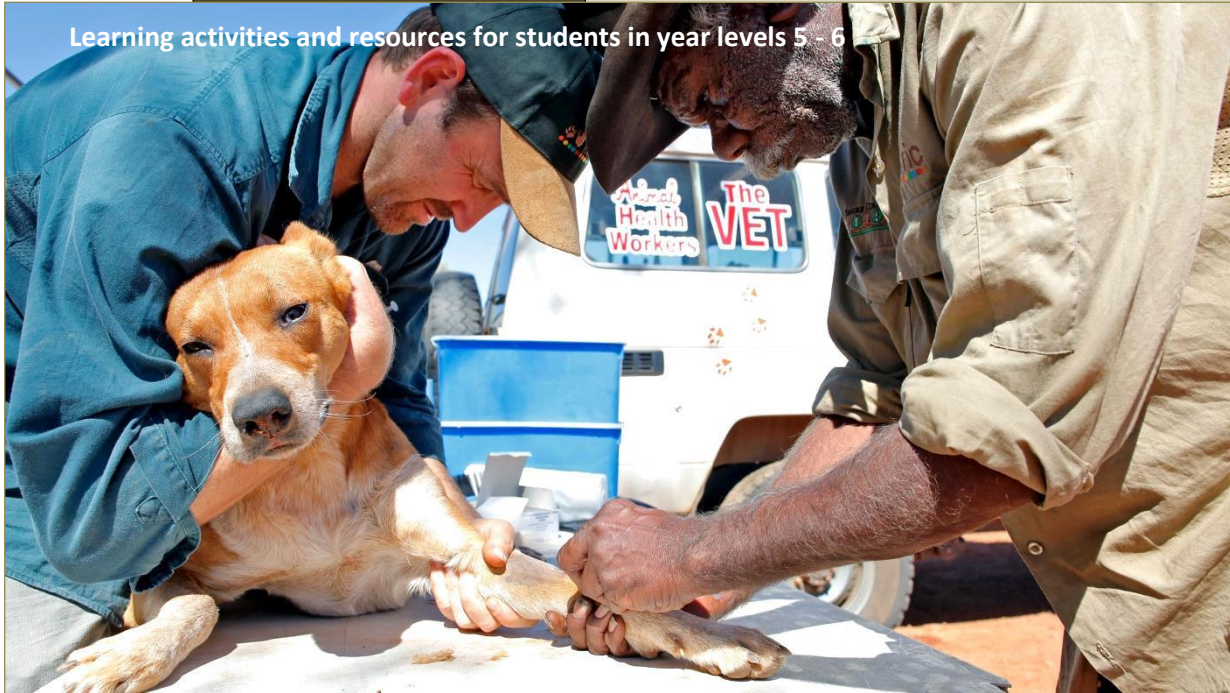


UNIT FOUR

A Dog Census

Conducting a dog population and health survey
Year levels 5 - 6

Learning activities and resources for students in year levels 5 - 6



ABOUT AMRRIC

AMRRIC works with rural and remote Indigenous **communities** and **schools** to develop culturally appropriate, sustainable solutions to improving animal health and management.

Our integrated One Health approach includes veterinary service delivery, education and capacity building that improves not only the health and management of companion animals, but also the health and wellbeing of people.

More about our schools services

Contact an Education Officer
08 8948 1768
info@amrric.org

UNIT OVERVIEW

- Year Level Focus:** 5 – 6 (some activities may be suitable for higher grades)
- Learning Outcome:** Students will design and deliver a community dog population and health survey to inform an upcoming 'Dog Health Program' undertaken by the visiting veterinarian
- Minimum suggested lessons:** 10 x 45 minutes (including extension options)
- Alignment to Australian Curriculum:** English, Maths, Science, Health and Physical Education and Geography in year levels 5-6 Content Descriptions and Achievement standards

CONTENTS

Unit summary	Page 1
Detailed description of learning activities	Page 2
Alignment of activities to Content descriptions	Page 9
Sample assessment plan	Page 13
Glossary of assessment terms	Inside back cover

