Australian Good Meat Education resources are developed by

MEAT & LIVESTOCK AUSTRALIA

3–4 | LESSON PLAN

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Lesson 1

Living things on the farm



AUSTRALIAN CURRICULUM CONTENT

Compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals. (ACSSU044, ACSSU072, AC9S3U01)

Identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates. (ACMMG061, AC9M3M01)

Interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units. (ACMMG084, AC9M4M01)

Use interaction skills to contribute to conversations and discussions to share information and ideas. (ACELY1676, AC9E3LY02)

Listen for key points and information to carry out tasks and contribute to discussions, acknowledging another opinion, linking a response to the topic, and sharing and extending ideas and information. (ACELY1687, AC9E4LY02)

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Lesson 1

LESSON OBJECTIVE

Students will learn about the features of living organisms. They will understand that living things are grouped into categories according to their observable features and relate this to livestock on farms.

LESSON OVERVIEW

Activity 1.1	Keywords	20–30 mins
Activity 1.2	Sorting living things into groups	30–40 mins
Activity 1.3	Sorting livestock on the farm	50–80 mins
Activity 1.4	Just for fun	20 mins

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Answers	24–30

Resources and equipment

ACTIVITY 1.1 – Keywords

1. Classic Sesame Street – Robin Williams on what is alive (2.02).
2. Stimulus 1.1a – *Is a sheep a living thing?*
3. Worksheet 1.1a – *Keywords and definitions.*
4. Worksheet 1.1b – *Keywords scramble.*
5. Worksheet 1.1c – *Keywords spelling list.*
6. Timer.

ACTIVITY 1.2 – Sorting living things into groups

1. Worksheet 1.2a – *Living things.*
2. Animal Classification for Children: Classifying Vertebrates and Invertebrates for Kids – FreeSchool (6.51).
3. Butcher's paper, markers.
4. Worksheet 1.2b – *Sorting animals into groups.*
5. Worksheet 1.2c – *Sorting animals into groups.*
6. Scissors, glue sticks.

ACTIVITY 1.3 – Sorting livestock on the farm

1. Paper, markers.
2. Stimulus cards 1.3a – *Who do I belong with?* Precut and laminated.
3. Worksheet 1.3a – *How tall am I?*
4. Toilet paper (or string), metre rulers/tape measures.

ACTIVITY 1.4 – Just for fun

1. *My farm*, Lester, A. (2017).
2. Butcher's paper, markers.

ADDITIONAL READING/RESOURCES

- Living things
- Science-Unit-Living-Things-9-Weeks.pdf

Lesson guide

ACTIVITY 1.1 – Keywords

1. Watch the video clip Classic Sesame Street – Robin Williams on what is alive (2.02), as an introduction to the features that determine if an object is alive. The video explains the terms, growth, respiration and nutrition.
2. Write 'MRS GREN' on the board/screen, so that each of the letters are vertically underneath each other in the following order. Explain that this acronym is an easy way to remember the seven features of living organisms. Fill in the words: **Respiration**; **Growth**; and **Nutrition**, which have been referred to in the clip.

   M *ovement*

   R *espiration*

   S *ensitivity*

   G *rowth*

   R *eproduction*

   E *xcretion*

   N *utrition*
3. Ask students to think about the living things, and what each of the letters could stand for. If the correct answers are provided by students, fill in the missing words (movement, respiration, sensitivity, growth, reproduction, excretion, nutrition).
4. Use Stimulus 1.1a – *Is a sheep a living thing?* to show students a visual cue and written checklist of the features and complete any missing words using the stimulus.
5. Distribute Worksheet 1.1a – *Keywords and definitions* and read through the keywords and definitions with students. Allow time for students to individually re-read the terms and then allocate students into pairs. Set a five-minute timer and ask pairs to practise recalling the meaning of the terms with each other. After five minutes, provide students with Worksheet 1.1b – *Keywords scramble*. Students work together to unscramble the keywords and recall and record their definitions together. (Answers page 24–25)

   Optional: Provide students with Worksheet 1.1c – *Keywords spelling list*.

