**23. Decimals & 24. Expressions and Equations**

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| **Elements** | * Understanding and Connecting | * Communicating | * Reasoning | * Applying and Problem-Solving |  |
| **Pedagogical Practices** | * Using cognitively challenging tasks | * Promoting maths talk | * Fostering productive disposition | * Encouraging playfulness | * Emphasising mathematical modeling |

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| **Assessment** |
| **Intuitive Assessment**  Use maths talk, key questions and observation to assess children as they engage in learning experiences.  **Planned Interactions**  Use key questions to discuss children’s work with them as they engage in learning experiences.  **Assessment Events**  Use the end of unit Practice Pages (pp. 138–143 and pp. 144–149) and the *Maths My Way* Spring Assessment. |
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| **Differentiation** |
| Alter pace as required.  Use low-threshold high-ceiling tasks and parallel tasks.  Provide concrete resources.  Use the Extension Activities to provide extra challenge. |
| **Linkage and**  **Integration** |
| **Number:** Fractions  **Number:** Sets and Operations  **Measures:** Money |

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| **Strand and Strand Unit** | | **Learning**  **Outcome(s)** | **Mathematical**  **Concept(s)** | **Mathematical**  **Language** | **Focus of**  **New Learning** | ✓ | **Learning**  **Experiences** |
| **Week 1** | **Number:** Place Value and Base Ten | Explore equivalent numerical expressions of numbers using the base ten system. | * A digit’s value in an integer or decimal is a multiple of its place value. * An integer or decimals value is represented by the value of the sum of each of its digits. * The principle of base ten holds for integers and decimals. * Numbers can be represented in different, equivalent ways using concrete materials. * A decimal point is a convention that separates the integer (left) from the fraction (right). * Base ten extends indefinitely: multiply (to the left) or divide (to the right) by multiples of ten. | tens, ones, partition, round up, round down, multiple of 10, less than, greater than | 1. Make connections between fractional and decimal hundredths. |  | * Understand visual representations of decimals. * Show decimals on a decimal place value chart. * Regroup tenths /hundredths. * Identify the use of decimals and fractions in the context of money and temperature. |
| 1. Express known fractions as decimals, e.g. 25/100 = 0.25 = 1/4. |  |
| 1. Understand that decimal numbers can be represented in different ways. |  |
| 1. Rounds numbers with one decimal place to the nearest whole number. |  |
| **Week 2** | **Algebra:** Expressions and Equations | Represent and express problems with known/ unknown values in different ways using appropriate letter-symbols or words. | * Real-life situations can be expressed using manipulatives, diagrams, word/number sentences. * An equals sign (=) conveys equality; ≠, < and > conveys inequality. * In number sentences, symbols can stand for an action (+, -, x, ÷), a relationship (=, <, >, ≠), or an unknown or variable. Number facts can help find unknowns. | expression, equation,  number sentence, diagram, equal, inequality, more than, less than, unknown, variable, substitute, pattern, prediction, calculation | 1. Generate symbolic expressions for the structure of patterns in real-world situations. |  | * Rewrite word problems as expressions. * Create a diagram based on the rules of a pattern. * Substitute numbers and symbols for missing values. |
| 1. Investigate how change in one variable can impact change in results or outputs. |  |
| 1. Find unknown values by using inverse operations. |  |
| 1. Generate a pattern in shapes from a function. |  |

**Overview**

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| **Week 1** | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** |
| **Focus of New Learning** | Make connections between fractional and decimal hundredths. | Express known fractions as decimals, e.g. 25/100 = 0.25 = 1/4. | Understand that decimal numbers can be represented in different ways. | Rounds numbers with one decimal place to the nearest whole number. | Consolidate learning. |
| **Slides** | 23.1 | 23.2 | 23.3 | 23.4 |  |
| **Book** | p. 138 | p. 139 | p. 140 | p. 141 | pp. 142–143 |
| **Concrete Resources** | strips of paper  scissors  paper | printable 23.1 | base ten blocks  decimal place value chart |  |  |
| **Digital Resources** | 23. Decimal Place Value: Game | | | | |

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| **Week 2** | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** |
| **Focus of New Learning** | Generate symbolic expressions for the structure of patterns in real-world situations. | Investigate how change in one variable can impact change in results or outputs. | Find unknown values by using inverse operations. | Generate a pattern in shapes from a function. | Consolidate learning. |
| **Slides** | 24.1 | 24.2 | 24.3 | 24.4 |  |
| **Book** | p. 144 | p. 145 | p. 146 | p. 147 | pp. 148–149 |
| **Concrete Resources** | interlocking cubes  counters | base ten blocks  counters | base ten blocks  Interlocking cubes | base ten blocks  pattern blocks |  |
| **Digital Resources** | 24. Expressions and Equations: Game | | | | |