Teacher's Notes

UNIT SUMMARY

A Dog Census Year levels 5 - 6

<p>Learning Outcome</p> <p>Students will design and deliver a community dog population and health survey to inform an upcoming Dog Health Program undertaken by the visiting veterinarian</p>	
<p>Understandings (Big Ideas):</p> <ul style="list-style-type: none"> A complex task e.g. designing a survey involves different types of thinking Many jobs require preparation and planning, e.g. a veterinary Dog Health Visit 	<p>Essential Questions:</p> <ul style="list-style-type: none"> Apart from helping the vet, why collect information about dog health? What other research might benefit the community and its surrounding environment?
<p>Students will know:</p> <ul style="list-style-type: none"> Which data help the veterinarian perform his/her work more effectively The nature and order of the steps that make up an investigation How to plan and conduct a survey How to write a report using a template <p>Sample Achievement Standards Students will be able to:</p> <p>AS 1: Pose questions for investigation and to gather data and plan investigation methods (Science: Year 5)</p> <p>AS 2: Construct tables and graphs to organise data and identify patterns ... use patterns to suggest explanations ... refer to the data when reporting findings (Science: Year 5)</p> <p>AS 3: Describe ways to improve (the fairness of) their methods and communicate their ideas, methods and findings using a range of text types (Science: Year 5)</p>	<p>AS 4: Analyse information in different texts (from different sources) ... listen to discussions, clarifying content and challenging others' ideas (English – productive mode: Year 6)</p> <p>AS 5: Make presentations and contribute actively to class and group discussions taking into account others' perspectives (English – productive mode: Year 5)</p> <p>AS 6: Pose questions to gather data ... construct data displays appropriate for the data (Mathematics: Year 5)</p> <p>AS 7: Develop geographical questions to investigate, collect and record information from a range of sources to answer these questions (Geography: Year 5)</p> <p>AS 8: Access and interpret health information and apply decision-making and problem-solving skills to enhance their own and others health, safety & wellbeing (HPE: Years 5 & 6)</p>
<p>THE LEARNING ACTIVITIES</p> <p><i>Choose this link to go straight to detailed descriptions of the activities in Unit 4</i></p> <p>AN OVERVIEW OF THE LEARNING ACTIVITIES</p> <p><i>An overview of the activities with links to accompanying learning resources in Unit 4</i></p> <ol style="list-style-type: none"> Introduction: Discussion, posing the problem, questions to answer. Learning resource: Healthy Dog, Healthy Community – Y Diagrams Prepare the map: Making use of a town map to conduct a dog census Plan the census: create a database to record data. Learning resource: Dog Census for Schools Analyse the veterinary services being offered (plus Extension A: Create knowledge-sharing resources (e.g. pamphlets, posters etc.)) Conduct the survey: learning resource: Dog Census Visual Guide Create the spreadsheet Enter the data from the survey (plus Extension B: use the spreadsheet to calculate totals) Write a report (plus Extension C: use the spreadsheet to monitor the program) Extension Option: the environmental impact of unmanaged dog populations in ATSI communities Extension Option: oral presentation on a dog health issue <p>Other useful resources</p> <p>Kids and dogs PowerPoint (B7); Dogs and Country PowerPoint; The Dog Book Ti Tree;</p> <p>Caring for Dogs Community and Country DVD (available for purchase on AMRRIC website); Gut Diseases PowerPoint; AMRRIC website</p>	

Learning Activities

A Dog Census

Dog population and health survey

TEACHING & LEARNING ACTIVITIES

TEACHER DIRECTIONS

1. INTRODUCTION

The vet is coming and needs to know how many dogs need her services

- i. Discussion: what does a community that is good for dogs look like?
- ii. Posing the problem

1.1 Discussion: why is the vet coming?

The vet is coming to keep our dogs happy and healthy. What does this mean?

What does a community look/sound/feel like that is good for dogs? Bad for dogs?

Activity: complete 'Healthy Dogs, Healthy Community' Y-diagrams

What can a vet do to make a good environment for dogs? What can people in the community do?



1.2 Posing the problem:

Can we help?

There are a number of things we can do before the vet arrives that will make her task much easier. What are they?

Read this email request from AMRRIC first:

Dear students,

My name is Dr Sophie. I'm going to be sending one of our vets out in a few weeks to your community. She is looking forward to meeting you all.

Her job when she is with you is to help keep the dogs healthy. She will have medicines that stop dogs getting ticks and mange. She can also do surgery on dogs to stop them having puppies.

I need to know how much medicine the vet needs to bring for all of this, so I thought I'd ask for your help.

Kind regards,

Dr Sophie Constable

Learning Activities

A Dog Census

Dog population and health survey



Animal Management in Rural and Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES	TEACHER DIRECTIONS	NOTES
<p>Introduction (continued ...) The vet is coming and needs to know how many dogs need her services and where to find them</p> <p>c. Pose questions</p>	<p>1.3 Questions to answer:</p> <ol style="list-style-type: none">How many dogs are in the community?What treatments will the dogs need and how will we know?How will the vets know how to find the dogs that need treating?What would be the best way to find out and record this information? <p><i>Teacher note:</i> these are the questions that the vet would ask in order to do her job.</p>	<p>Lead the students to conclude that there are two instruments they will need to design that will allow them to find out and record necessary information:</p> <ul style="list-style-type: none">✓ A map on which to note the locations of dogs (and their households);✓ A dog census that records the number, description (type) of dog, its condition and the owner's request for treatment <p>N.B. an exact understanding of the fields required in the census is not important at this stage (see Activity 3)</p>
<p>2. PREPARE THE MAP</p>	<p>Introduce: the map of the local community as a means to help organise household visits</p> <ol style="list-style-type: none">Identify the main places: shop, council office, clinic, oval etc.Locate each student's houseIdentify the houses that aren't lived in and mark them with a cross <p>Discuss: using the map. Make a plan for visiting each household to carry out the dog census. Divide the task into sections (of the town) and teams (of students)</p>	<p>Preparation: obtain a town map from the local council office</p>
<p>3. PLAN THE CENSUS</p>	<p>Introduce: the spreadsheet as a tool to help carry out the dog census.</p> <p>Discuss: what fields (information) should be recorded in the spreadsheet. Why is this information necessary? Remind students of the questions in 1.3 (See sample spreadsheet – D3 'Dog Census for Schools')</p> <p>Introduce/discuss: the D4 'Dog Census Visual Guide'</p>	<p><i>Teacher note:</i> there are two complex and separate skills here – understanding a spreadsheet and how it works; and designing the census itself.</p> <p>Start with the census and its design. Ensure that students understand the fields and why they are included then have them design a simple table on paper.</p> <p>Later, when students use the spreadsheet application, you may prefer to provide a ready-made spreadsheet for all or some of your students</p>