***Lesson guide** continued next page*

Lesson guide *continued*

ACTIVITY 1.2 – Sorting living things into groups

1. Recall the seven features that determine if an organism is a living thing (movement, respiration, sensitivity, growth, reproduction, excretion and nutrition), and distribute Worksheet 1.2a – *Living things.* Read the information with students and instruct students to draw a line to the correct picture for each description. (Answers page 26)
2. Explain that placing things into categories makes talking about organisms easier. Ask students to imagine they are in a supermarket in the aisle that sells bread. Question them about what else is normally in this aisle and why? *(breakfast goods, similar types of food)*. Repeat this, by asking them if they have ever been to a hardware store. If they were standing in the paint area, what other products would be close by? *(paint brushes and other painting needs)*. This process of sorting makes life easier and saves time. Sorting is also called classification *(things that are alike or have similar features are grouped together).* Discuss other areas around the school where people have organised or classified *(library books, classes, year groups, sporting teams, science equipment, etc.)*.
3. Watch the video clip Animal Classification for Children: Classifying Vertebrates and Invertebrates for Kids – FreeSchool (6.51) as a class. At the conclusion of the video clip, split students into groups of four and distribute a piece of butcher's paper and markers to each group. Ask students to recall as many features from the video about the following vertebrates as possible:
   - Fish
   - Amphibians
   - Reptiles
   - Birds
   - Mammals

   (Answers page 27)
4. Distribute Worksheet 1.2b – *Sorting animals into groups.* Students trace the names on the worksheet and cut and paste the corresponding picture underneath the correct headings. (Worksheet 1.2c – *Sorting animals into groups (outlines)* is a modelled version of the worksheet for students requiring additional support). (Answers page 28)

***Lesson guide** continued next page*

Lesson guide *continued*

ACTIVITY 1.3 – Sorting livestock on the farm

1. Animals are sorted into groups, based on their features. Ask students to sit back-to-back with a group member in their class. Each person uses a marker and piece of paper to draw an animal (and keep it secret from the other person). One person starts by describing their animal's features to their partner without saying its name or the noises that it makes (e.g. it has pointy ears, four legs, spots, etc). The second person tries to guess what the animal is, based on the characteristics. When the animal has been correctly identified, the other person repeats the game for their secret animal.
2. Allocate students into groups of four. Provide groups with the precut, laminated Stimulus cards 1.3a – *Who do I belong with?* to observe. Challenge groups to classify the animals into groups, based on their observable characteristics. Allow an appropriate time for students to sort the cards.
3. All members of the class should then move together to each group's area. One member of each group should explain why they have classified the organisms in the way that they did. (Answers page 29)
4. With students in groups of three–four, distribute Worksheet 1.3a – *How tall am I?* Students should observe the data for each animal on the worksheet. Student groups should then choose one animal from the worksheet and use toilet paper (or string) and a metre ruler, to roll the paper out to the height of their chosen animal, tearing off the roll at the correct measurement. Students record the name and height of the animal on the paper. Groups should repeat this for the remaining animals on the worksheet, and then order the toilet paper/string from shortest to tallest animal. (Answers page 29)
5. Engage in a discussion about the observable features of the different breeds and species of livestock and the similarities and differences between the features they see. Emphasise to students that farmers select animals that are suited to their particular environment and have characteristics that consumers want.

ACTIVITY 1.4 – Just for fun

1. Allocate students into challenge groups (groups of four) and provide each group with a piece of butcher's paper and markers.
2. Read the story, *My farm,* Lester, A. (2017) and as the story is being read, students should listen for the living (both plants and animals) and non-living things in the story. Groups compile a list on their paper, to be tallied at the end of the story.

   (Note: reference to an orphaned animal, an animal skin, and eating meat from a farm are made during the story. Omit sections that are not suitable for individual classes.) (Answers on page 29–30)

Student resources

ACTIVITY 1.1 – Keywords

Stimulus 1.1a	Is a sheep a living thing?
Worksheet 1.1a	Keywords and definitions
Worksheet 1.1b	Keywords scramble
Worksheet 1.1c	Keywords spelling list

ACTIVITY 1.2 – Sorting living things into groups

Worksheet 1.2a	Living things
Worksheet 1.2b	Sorting animals into groups
Worksheet 1.2c	Sorting animals into groups

ACTIVITY 1.3 – Sorting livestock on the farm

Stimulus 1.3a	Who do I belong with? Picture cards
Worksheet 1.3a	How tall am I?

