




# Magazine 1C – Rangers

This document provides a transcript for the audio in Magazine 1C – Rangers. It includes a text copy for interviews, presenter videos and activity audio.

Slide Image	Transcript
	<p>WORKING WITH COUNTRY Issue 3</p> <p>RANGERS</p> <p>Interviews with Wadeye, Thamarrurr &amp; Kakadu region rangers.</p> <p>+ Helicopter</p> <p>Footage of Backburning</p> <p>Meet Patrick &amp; Ralph</p>
	<p>Welcome to Issue 3 of Working with Country</p> <p>Introduction to Rangers</p> <p>Presenter, Introduction to Rangers</p> <p>0:28 minutes</p> <p><i>Welcome to PreVET.</i></p> <p><i>In this section, we'll be meeting with Patrick, Maureen and Ralph.</i></p> <p><i>They are rangers in different parts of the Top End. They look after the country in lots of different ways. From the oceans to the coastlines, plants and wildlife. Let's have a look at what they have to say.</i></p>
	<p>Interviews with Rangers</p> <p>Senior Ranger Daly Region</p> <p>Maureen Simon</p> <p>Maureen Simon, Senior Ranger, Daly Region</p> <p>3:31 minutes</p> <p><i>Hello, my name Maureen Simon, and I work for Thamarrurr Rangers.</i></p> <p><i>I am not from this area/country, but my country is back this way: Marralam</i></p>

*community. But I was born in Kununurra, and I work for the rangers—Thamarrur Rangers.*

*Part of my job is spraying rubber bush, mimosa and mission grass.*

*It's part of my job is, I have been training for the chemical—how to use the chemical and mix it. To mix and use it, just go out and do spraying outside the countryside.*

*In my Certificate I, to look after country and to look around if any different weeds are in that country. Not for us maybe poison tree, or maybe from long-way country then we spray that. That tree along the beach area or inland. So we had to kill the rubbish tree like mimosa, rubber bush and mission grass.*

*I like to be a ranger, and I like my job. I like to go out around the countryside spraying mimosa and all that weeds and going along the beach and looking around for whatever rubbish along the beach. That's what we do, removing debris; picking up rubbish along the beachside or anything that might flow from different country to this country. So we had to check the beach too—and inland. I like my job very much.*

*We like taking out some kids, too. Maybe looking around for bush tucker and not good tucker—maybe poison tucker—we tell them not to pick up those little seeds, may be poison one. And may be good one—we eat it—and we'll give it to them and they can have a taste.*

*We learn them kids in school, too. Go to school every day and learn more about, and if you be a grown-up kid, maybe about 16 or 17, if you are out from school you can just go and work, look for job, maybe you could be a ranger one day.*



Interviews with Rangers  
Ranger Kakadu National Park  
Patrick Green

Patrick Green, Kakadu Indigenous Ranger, Headquarters District, Alligator Region  
3:11 minutes

*Hi, how's it going? I'm Patrick Green.*

*I was born in Alice Springs, but I lived about 850 kilometres west of Alice Springs in a small community. Lived in the desert for about six years. I moved to Darwin; lived there for about 11 years, and now I'm working out*

here at Kakadu.

*I enjoy working in Kakadu. It's been a pretty good privilege to work here. Obviously I'm not from this country, but it's been a pretty good experience so far, especially with working with countrymen from here, and I've learnt a lot working within Kakadu National Park.*

*Working in Kakadu, I've gained a lot of skills: welding, woodwork, mechanicals, maintenance, gardening. It's been a pretty good experience working in the Nourlangie district because of how big our district is and the amount of different variety of jobs you get through the day.*

*Living in Kakadu, the culture is pretty much the same as where I come from, a little different, pretty much the same as everywhere else, but the main thing is is respecting the countrymen who are from this area and respecting their views and respecting what they want. Pretty much you're a visitor, like myself. I've come here but gained respect from other people with respecting what they think first and what their views are.*

*I'm a strong believer in the environment and joint management. I find that it works very well, especially with Indigenous and the non-Indigenous workers get to know each other and have a very good respect, especially in the workplace, and a good understanding of each other.*

*What's great about being a ranger is I get to work outside. I get to see the environment. I get to see animals, I get to drive on roads, drive on dirt roads.*

*The best part of my job as being a ranger is everything that comes with it, which is from catching crocs to being in helicopters, going down the rivers—East Alligator River, South Alligator River.*

*We did croc surveys for about a month, and we were catching crocs nearly every four days. It was pretty intense there for about a month after Christmas—probably one of the best experiences I've had so far in this job.*

*Going camping...we do a fair bit of camping. Pretty much every day when you come to work, you don't know what you're going to get, so it's always exciting.*

*I feel pretty privileged as a ranger, but I wouldn't have got this far if I didn't finish high school. I'm pretty happy I finished high school.*

*My biggest thing is respect and respecting where you are, the people that you're with. Some advice I could give is look after yourself and have some*

