

Using Google SketchUp to Demonstrate Learning

EXPLORING THE DIFFERENT PARTS OF A DAIRY FARM

ESSENTIAL QUESTION

Can I show my learning using design?

WHAT ARE WE LEARNING?

- To retrieve and validate information from different sources
- To manage time effectively to ensure deadlines are met
- The intricate nature of a working dairy farm

TRY THIS WITH

- Years 6-8
- Students who have an interest in design
- Students who love showing their learning in different ways

FIND

- | | |
|---------------|-------------|
| Comprehension | Demonstrate |
| Discuss | List |
| Observe | Listen |

Watch a selection of Cow Cams and compete to list as many different parts of a farm as possible.

Choose a part of a farm to investigate.

Create a Wordle by naming all the things students can think of associated with this area of a dairy farm.

Explain that students will choose and research a part of a dairy farm and design it using Google SketchUp.

Discuss what students will need to know to design their chosen farm part. For example, how many cows can fit in a milking shed?

Review the process of validating information by checking three different sources.



APPLY

- | | |
|----------|----------|
| Research | Choose |
| Identify | Organise |
| Infer | Compare |

Choose a part of a dairy farm to research. Some examples are; milking shed, cattle yards, implement/machinery shed, paddock and riparian planted stream.

Decide what information is needed to design this part of a dairy farm in detail. Turn these 'need to knows' in to research questions.

Create a Google Doc template for the design log.

Use these fields; Date, Time, What I worked on, Sites / Platforms used, Issues, How I solved the issues, Breakthroughs or Moments of Genius, Where to from here and Feedback.

Fill in the design log to track work output, thought processes and progress.



PRODUCE

- | | |
|---------|-----------|
| Compile | Design |
| Explain | Adapt |
| Justify | Interpret |

Explore Google SketchUp to become familiar with using it.

Create a comprehensive and detailed design of the chosen farm part. The design will reflect the depth of the research. Students who are able can use a scale to reflect real life measurements.

Record sections of the design process using Screenr.

Provide commentary explaining the features being worked on and the research that led to their inclusion.

Add these 'screens' to the design log to form a full record of the student's learning and thought process.

Share the designs by allowing students to explore them from all angles and ask the designer questions.



SUCCESS CRITERIA

Students can check they have completed the task successfully by:

- Explaining how each feature is integral to the successful working of that area and ultimately the entire farm
- Ensuring their design shows the depth of their research through the level of detail they include
- Researching their farm part comprehensively

PRINCIPLES	VALUES	KEY COMPETENCIES	LEARNING AREAS	WORD BANK	RESOURCES REQUIRED
Coherence High expectations	Innovation, inquiry and curiosity Community and participation Excellence	Thinking Managing self Using language, symbols and texts	Mathematics and Statistics Social Sciences	Validate Deadline Three dimensional Integral	DairyNZ TED-Ed Videos