ACTIVITY 1.4 – Just for fun

N/A

Stimulus 1.1a

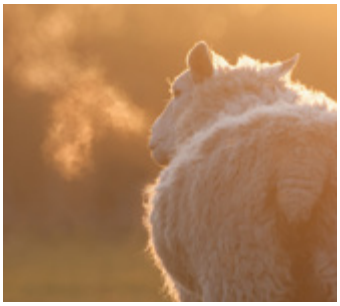
Is a sheep a living thing?

'MRS GREN' checklist

- [ ] Can it MOVE?



- [ ] Does it RESPIRE/BREATHE?





- [ ] Is it SENSITIVE to the environment?



- [ ] Does it GROW?



- [ ] Does it REPRODUCE? (have babies)



- [ ] Does it EXCRETE waste?



- [ ] Does it need NUTRITION?

Worksheet 1.1a

Keywords and definitions

Read the keywords and definitions below. Practise saying them once to yourself and then with a partner. Test each other on the meaning of the words.

movement	All living things move in a controlled way.
respiration	Living things create energy inside their bodies to survive.
sensitivity	Living things can detect changes in their environment.
growth	All living things grow and develop.
reproduction	The ability to have offspring and pass on characteristics or replicate to produce more organisms.
excretion	Living things remove the wastes from inside their body, such as carbon dioxide or urine.
nutrition	Living things need to take in nutrients to survive.






Worksheet 1.1b

Keywords scramble

Unscramble the keywords below and recall their meanings.

tinsitiyves

tinoxerce

tiriutnno

tidorrepcuon






Worksheet 1.1b continued next page

Worksheet 1.1b continued

Worksheet 1.1b

Unscramble the keywords below and recall their meanings.

tiesirpraon

teemnmvo

twghor






Worksheet 1.1c

Keywords spelling list

Spell the keywords below.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

Worksheet 1.2a

Living things

Instructions: Look at the images below of different living things found on a farm. Draw a line to match the pictures with the correct description.

Life process: Movement
Throughout the day, the flower on this plant follows the arc of the Sun moving from east to west.



Life process: Growth
After a goat is born, it has grown enough by 7 months to have its own kid.



Life process: Sensitivity
When it is hot, these animals move to the shade and seek shelter to cool down. They are shorn once a year for their wool and this also helps them to keep cool.



Life process: Nutrition
This fruit requires three main nutrients to help it grow: nitrogen, phosphorous and potassium.



Life process: Excretion
The waste from this animal is known as manure and is made up of digested grass and grain. People sometimes use this manure on their gardens as fertiliser.



Life process: Reproduction
This animal generally gives birth to its young between August — October. The mothers are called ewes and the young are called lambs. 1–2 lambs are usually born at a time.