Learning Activities

A Dog Census

Dog population and health survey



Animal Management in Rural and
Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES

TEACHER DIRECTIONS

4. ANALYSE THE VETERINARY SERVICES



Question: what services can the vet offer? What might owners like to know before they decide if they want their dog treated?

Activity: Students compile a list of things owners need to know so they can make an informed decision. First, teacher reads the following excerpt of an email from the vet.

The vet will have medicines for the dogs and can do de-sexing surgery too.

The medicine kills mites, ticks and some worms inside the dog. These bugs can make us sick too! The medicine stays inside the dog for a while to protect them from any other mites, ticks or worms that try to get inside. It makes the dog healthier for a while, and helps them fight off sickness. But it doesn't do everything, and it doesn't last forever. Some worms, and fleas, need a different medicine.

We can't give this medicine to little puppies that are still drinking from their mother. But if we treat the mother, a little bit of medicine will go into the milk and help the pups. Not too much though! It's really important that each dog gets the right amount of medicine. A little bit of medicine will kill the bugs. A lot might kill the dog! So I'll need to measure out the right amount for each dog: a little bit for a little dog, and a bit more for a bigger dog.

If we get the medicine on our hands, it will get into us too. A little bit doesn't matter, but a lot can make us sick. We can wear gloves, or wash our hands after using the medicine to make sure we don't get too much.

The surgery that we can do is called de-sexing. It stops dogs breeding forever. Some people want this surgery because it stops female dogs having puppies all the time. Too many puppies can be hard to look after, and they get skinny and sick. Dogs can also get diseases, for instance some cancers, when they are not de-sexed. The de-sexing surgery stops male dogs chasing the female dogs. They calm down a bit, stay at home and guard the house. When dogs have the de-sexing surgery, they don't need as much food, so they often get fatter and shiny.

The de-sexing surgery takes out the uterus (the baby bag) from the female dog, or the testes (the balls) from the male dog. We use anaesthetics (medicines to keep them asleep so they won't feel anything) while we do this. That way they don't feel any pain. It's the same as what happens inside a human hospital.

We have to keep everything very clean so the wound doesn't get infected with germs. That includes the vets! They wash their hands really well with an antiseptic (especially strong) soap. Sometimes they use gloves too, so they are sterile, or germ-free. Then they can only touch other sterile equipment. No one else is permitted to touch the sterile equipment!

They use sterile instruments to cut through the skin and take out the reproductive organs (breeding bits). Then they sew them back up with sterile thread.

Once they are sewn up, the dogs are allowed to wake up. They will be sleepy for a few hours and maybe a bit sore too, so we need to watch out for them.

Learning Activities

A Dog Census

Dog population and health survey



Animal Management in Rural and Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES

TEACHER DIRECTIONS

NOTES

Veterinary services (continued ...)



Activity: students list the reasons why people might want their dogs treated. Then discuss what information the owners should know about safety
(Use the following table and the set of questions)

Medicine	Surgery
Makes mangy dogs better	Stops dogs having too many puppies
Helps wormy dogs to get better (doesn't kill all worms though)	Stops male dogs chasing the female dogs, making a noise at night and fighting
Makes the ticks drop off	Calms down cheeky (aggressive) dogs.
Protects dogs from getting mange	Makes the dogs fatter and healthier
Protects dogs from getting worms	If done when young, stops female dogs from getting breast cancer
Protects us from getting sick from our dogs	If done when young, stops all dogs from getting Transmissible Venereal Tumour (sex cancer). TVT is like the Tasmanian Devil facial tumour except it is a canine version and sexually transmitted.

Medicine - the owners should know:

- What the medicine does and does not do
- That the medicine does not last forever
- Too much medicine is harmful; not enough won't work
- Medicine should not touch our skin
- Mothers feeding puppies should not get medicine (except for mite and tick medicine)

Surgery - the owners should know:

- Surgery stops dogs breeding forever
- The surgery area must be kept clean
- Dogs need extra care when they wake up from surgery

EXTENSION A: creating resources for community education

Activity: Students research problems associated with, and consequences of, too many dogs (or too much mange or worms)

Create information sheets, posters or pamphlets to share in the community

Resources: fact sheets available at <http://www.amrric.org>

Take photos, draw or make use of the web for photos and information

Learning Activities

A Dog Census

Dog population and health survey



Animal Management in Rural and Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES

TEACHER DIRECTIONS

NOTES

5. CONDUCT THE CENSUS

Direct: the students into groups ensuring a good mix of abilities. Allow each group to discuss the roles needed to conduct the survey

Class discussion: share group ideas for roles and agree on the best arrangement. Assign town sections for which each group will be responsible

Group activity: students plan their procedure and materials; and (if needed) role play engaging a household

Debrief: what does success look like – is the data accurate, clear, and comprehensive. If not, what can be done to improve it?