*self-respect. Stay healthy and strong!*



Interviews with Rangers  
Senior Ranger East Arnhem Region  
Ralph Marrayumba Garrawurra

Ralph Marrayumba Garrawurra, Senior Ranger, East Arnhem Region  
2.03 minutes

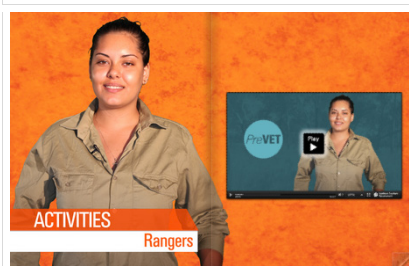
*Hello, my name is Ralph Garrawurra. I am from Galiwin'ku, Elcho Island, and my job is as a Senior Ranger. I am a Senior Ranger out in Galiwin'ku.*

*Like we send the land rangers to do the land and the sea rangers have to do the sea. So that's how we organise ourselves in the morning in the ranger work to split those two groups into field to do their job. The job they do is very well and great.*

*That's our general focus on the sea and land; that's our general lookout—to concentrate on land and sea. A lot of things are coming in, like rubbish; all sorts of things are coming into the sea, in the land as well.*

*There's the crocs coming in, breaking down all the trees, there are dying weeds. So that's the main job to look after the sea and the land country.*

*Yo, that's my part of my ranger program that I work in that town of Galiwin'ku. This is my birthplace. This is my little bit of part giving back to my fellow countrymen—little ones. Education is an important key role for knocking doors to another world, to live with that people, education is the way—to stick on it and live with it. My main key role is education.*



ACTIVITIES Rangers

Presenter, Introduction to activities  
0:23 minutes

*Hey! Now we'll have a go at all the many skills that rangers use every day.*

*They have to know the difference between all the different plants and how to mix chemicals safely and accurately to spray the weeds.*

*They even need to know how to use radios to communicate with each other*

and their knowledge of numbers to identify the crocs.

Let's have a go.



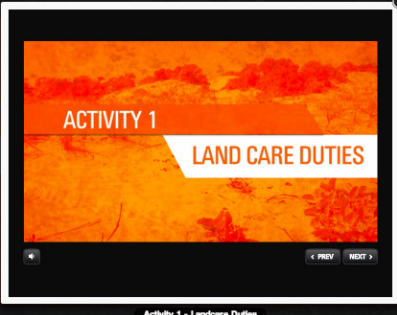
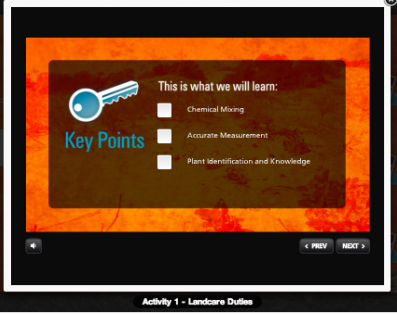
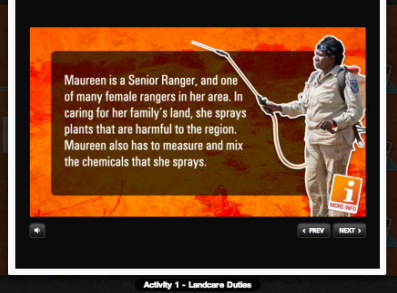
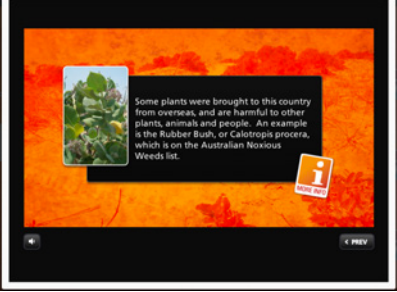
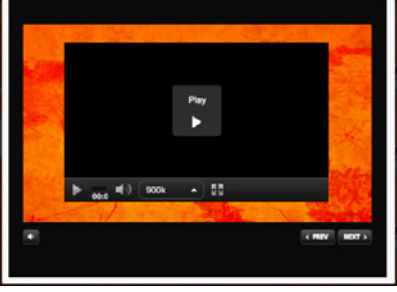
## Rangers

Landcare duties - Maureen is a Senior Ranger, and one of many female rangers in her area

Radio communication - In this story, Patrick hears a radio transmission

Crocodile safety - Rangers use knowledge of hundreds, tens and units when they identify a crocodile



Slide Image	Activity A1 Land Care Duties
	Activity 1: Landcare duties
	<p>Key Points</p> <p>This is what we will learn:</p> <ul style="list-style-type: none"> <li>• Reading scales to measure accurately</li> <li>• Plant identification and knowledge</li> </ul>
	<p><i>Maureen is a Senior Ranger, and one of many female rangers in her area. In caring for her family's land, she sprays plants that are harmful to the region. Maureen also has to measure and mix the chemicals that she sprays.</i></p> <p>(Audio same as screen text)</p>
	<p>More Info</p> <p>Some plants were brought to this country from overseas, and are harmful to other plants, animals and people. An example is the Rubber Bush, or <i>Calotropis procera</i>, which is on the Australian Noxious Weeds list.</p>
	<p>Maureen, Senior Ranger.</p> <p>3:50 minutes</p> <p><i>I'm about to wear my PPE. So I put my glasses on first to protect me from not spilling the chemical in my eyes.</i></p> <p><i>Second is to put on the gloves. Third one is the mask to protect me not to breathe the chemical.</i></p>