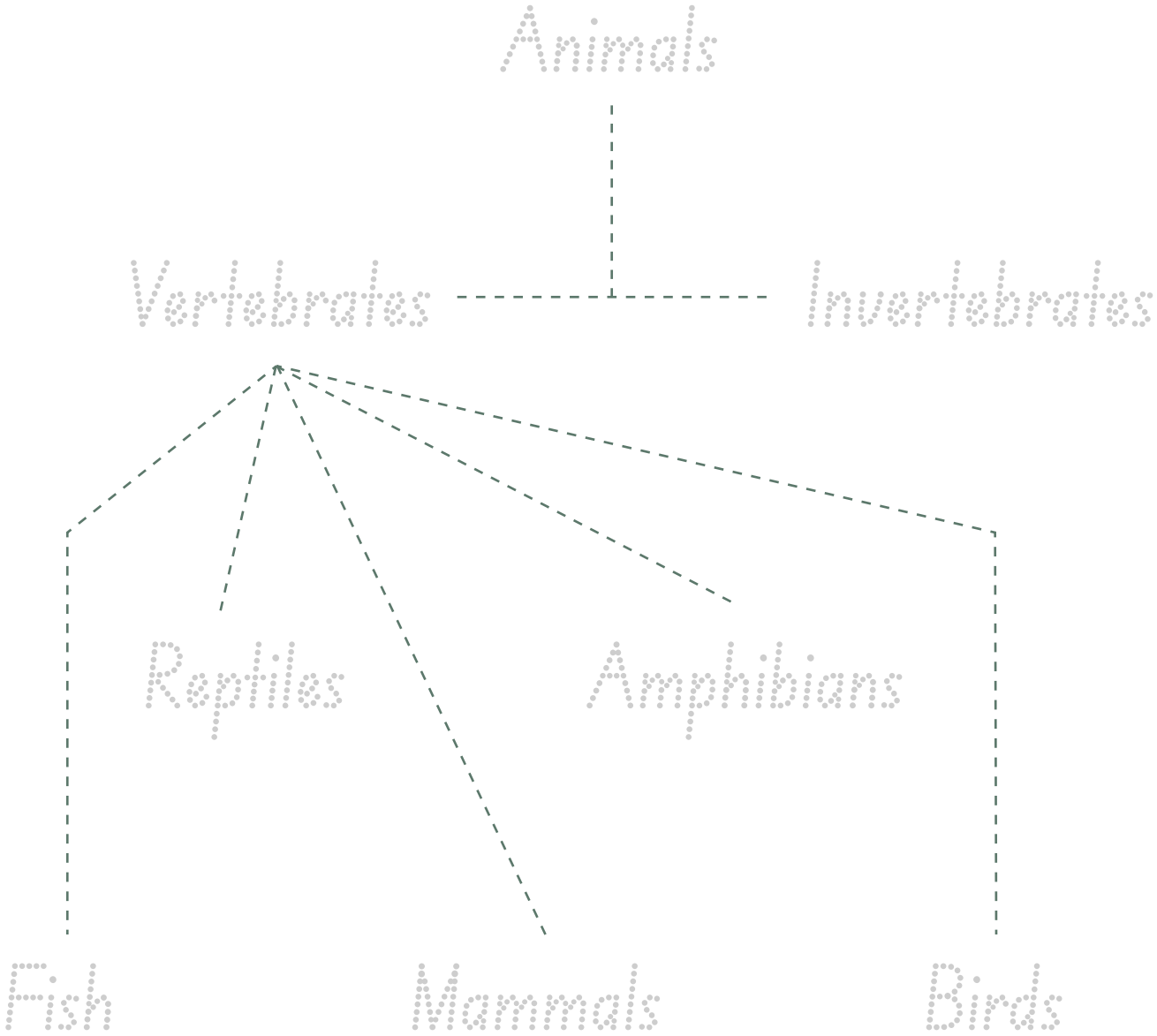


Life process: Respiration
This plant uses energy to produce grains. Grains are created by combining oxygen and glucose (sugar produced during photosynthesis).



Worksheet 1.2b

Sorting animals into groups



Worksheet 1.2b *continued next page*

Worksheet 1.2b continued

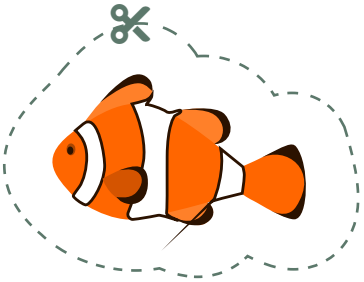
Worksheet 1.2b

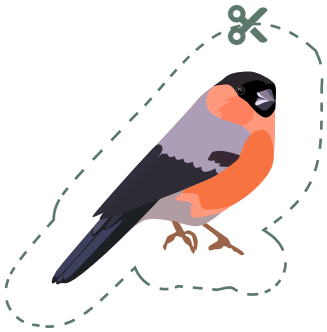
PLEASE NOTE: This activity requires single-sided printing

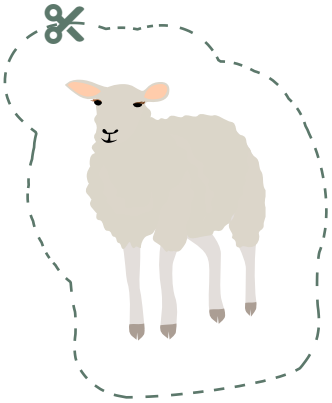
Cut out the animals and paste them under the correct heading.