Teacher note: Consider using an adult community member to accompany each group, e.g. Animal Management Worker, Teacher Aid, LGA official, Government Engagement Officer or Elder

Procedure for conducting census:

- ✓ Mark a route on the map
- ✓ Explain important information
- ✓ Record census data
- ✓ Note which households will require a second visit (owner absent)

6. CREATE THE SPREADSHEET

Activity: students use their hard copy design to construct the spreadsheet. Focus on setting up the spreadsheet. Including function cells comes later.

Teacher note: You may prefer to provide your 'prepared beforehand' spreadsheet for all or some of your students.

Alternatively, allow less able students to partner with a more computer-literate friend.

7. ENTER AND DISPLAY THE DATA (using a spreadsheet)

Activity: enter the data into the spreadsheet and construct tables and graphs to organise the data

Review and revise: how well did the census instrument work? Change the design of the spreadsheet if necessary

Teacher note: as an aside discussion, pose the question whether it is worth revising the census/spreadsheet.

Remind students that a well-designed instrument can be used over and over or can be easily modified

EXTENSION B:

Use the spreadsheet to calculate totals

Demonstrate: how function cells can be used to calculate totals, e.g. total number of dogs: per house, in the community, that have mange, are undernourished, require medicine, to be de-sexed

Activity: students add function cells to their spreadsheet

Note: enter 1 or 0 instead of yes and no so that columns can be totalled

Learning Activities

A Dog Census

Dog population and health survey



Animal Management in Rural and Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES

TEACHER DIRECTIONS

NOTES

8. WRITE A REPORT

Introduce: the report genre and provide a template

Activity: students write a report on the current dog situation in their community. Attach census data (spreadsheet) and optionally, photos to illustrate facts contained in the report

Teacher note:

1. This can be as big (e.g. an extension lesson on report writing) or as simple (provide a template and/or whole class guided writing) as you like
2. The report should include the answers to questions in 1.3

EXTENSION C

Monitor the program (making use of the spreadsheet)

Extension activities

- a. Conduct a follow-up survey a month or two after the veterinary program
- b. Compare the changes and draw conclusions
- c. Report back to the community and to AMRRIC and ask for feedback on how the program could be improved
- d. Continue to monitor dog population and wellbeing. Create graphs to illustrate changes over time
- e. Refer back to the D2 'Healthy Dogs, Healthy Community – Y Diagrams. Discuss the community's progress toward being a place that is good for dogs

Teacher note:

1. If done methodically and accurately, these activities provide invaluable data to AMRRIC and the community.
2. Consider including other interested people in the community, e.g. AMW, GEC etc. to help students maintain their enthusiasm for the project, e.g. to help lead the monitoring project and/or as a regular guest speaker

9. EXTENSION OPTION

Investigate the impact of unmanaged dog populations

Extended project/s: explore the extent of change in the local environment in remote ATSI communities over time through unmanaged dog populations

Sample activities:

Develop a significant question about how human and environmental processes have shaped the local community and its surrounding environment

Keep a class journal of each stage in planning the investigation

Learning Activities

A Dog Census

Dog population and health survey

LEARNING ACTIVITIES	TEACHER DIRECTIONS	NOTES
10. EXTENSION OPTION Produce an oral presentation – 'A Dog Health Issue'	Group work: collaboratively plan, research and deliver a presentation to the community (or community group) on a debatable topic. For example: <ul style="list-style-type: none">a. 'Families should have no more than two dogs' ORb. 'All male dogs should be de-sexed' Select an appropriate way to deliver the presentation, e.g. PowerPoint Select and sequence appropriate multi-modal content/elements to support and emphasise your arguments	<i>Resources:</i> draw on the data from the dog census/survey, the extended survey and research conducted over the range of the project Refer also to the 'Additional Resources' in <i>Be a Friend to Your Dog:</i>



Learning Activities

A Dog Census

Dog population and health survey



Animal Management in Rural and Remote Indigenous Communities

'Be a Friend to Your Dog'
An Educational Package

LEARNING ACTIVITIES

YEAR 5 Content Descriptions

YEAR 6 Content Descriptions

11. Introduction

The vet needs information:

- Discussion: what does a community that is good for dogs look like?
- Posing the problem
- Questions to answer

ENGLISH: (ACELY1699)

Literacy (Interacting with others)

Clarify understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a point of view

SCIENCE: (AC SIS231); (AC SIS232)

Science Inquiry Skills (Questioning & predicting)

With guidance, pose questions to clarify practical problems or inform a scientific investigation, and predict what the findings of an investigation might be

ENGLISH: (ACELY1709)

Literacy (Interacting with others)

