**K1**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

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| Key for Levels of Achievement |

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| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| **Participate in practical addition and subtraction stories**   * Responds to addition and subtraction stories eg: There were four ducks on the pond and 3 more flew in. How many ducks ? (Not necessarily accurate, just showing participation) | Understand simple addition and subtraction using concrete materials in situations.   * Use concrete materials to show addition find one more and one less * Use concrete materials to show addition situations * Use concrete materials to show subtraction situations * verbalise the joining process using and * verbalise the subtraction process using take away | Solve simple addition and subtraction problems up to 10 using concrete materials   * Recognise and use addition, subtraction and equals signs * Use materials to add a single digit number to another single digit number to 10 * Use materials to subtract a single digit number from another single digit number to 10 * Record number problems using pictures, symbols or numerals |
|  | Solve problems by sharing   * Use mathematical language of sharing in play eg. Can you share your biscuits? | Solve problems including doubling, halving and sharing   * Use mathematical language of doubling, halving and sharing in play eg. I will give you half of my cake, can you share your biscuits |
| **Solve problems by sharing**   * Use mathematical language of sharing in play eg. Can you share your biscuits? | Solve problems by sharing   * Use mathematical language of sharing in play eg. Can you share your biscuits? | Solve problems including doubling, halving and sharing   * Use mathematical language of doubling, halving and sharing in play eg. I will give you half of my cake, can you share your biscuits |

**K2**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

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| Key for Levels of Achievement |

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
|  |  | Recall addition facts for single-digit numbers and related subtraction facts   * Recall number bonds and number facts to 10 |
| **Understand simple addition and subtraction using concrete materials in situations.**   * Use concrete materials to show addition find one more and one less * Use concrete materials to show addition situations * Use concrete materials to show subtraction situations * verbalise the joining process using and * verbalise the subtraction process using take away | Solve simple addition and subtraction problems up to 10 using concrete materials   * Recognise and use addition, subtraction and equals signs * Use materials to add a single digit number to another single digit number to 10 * Use materials to subtract a single digit number from another single digit number to 10 * Record number problems using pictures, symbols or numerals | Solve simple addition and subtraction problems using manipulatives   * Use materials to add a 2 digit number to a single with recording * Use materials to subtract a single digit number from a 2 digit number with recording |
| **Solve problems by sharing**   * Use mathematical language of sharing in play eg. Can you share your biscuits? | Solve problems including doubling, halving and sharing   * Use mathematical language of doubling, halving and sharing in play eg. I will give you half of my cake, can you share your biscuits | Solve simple addition and subtraction problems using strategies including part/whole   * Add whole numbers by using a part whole strategy. * Use ten facts (tidy tens) to solve basic problems e.g. 8+4 = 8+2+2. * Using the largest numbers first for addition * Counting on and counting back |

**Year 1**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
|  | Recall addition facts for single-digit numbers and related subtraction facts   * Recall number bonds and number facts to 10 | Recall number bonds for 20 and related subtraction facts   * Recall doubles to 20 * Recalls number bonds to twenty accurately |
| **Solve simple addition and subtraction problems up to 10 using concrete materials**   * Recognise and use addition, subtraction and equals signs * Use materials to add a single digit number to another single digit number to 10 * Use materials to subtract a single digit number from another single digit number to 10 * Record number problems using pictures, symbols or numerals | Solve simple addition and subtraction problems using manipulatives   * Use materials to add a 2 digit number to a single with recording * Use materials to subtract a single digit number from a 2 digit number with recording | Model addition and subtraction of whole numbers   * Model addition of two digit numbers using tokens, bundling sticks and/or ten frames * Model subtraction of whole numbers using tokens, bundling sticks and/or ten frames |
| **Solve problems including doubling, halving and sharing**   * Use mathematical language of doubling, halving and sharing in play e.g. I will give you half of my cake, can you share your biscuits | Solve simple addition and subtraction problems using strategies including part/whole   * Add whole numbers by using a part whole strategy. * Use ten facts (tidy tens) to solve basic problems e.g. 8+4 = 8+2+2. * Using the largest numbers first for addition * Counting on and counting back | Represent and solve addition problems (including real life and word) involving 2 digit numbers, using appropriate strategies.   * For example: Counting on, Counting on in ten, largest number first, bridging to/through ten, doubles/near doubles, place value partitioning, easy combinations to 10, 50, number families * Creates verbal action stories to represent addition problems   *Refer to the progression of strategies document for further information* |
|  |  | Represent and solve subtraction problems (including real life and word) involving 2 digit numbers, using appropriate strategies   * For example: Counting back, counting back in 10’s, bridging back through 10, number families * Creates verbal action stories to represent subtraction problems   *Refer to the progression of strategies document for further information* |
|  |  | Model multiplication and division using groups and/or arrays   * Groups and shares collections of objects equally, recording the grouping and sharing informally * Models the relationship between multiplication and division using arrays |
|  |  | Skip count by twos, fives and tens starting from zero   * Skip count by 2’s, 5’s and 10’s making connections to multiplication tables |
|  |  | Recognise and represent division as grouping into equal sets and solve simple problems using these representations |
|  |  | Use estimation to check reasonableness of answers to calculations |