Worksheet 1.2c

Sorting animals into groups

Animals

Vertebrates

Invertebrates

Reptiles

Amphibians

Fish

Mammals

Birds

PLEASE NOTE: This activity requires single-sided printing

Stimulus 1.3a

Who do I belong with? Picture cards

Cut out the individual cards and group the organisms that belong together.









***Stimulus 1.3a** continued next page*

Stimulus 1.3a continued

Stimulus 1.3a

PLEASE NOTE: This activity requires single-side printing

Cut out the individual cards and group the organisms that belong together.









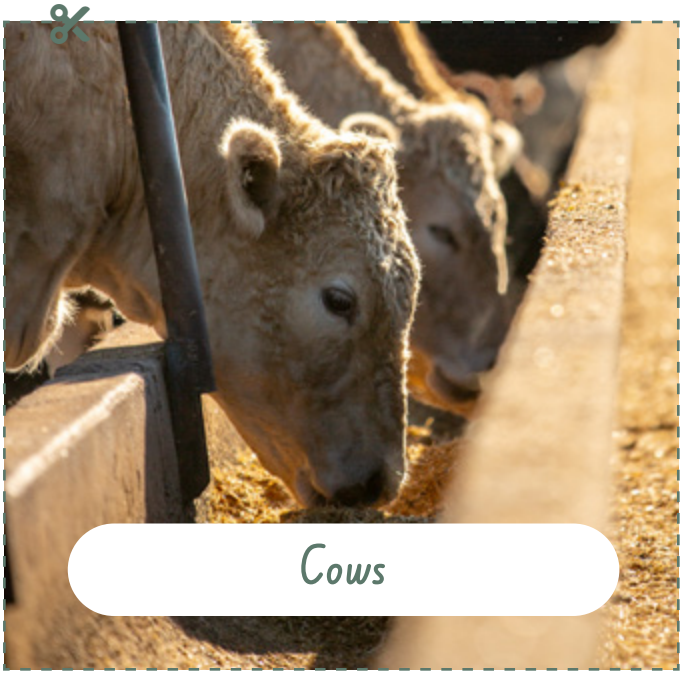
Stimulus 1.3a continued next page

Stimulus 1.3a continued

Stimulus 1.3a

PLEASE NOTE: This activity requires single-side printing

Cut out the individual cards and group the organisms that belong together.









Stimulus 1.3a continued next page

Stimulus 1.3a continued

Stimulus 1.3a

PLEASE NOTE: This activity requires single-side printing

Cut out the individual cards and group the organisms that belong together.









Stimulus 1.3a continued next page

Stimulus 1.3a continued

Stimulus 1.3a

PLEASE NOTE: This activity requires single-side printing

Cut out the individual cards and group the organisms that belong together.









Stimulus 1.3a continued next page

Stimulus 1.3a continued

Stimulus 1.3a

PLEASE NOTE: This activity requires single-side printing

Cut out the individual cards and group the organisms that belong together.









Worksheet 1.3a

How tall am I?

Look at the height of these different types of livestock.

Choose one animal then roll out your paper/string, cutting it off at the same measurement as the animal. Repeat this for the remaining animals on this sheet and then order your paper/string from shortest to tallest animal.



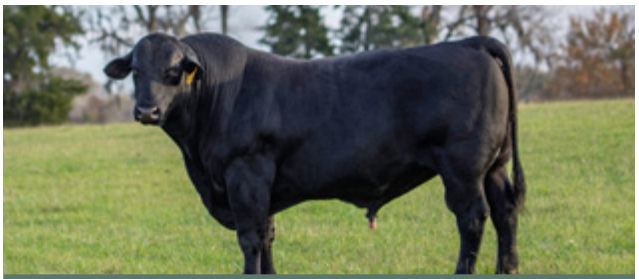
Border Leicester ram — 85cm



Nubian buck — 94cm



Brahman bull — 205cm



Angus bull — 187cm



Belted Galloway bull — 135cm



Boer buck — 75cm

Keywords

Worksheet 1.1b – Keywords scramble.