Participate in and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions

SCIENCE: (AC SIS086); (AC SIS103)

Science Inquiry Skills (Planning and conducting)

With guidance, plan appropriate investigation methods to answer questions or solve problems

12. Prepare the map

GEOGRAPHY: (ACHGS035); (ACHGS042)

Geographical Inquiry and Skills (Collecting, recording, evaluating and representing)

Evaluate sources for their usefulness and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams

13. Plan the Census

SCIENCE: (AC SIS086); (AC SIS103)

Science Inquiry Skills (Planning and conducting)

With guidance, plan appropriate investigation methods to answer questions or solve problems

ENGLISH: (ACELA1524)

Language (Expressing and developing ideas)

Identify and explain how analytical images like figures, tables, diagrams, maps and graphs contribute to our understanding of verbal information in factual and persuasive texts

Note: paired Science and Geography Content Descriptions

The paired Content descriptions are sequentially paired through Years 5 and 6. They are identically worded but the elaborations provide specific examples by which teachers can distinguish between the two year levels.

Content Descriptions

A Dog Census

Dog population and health survey

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES

14. Interpret the veterinary services on offer

Extension A

Create knowledge sharing resources (posters, pamphlets etc.)



YEAR 5 Content Descriptions

HEALTH & PHYS. ED: (ACPPS058)

Personal, social and community health (Contribution to healthy and active communities)

Recognise and describe the role of preventive health in maintaining and promoting health and wellbeing for individuals and the community

ENGLISH: (ACELY1703)

Literacy (Interpreting, analysing, evaluating)

Use comprehension strategies to analyse information, integrating and linking ideas from a variety of print and digital sources

ENGLISH: (ACELY1704)

Literacy (Creating texts)

Plan, draft and publish imaginative, informative and persuasive texts, choosing text structures, language features, images and sound appropriate to purpose and audience

SCIENCE: (AC SIS087); (AC SIS104)

Science Inquiry Skills (Planning and conducting)

Decide which variable should be changed and measured in fair tests and accurately observe, measure and record data, using digital technologies as appropriate

YEAR 6 Content Descriptions

SCIENCE: (AC SIS093); (AC SIS110)

Science Inquiry Skills (Communicating)

Communicate ideas, explanations and processes in a variety of ways, including multi-modal texts

ENGLISH: (ACELY1713)

Literacy (Interpreting, analysing, evaluating)

Use comprehension strategies to interpret and analyse information and ideas, comparing content from a variety of textual sources including media and digital texts

ENGLISH: (ACELY1714)

Literacy (Creating texts)

Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with text structures, language features, images, and digital resources appropriate to purpose and audience

SCIENCE: (AC SIS090); (AC SIS107)

Science Inquiry Skills (Processing and analysing data and information)

Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate

Note: paired Science Content Descriptions

The paired Content descriptions are sequential through year levels 5 and 6. They are identically worded but the elaborations in each provide specific examples through which teachers may adapt learning activities to distinguish between the two year levels.

Content Descriptions

A Dog Census

Dog population and health survey



Animal Management in Rural and Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES	YEAR 5 Content Descriptions	YEAR 6 Content Descriptions
1. Conduct the census	<p>SCIENCE: (AC SIS086); (AC SIS103) <i>Science Inquiry Skills (Planning and conducting)</i> With guidance, plan appropriate investigation methods to answer questions or solve problems</p> <p>MATHEMATICS: (AC MSP118) <i>Statistics and probability (Data representation and interpretation)</i> Pose questions and collect categorical or numerical data by observation or survey</p>	<p>SCIENCE: (AC SIS087); (AC SIS104) <i>Science Inquiry Skills (Planning and conducting)</i> Decide which variable should be changed and measured in fair tests and accurately observe, measure and record data, using digital technologies as appropriate</p>
2. Create the spreadsheet	<p>SCIENCE: (AC SIS091); (AC SIS108) <i>Science Inquiry Skills (Evaluating)</i> Suggest improvements to the methods used to investigate a question or solve a problem</p>	<p>ENGLISH: (AC ELY1717) <i>Literacy (Creating texts)</i> Use a range of software, including word processing programs, learning new functions as required to create texts</p>
3. Enter and display the data Extension B: Use the spreadsheet to calculate totals and create tables and graphs	<p>MATHEMATICS: (AC MSP119) <i>Statistics and probability (Data representation and interpretation)</i> Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies</p>	<p>SCIENCE: (AC SIS091); (AC SIS108) <i>Science Inquiry Skills (Evaluating)</i> Suggest improvements to the methods used to investigate a question or solve a problem</p>
4. Write a report	<p>ENGLISH: (AC ELY1707) <i>Literacy (Creating texts)</i> Use a range of software including word processing programs with fluency to construct, edit and publish written text, and select, edit and place visual, print and audio elements</p>	<p>ENGLISH Yr 5: (AC ELA1504) <i>Language (Text structure and organisation)</i> Understand how texts vary in purpose, structure and topic as well as the degree of formality</p>

