**FRACTIONS AND DECIMALS 1 – STAGE 2**

**OUTCOMES**

A student:

* MA2-1WM - uses appropriate terminology to describe, and symbols to represent, mathematical ideas
* MA2-3WM - checks the accuracy of a statement and explains the reasoning used
* MA2-7NA - represents, models and compares commonly used fractions and decimals

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| **CONTENT** | **plan** |
| **Model and represent [unit fractions](http://syllabus.bos.nsw.edu.au/glossary/mat/unit-fraction/?ajax" \t "_blank" \o "Click for more information about 'unit fractions'), including one half, one third, one fifth and one quarter and their multiples to make a whole** |  |
| model [fractions](http://syllabus.bos.nsw.edu.au/glossary/mat/fraction/?ajax" \t "_blank" \o "Click for more information about 'fractions') with [denominators](http://syllabus.bos.nsw.edu.au/glossary/mat/denominator/?ajax" \t "_blank" \o "Click for more information about 'denominators') of 2, 3, 4, 5 and 8 of whole objects, shapes and collections using concrete materials and diagrams, e | 1 |
| recognise that as the number of parts that a whole is divided into becomes larger, the size of each part becomes smaller (Reasoning) | 1 |
| recognise that fractions are used to describe one or more parts of a whole where the parts are equal, eg  (Communicating, Reasoning) CT | 1 |
| name fractions up to one whole | 2 |
| interpret the denominator as the number of equal parts a whole has been divided into | 2 |
| interpret the [numerator](http://syllabus.bos.nsw.edu.au/glossary/mat/numerator/?ajax" \t "_blank" \o "Click for more information about 'numerator') as the number of equal fractional parts, eg three eighths is 3 equal parts in 8 | 2 |
| use the terms 'fraction', 'denominator' and 'numerator' appropriately when referring to fractions http://syllabus.bos.nsw.edu.au/wsimages/cca/l.png | 2 |

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| **Count by quarters, halves and thirds, including with mixed [numerals](http://syllabus.bos.nsw.edu.au/glossary/mat/numeral/?ajax" \t "_blank" \o "Click for more information about 'numerals'); locate and represent these fractions on a [number line](http://syllabus.bos.nsw.edu.au/glossary/mat/number-line/?ajax" \t "_blank" \o "Click for more information about 'number line') (ACMNA078)** |  |
| identify and describe 'mixed numerals' as having a [whole-number](http://syllabus.bos.nsw.edu.au/glossary/mat/whole-number/?ajax" \t "_blank" \o "Click for more information about 'whole-number') part and a fractional part | 3 |
| rename 2 halves and 3 thirds as a whole | 3 |
| count by halves, thirds and quarters | 3 |
| place halves, quarters, eighths and thirds on number lines between 0 and 1, eg  | 4 |
| place halves, thirds and quarters on number lines that extend beyond 1, eg  | 4 |
| compare unit fractions using diagrams and number lines and by referring to the denominator, eg one eighth is less than a half | 5 |
| recognise and explain the relationship between the value of a unit fraction and its denominator (Communicating, Reasoning) CT | Missing |

**FRACTIONS AND DECIMALS 2 – STAGE 2**

**OUTCOMES**

A student:

* MA2-1WM - uses appropriate terminology to describe, and symbols to represent, mathematical ideas
* MA2-3WM - checks the accuracy of a statement and explains the reasoning used
* MA2-7NA - represents, models and compares commonly used fractions and decimals

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| **CONTENT** | **Plan** |
| **Investigate [equivalent fractions](http://syllabus.bos.nsw.edu.au/glossary/mat/equivalent-fractions/?ajax" \t "_blank" \o "Click for more information about 'equivalent fractions') used in contexts (ACMNA077)** |  |
| model, compare and represent [fractions](http://syllabus.bos.nsw.edu.au/glossary/mat/fraction/?ajax" \t "_blank" \o "Click for more information about 'fractions') with [denominators](http://syllabus.bos.nsw.edu.au/glossary/mat/denominator/?ajax" \t "_blank" \o "Click for more information about 'denominators') of 2, 4 and 8; 3 and 6; and 5, 10 and 100 | 6 |
| model, compare and represent the equivalence of fractions with [related denominators](http://syllabus.bos.nsw.edu.au/glossary/mat/related-denominators/?ajax" \t "_blank" \o "Click for more information about 'related denominators') by redividing the whole, using concrete materials, diagrams and [number lines](http://syllabus.bos.nsw.edu.au/glossary/mat/number-line/?ajax" \t "_blank" \o "Click for more information about 'number lines'), CThttp://syllabus.bos.nsw.edu.au/wsimages/cca/l.png | 7 |
| record equivalent fractions using diagrams and [numerals](http://syllabus.bos.nsw.edu.au/glossary/mat/numeral/?ajax" \t "_blank" \o "Click for more information about 'numerals') | 7 |
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| **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 (ACMNA079)** |  |
| recognise and apply decimal notation to express [whole numbers](http://syllabus.bos.nsw.edu.au/glossary/mat/whole-number/?ajax" \t "_blank" \o "Click for more information about 'whole numbers'), tenths and hundredths as decimals, eg 0.1 is the same as one tenth | 8 |
| investigate equivalences using various methods, eg use a number line or a calculator to show that a half is the same as 0.5 and 5 tenths (Communicating, Reasoning)  | 9 |
| identify and interpret the everyday use of fractions and decimals, such as those in advertisements (Communicating, Problem Solving) http://syllabus.bos.nsw.edu.au/wsimages/cca/l.pngCT | 12 |
| state the place value of digits in decimal numbers of up to two decimal places | 10 |
| use place value to [partition](http://syllabus.bos.nsw.edu.au/glossary/mat/partitioning/?ajax" \t "_blank" \o "Click for more information about 'partition') decimals of up to two decimal places, eg 5.37 = 5 + 3 tenths + 7 hundredths | 11 |
| partition decimals of up to two decimal places in non-standard forms, eg 5.37 = 5 + 37 hundredths | 11 |
| apply knowledge of hundredths to represent amounts of money in decimal form, eg five dollars and 35 cents is 5 and 35 hundredths which is the same as $5.35 (Communicating) | 12 |
| model, compare and represent decimals of up to two decimal places http://syllabus.bos.nsw.edu.au/wsimages/cca/l.png | 10 |
| apply knowledge of decimals to record measurements, eg 123 cm = 1.23 m (Communicating) | 13 |
| interpret zero digit(s) at the end of a decimal, eg 0.70 has the same value as 0.7, 3.00 and 3.0 have the same value as 3 (Communicating) | 13 |
| recognise that amounts of money are written with two decimal places, eg $4.30 is not written as $4.3 (Communicating) | 12 |
| use one of the symbols for dollars ($) and cents (c) correctly when expressing amounts of money, ie $5.67 and 567c are correct, but $5.67c is not (Communicating) | 12 |
| use a calculator to create patterns involving decimal numbers, eg 1 ÷ 10, 2 ÷ 10, 3 ÷ 10 (Communicating) | 14 |
| place decimals of up to two decimal places on a number line, eg place 0.5, 0.25 and 0.75 on a number line | 15 |
| [round](http://syllabus.bos.nsw.edu.au/glossary/mat/rounding/?ajax" \t "_blank" \o "Click for more information about 'round') a number with one or two decimal places to the nearest whole number | 15 |

**MISSING PLANS**