*I have a backpack already filled with water. So I had to add the water - 10 litres. So I have to add the chemical now.*

*So first of all I'm gonna put the Grazon in first; it's about 50ml. So that is a chemical called Grazon, so I added 50ml. So I'm gonna pour it into the backpack. It's very important to close it because it is poison.*

*So this is the Activator. And I'm going to add it: 30. I did it count by ten: one, two, three. So that's 30. I got 30ml of Activator, so I pour it in there.*

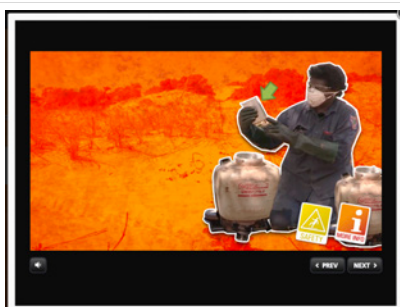
*So I have to mix it and shake the bottle. It's gotta be the right amount of the chemical to kill the rubber bush.*

*Whoo! Plenty of them. Very funny tree, eh? They can be dry—see how they go dry from the bottom. They still got more water in them.*

*As you can see, this one I already sprayed and it started to grow back from the bottom.*

*This one gone.*

*If this grow bigger, it'll start flowering and it'll have that seed on him and when it's dry, it'll just spread the seed around, especially when it's really windy and all that.*



*Maureen has to measure different amounts of chemicals in millilitres then mix it together with 10 litres of water in her spray pack. She uses a measuring jug to help her measure the right amount.*



#### Safety

Maureen needs to wear Personal Protective Clothing (PPE) for spraying. She avoids spraying in windy conditions to protect herself and other plants. There is no emergency shower or eyewash station outdoors, so where do you think her emergency equipment is kept?



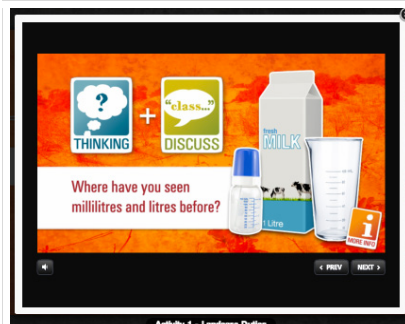
More Info  
'mL' is a shortened version of writing millilitres, and is a much smaller unit than litres, or 'L'. There are 1000 millilitres in 1 litre. (Just like there are 1000 millimetres in 1 metre).



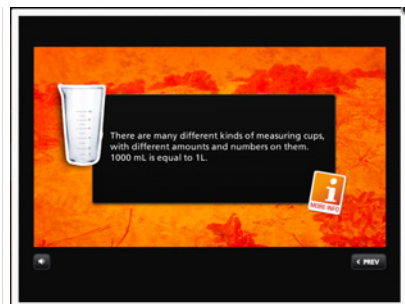
*Maureen reads the label on the container to know how much of the chemical to measure.*



Safety  
The chemicals Maureen talks about are poisons which kill the weeds that are invading the land. They can be harmful to your health and in these cases need to be treated as hazards. Each chemical container has a safety information sheet on it which tells you how to use it.

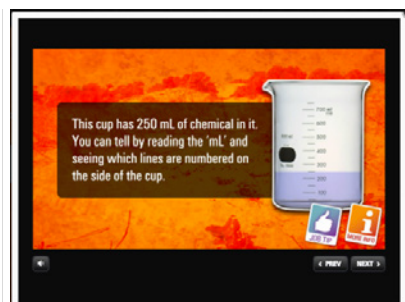


*Where have you seen millilitres and litres before?*



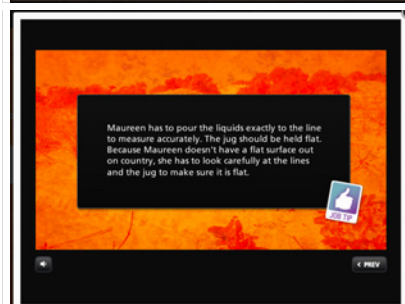
More Info  
There are many different kinds of measuring cups with different amounts and numbers on them. 1000ml is equal to 1L.