Content Descriptions

A Dog Census

Dog population and health survey

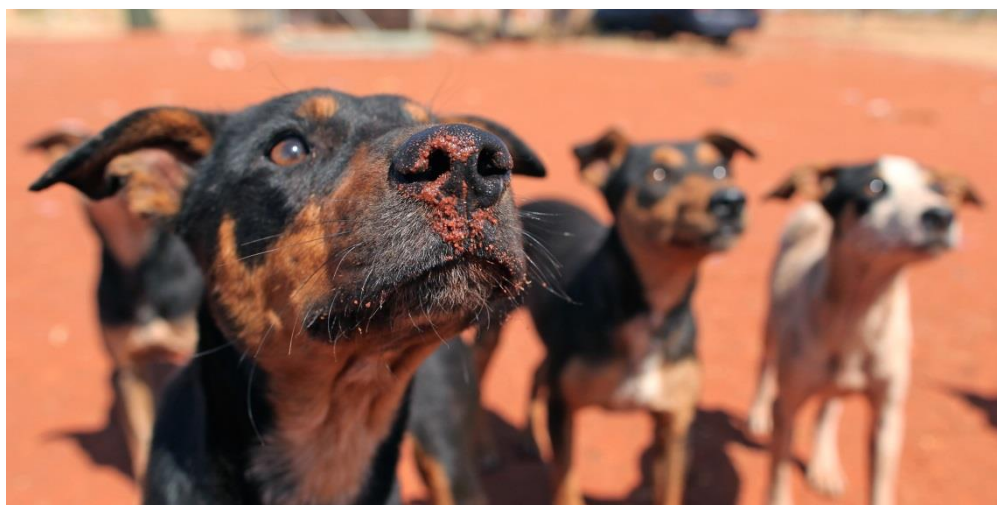


Animal Management in Rural and Remote Indigenous Communities

*'Be a Friend to Your Dog'
An Educational Package*

LEARNING ACTIVITIES	YEAR 5 Content Descriptions	YEAR 6 Content Descriptions
Extension C Use the spreadsheet to monitor the program	GEOGRAPHY: (ACHGK027) <i>Geographical Knowledge and Understanding</i> The influence of people, including Aboriginal and Torres Strait Islander Peoples, on the environmental characteristics of Australian places	GEOGRAPHY: (ACHGS033); (ACHGS040) <i>Geographical Inquiry and Skills (Observing, questioning and planning)</i> Develop geographical questions to investigate and plan an inquiry
5. Extension Option Investigate the environmental impact of unmanaged dog populations	ENGLISH: (ACELY1700) <i>Literacy (Interacting with others)</i> Plan, rehearse and deliver presentations for defined audiences and purposes incorporating accurate and sequenced content and multimodal elements	ENGLISH: (ACELY1710) <i>Literacy (Interacting with others)</i> Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for defined audiences and purposes, making appropriate choices for modality and emphasis
6. Extension option Oral presentations on a dog health issue		

Additional Resources
Dogs and Country – PowerPoint (PPT, 1MB); *The Dog Book* Ti Tree; *Caring for Dogs, Community and Country* – DVD; *Gut Diseases* – PowerPoint (PPT, 3MB);
Web: <http://www.amrric.org>



SAMPLE ASSESSMENT PLAN

A Dog Census: Conducting a dog population and health survey

Note: the assessment tasks are examples only and may not suit the students in your school community without some modification. Choose from among the examples to build an assessment plan that best suits your students and your teaching-learning approach to the unit;

For descriptions of some terms see the glossary on the inside back cover

ACHIEVEMENT STANDARDS Refer to unit summary, page 1	RELATED ACTIVITIES Refer to the detailed learning activities	DESIRED UNDERSTANDINGS Assessing what	SAMPLE ASSESSMENT TASKS
AS 1 [Science: Year 5] Pose questions for investigation, gather data and plan investigation methods	Activity 1.1: Introduction	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ Clarify understanding of content as it unfolds; ✓ connect ideas to own experience; ✓ present and justify a point of view 	<i>Y-diagram – constructed response (written task):</i> Facets: explain, interpret, show perspective Description: after a brief introductory discussion, students complete the Y-diagram individually and without comparing. Discuss and compare different responses as a class. Students revise their diagram and submit <i>Extension:</i> students write a position statement describing what they would do to help their community become a place that is good for dogs
	Activity 1.2 – 1.3: Pose questions	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ pose questions to clarify practical problems or inform an [scientific] investigation, ✓ predict what findings might be 	<i>Read, discuss, report – group work (oral task)</i> Facets: interpret, apply Description: after reading the vet’s letter, students predict what the vet will need to know to do her job OR what they can do (and will need) to help. Report back to class Note: record evidence of desired understandings
	Activity 3: Plan the census Activity 5: Conduct the census	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ define a procedure, identify roles, materials needed and potential problems; ✓ record data accurately and clearly 	<i>Group work - role play vet team planning a community visit (product)</i> Facets: explain, apply Description: outline a plan and carry out a complex task (see also AS 2) OR Graphic organiser (written) [Criteria sheet needed for both]

