

SAVE A BABY KANGAROO



**'LEVI',
a 5-month-old orphaned joey
cared for by the author and his daughter, Emily.**

A baby kangaroo is called a joey.

Your Name: _____



Summer vacation arrives, and this year you are visiting your cousins who live on a large sheep station in Outback Australia, two hours from the nearest town. One afternoon while out horse riding you find a female kangaroo that has just been killed on the road by a passing truck.

Her joey is still alive in her pouch. It is just 12 cm long and weighs 60 grams.

Will you be able to save its life?

This task asks you to make some important decisions about how to save this young animal. During this task you will –

- Keep a journal to record what you do and learn along the way
- Produce a poster to outline how someone may save an orphaned joey
- Save an orphaned joey.

During this unit, you will be doing the following activities to help you investigate the best way to look after your orphaned joey.

LESSON 1: So what is so different about a joey?

Task 1.1

Watch the video on the birth of a kangaroo. Think about how tiny the newborn joey is. Make a list of things that are the size of a new born joey.

Task 1.2

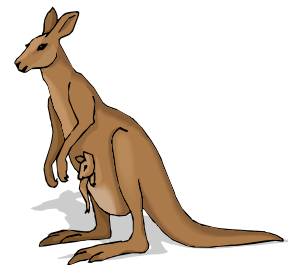
Fill in the table below using the correct conversions. There is working space on the previous page.

ANIMAL	BIRTH WEIGHT (grams)	ADULT WEIGHT (kilograms)	ADULT WEIGHT (grams)	BIRTH WEIGHT AS PERCENTAGE OF ADULT WEIGHT $\frac{\text{Birth weight (g)}}{\text{Adult weight (g)}} \times 100$
<i>KANGAROO</i>	3	70	70 000	$\frac{3}{70000} \times 100 = 0.004\%$
<i>MOUSE</i>	1	0.040		
<i>CAT</i>	100	4.5		
<i>DOG (corgi)</i>	284		9000	
<i>HORSE</i>	50,000		550	
<i>FOX</i>	150			3%
<i>ELEPHANT</i>	100,000			2.5%
<i>HUMAN</i>				

Task 1.3

Make some observations about the sizes of the animals in the table above. Consider different ways you may compare the sizes of the animals.

Now write down a list of things that you would need to consider if you found an injured animal on the side of the road.



Time for Reflection

a) Think about a usual maths lesson and compare it to today's lesson. What was the same? What was different? Use the table below to record your ideas. You will be using this table again in the last lesson

Usual Maths Lesson	Today's Maths lesson

b) What maths did you use today and for what did you use it? Fill out your ideas in the table below.

Maths I used today	What I used the Maths for

LESSON 2: Planning to care for a joey

Next lesson, everyone will choose an orphaned "joey" to save (from a computer simulation). Your task will be to determine a feeding program for your orphaned joey. Using the tables which your teacher will now provide you with, as a class you will develop a step by step process for determining a feeding program for an orphaned joey. Keep notes below as you work through this as a class -

Task 2.1

When I get my orphaned joey, before I can determine a feeding program for it, I need to work out its -

a)

b)

I can do this by -

Therefore, when I get my orphaned joey, the steps I will go through in order to determine a feeding program will be -

- 1.
- 2.
- 3.
- 4.

During this process, your teacher will have provided your group with a species which you will become an expert in. Write this below.

The species of joey my group is studying is : _____

Task 2.2

To make identifying the species and age of an orphaned joey easier, you are going to produce graphs of your species' growth data. Explain below the benefits of converting the data from tabular form to graphical form. Use this to demonstrate your knowledge of "interpolation" and "extrapolation".

Using the growth data for your species, produce a graph for weight and age, tail length and age and foot length and age.



Task 2.3

For homework tonight, collect some information about the species of joey whose data you have graphed to go on the poster tomorrow. Try to find out something about feeding, breeding, habitat, and size of this species of joey (kangaroo). You can use the internet, library books or your general knowledge to help you.

Time for Reflection

What maths did you use today and for what did you use it?

Maths I used today	What I used the Maths for

LESSON 3: Meeting your orphaned joey for the first time

First, turn to Lesson 4 and read what you will be doing next lesson.

Task 3.1

Your teacher will tell you about the posters that you will be producing today.

You will display them in the "VET CLINIC" in tomorrow's lesson.

Make sure that they are colourful and creative, whilst still being informative and easy to read.

Task 3.2

Choose a computer image of your orphaned joey. Your teacher will also give you an "orphaned joey" card. Fill in the measurement details under "My joey". The remainder will be completed in the next lesson.

Time for Reflection

What maths did you use today and for what did you use it?

Maths I used today	What I used the maths for

LESSON 4: Some detective work – identifying your joey’s species

Task 4.1

Move around the room to use the posters available to “rescue” your orphaned joey. For each species, use the three different graphs to get three different predictions for the age of your joey. Record these predictions in the appropriate column on your “orphaned joey” card. Once you have done this, decide which species your joey is from. Complete the table at the bottom of your “orphaned joey” card.

Once this is completed, collect a VET CLINIC card following these steps:

- Fill in the grey column in each table with the relevant information
- Go to the next age point on your data sheet. For example, if your joey is 23 days old, then your next age point is 40 days. Fill in the next four age points for each table using the data from the growth and feeding charts.

If you have saved your Joey and have time to save another, see your teacher.

Time for Reflection

What maths did you use today and for what did you use it?

Maths I used today	What I used the maths for

LESSON 5: Joey Expert creates “Saving a joey” Guide

Task 5.1

Now that you are an expert in saving an orphaned joey, turn your poster into something that could be placed on the wall at a real VET CLINIC. You could consider adding onto it –

- “How to” section for rescuing a joey
- Any graphs you drew for your species
- Any tables or information you used for the rescue
- An example of a how a feeding program could be determined for an orphaned joey of your species.
- More pictures, diagrams and other interesting information about your species.

See you teacher if you require more poster paper.

Task 5.2

Reviewing the mathematics you have used. Think back to all the different activities you used in each lesson. Many of them involved mathematics. Fill out the Final Table below.

Saving Joey



Your joey's name: _____

Think back to all the different activities you used in each lesson. Many of them involved mathematics. Fill out the table below, specifying which skills you think you used or learnt, and where/how you used these skills.

Maths Skill which I used	Where I used it	Example of the maths Eg. a formula with answer, a question with the working, and an answer etc.	Did I understand how to use skill? Y = Yes AB = A Bit N = No

Personal reflection:

- a) Did I work well in my team? Explain why/why not.

- b) Did I enjoy the activity? Explain why/why not.