*This cup has 250 millilitres of chemical in it. You can tell by reading the 'mL' and seeing which lines are numbered on the side of the cup.*

(Audio same as screen text)



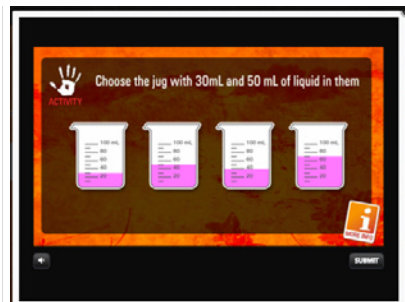
Job tip

Maureen has to pour the liquids exactly to the line to measure accurately. The jug should be held flat. Because Maureen doesn't have a flat surface out on country, she has to look carefully at the lines and the jug to make sure it is flat.



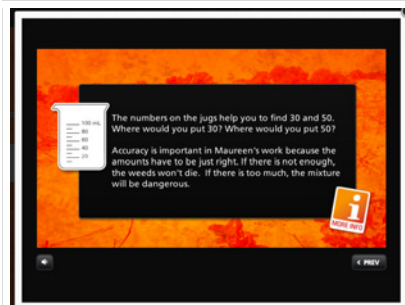
More Info

250 is not on the jug. But we know it is half way between 200 and 300.



Activity

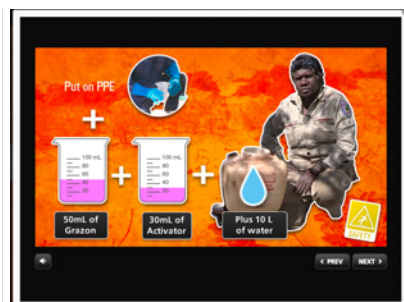
Choose the jugs with 30mL and 50mL of liquid in them.



More Info

The numbers on the jugs help you to find 30 and 50. Where would you put 30? Where would you put 50?

Accuracy is important in Maureen's work because the amounts have to be just right. If there is not enough, the weeds won't die. If there is too much, the mixture will be dangerous.



*Maureen has to mix the right amount of chemicals in the right order so the mixture will be effective.*

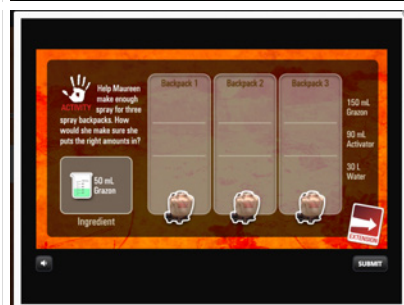
Put on PPE.

50mL of Grazon + 30mL of Activator + 10L of water



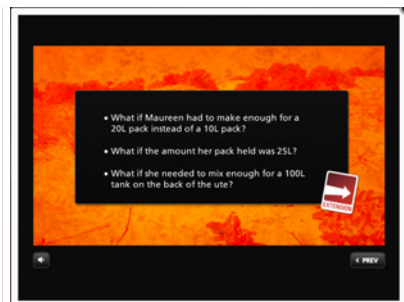
Safety

Before mixing the chemicals Maureen needs to put on Personal Protective Equipment (PPE) including gloves, goggles and a mask.



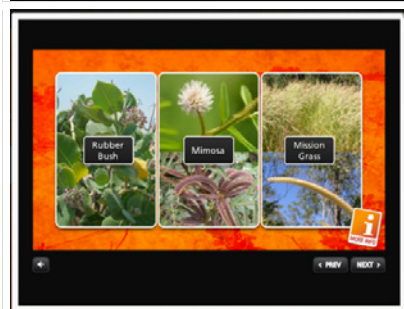
Activity

*Help Maureen make enough spray for three spray backpacks. How would she make sure she puts the right amounts in?*



Extension

- What if Maureen had to make enough for a 20L pack instead of a 10L pack?
- What if the amount her pack held was 25L?
- What if she needed to mix enough for a 100L tank on the back of the ute?

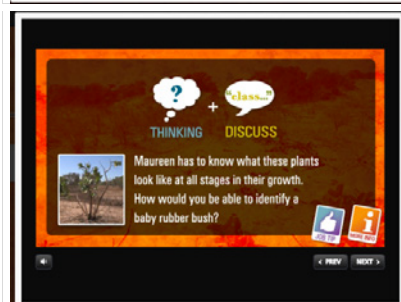


*Maureen sprays the Rubber Bush, the Mimosa and the Mission Grass.*



## More Info

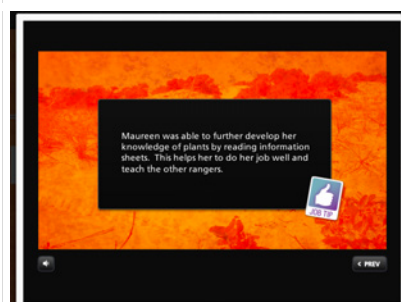
Mission grass (*Cenchrus polystachios*) is originally from Africa. It can fuel dangerous fires. Mimosa (*Mimosa pigra*) has spread heavily through river systems and floodplains, and makes the water inaccessible to animals and people.