Unscramble the keywords below and recall their meanings.

tinsitiyves — sensitivity

Living things can detect changes in their environment.

tinoxerce — excretion

Living things remove the wastes from inside their body, such as carbon dioxide or urine.

tiriutnno — nutrition

Living things need to take in nutrients to survive.

tidorrepcuon — reproduction

The ability to have offspring and pass on characteristics or replicate to produce more organisms.

***1.1b Answers** continued next page*

1.1b ***Answers*** *continued*

Activity 1.1

tiesirpraon — respiration

Living things create energy inside their bodies to survive.

teemnmvo — movement

All living things move in a controlled way.

twghor — growth

All living things grow and develop.

Sorting living things into groups

Worksheet 1.2a – Living things.

Life process: Movement
Throughout the day, the flower on this plant follows the arc of the Sun moving from east to west.

Life process: Growth
After a goat is born, it has grown enough by 7 months to have its own kid.

Life process: Sensitivity
When it is hot, these animals move to the shade and seek shelter to cool down. They are shorn once a year for their wool and this also helps them to keep cool.

Life process: Nutrition
This fruit requires three main nutrients to help it grow: nitrogen, phosphorous and potassium.

Life process: Excretion
The waste from this animal is known as manure and is made up of digested grass and grain. People sometimes use this manure on their gardens as fertiliser.

Life process: Reproduction
This animal generally gives birth to its young between August — October. The mothers are called ewes and the young are called lambs. 1–2 lambs are usually born at a time.

Life process: Respiration
This plant uses energy to produce grains. Grains are created by combining oxygen and glucose (sugar produced during photosynthesis).









***1.2a Answers** continued next page*

*1.2 **Answers** continued*

Activity 1.2

3.

Amphibians
Cold blooded; live on land and in the water; they have smooth, moist skin; lay their delicate, jelly-covered eggs in water; young look different to parents as many must go through metamorphosis.

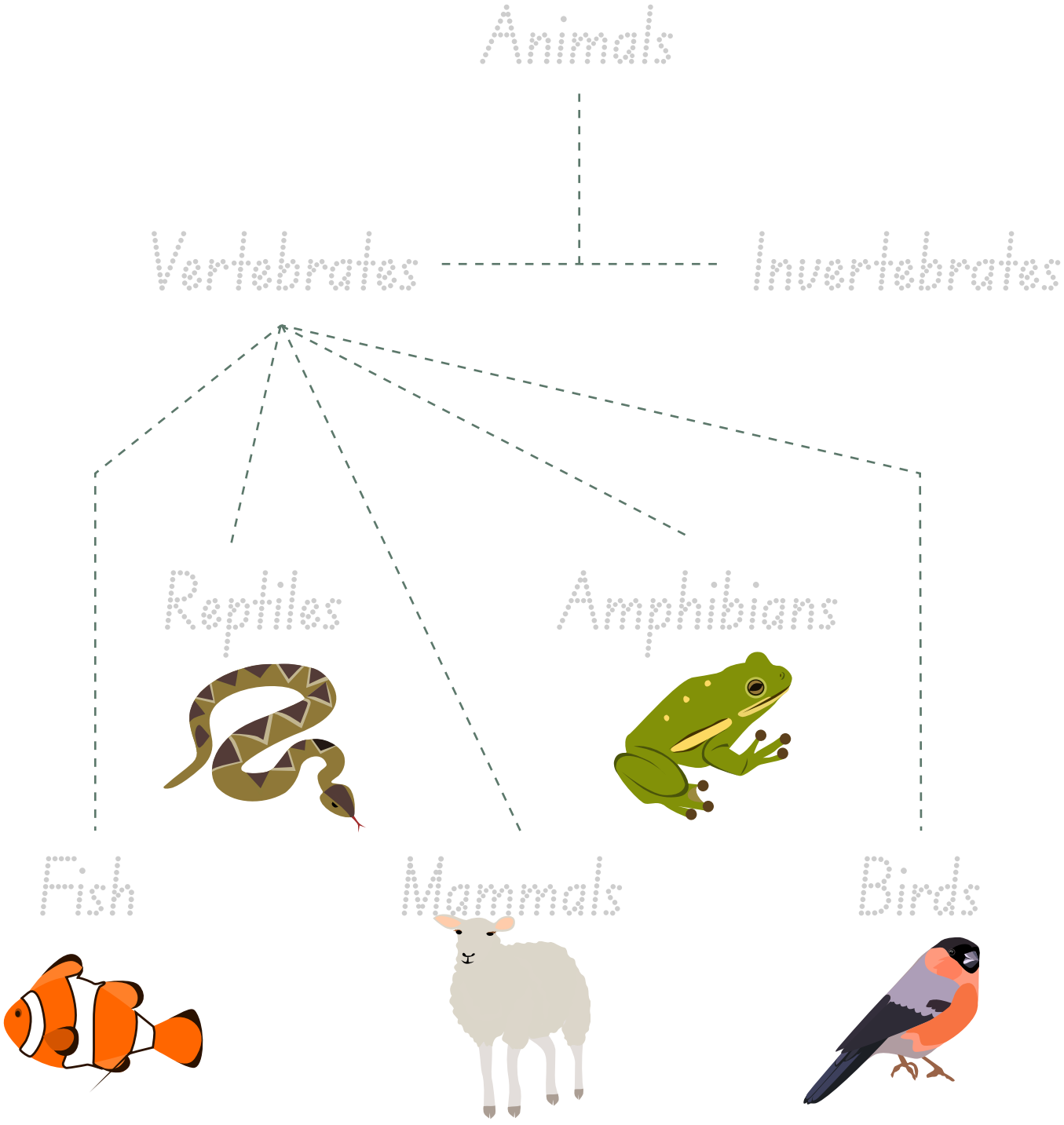
Reptiles
Cold blooded; air breathing animals; must come to the surface to breathe; dry scaly skin; lay eggs that are out of the water and have a protective shell which is soft and leathery.

