DairyNZ

Providing meaningful contexts to engage mathematical thinking.

GATHER, SORT AND DISPLAY DATA SETS FOR MATHEMATICAL AND STATISTICAL THINKING.

ESSENTIAL QUESTION

Can you fill a wall with numbers?

WHAT ARE WE LEARNING?

- To estimate, calculate and use strategies with numbers.
- To use appropriate scales, devices and metric units.
- To use Olympic catering and events to provide context to numbers.

TRY THIS WITH

- Year Level 3-8
- Students who have the ability to find numbers and patterns in everything.
- Students who love Post-it Notes.

FIND

Choose
Identify
Label
Give examples
Match
Recall

Watch 'The Beginner's Guide to the Olympics'.

Discuss Rio de Janeiro Olympics 2016 numbers.

Allocate categories such as catering, track, travel, points and people numbers.

See what has been done with Post-it Note walls.

Challenge the class to fill a wall with colour coded group Post-It Notes.

Search for Rio Olympic numbers using Google and YouTube and collate on a Pinterest board.

Write the numbers on the Post-it Notes.

Investigate DairyNZ facts and figures to add to the wall.

Identify math terms and concepts from the NZ Curriculum.

Write the math terms and concepts onto Post-it Notes for reference.

Use Khan Academy tutorials and tests to check your understanding.

Identify the terms and concepts in the Rio Olympic numbers.

Add as notations to the Post-it Notes.

APPLY

Investigate
Isolate
Categorise
Analyse
Calculate
Question

Count the Olympic examples you have for measurement units of length, area, volume and capacity, weight (mass) and time.

Discuss the units of measurement and processes that have been used.

Combine enquiry and research in Olympic stories, e.g. how long does it take you, a cyclist and a runner to cover 400m?

Use the following 'milk story' as an example:

Conduct a statistical enquiry of daily milk intake of students.

Research NZ figures for a student, adult and athlete.

Determine the volume of a glass of milk.

Write equations and calculate the amount of milk needed at the Rio Olympics.

Weigh 1L bottles of milk to determine their volume.

Measure the distance the milk would need to travel if NZ were the main supplier.

Calculate how many fridges will be required to store the milk.

PRODUCE

Measure
Solve
Support
Innovate
Visualise
Modify

Create a Piktochart infographic to tell one of the mathematical stories.

Identify each object in the story, e.g. glass of milk, plane.

Explain that each can be represented using an icon, photo or 3D model.

Download the 123Dapp onto an iPad or iPhone.

Watch tutorials and open the 123Dapp.

Place the object on a white background.

Take 30+ photos to capture the object from every angle.

Allow time for the photos to load and finalise.

Decide on ways to show scale and quantity, e.g. 10 glasses = 100L.

Open a blank infographic in a new Piktochart.

Input text, numbers, photos and icons.

Include mathematical symbols to make sense of the information.

Manipulate the composition (set up) of the infographic.

Peer review to assess readability and impact.

SUCCESS CRITERIA

Students can check they have completed the task successfully by:

- Explaining the Rio Olympics in numbers.
- Calculating the distance travelled if NZ were the main supplier.
- Creating an infographic that tells a mathematical story.

PRINCIPLES	VALUES	KEY COMPETENCIES	LEARNING AREAS	WORD BANK	KEY CONCEPTS
Coherence High expectations	Innovation, inquiry and curiosity Excellence	Thinking Using language, symbols and text	Mathematics and statistics Health and Physical education	Calculate Measure Context Volume	Units of measurement Statistical enquiry Patterns and relationships Investigating