ACHIEVEMENT STANDARDS Refer to unit summary, page 1	RELATED ACTIVITIES Refer to the detailed learning activities	DESIRED UNDERSTANDINGS Assessing what	SAMPLE ASSESSMENT TASKS
AS 2 [Science: Year 5] Construct tables and graphs to organise data and identify patterns ... use patterns to suggest explanations ... and refer to the data when they report their findings [Science: Year 6] Collect, organise and interpret data identifying where improvements to their methods or research could improve the data	Activity 6: Create the spreadsheet Activity 7: Enter and display the data Activity 8: Write a report	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ plan appropriate investigation methods ✓ Identify and explain how analytical images, e.g. figures, tables, diagrams, maps and graphs contribute to our understanding of ... texts ✓ suggest improvements to data gathering/reporting methods 	<i>Report (written task):</i> Facets: explain, apply, interpret Description: student produces a table with appropriate fields to record data, creates a spreadsheet (Excel), enters data accurately and presents in tables and graphs <i>Note:</i> Combine these two or all three of the activities to make an assessment Rich Task. The report should include the spreadsheet (including tables and graphs) and make reference to it [Criteria sheet needed]
	Activity 8 (Extension C): Monitor the program	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ Plan appropriate investigation methods ✓ Identify patterns (changes) to suggest explanations; ✓ Refer to the data to report findings. 	<i>Report (written task):</i> Facets: apply, interpret, have perspective Description: conduct a follow-up survey and compare changes to the data. Report changes and conclusions [Criteria sheet needed]
AS 3 [Science: Year 5] Describe ways to improve (the fairness of) their methods and communicate their ideas, methods and findings (using a range of text types) [Science: Year 6] Describe (and analyse) relationships in data using graphic representations ... construct multi-modal texts to communicate ideas, methods and findings	Activity 5: Conduct the survey (and debrief)	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ Describe ways to get better (more complete) data <i>Note:</i> the actual achievement standard is about creating a fair scientific test but, in the context of the Dog Census, it could be about obtaining rigorous and comprehensive data	<i>Report (written task) - constructed response:</i> OR Report (oral task) Facets: explain, interpret, have perspective Description: students respond to a series of debriefing questions prompting students to think about the effectiveness of the census taking, e.g. 'Were you able to talk to all the owners? Why/not? If not, how could you improve the procedure to include more people?'

ACHIEVEMENT STANDARDS Refer to unit summary, page 1	RELATED ACTIVITIES Refer to the detailed learning activities	DESIRED UNDERSTANDINGS Assessing what	SAMPLE ASSESSMENT TASKS
AS 4 [English – productive mode: Year 6] Analyse information in different texts (from different sources) ... listen to discussions, clarifying content and challenging others' ideas	Activity 4: Analyse veterinary services being offered	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ use comprehension strategies to extract information from text 	<i>Paper test - selected response (written task):</i> Facets: explain Description: students respond to the text (excerpt of email from the vet) by choosing given words/phrases to complete either or both of the tables in Activity 4
		<i>Students succeed when they</i> <ul style="list-style-type: none"> ✓ listen, clarify information and challenge ideas 	<i>Checklist - Observation</i> Facets: explain Description: A group/class discussion (students justify their choice) before the teachers gives the correct responses <i>Note:</i> follows on from assessment task immediately above - see also AS 8
AS 5 [English – productive mode: Year 5] Make presentations and contribute actively to class and group discussions (taking into account other perspectives)	Activity 9: Extension option	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ present information in a clear way by taking account other perspectives; AND/OR	RICH TASK <i>Multimodal presentation (written task):</i> Facets: explain, apply, interpret, show empathy [Criteria sheet needed] Description: extension project for more able, independent students
[English – productive mode: Year 6] Make presentations and contribute actively to class and group discussions (using a variety of strategies for effect)		AND/OR <ul style="list-style-type: none"> ✓ present information using a variety of strategies; AND/OR <ul style="list-style-type: none"> ✓ present by sequencing content and multimodal elements for defined audience and purpose 	
AS 6 [Mathematics: Year 5] Pose questions to gather data ... construct data displays appropriate for the data	Activity 1 b. & c. Activity 5: conduct the census Activities 6 & 7: Create the spreadsheet; enter and display the data	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ Collect numerical data by observation or survey; ✓ Construct graphs (appropriate for data type) with and without digital technologies 	<i>Produce a spreadsheet to display data (written task):</i> Facets: explain, apply [Criteria sheet needed] Description: treat as a separate assessable task or include the spreadsheet in report - see AS 2 and the related criteria sheet