Birds
Only type of animals that have feathers; breathe air; have two legs; wings (not all can fly); warm blooded and maintain a constant body temperature; lay eggs that have hard shells.

Mammals
Warm blooded; breathe air (even if they live in the water they need to come to the surface); have some fur or hair; almost all give birth to live young instead of laying eggs; feed their babies milk; fun fact: ears stick out!

Fish
Live in water; breathe underwater; gills; scales and fins; cold blooded and cannot control their own body temperature; most lay eggs.

Worksheet 1.2c – Sorting animals into groups



Stimulus 1.3

Who do I belong with? Picture cards

1. Answers are dependent on individual groups' reasoning – encouraging students to use the vertebrate groups is desirable.

Activity 1.3

Worksheet 1.3a – How tall am I?

Boer buck (75cm), Border Leicester ram (85cm), Nubian buck (94cm), Belted Galloway bull (135cm), Angus bull (187cm), Brahman bull (205cm).

Activity 1.4

Just for fun

1. (listed in order of text reference)

Living things – My Farm, Alison Lester		
Animals	Plants	Non–Living
Mum, Dad, Charlie, Kate, Jake, 'Me'.		
Horses		
Tricky and Inky the horses		Motorbike
Thirsty cattle		Water
Mobs of cattle	Pasture	Old jinker
		Trucks
Dogs		Stockyards
Bullocks		Whips
		Ramp

***1.4 Answers** continued next page*

*1.4 **Answers** continued*

Activity 1.4

	Blackberries and apples	Bushfires, water tank
Stud bulls and cows		
Bella the horse		
Sadie the dog		
Maggie	Autumn trees	Fallen leaves
Uncle Jack and new cattle		
Calves		Warm milk
Neighbours		
Note – reference to orphan calf and using dead calf skin on this page. Determine if content is suitable for your own class.		
Cow and orphan calf		
Newborn calves	Mushrooms (fungi not a plant)	Knives and buckets
		Dips and drench, boots
		Meat
Note – reference to using own meat off the farm from a killed sheep. Determine if content is suitable for your own class.		
Dogs and cats	Hay	
	Grass	Twine (rope)
Bambi the cow		
Bambi's calf and chooks		
Baby wombat		
Ducks eggs		Electric frypan
		Hut
	Lawn	Clothesline
Old black horse		
Tadpoles and pet sheep	Sweet spring grass	
	Mown grass	
Possum the pony		
Puppies		Hollow log, shed
Cousins		
Snails	Orchard	
Palamino pony		