## Thinking + Discuss

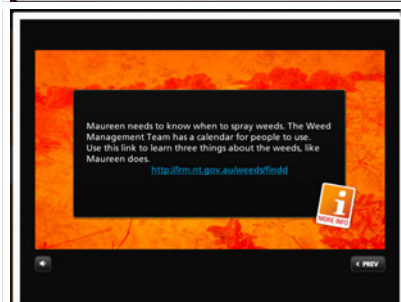
Maureen also has to know what these plants look like at all stage in their growth. How would you be able to identify a baby rubber bush?

*Maureen has to know what these plants look like at all stages in their growth as well as the right time of year to spray them. She uses a calendar and information sheets to learn about these plants, as well as many others.*



## Job Tip

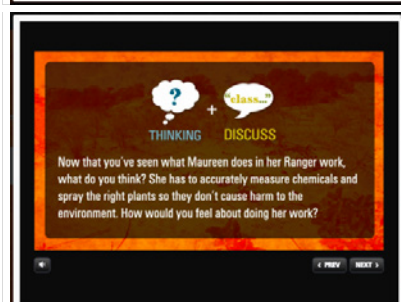
Maureen was able to further develop her knowledge of plants by reading information sheets. This helps her to do her job well and teach the other rangers.



## More Info

Maureen needs to know when to spray weeds. The Weed Management Team has a calendar for people to use. Use this link to find out three things about the weeds, like Maureen does.

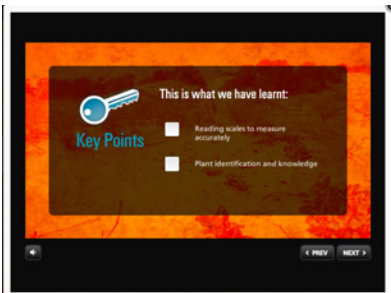
<http://lrm.nt.gov.au/weeds/findd> (link)



## Thinking + Discuss

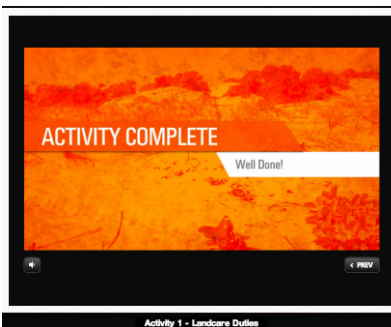
*Now that you've seen what Maureen does in her Ranger work, what do you think? She has to accurately measure chemicals and spray the right plants so they don't cause harm to the environment. How would you feel about doing her work?*

(Audio and screen text the same)



This is what we have learnt:

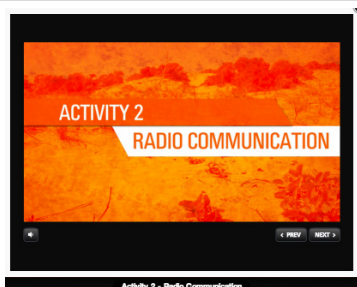
- Reading scales to measure accurately
- Plant identification and knowledge



Activity complete. Well done!

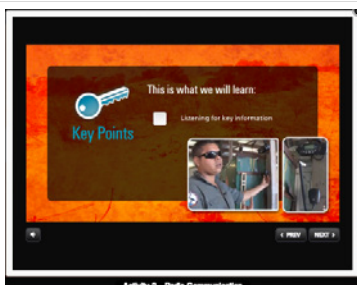
## Slide Image

## Activity A2 Radio Communication



### ACTIVITY 2 Radio communication

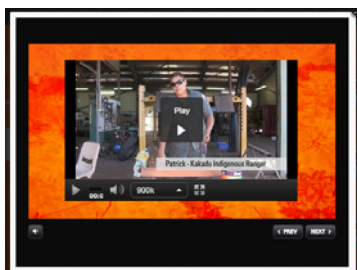
*In this story, Patrick hears a radio transmission. This is the main form of communication for rangers, as well as a lot of other jobs. The rangers work in large parks, and radios are the most reliable way of staying in touch.*



### Key Points

This is what we will learn:

- Listening for key information.



Patrick, Kakadu Indigenous Ranger.  
2:20 minutes

*Pretty much that's our main form of communication: handheld and car radios.*

*Pretty much everyone is on the same station, so everyone knows whats..it's just the best form of communication you can use in the park pretty much. Reliable, and, yeah, we had to do some radio training to learn how to use a radio properly.*

*It's good to have good communication because Kakadu is such a massive park. It's such a huge area to cover, so you can't just tell someone I'm going down over here to do some maintenance on a campsite and then someone might have had an accident down the road so you've gone somewhere else. Then you can just go on the radio: 'Look, there's been an accident, we're not going to be at the campsite, we're going to be at this location', so everyone knows where you are; communication is easy.*

*It's very simple to use as well. You've got an emergency button located on them. If you want to have a look at this radio...*

*Radio, voice 1: '...and anyone else to come down to Yellow*



*Water and help with getting that cleared tomorrow. Over.'*

*Patrick: 'That was us.'*

*Radio, voice 2: 'Yeah, roger, mate, I'll get onto Pat in the morning and let him know what the go is. Over.'*

