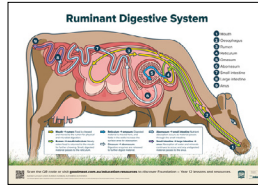




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Activity 1

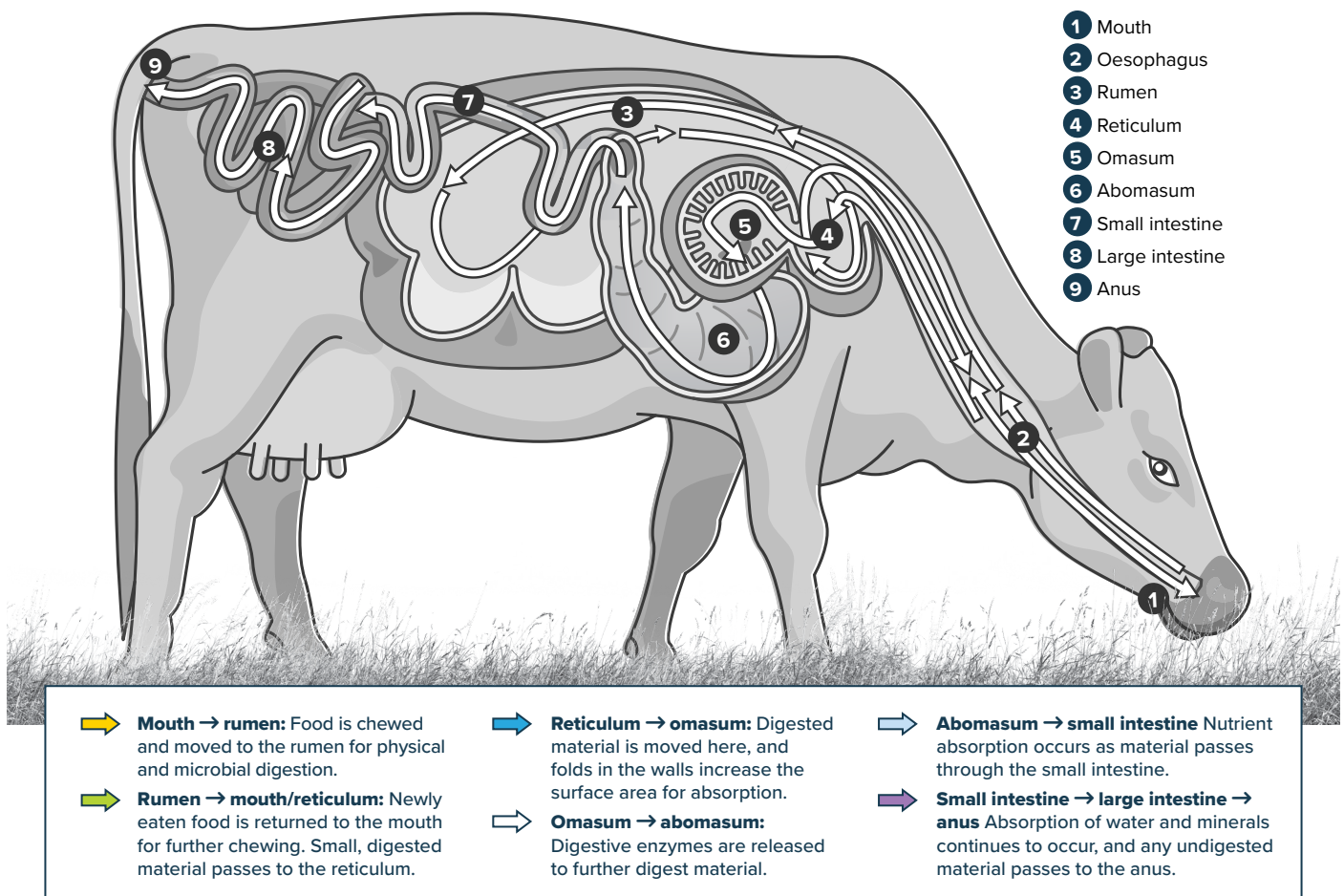
Ruminant Digestive System

The ruminant digestive system is an excellent adaptation for animals such as cattle, sheep, and goats that enables them to efficiently extract nutrients from food.

Cattle, sheep, and goats are herbivores. They consume plant matter, which has a lot of roughage, including cellulose and complex starches. To break down this difficult-to-digest material, they have a ruminant digestive system that consists of four stomach compartments (rumen, reticulum, omasum, and abomasum) containing billions of microorganisms.

Observe the 'Ruminant Digestive System' poster.

Using the poster, colour code the arrows in the diagram to match the poster's colour key.



Activity 1 continued next page



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Activity 1 continued

Activity 1

Record the correct number in the first column of the table to match the structure to the label and description in the poster key.

No.	Label	Description
	Omasum	Made up of lots of leaf-like projections, creating a large surface area to absorb water.
	Mouth	The tongue is used to grasp a clump of grass and pull it into the mouth. Teeth in the mouth chew fresh plant material and regurgitated material from the rumen known as the 'cud'.
	Small intestine	About 40 metres long and is where additional digestion and absorption of nutrients occurs.
	Oesophagus	Muscle contractions move the food down from the mouth to the rumen and also back up to the mouth again so it can be chewed again.
	Anus	A circular muscle that controls the expulsion of waste from the digestion process.
	Rumen	The largest part of the stomach. It is here that billions of microorganisms begin to ferment the plant material. It is also used for storage of chewed vegetation that will be passed back into the mouth for more chewing (rumination).
	Abomasum	The last part of the stomach. It functions like stomachs found in non-ruminant animals, using acid and digestive enzymes to break down food.
	Large intestine	The final part of the digestive tract. Its main function is to absorb water and minerals.
	Reticulum	Acts as a filter, trapping larger particles that require further chewing. A small tissue fold lies between the reticulum and rumen, but the two aren't separate compartments.

Access the curriculum-aligned Australian Good Meat Education [resources](#) Year 7–10 to extend the learning on this topic, including Year 7–8 [Feeding strategies and product quality](#) and Year 9–10 [Intensive and extensive production systems](#) lessons to learn more about ruminant digestion, nutrition, and meat quality.