

Explain the sustainability of the continuing use of the environment.

MOVING TOWARDS SUSTAINABLE DAIRYING - CURRENT INNOVATIONS AND PRACTICES.

ESSENTIAL QUESTION

Can a farmer help me see into the future?

WHAT ARE WE LEARNING?

- Explains how different processes operate and how they impact on environments.
- Conduct good quality student-led geographic research.
- Investigate a real world dairy farm and assess farmer progress against industry standards.

TRY THIS WITH

- Year 11 Geography students
- Students who live in a rural environment.
- Students who enjoy challenging situations.

FIND

- Interpret
- Restate
- Summarise
- Trace
- Define
- Name

Share at least six videos between the students that claim to explain the term 'sustainability'.

Analyse [each](#) video for [definitions](#) and [explanations](#).

Use the class findings to create a shared understanding of what sustainability means.

Check that the shared understandings are a fair reflection of the [NZ Curriculum definition](#).

Reflect again on the TedEd [Causal Relationships](#) Flipped Lesson.

Re-visit the key impacts of dairy farming identified in the Impact and Use study.

Refer to the [Farm Enviro Walk Guide](#) and support students to choose individual themes.

Research [guidelines](#), [legislation](#) and [practical examples](#) the dairy industry employs to address these impacts.

Use [Visual.ly](#) to summarise the [NZ legislative](#) and [policy guidelines](#) on one page.



APPLY

- Connect
- Interview
- Cause and Effect
- Simplify
- Organise
- Represent

Investigate [New Zealand's progress](#) on policy and legislative requirements.

Watch the [three](#) on-farm innovation videos to spark thinking around innovation.

Use the class Popplet impact maps to remind students of the details of their research pre-visit.

On an individual basis, support students to create an [on-farm](#) summary of each of their four chosen impacts.

Ask students to identify the theme in relation to both their map and to the recommended advice on the [Envirowalk](#).

Consider contacting your farmer or industry representative to point you in further helpful directions.

Use [Twitter](#) and the hashtag #agchat to check in with NZ farmers about any further information that is required.

Ask what they do to manage environmental impact for specific themes.



PRODUCE

- Speculate
- Evaluate
- Recommend
- Appraise
- Visualise
- Construct

Review information collected from the farm visit.

Create another layer of information for your original map.

Add all information and any photos to the map of the farm and surrounding region. Include labels.

Encourage students to include any additional information specifically related to hotspots, waterway type, riparian planting and roading.

Support students to organise their Farm Enviro Walk report for the farmer.

Use an indicative photo taken during the visit to create a [Thinglink](#) for each impact selected pre-visit.

Create an individual [Thinglink](#) of the four impacts that were chosen pre-visit.

Use the Enviro Walk document to assess current progress, next steps and any other comments you feel you may want to add.

Reflect on the class opinion of dairying at the beginning of the study.

Use [Today's Meet](#) to discuss - have class opinions moved, shifted, altered?



SUCCESS CRITERIA

Students can check they have successfully completed the task by:

- Creating a visual.ly that summarises key legislative standards for Dairy Farming in NZ.
- Investigating current innovative practice in the area of sustainability on NZ Dairy Farms.
- Creating four Thinglinks (one for each impact) that serve as the Farmer's Enviro Walk Report.

PRINCIPLES	VALUES	KEY COMPETENCIES	LEARNING AREAS	WORD BANK	KEY CONCEPTS
Future Focus Learning to Learn	Ecological Sustainability Community and Participation	Social Skills Resource Construction	Science Mathematics and Statistics	1. Riparian Planting 2. Irrigation 3. Nutrient Budget 4. Silage	Interaction Environments