



Learning from Home

Term 4 Weeks 2 and 3

Key Learning Area: Agriculture Technology Elective

Year Group: Year 9

Student Name: _____

Please Circle Your Team:

1	2	3	4	5	6	7	8	9
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<p>Work Overview and Instructions</p> <p>Work through the activity lessons below.</p> <p>You can complete this either by using the version supplied on Google classroom or printing and using it as a booklet to write your answers in.</p> <p>Google Classroom is the preferred method but either is fine.</p> <p>If you have time left over complete any unfinished work.</p>	<p>Learning Intentions</p> <p>Essential Question</p> <p>What is the best way to plant new seeds? What is Wool?</p> <p>Literacy</p> <p>Short answer response and comprehension</p> <p>Numeracy</p> <p>mapping</p>
<p>Assessment Overview <i>(If required)</i></p>	<p>Feedback Instructions</p>

Student Feedback

Sheep - The Wool Producers

SHEEP — THE WOOL PRODUCERS

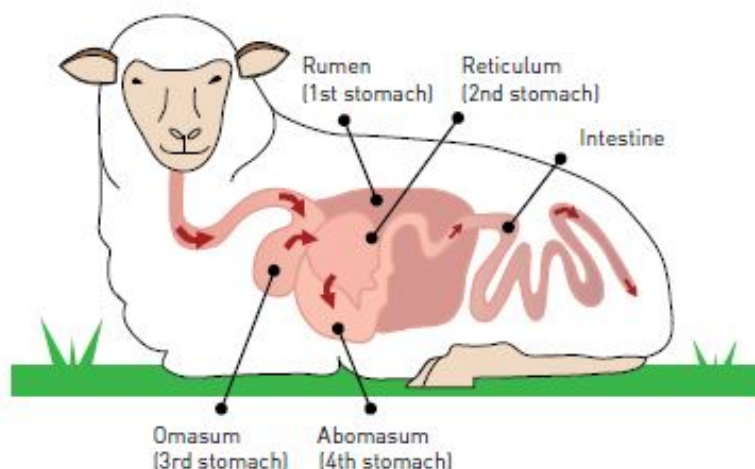


Sheep are domestic animals raised on farms for their wool, meat and milk.

Sheep belong to a group of animals called **mammals**. Like other **mammals**, sheep give birth to live young (lambs) and suckle them on milk until they can support themselves by grazing on **pasture**.

Because they are **herbivores**, sheep only eat plants and rely on farmers to ensure they have enough **pasture, hay, grain** and water to stay healthy.

Sheep also are **ruminants**, which means they have four stomachs and chew **cud**. Each stomach performs a different job during the process of digestion.



Fast facts

- Sheep are domestic animals raised for wool, meat and milk.
- As herbivorous **mammals**, sheep only eat plant material — they do not eat meat.
- Sheep are **ruminants** (they have four stomachs).

The digestive process

As sheep graze, they eat quickly, only chewing their food briefly, mixing it with saliva before swallowing.

Digestion

The first stop in the digestive process is the rumen (first stomach).

The rumen contains digestive juices and millions of **microbes** that start

to break down the food. This process produces lots of gas (including methane), which sheep get rid of by burping.

About an hour after entering the rumen, muscles push the partially digested food back to the mouth to be chewed again.



Natural born fibre producers: Australian Merino sheep are domesticated animals whose natural ability to produce wool has been tailored through rigorous selective breeding.



Chewing the cud: After food has been in the rumen for about an hour it is regurgitated as cud, which sheep chew to extract more nutrients before it passes into the reticulum (second stomach) for further digestion.

Sheep often appear to be resting as they chew their **cud** as they are not actively grazing.

This additional chewing helps break the food down further before it is swallowed again, passing into the reticulum (second stomach).

The reticulum stores the juices from the chewed-up food, which then passes into the omasum (third stomach).

Muscles in the folds of the omasum squeeze the food to remove any remaining liquid.

The food then moves to the abomasum (fourth stomach), where it is mixed and churned with more digestive juices. It then passes into the intestine where nutrients are absorbed into the bloodstream. The remaining waste is excreted as urine and manure.

Did you know?

- Sheep are not the only ruminants. Other ruminants include cattle, goats, giraffes, deer, gazelles, moose and antelopes.
- Sheep prefer to eat shorter grass, rather than long grass. They thrive on pasture shorter than 100 millimetres.
- During drought, sheep producers sometimes need to feed sheep with hay and grain when there is not enough pasture available.
- Sheep can drink up to 12 litres of water every day, although this will vary depending on the type of feed they are eating, their size and age, the season (summer vs winter) and the weather conditions.

Glossary

Cud — partially-digested food.

Hay — pasture that has been cut, dried, baled and stored to feed livestock when there is not enough pasture available.

Herbivore — animals that only eat plant material.

Mammals — vertebrate, milk-producing animals, usually with four legs and hair or fur, most of which give birth to live young.