*Radio, voice 1: 'Yeah, look, we need them down here fairly early, so if you can organise you know brooms, leaf blowers, picks, shovels and have them at Yellow Waters no later than 8:30, please. Over.'*

*Radio, voice 2: 'Yeah, roger, and if it's more like 9 o'clock? Over.'*

*Patrick: 'More like 9 o'clock, all right.'*

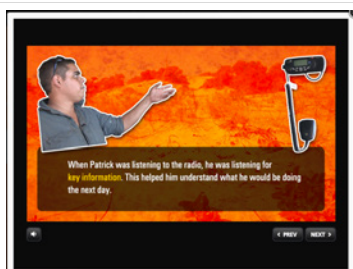
*Radio, voice 1: 'Yeah, OK. Let's work on 9 o'clock with all that gear, that'd be great, Ian. Over.'*

*Radio, voice 2: 'Yeah, roger, I'll give you an update in the morning when I get those things on the way. Over.'*

*Radio, voice 1: 'Thanks, mate. Standing clear.'*

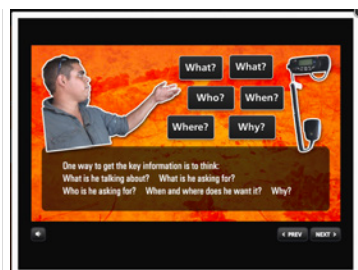
*Patrick: 'They were just talking about us: Jacqui and I.'*

*Well, there you go, pretty much just shows...I can hear the conversation between my boss and another supervisor. I already know what I'm doing tomorrow. So Jacqui and I are going to be going down to Yellow Waters because we just heard the conversation there.*



*When Patrick was listening to the radio, he was listening for **key information**. This helped him understand what he and Jacqui would be doing the next day.*

(Screen text is the same as the audio)



One way to get the key information is to think, 'What is he talking about? What is he asking for? Who is he asking for? When and where does he want it? Why?'

(Screen text is the same as the audio)



### Activity + Discuss

Listen for the key information to answer these questions.

Who will need to go?  
Where will they go?  
What will they be doing?  
Why are they going?

### Answer

Anyone else, do come down to Yellow Water and help with getting that cleared tomorrow. Over." Patrick: "That was us."

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When will he need to be there?  
What will he need to take?

### Answer

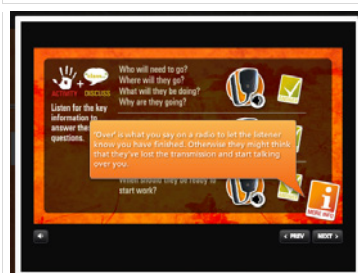
Yeah, look, we need them down here fairly early. If you can bring brooms, leaf blowers, shovels and be at Yellow Water, no later than 8:30 please.

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When should they be ready to start work?

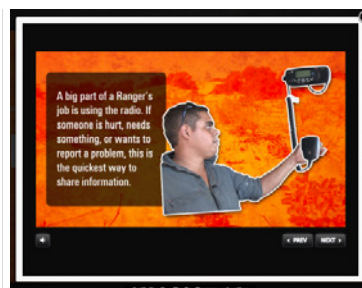
### Answer

Starting work at 9:00, would be great, over



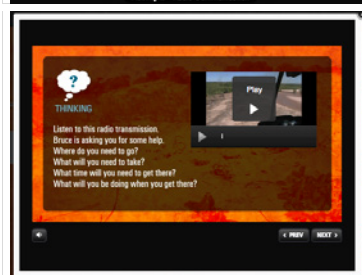
### More Info

'Over' is what you say on a radio to let the listener know you have finished. Otherwise they might think that they've lost the transmission and start talking over you.



*A big part of a ranger's job is using the radio. If someone is hurt, needs something or wants to report a problem, this is the quickest way to share information.*

(Text on screen the same as audio)



Thinking

*Listen to this radio transmission. Ruby is asking you for some help.*

- *Where do you need to go?*
- *What will you need to take?*
- *What will you be doing when you get there?*

Audio:

*I'm just in the chopper. We're burning off some of the southern shoreline. The winds have changed and it might be heading towards town. I need you guys to get towards town and burn off a strip. You should make sure that everything is safe. Be sure to bring PPE and a fire truck. Let the guys in town know a lot of animals will be heading their way.*

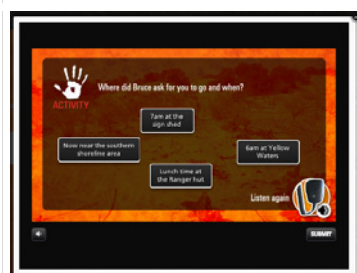


Activity

What did Ruby ask you to bring?

Listen Again

*I'm just in the chopper. We're burning off some of the southern shoreline. The winds have changed and it might be heading towards town. I need you guys to get towards town and burn off a strip. You should make sure that everything is safe. Be sure to bring PPE and a fire truck. Let the guys in town know a lot of animals will be heading their way.*



Activity

Where did Ruby ask for you to go?

