**Inclusive Education** 



# Provide reading and writing supports for numeracy in NCEA

A suggestion for implementing the strategy 'Supporting literacy and numeracy in NCEA' from the Guide: Dyslexia and learning

### Includes:

Understand what the question is asking Break questions down into steps Support working memory Make the abstract concrete Useful resources

## Understand what the question is asking

Scaffold learners to find the "mathematical and statistical clues" in the context of the question.

Highlight how everyday words can have a different meaning in maths and statistics e.g. mean, average.



Video hosted on Vimeo http://vimeo.com/97295513

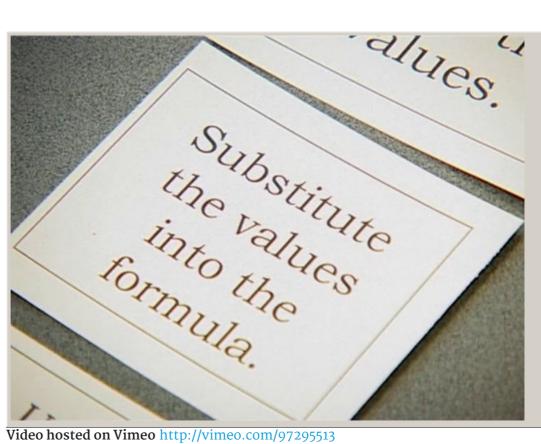
**Closed Captions** 

Source: Ministry of Education (NZ) https://vimeo.com/educationnz

## **Break questions down into steps**

Use cards to break down the question.

This can help ākonga identify the steps needed to solve the problem.



Video hosted on Vimeo http://vimeo.com/97295513 **Closed Captions** 

Source: Ministry of Education (NZ) https://vimeo.com/educationnz

## Support working memory

Following multi-step directions and operations requires ākonga to hold information in their heads whilst they work.

Here are some useful strategies to support this working memory:

- ✓ Work with ākonga to find an approach for breaking apart multi-step directions that works for them. They may draw lines between each step, or highlight, cross out, or number each step.
- ✓ Encourage ākonga to write down their thoughts and observations to support mental calculations on paper.
- ✓ Give your learner examples to look at in order to decrease the cognitive load.
- ✓ Provide frequent practice to build competency.
- Encourage the use of physical objects, manipulatives, drawing and visual representations.
- ✓ Identify and use assistive tools where applicable e.g. calculators, text-to-speech.
- ✓ Allow ākonga to move at their own pace. Be considerate of the time it takes to read and interpret questions.

## Make the abstract concrete

In this video, ākonga manipulate cards and draw diagrams to help understand the maths and statistics in the context.

Familiar contexts support links to prior knowledge.



Video hosted on Vimeo http://vimeo.com/97295512

**Closed Captions** 

Source: Ministry of Education (NZ) https://vimeo.com/educationnz

## **Useful resources**



## Resources to Support Numeracy Across the Curriculum

The Numeracy Pedagogy Guides (NPGs) and Numeracy Enhanced Plans (NEPs) link authentic and meaningful contexts that are numeracy-rich from your learning area to the content ideas in Unpacking Numeracy.

### Visit website

www

### Numeracy

This page of the NCEA website contains information to support building effective relationships, and effective practices that support NCEA numeracy.

### Visit website

www

### Dyslexia and mathematics fact sheet

#### Read time: 4 min

This factsheet describes the effects of dyslexia and teaching accommodations that support dyslexic learners are described. This includes: working memory, language, processing speed, and anxiety.

Publisher: Code Read Dyslexia Network

### Visit website

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