**MATHEMATICS STAGE 2**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: 16 | 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** \* Recognise that amounts of money are written with two decimal places eg $4.30 is not written $4.3.\* Uses one of the symbols for dollars ($) and cents (c) correctly when expressing amounts of money. |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Present students with 5 word problems about money and ask them to convert to numbers. Eg 6 dollars and 30 cents.

Using these 5 questions establish a starting point for learning.* Convert to a number sentence:

 2 dollars and 45 cents, 3 dollars and 30 cents, 15 dollars and 45 cents, 64 dollars and 80 cents, 107 dollars and 20 cents. |
| **WARM UP / DRILL** | * Buzz off skip counting by 2,3,5,10
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | Bill went to the bank with 900 cents to put in his account how much is this in dollars?* Jade was counting her money box she had $404.95. How much is this in cents?
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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 | IWB File matching, Cut and Paste Sheet, Number Cards, Assessment, IWB file decimal point, IWB file Circle correct answer, How much can I make cards |

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Teach and Review: Show students where the $ or cents sign goes and modelled how this is done correctly to two decimal places. * **Where does the decimal point go?** Teach students where the decimal point goes when calculating money. They will need to be shown that there is always 2 numbers after the decimal point.
* **Teach and Review:** Show students how to correctly write money to 2 decimal places. Ask students to come up and have a go at writing the number sentence themselves
* **IWB Matchup:** Students match the words to the correct number sentence on the IWB.
 | LEARNING SEQUENCERemediationS1 or Early S2 | * Match Up: Students are matching cards from $1.01 to $9.99. Give students cards the number sentence and the matching word problem. Cards in file titled “match up low”
* Cut and Paste: Students match up a mixture of cards that range from $1.01 to $9.99 to the word sentence. They are required to cut out the number sentence and match with the word sentence before gluing in the book. Cards in file titled “cut and paste low”
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| LEARNING SEQUENCES2 | * Match Up: Students match up a mixture of cards that range from$0.01 to $99.99 to the word sentence. Give students the number sentence and matching word problem Cards in file titled “ matchup”

 * Cut and Paste: Students match up a mixture of cards that range from$0.01 to $99.99 to the word sentence. They are required to cut out the number sentence and match with the word sentence before gluing in the book. Cards in file titled “cut and paste”.
* Quick Questions: Teacher to write 10 questions on the board with numbers all in cents and ask students to convert to dollars and cents and 10 questions when numbers are already in dollar and cents ask students to convert back to dollars.
* How much can I make: Present students with a set of number cards 4 will be fine see file titled “How much can I make” ask students to find out what is the highest number they can make in dollars and cents. They need to write the amount in both dollars and cents format and also cents format. Students can work in pairs. A focus should be on using the correct signs for dollars, placing the decimal point in the correct spot and also adding the zero to the end of the cents part when it is on the tens.
* Assessment: Ongoing observation assessment will take place during group activities
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| LEARNING SEQUENCEExtension Late S2 or Early S3 | * Match Up: Students match up a mixture of cards that range from $0.01 to $999.99 to the word sentence. Give students the number sentence and the matching word problem. Cards in file titled “ matchup high”
* Cut and Paste: Students match up a mixture of cards that range from$0.01 to $999.99 to the word sentence. They are required to cut out the number sentence and match with the word sentence before gluing in the book. Cards in file titled “cut and paste high”
* How much can I make: Present students with a set of number cards 6 will be fine see file titled “How much can I make” ask students to find out what is the highest number they can make in dollars and cents. They need to write the amount in both dollars and cents format and also cents format. Students can work in pairs. A focus should be on using the correct signs for dollars, placing the decimal point in the correct spot and also adding the zero to the end of the cents part when it is on the tens.
* Quick Questions: Teacher to write 15 questions on the board with numbers all in cents and ask students to convert to dollars and cents.
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| **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.