MATHEMATICS STAGE 2

TEACHING AND LEARNING OVERVIEW

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| TERM:  | WEEK:13  | STRAND: Number and Algebra  | **SUB-STRAND:** Fractions and Decimals | **WORKING MATHEMATICALLY:** MA2-1WM, MA2-3WM |
| OUTCOMES: MA2-7NA | **\* Represents, models and compares commonly used fractions and decimals** |
| **CONTENT:**  | **Recognise that the [place value](http://syllabus.bos.nsw.edu.au/glossary/mat/place-value/?ajax" \t "_blank" \o "Click for more information about 'place value') system can be extended to tenths and hundredths, and make connections between fractions and [decimal](http://syllabus.bos.nsw.edu.au/glossary/mat/decimal/?ajax" \t "_blank" \o "Click for more information about 'decimal') notation** \* apply knowledge of decimals to record measurement eg 123cm = 1.23m\* interpret zero digit (s) at the end of a decimal eg 0.70 has the same value as 0.7 and 3.00, 3.0 have the same value as 3. |
| ASSESSMENT FOR LEARNING**(PRE-ASSESSMENT)** | * Match up (see attached) Students are matching decimals that are the same eg 3.00 is the same as 3
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| WARM UP / DRILL | * Skip counting playing Buzz off.
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | Cassidy has 325cm of rope but his teacher has told him that he needs to show this in metres. How many metres of rope does Cassidy have?* Ken has to write 4.60 a different way but is unsure how to write this. What is a different way to write 4.60?
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| QUALITY TEACHING ELEMENTS | INTELLECTUAL QUALITY | QUALITY LEARNING ENVIRONMENT | SIGNIFICANCE |
| * Deep knowledge
* Deep understanding
* Problematic knowledge
* Higher-order thinking
* Metalanguage
* Substantive communication
 | * Explicit quality criteria
* Engagement
* High expectations
* Social support
* Students’ self-regulation
* Student direction
 | * Background knowledge
* Cultural knowledge
* Knowledge integration
* Inclusivity
* Connectedness
* Narrative
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| RESOURCES | Match Up (Pre assessment), Worksheet (Which is the same value), Memory Matching, Clothes Line, Clothes line (Extension) Cut and Paste, Art Paper, Catalogues, Work Sheet (Mass- Kilograms and grams) Decimal wheel |

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explain that a decimal point is used to show how many tenths or hundreds are in a number this is dependent on whether there is 2 or 3 numbers after the decimal point. The teacher needs to write an example on the board and these above concepts to the students. Provide students with 5 quick questions to access understanding.* The teacher writes examples on the board which use the digit in the same spot but different amounts of zero. Eg 0.3, 0.30 Provide students with a guided worksheet and work through together (attached) (Which is the same value).
* Ask students to suggest real life examples of where decimals cross over with measurement eg 1025g is the same as 1.025kg. Create a class mind map of the results.
 | LEARNING SEQUENCERemediationS1 or Early S2 | * **Memory Matching different pairs:** Students break off into pairs or 4’s they spread out the decimal cards on the floor each decimal number has a matching pair of the same value. Example 0.01 and .01. Students need to match up the pairs from memory and keep their pairs. The student with the most pairs wins. Students are presented with less cards.
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| LEARNING SEQUENCES2 | * **Memory Matching different pairs:** Students break off into pairs or 4’s they spread out the decimal cards on the floor each decimal number has a matching pair of the same value. Students need to match up the pairs from memory and keep their pairs. The student with the most pairs wins.
* **Clothes Line Matching different pairs:** Tie a piece of string across the room. Place one set of numbers on the string students are then given another set of numbers that have equal value. Students need to match the numbers to the numbers on the string.
* **Cut and Paste Matching different ways to write:** Students are presented with a worksheet that requires them to match the grams value to the kg value. They are of equal value but are presented differently eg 1250g equals 1.25kg.
* **Worksheet** (Mass-Kilograms and grams): Students are converting grams to kg and kg to grams.
* **Investigation:**

Students will be investigating different ways under and over 1kg can be written on labels. Students will be creating a grid with the picture in the first column, the measurement of kg In the next and grams in the last. All activities can be used as assessment. |
| LEARNING SEQUENCEExtension Late S2 or Early S3 | * Ask Students:

What is the relationship between kg and g?Does a zero always change the value of a decimal?Can you tell me 2 decimals of equal value? |
| **EVALUATION & REFLECTION** | **Student Engagement: Resources:****Achievement of Outcomes: Follow-up:** |

* All assessment tasks should be written in red and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.