Microbes — microscopic living organisms that aid in the process of digestion.

Pasture — plants that are managed by farmers for livestock production.

Ruminant — an animal with four stomachs.



Feed on offer: Depending on the amount and quality of pasture available, sheep can spend up to 12 hours a day eating and walk many kilometres as they graze (eat).

More information

For more information about sheep, go to:

- learnaboutwool.com
- *Beyond the Bale:* beyondthebale.wool.com
- feedonofferlibrary.com



Sheep - The Wool Producers

Refer to the Factsheet Sheep - The Wool Producers

1) Sheep are m_____ (give birth to l_____ y_____ and s_____). They are _____ (eat plants) and eat p_____, h_____, g_____ and need w_____ for good health.

2) Sheep are _____ (have four stomachs) and chew a _____. They eat quickly only c_____ their f_____ briefly mixing it with _____ and swallowing.

3) Fill in the flow chart.

Chew quickly and
swallow



First stomach is called the _____ which has d_____ j_____ and m_____ which b_____ d_____ food. This makes m_____ gas which makes them b_____ a lot.



First stomach is called the _____ m_____. This s_____ the j_____ from c_____ food and then it goes to the third stomach.



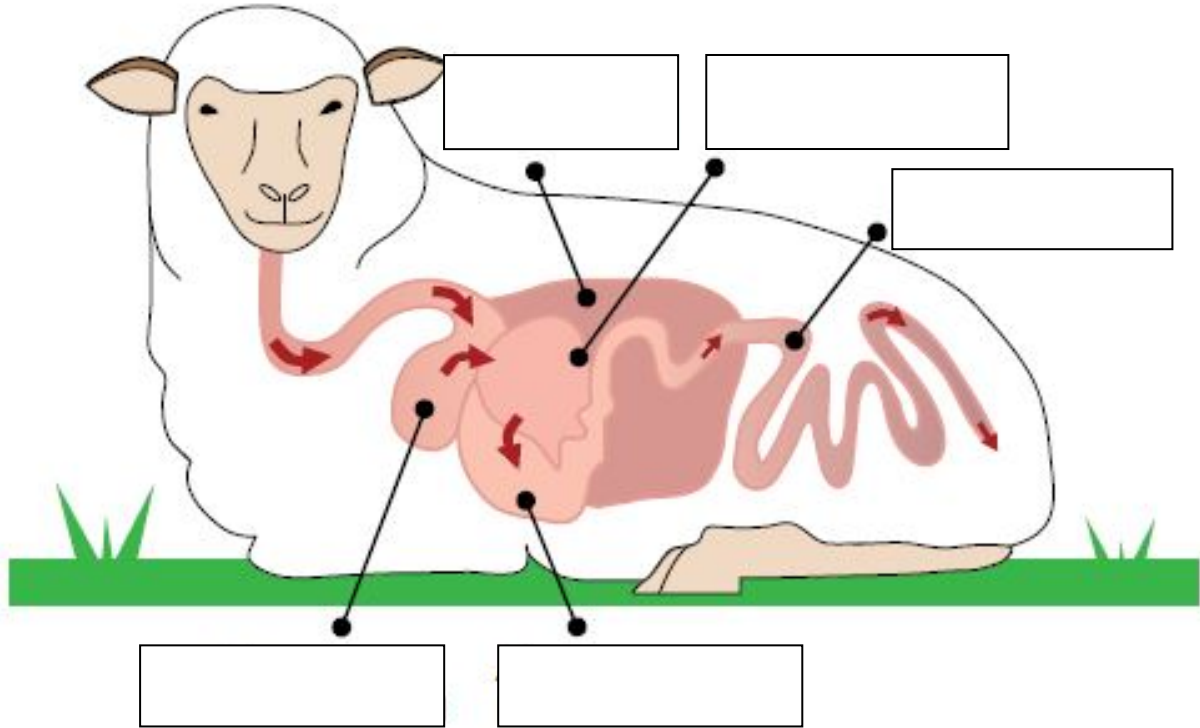
Third stomach is called the o_____ where m_____ in the folds sq_____ food to _____.



Fourth stomach is called the _____ where its mi_____ and c_____ with more which d_____ j_____. It then goes to the intestines where nutrients go into the bloodstream to cells and the remaining waste is excreted.