- Now, near the southern shoreline area
- 7am at the sign shed
- Lunchtime at the ranger hut
- Get towards town

Listen Again

*I'm just in the chopper. We're burning off some of the southern shoreline. The winds have changed and it might be heading towards town. I need you guys to get towards town and burn off a strip. You should make sure that everything is safe. Be sure to bring PPE and a fire truck. Let the guys in town know a lot of animals will be heading their way.*

Activity

What two things did Ruby ask you to do when you get there?

- Have a picnic
- Tell town what's happening
- Go to the beach
- Burn a strip

Listen Again

*I'm just in the chopper. We're burning off some of the southern shoreline. The winds have changed and it might be heading towards town. I need you guys to get towards town and burn off a strip. You should make sure that everything is safe. Be sure to bring PPE and a fire truck. Let the guys in town know a lot of animals will be heading their way.*

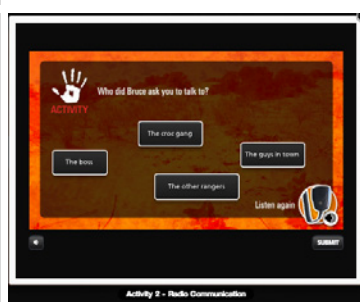
Activity

Who did Ruby ask you to talk to?

- The boss
- The croc gang
- The other rangers
- The guys in town

Listen Again

*I'm just in the chopper. We're burning off some of the southern shoreline. The winds have changed and it might be heading towards town. I need you guys to get towards town and burn off a strip. You should make sure that everything is safe. Be sure to bring PPE and a fire truck. Let the guys in town know a lot of animals will be heading their way.*

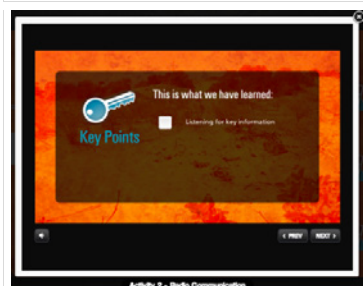




Thinking + Discuss

*Now you know more about how the rangers talk to each other. Do you think you have the skills to listen for key information?*

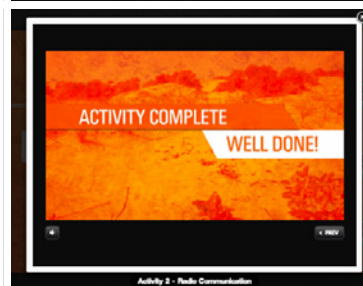
(Text on screen the same as audio)



Key Points

This is what we have learnt:

- Listening for key information



Activity complete. Well done!



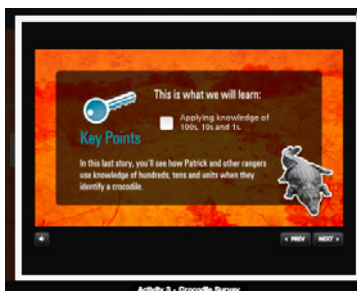
## Slide Image

## Activity A3 Crocodile Survey



### ACTIVITY 3 Crocodile survey

*In this last story, you'll see how Patrick and other rangers use knowledge of hundreds, tens and units when they identify a crocodile.*



### Key Points

This is what we will learn:

- Applying knowledge of 100s, 10s and 1s.

*In this last story, you'll see how Patrick and other rangers use knowledge of hundreds, tens and units when they identify a crocodile.*



Patrick, Kakadu Indigenous Ranger.  
3:29 minutes

*This is our croc chart. Pretty much just write in the area, the catching method (we used the cage, tied it up), the head length (so the length of the head of the crocodile), the crown width (or with the spikes on top of the croc on the top, you get the width of that), and the eye width, the head width, the sex (finding out if it's female or male, 'cause you can't really tell from the top of the water), the date that we caught it, the animal number, and there's our hundreds, tens and units.*

*When we're doing our croc surveys, literacy and numeracy are very important, only because when we're identifying the crocodile or marking the crocodile, we cut off these scutes.*

*Now you've got your tens columns down that side, you got your hundreds down there, you got units down there and then you've got the hundreds down here.*

*So if it's 555, you'd have to go five down, five down, five down. That way you've got 500 there, 50 there and your 5 there. So that makes it 555.*

*That's what the croc will be named. They don't get given names, they only get given numbers. So that's one example of how we get to mark our crocs in the system that we use within Kakadu National Park.*

*It's pretty effective, I think. We found a crocodile about, in one of the billabongs that we hadn't seen for about eight years, and we could tell where we got him, how big he was back then because of the way that we have our data and everything else set up.*

*These are the scutes that we cut off the crocodile. Now, if you have a look on the back tail, you've got your tens, units and your hundreds.*

*This one here is 1177. So what we'll do is we'll go seven scutes down there—cut—another seven scutes down there—cut—and go down 10 scutes and cut down there to get 1177 (Oh, there's a hundred in there...yeah. Yep, that's how they do it.)*

