

ACTIVITY EXAMPLE

KEY WORDS

Numeracy | algebra | problem solving | decimals | ratios | number | calculations | measurement | area | perimeter | volume | mass

ALSO USEFUL FOR

Business studies | Economics | Agriculture | Agribusiness | Science

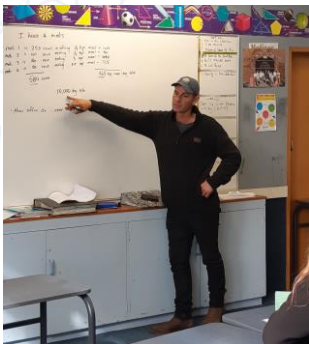
PROGRAMME OUTLINE

3 POINTS OF CONTACT

- Dairy farmers come into classroom (x2)
- Workplace visit (x1)

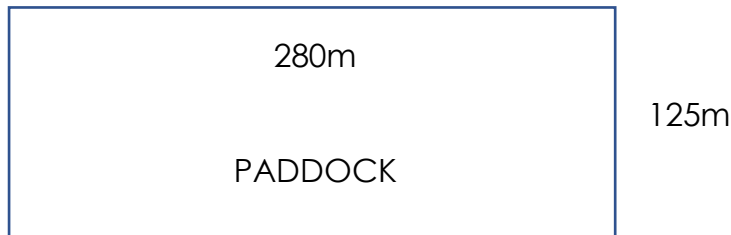
EXAMPLE

1. Dairy Farmers come into classroom, introduce themselves, background to dairy farming, their careers and how maths is used in the industry.
2. Workplace visit includes tour of the cowshed area, stock feed areas and paddocks. Introduction to the wider agricultural sector including suppliers and farming consultants. Seeing dairy farming 'behind the scenes'
3. Return to the classroom. **Student Activity:** Dairy grazing and calf feeding



ACTIVITY EXAMPLE

BREAK FEEDING



1. I have 320 cows going to paddock 17.

- One hectare (ha) is 10 000 m²
- How big in m² is paddock 17?
- How big in hectares is paddock 17?

2. I want to make the cows daily allocated area 0.17ha.

- How many days can I get out of paddock 17?
- If I want to get 4 days out of the paddock, how big would their daily allocated area be?
- How big would the daily allocated area be if I want to get 6 days out of the paddock?

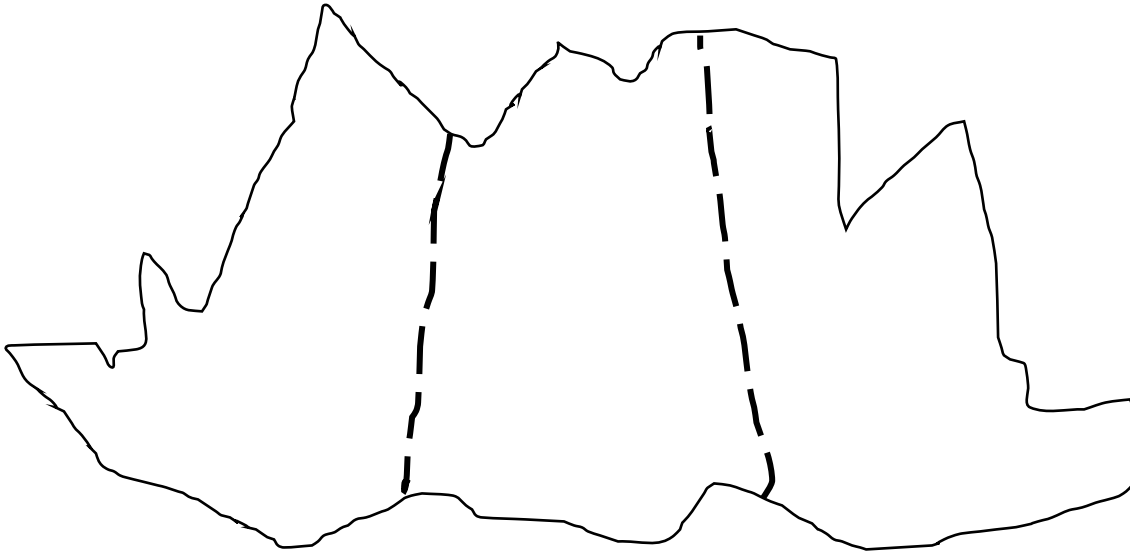
3. I want my cows to eat 10kg of dry matter (dm) per cow per day.

- If there is not enough grass to feed each cow 10kg each, how much do I need to give them in hay to make up the difference?

4. The pasture cover is 4200kg of dry matter per hectare. There will be 1500kg of dm per ha once the cows have finished eating.

- How much is available (or eaten) per hectare?
- How much is available or eaten in their allocated daily area?
- How many kg is that per cow?
- Is that enough?
- How many kg's do I need to supplement?
- One bale of hay = 220kg dm
- How many bales of hay do I need to feed each day?

ACTIVITY EXAMPLE



2.8 hectares (ha)

5. I have an odd shaped paddock which is difficult to fence. The easiest way to fence it is into 3 even sized breaks.

I don't want to feed hay in here, so I want my cows to get their entire 10kg/dm/cow totally in grass. The paddock is 2.8 ha's with 4200kg/dm/ha cover leaving 1500kg/dm/ha when finished grazing:

- how big is each day's allocated area?
- how many cows can I afford to put in these breaks to get 10kg/dm each?

ACTIVITY EXAMPLE

MEAL FEEDING

My cows are currently in 4 different mobs.

- b) Mob 1 is 250 cows eating 4kg meal/cow/day
- c) Mob 2 is 40 cows eating 4kg meal/cow/day
- d) Mob 3 is 160 cows eating 3kg meal/cow/day
- e) Mob 4 is 130 cows eating 2.5kg meal/cow/day

1. How many cows do I have?
2. How many kg meal am I feeding in total?
3. What is the average per cow?
4. I have a 10 000 kg silo. How often do I need it refilled?

MOLASSES FEEDING

1. I have a molasses vat that holds 3000 litres. My cows get 350 ml of molasses/cow/milking.

- a) If I milk once a day, how much molasses am I using per day?
- b) How often do I need my vat refilled?
- c) If I milk twice a day, how much molasses am I using per day?
- d) How often do I need my vat refilled?

CALF FEEDING

- 1. I have a calf milk vat that holds 8000 litres. I have 30 cows giving 20 litres/cow/day to feed the calves.**
 - a) How much calf milk am I getting per day?
 - b) How many days will it take to fill the vat?
 - c) *BUT* I have 50 calves drinking 5 litres of milk/calf/day. How much are the calves drinking per day?
 - d) How many litres is my vat actually going up by per day?
 - e) How many days will it take to fill my vat?
- 2. By the end of calving I have 120 dairy calves and 50 beef calves so 170 calves all together. They are fed different amounts of milk depending on their age and weight. I have:**
 - 40 calves drinking 3.5L each
 - 40 calves drinking 4L each
 - 40 calves drinking 4.5L each
 - 50 calves drinking 5L each
 - a) How much milk do I need each day?
 - b) Is my 600L enough?
 - c) How much extra do I need to top it up with each day?
 - d) *Cost of each litre is 10 cents.* How much does it cost me per day?
 - e) How much does it cost me per calf?