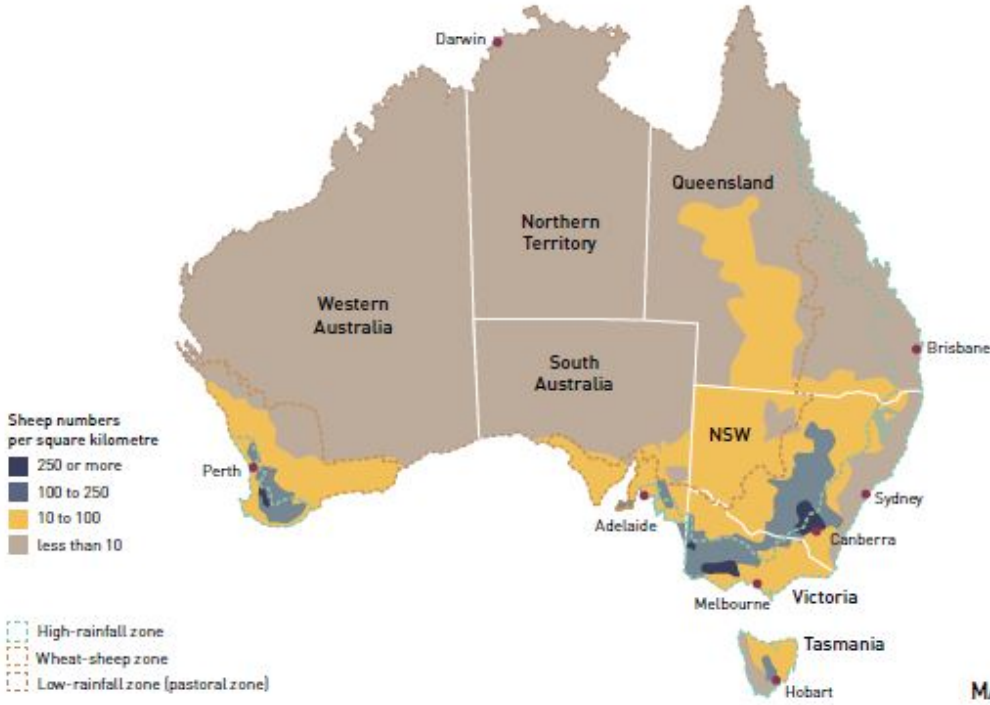
4) Sheep only drink about _____ liters of water a day (3% of their body weight)

5) Label the sheep stomach diagram



Wool Production in Australia

WOOL PRODUCTION IN AUSTRALIA



MAIN WOOL-PRODUCING AREAS IN AUSTRALIA



Wool production in Australia



Sheep are found in most states and territories of Australia, grazing more than 85 million hectares across the country. Most wool production is located in the sheep-wheat belt of the southern states.

There are two main wool production systems in Australia — high rainfall and low rainfall.

High-rainfall wool production

Woolgrowers in high-rainfall areas can grow high-quality **pastures** with nutritious grasses and **legumes**, such as **lucerne and clover**.

Low-rainfall wool production

Producers in areas that receive less rainfall rely on lower-quality **pastures** and graze their sheep on native grasses and shrubs.

Stocking rates

The number of sheep grazing a paddock is called the stocking rate.

Woolgrowers in high-rainfall areas have more **pasture**, so can run more sheep on one **hectare** of land (a higher stocking rate) than a producer in a low-rainfall area (lower stocking rate).



Managing the environment: Woolgrowers manage their sheep and land carefully to protect the animals and the environment.

Did you know?

- In a drought when there has been little or no rain, woolgrowers feed their sheep with hay and grain or sell some of their sheep.
- Farms in low-rainfall areas tend to be very large, while farms in high-rainfall areas tend to be smaller.
- Woolgrowers in high-rainfall areas often use a type of grazing called rotational grazing, where there are lots of small paddocks. Sheep are moved between paddocks according to how much and how fast the pasture is growing.
- Woolgrowers in low-rainfall areas have much bigger paddocks and leave their sheep in the same paddock for longer.

FUN FACTS ABOUT WOOL PRODUCTION

- One hectare equals 10,000 square metres.
- An average paddock size in a high-rainfall system can be as small as 10 **hectares** (about five football fields).
- Paddock sizes in low-rainfall areas range from 2,000 to 20,000 **hectares** (which equates to more than 10,000 football fields.)



Glossary

Hectare — a unit of measurement used to describe the area of a piece of land, such as a paddock or farm.

Legumes — nutritious plants that contain lots of protein.

Lucerne and clover — common types of legumes used to feed sheep in high-rainfall areas.

Pasture — plants grown specifically to feed animals such as sheep and cattle.

More information

To find out more about wool production in Australia, take a look at:

- learnaboutwool.com
- Beyond the Bale magazine: beyondthebale.wool.com



Wool Production in Australia

Refer to the Factsheet Wool Production in Australia

1) Fill in the map of where you find sheep in Australia (over 85 million ha has sheep)



www.TeachersPrintables.net

2) What and why are the two distinct types of wool production in Australia?

3) What is the biggest factor that affects management?

4) Complete the table of facts on wool production (areas, types of pasture, body size of sheep).

High Rainfall	Low Rainfall

5) Describe what stocking rate is. Also, explain the differences between stocking rates in high and low rainfall areas.

6) How do farmers overcome a 'feed gap' period?

7) Describe rotational grazing

8) Define the following terms:

Hectare -

Legumes -

Pasture -