas to get involved in the community and start combating toads are provided in this information sheet.

Extension Activities

- Construct toad trap students have designed
- Test cane toad trap
- Test effectiveness of a range of commercially available traps

5.1 Toad Free Zone

Read the 'Making your yard a toad free zone' brochure.

Answer the following questions.

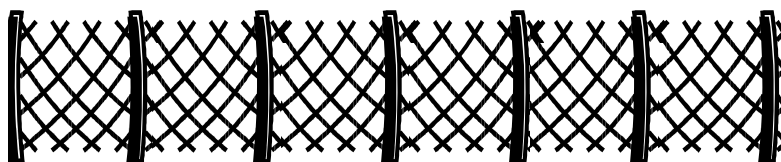
1. What are toads attracted to?

L _ _ _ _ W _ _ _ _ S _ _ _ _



2. Where do toads like to hunt? _____

3. What is meant by 'patrols'? _____



4. How will fencing help stop toads? _____

5. Draw a fence and label the specifications (material, height etc) that will make it suitable for keeping cane toads out.

A large, empty rectangular box with a thin black border, intended for a student to draw a fence and label its specifications.

making your yard a toad-free zone

Keeping cane toads out of your property may be possible ... but it will not be easy. The cane toad is one of the most determined, abundant and robust animals in the world: it is a worthy adversary. There are no entirely reliable proven ways to keep cane toads out. But the guidelines here are our best guesses based on what we know now. They could help minimise the chances of toads getting in.



fencing

Toads are not very good at climbing, hopping or burrowing. So a well-designed fence around your property may keep toads out.

The fence should be:

- A smooth solid material such as metal sheeting. Mesh fences - for example, flywire - may provide handholds for toads to climb over or may allow juvenile toads through.
- At least 50 cm high.
- Buried about 10 cm into the ground.

Remember to check the fence regularly for breaches caused by trees, water or other animals. You will also need to consider the weak points in your perimeter fencing: access roads and gates.

water

Toads prefer to drink or moisten themselves at least every two days. You can make your property less attractive for toads by eliminating (or fencing) any standing water, and using sprinklers infrequently.

garden maintenance

Toads hunt most effectively in relatively open areas with little vegetation, such as closely cropped lawns and bare areas. Gardens with long grass or dense ground vegetation will be far less attractive to toads.

lighting

Toads like night-time lighting, because they can feast on the many moths and other insects that are also attracted to the lights.

reduce shelters

Toads seek shelter during the day in places that offer some shade and security, such as under rubbish and debris, in old car tyres, etc. You can make life far less tolerable for toads by eliminating such shelters.

patrols

Regular searches, for example by torchlight at night, may help you to find and destroy any toad intruders before they get a chance to breed and build up numbers. If you think one or a few toads have got into your place, it may be easiest to find them by putting out a bowl of water and using a tape of their display calls.

For more information phone the
Parks and wildlife Service
on 8999 4536 / 0409 090 840.



Northern Territory Government
Department of Infrastructure, Planning and Environment

5.2 Toad Poster Starters

Why are cane toads a problem in Australia?

- Toads compete with native animals for food and shelter (they take away food and shelter for native frogs, small mammals as there are usually lots of them)
- Toads kill most types of native animals and pets as they are poisonous at all stages of their life cycle (eggs, tadpoles, toads). Most animals that try to eat the toad are poisoned and die quickly.
- Toads eat native animals (they eat frogs, lizards, snakes, small mammals and eggs of ground dwelling birds)
- Toads are free from predators/diseases in Australia. In their country of origin there are animals/diseases that limit cane toad numbers.
- Toads can survive in almost any environment in Australia.
- Toads can breed at any time in the year. Native frogs do not breed as often or lay as many eggs as cane toads. Frogs may be out-competed in physical numbers very quickly.
- Toads live very happily in suburbia. They eat dog food as well as anything else!

How can cane toad numbers be controlled?

- Physical control. Collecting adults (mustering), pulling cane toad egg chains out of a water body and letting them dry on the bank in full sunshine. Trapping, toad proofing dams/ ponds.
- Biological control. Several suggestions are being looked into. Dahl's water frog (NT frog) eats cane toad tadpoles without dying. The lavender beetle is not eaten by native frogs. Cane toads love eating them and then die. Scientists are also looking at microbiological internal parasites that may slow down toad health and breeding.
- Ecological control. These solutions have not yet been proven to be successful, but are worth mentioning. Scientists are looking at producing large numbers of sterile male toads to be released in the environment. Or genetically modifying cane toad egg production to only produce male cane toads.