ACHIEVEMENT STANDARDS Refer to unit summary, page 1	RELATED ACTIVITIES Refer to the detailed learning activities	DESIRED UNDERSTANDINGS Assessing what	SAMPLE ASSESSMENT TASKS
AS 7 [Geography: Year 5] Develop Geographical questions to investigate and collect and record information from a range of sources to answer these questions	Activity 10: oral presentation – a dog health issue	<i>Students succeed when they:</i> Plan, rehearse and deliver presentations to defined audiences by: <ul style="list-style-type: none"> ✓ developing questions to investigate and plan an inquiry ✓ incorporating accurate and sequenced content and multimodal elements ✓ explain/describe the influence of people, including Aboriginal peoples, on the environmental characteristics of Australian places 	RICH TASK <i>(for more able students who can work independently through consultation and feedback with teacher)</i> <i>Presentation (oral task):</i> Facets: explain, apply, interpret, show self-knowledge Description: identify, present and discuss questions [criteria sheet – see also AS 5]
AS 8 [HPE: Years 5 & 6] Access and interpret health information and apply decision-making and problem-solving skills to enhance their own and others health, safety and wellbeing	Activity 4: Analyse veterinary services being offered	<i>Students succeed when they:</i> <ul style="list-style-type: none"> ✓ Recognise the role of preventative health in promoting health and wellbeing 	See also AS 4: checklist – observation assessment task or include in AS 4 OR <i>Write a letter (written task)</i> Facets: explanation, perspective Write a letter (from a vet’s perspective) to the community explaining the benefits of treatments and the correct care of dogs during and after surgery

Assessment Glossary*

1. **Assessment plans** are based on valid learning objectives (e.g. Content descriptions in the Australian Curriculum) and measure student understanding of the desired results or learning objectives (from the Achievement standards).

A well-designed assessment plan should be:

- a. Valid – based on approved state or national achievement standards (and are accurately matched to the learning activities)
 - b. Reliable – the assessment instruments themselves are well designed so that they adequately measure what they are meant to measure
 - c. Sufficient – the number and type of assessment instruments is enough to adequately measure the range of essential knowledge and skills introduced in the learning unit
 - d. Authentic – the assessment tasks are grounded in a meaningful context for the student
 - e. Feasible – it is possible to implement the assessment plan in the time allocated without compromising the learning time
 - f. Student-friendly – the nature and type of assessment instruments does not disadvantage the student, e.g. the language used is at 'student level' and the students are familiar with the type of test, assignment etc.
2. **Summative assessment** (assessment OF learning) is meant solely to measure whether the student has learned (depending on your definition of 'learned') the taught subject matter or content. Traditionally, this usually took the form of 'paper and pencil' tests such as selected and/or constructed responses, an essay or other type of written text (e.g. imaginative, informative or persuasive). Acceptable types of assessment tasks are now much broader. For example, McTighe categorises the 'tools for assessment' under four headings: written, oral, visual and kinaesthetic. The assessment plan needs to cover a continuum of acceptable assessment instruments to be considered sufficient
 3. **Formative assessment** (assessment FOR learning) occurs when assessment is also an opportunity for student learning and is well explained in Rich Task (below). Arguably, formative assessment should be a feature of student assessment in the primary years but it does become more problematic as students progress through high school where grading (assessment of learning) becomes increasingly important.
 4. A **Rich Task** is a project that ideally connects different subjects (interdisciplinary) and involves a variety of teaching and learning methods. In undertaking a Rich Task, students are encouraged to display their learning throughout the task. It is not only about improving students' understanding, knowledge and skills – it is equally about how they display their progress. The project should spark interest (student-friendly), relate to real issues (authentic) and help students develop useful skills that go beyond the learning content.
 5. A (success) **Criteria Sheet** outlines a set of clear, student-friendly descriptors that allows the student to understand what he or she needs to do to succeed at the task. The criteria are discussed with the student before, during (to provide timely feedback) and after assessment. Criteria sheets can therefore be instruments of assessment FOR learning as well as assessment OF learning. If the Rich Task is also an assessment task, the teacher guides the student by asking probing questions - e.g. 'What do you think this criterion means?' or 'Have you done enough to satisfy this criterion?' or 'How would you rate yourself on this criterion?'. In this way, the task remains the student's work.
 6. **Facets of Understanding (McTighe)**: Applying the facets of understanding to the assessment tasks helps to ensure that the assessment plan is reliable, i.e. that the assessment tasks can actually be considered to measure student understanding. Another way to put this is to ask: 'Do the assessment tasks actually measure student understanding in enough depth so as to result in enduring understandings?'

By considering one or more of the facets in each assessment task, the teacher is better able to shape their approach to the learning activities. For example, should the student simply demonstrate why an answer or approach is the right one (explanation)? Or does s/he need to have a broader or more nuanced understanding of the topic (perspective, interpretation)? By asking, and answering, these sorts of questions, teachers add intent to the learning activities and better prepare students for the assessment OF learning.

- The concepts and approaches to assessment outlined above are widely accepted but AMRRIC does not imply that they are the only ones that are valid

Why Develop an Education Package about Dog Health and Wellbeing?

Dogs play an important role in remote Indigenous community life. A healthy, well-managed dog population contributes to good human health and safety, and the wellbeing of the community in general.



Why introduce 'Be a Friend to Your Dog' into your school curriculum?

By implementing 'Be a Friend to Your Dog', schools help students to develop:

- empathy for dogs' feelings
- an understanding of dogs' needs and behaviours
- safe personal behaviours around dogs
- knowledge of the relationship between dog and human health
- knowledge of dog management programs
- an understanding of owner responsibilities that contribute to the wellbeing of dogs