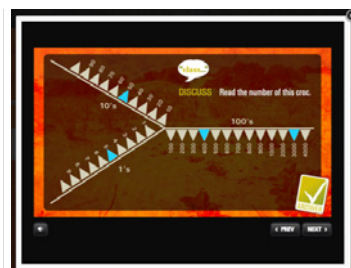
*And then pretty much we put all our data that we record in here, how big it was, the comments. So Jacqui will probably say it was very skinny...it was very aggressive, so that way we can say, all right, well this crocodile here is a very aggressive crocodile; probably a good time to remove it from the community in case someone gets taken.*

*And pretty much you write down the crew as well—the people that are involved. So Jacqui, myself, supervisors, everyone who was involved.*

*And pretty much, yeah, we'll get given a number from the croc gang up here, and they'll tell us what number it is and then we'll cut the number on the crocodile. That way we know how to identify it, by cutting these scutes. And these will get sent down to Canberra to get tested for DNA, tested for disease or anything like that, something new in the water. So they'll get sent down for that.*

*That's why literacy and numeracy is very important while you're working because you never know when you have to use it, especially if you're doing croc surveys. There's a lot*

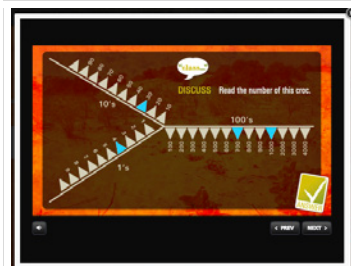
	<p>of maths involved; a lot of writing involved as well. And you have to be very accurate. Very accurate in croc surveys.</p>
	<p>The 'scutes' Patrick talks about are the bony plates or scales, of which there are many. They appear in a pattern on each crocodile's tail.</p> <p>(Screen text same as audio)</p>
	<p>The rangers use different sections of the tail to represent the parts of the number they give to the crocodile. They cut part or all of a scute to mark each part of the number and record the number on the croc chart. The number that is given is like a name that identifies the crocodile.</p> <p>(Screen text is the same as audio)</p>
	<p>Job Tip</p> <p>Removing the scutes is a bit like cutting fingernails. It doesn't hurt the crocodile too much as long as the rangers are careful not to cut too deeply. Removing a scute does make a small wound that bleeds but it generally heals without any trouble.</p>
	<p>More Info</p> <p>Hundreds and thousands run to the end of the crocodile's tail, tens are on the crocodile's right and ones are on the left. Rangers do not cut the #1, #10 and #100 scutes because this is the point of bifurcation, where the lines of scutes split into two branches. Leaving these three scutes helps the rangers to count the crocodile's identification number.</p>
	<p>Class Discuss</p> <p>Read the number of this croc.</p> <p>Answer 937</p>



Class Discuss

Read the number of this croc.

Answer 3455



Class Discuss

Read the number of this croc.

Answer 1734



Activity

Mark the number 257



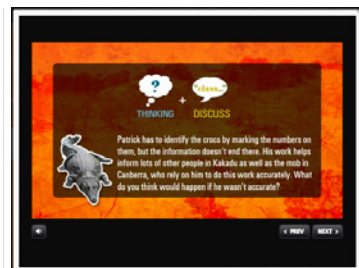
Activity

Mark the number 1345



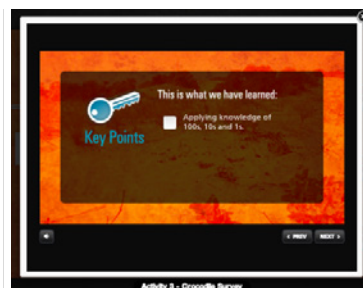
Activity

Mark the number 1284.



Thinking + Discuss

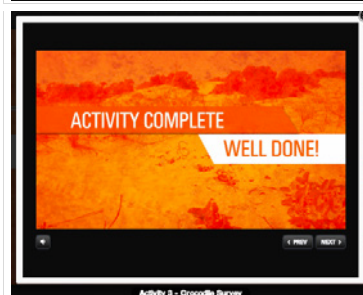
Patrick has to identify the crocs by marking the numbers on them, but the information doesn't end there. His work helps inform lots of other people in Kakadu as well as the mob in Canberra, who rely on him to do this work accurately. What do you think would happen if he wasn't accurate?



## Key Points

This is what we have learnt:

- Applying knowledge of 100s, 10s and 1s.



Activity complete. Well done!



## Review

Presenter, review

0:40 minutes

*We've had a look at how some rangers in different regions look after their country.*

*They have to be able to read and understand plant information sheets, chemical mixing instructions and safety regulations.*

*They also have to be able to communicate well on the radio, listen for key information and use their knowledge of hundreds and tens and units to mark crocs with their ID numbers.*

*These are just some of the skills involved in being a ranger and caring for the land. How would you feel about doing this job?*



Northern Territory Government logo