How do you handle cane toads?

- Carefully! As little as possible. Only pick them up if it is really necessary.
- With plastic gloves on. They secrete poison from the glands on the back of their neck that can be absorbed through your skin. Cane toad poison can kill people.
- Keep them away from your face.
- Keep your little brothers, sisters and pets away from cane toads. Tell your parents where to find the toad in your garden so they can get rid of it quickly.
- Cats and dogs die from eating/mouthing cane toads. If a dog grabs a cane toad you should contact a vet for instructions.
- Dispose of toads humanely in a plastic bag in the freezer for a day. Toads can be buried deeply as fertilizer in the garden or well wrapped in the rubbish (so animals at the tip don't get to it before it decomposes).

What can cane toads be used for?

- Medicine. Scientists are still investigating.
- Leather. There is a cane toad leather industry that makes wallets, key rings out of cane toad parts.
- Scientific experiments. Freshly killed cane toads make excellent dissection material for school students.
- Entertainment. Cane toad races for charity.

5.3 Toad Trapping

There are a few things we can do to reduce the numbers of cane toads. One way is to trap cane toads. Using the information you know about Cane Toads, design a trap that will stop them being a nuisance in your backyard!.

STEP 1: To make a trap that really works you need to think about how toads move, what they're attracted to etc. List what you know about toads here:

STEP 2: List some of the material that could be used to make a trap.

STEP 3: Write down how the toads will get in (eg. fall, jump, attracted)

STEP 4: Explain how the toads will stay in the trap

STEP 5: Draw the trap

STEP 6: How will you know your trap is successfully reducing the impact of toads?

The impact of the Cane Toad in the NT

Write one impact the Cane Toad might have in the NT in each of the callouts below

I will...

I will...

I will...

I will...

I will...

Cane toad image sourced from <http://www.deh.gov.au/biodiversity/invasive/publications/cane-toad>

5.5 Mind Mapping



Write down words that pop in to your head after viewing the image of the 'Death Adder' which has been poisoned by a cane toad.

Cane toads are becoming part of life in the Top End but you don't just have to sit at home and let them take over. Here are some ideas to take into your community to help combat toads!

Community Frog Night

You could host a community advertised 'Frog and Toad Awareness Night' Some ideas for the night could include:

- Display all the work the children have completed on frogs and toads
- Live frog and toad displays
- Invite a guest speaker from Frogwatch, Parks and Wildlife, Territory Wildlife Park or NT Museum to come and give a talk and set up information.
- Invite local nurseries to set up some of their water plants and pots as an attractive display and advertisement for their business. They could even sell plants on the night.
- Invite a local wildlife group (such as RANA) to display/sell amphibian and frog friendly books.
- Sell jelly frog cups, frog cupcakes and drinks to raise money for the school.
- Frog colour-in competitions
- Frog craft activities
- Ideas presented in the section "Fantastic Frog Fun".

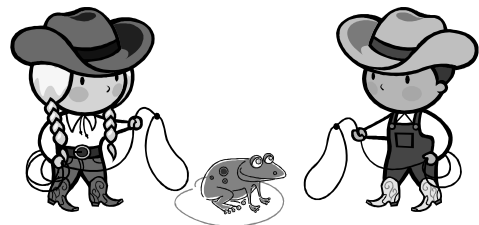
Walk Against Toads

The school children could hold a walkathon to raise money to buy a cane toad trap for their school. Sponsorship could be per lap of the school or sporting ovals.



Organise a 'Toad Muster'

Select a cane toad infested site (perhaps even your own school or property), call all your friends, get together after dark and collect as many toads as you can. Think about feeding the mustering party with a BBQ and prizes for the 'biggest toad' and person who collects the most toads'



Research Trapping Program on Cane Toad Numbers

Trapping toads lowers the overall breeding population in our community. Toad numbers can be significantly lowered by a trapping program.

With the trap bought from the proceeds of the "frog and toad awareness night", you could start trapping toads at your school or a local wetland. You could have different classes trap for a month and collate the information on how many toads were caught, which was the best time of year to catch them, the number of males compared to females, the best place to locate the trap etc. There are many aspects that could be monitored and hypothesised about.

Toadathon

A "toadathon" could be generated for families to donate an amount for each toad caught in the trapping program mentioned above.