

# Curriculum Clarity Template

## Gaining clarity of the curriculum intent for a unit of study

(a guide with prompts and examples can be found here: <https://school-inclusion.com/inclusion-in-action/teaching-and-learning/>)

### Compare and Analyse Data Displays – Year 6 Math

#### 1. Achievement Standard

In this unit, assessment of student learning aligns to the following components of the achievement standard.

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They interpret secondary data displayed in the media.

Students locate fractions and integers on a number line. They calculate a simple fraction of a quantity. They add, subtract and multiply decimals and divide decimals where the result is rational. Students calculate common percentage discounts on sale items. They write correct number sentences using brackets and order of operations. Students locate an ordered pair in any one of the four quadrants on the Cartesian plane. They construct simple prisms and pyramids. Students describe probabilities using simple fractions, decimals and percentages.

#### 2. Assessable Content Descriptions

Content Descriptions		
Number and Algebra	Measurement and Geometry	Statistics and Probability
<p><i>Number and place value</i></p> <ul style="list-style-type: none"> <li>Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)</li> <li>Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)</li> </ul> <p><i>Fractions and decimals</i></p> <ul style="list-style-type: none"> <li>Compare fractions with related denominators and locate and represent them on a number line (ACMNA125)</li> <li>Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126)</li> <li>Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)</li> <li>Make connections between equivalent fractions, decimals and percentages (ACMNA131)</li> </ul> <p><i>Money and financial mathematics</i></p> <ul style="list-style-type: none"> <li>Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)</li> </ul>	<p><i>Using units of measurement</i></p> <ul style="list-style-type: none"> <li>Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)</li> <li>Interpret and use timetables (ACMMG139)</li> </ul>	<p><i>Chance</i></p> <ul style="list-style-type: none"> <li>Describe probabilities using fractions, decimals and percentages (ACMSP144)</li> <li>Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)</li> </ul> <p><i>Data representation and interpretation</i></p> <ul style="list-style-type: none"> <li>Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)</li> </ul>

### 3. Identify the key components of curriculum, cognition, context and complexity

#### Achievement Standard and Content Descriptions:

- Interpret and compare
- Variety of data displays (including side-by-side column graphs)
- Two categorical variables



#### Year Level Description:

**Problem solving** - includes formulating and solving authentic problems



#### Elaborations:

- comparing different student-generated diagrams, tables and graphs, describing their similarities and differences and commenting on the usefulness of each representation for interpreting the data
- understanding that data can be represented in different ways, sometimes with one symbol representing more than one piece of data, and that it is important to read all information about a representation before making judgements



#### Literacy:

Composing texts through speaking, writing and creating

- Compose spoken, written, visual and multimodal learning area texts
- Compose texts

Word Knowledge

- Understand learning area vocabulary

Comprehending texts through listening, reading and viewing

- Comprehend texts
- Navigate, read and view learning area texts
- Interpret and analyse learning area texts

Visual Knowledge

- Understand how visual elements create meaning

#### Numeracy:

Interpreting statistical information

- Interpret data displays

#### Critical and Creative Thinking:

Analysing, synthesising and evaluating reasoning and procedures

Inquiring – identifying, exploring and organising information and ideas

- Apply logic and reasoning
- Organise and process information
- Identify and clarify information and ideas



#### 4. Consolidate this information into a Learning Objective and Success Criteria for the unit of study

**Students are learning to interpret, compare and analyse data displays to make decisions.**

**They will be successful when they can:**

- Understand data can be represented in different ways
- Understand that sometimes a symbol can represent more than one piece of data
- Interpret information from data displays
- Compare different student-generated diagrams, tables and graphs
- Describe similarities and differences
- Comment on the usefulness of each representation
- Analyse data to make reasoned decisions (agree/disagree, make recommendations, explain reasoning)

In addition, teachers may wish to articulate what students need to know, be able to do and think about in order to be successful in the assessment task.

This process draws alignment between the achievement standard, curriculum elements and the context of the assessment task, explicitly identifying the aspects required for success. It demonstrates the connection between curriculum input and output expectations.

The following Unit Analysis table for this unit of study has been extended to reflect the provision of substantial (alternate access point) and extensive (individual learning goals) curriculum adjustments to meet the needs of identified students in the class.

## Unit Analysis Table

Unit Analysis			Curriculum Adjustments	
Know	Do	Think	Substantial (Year 1 Access Point)	Extensive (Individual Learning Goals)
Data can be represented in different ways	Read and interpret information from data displays	What are the different types of data displays? How do I read and interpret their meaning?	Make simple inferences from data displays (objects and drawings)	Display information using real objects and photographs
A symbol can represent more than one piece of data	Draw a suitable key to communicate the amount of data represented	How much data does the symbol represent? How do I know?	A symbol represents one piece of data – record the amount of data represented (one-to-one correspondence)	Comment on data in pictographs
Features of data displays	Describe similarities and differences	What features are the same or different?	Describe categories with greatest or least number of objects	Work out the meaning of pictographs using knowledge of context and vocabulary
Purpose and quality of data representation in different displays	Comment on the usefulness of each representation	Is the display a good representation of the data? Why/why not?	What questions to ask to get the data needed – determine which question will collect appropriate responses Collect data	Convey knowledge about learning area topic
Data can inform decisions and support or refute statements	Analyse data to make a reasoned decision (agree/disagree, make recommendations, explain reasoning)	What is the data telling us? Does this support the statement?	Use the data to justify if a statement is true or false	Respond to questions about pictographs Respond to questions about information displayed

**5. Consider the literacy demands and proactively plan how these will be taught and adjusted:**

Literacy Demand	Support/Adjustment
Read and comprehend questions	Reader Text to speech Clarify understanding Comprehension scaffolds
Tier 2 vocabulary	Explicitly teach and review key words Provide visual prompts and student friendly definitions
Write answers	Modelled responses Sentence starters Scribe Speech to text Voice/video record verbal responses

*Note: the general capabilities literacy continuum can be utilised to inform supports and adjustments to the literacy demands*

**6. Consider the summative assessment conventions (technique, type of text, mode and conditions) and the provision of access adjustments:**

The current summative assessment is a test which is to be completed in one sitting.

Things to consider:

- Ensure instructions are clear
- Provide extra time and/or chunk into sections across days
- Consider the text size and font
- Consider clarity and size of graphics (graphs)
- Format layout so that graphs and their associated questions are on the same page
- Adjust the complexity of the oral and written instructional language
- Provide the identified supports and adjustments for the literacy demands
- Consider if alternate ways of capturing what students know and are able to do would be more effective/appropriate
- Consider if choice in how a student demonstrates their learning can be incorporated

**7. Consider any additional adjustments for individual students:**

The student accessing substantial curriculum adjustments will require an assessment task that reflects the knowledge and skills identified at the Year 1 access point. This will require the question complexity of the summative assessment and the associated marking guide to be altered.

The student accessing individual learning goals may need to demonstrate their learning in a more appropriate way – such as collecting evidence throughout the unit of study. The evidence collected may include photographs, videos, observations and annotated work samples. This student may also require personalised literacy and communication adjustments which would need to be considered for the summative assessment, but also in the teaching and learning process.

It is recommended that multidisciplinary collaboration occurs in relation to curriculum instruction for both of these students.