**Year 2**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Recall addition facts for single-digit numbers and related subtraction facts**   * Recall number bonds and number facts to 10 | Recall number bonds for 20 and related subtraction facts   * Recall doubles to 20 * Recalls number bonds to twenty accurately. | Recall addition facts of multiples of ten to at least 100 and related subtraction facts |
| **Solve simple addition and subtraction problems using manipulatives**   * Use materials to add a 2 digit number to a single with recording * Use materials to subtract a single digit number from a 2 digit number with recording | Model addition and subtraction of whole numbers   * Model addition of two digit numbers using tokens, bundling sticks and/or ten frames * Model subtraction of whole numbers using tokens, bundling sticks and/or ten frames | Model addition and subtraction of whole numbers   * Model addition of two digit numbers using tokens, bundling sticks and/or base 10 blocks * Model subtraction of whole numbers using tokens, bundling sticks and/or base 10 blocks |
| **Solve simple addition and subtraction problems using strategies including part/whole**   * Add whole numbers by using a part whole strategy. * Use ten facts (tidy tens) to solve basic problems e.g. 8+4 = 8+2+2. * Using the largest numbers first for addition * Counting on and counting back | Represent and solve addition problems (including real life and word) involving 2 digit numbers, using appropriate strategies.   * For example: Counting on, Counting on in ten, largest number first, bridging to/through ten, doubles/near doubles, place value partitioning, easy combinations to 10, 50, number families * Creates verbal action stories to represent addition problems   *Refer to the progression of strategies document for further information* | Solve addition problems (including real life and word) using appropriate of written and mental strategies   * For example: Jump Strategy, Bridging to/through 10, Place Value Partitioning, Easy Combinations to 10, 50, 100, Compensation * Add whole numbers using expanded formal written strategies   *Refer to the progression of strategies document for further information* |
|  | Represent and solve subtraction problems (including real life and word) involving 2 digit numbers, using appropriate strategies   * For example: Counting back, counting back in 10’s, bridging back through 10, number families * Creates verbal action stories to represent subtraction problems   *Refer to the progression of strategies document for further information* | Solve subtraction problems (including real life and word) using appropriate written and mental strategies   * For example: Jump strategy, Bridging back through 10, Place Value Partitioning (Split Strategy), Compensation, Inverse Operation (don’t subtract add) * Subtract whole numbers using expanded formal written strategies   *Refer to the progression of strategies document for further information* |
|  | Model multiplication and division using groups and/or arrays   * Groups and shares collections of objects equally, recording the grouping and sharing informally * Models the relationship between multiplication and division using arrays | Model multiplication and division using groups and/or arrays   * Models the relationship between multiplication and division using tokens and drawing arrays on squared paper |
|  | Skip count by twos, fives and tens starting from zero   * Skip count by 2’s, 5’s and 10’s making connections to multiplication tables | Recall multiplication and division facts to at least two, three, five and ten times tables   * Securely recall of multiplication and related division number facts for at least 2’s, 3’s, 5’s, 10’s times tables |
|  |  | Solve multiplication problems (including real life and word) using appropriate written and mental strategies   * For example: Doubling strategies, Place Value Partitioning (split strategy), Inverse operations (using fact families)   *Refer to the progression of strategies document for further information* |
|  | Recognise and represent division as grouping into equal sets and solve simple problems using these representations | Solve division problems (including real life and word) using written and mental strategies for division without remainders   * For example: Sharing, Halving Strategies, Fact Families   *Refer to the progression of strategies document for further information* |
|  | Use estimation to check reasonableness of answers to calculations | Use estimation and rounding to check the reasonableness of answers to calculations |

**Year 3**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Recall number bonds for 20 and related subtraction facts**   * Recall doubles to 20 * Recalls number bonds to twenty accurately. | Recall addition facts of multiples of ten to at least 100 and related subtraction facts |  |
| **Model addition and subtraction of whole numbers**   * Model addition of two digit numbers using tokens, bundling sticks and/or ten frames * Model subtraction of whole numbers using tokens, bundling sticks and/or ten frames | Model addition and subtraction of whole numbers   * Model addition of two digit numbers using tokens, bundling sticks and/or base 10 blocks * Model subtraction of whole numbers using tokens, bundling sticks and/or base 10 blocks | Model addition and subtraction of whole numbers   * Model addition of three digit numbers using trading game with base 10 blocks |
| **Represent and solve addition problems (including real life and word) involving 2 digit numbers, using appropriate strategies.**   * For example: Counting on, Counting on in ten, largest number first, bridging to/through ten, doubles/near doubles, place value partitioning, easy combinations to 10, 50, number families * Creates verbal action stories to represent addition problems   *Refer to the progression of strategies document for further information* | Solve addition problems (including real life and word) using appropriate written and mental strategies   * For example: Jump Strategy, Bridging to/through 10, Place Value Partitioning, Easy Combinations to 10, 50, 100, Compensation * Add whole numbers using expanded formal written strategies   *Refer to the progression of strategies document for further information* | Solve addition problems (including real life and word) using appropriate efficient mental and written strategies   * For example: Jump Strategy, Bridging to/through 10, Place Value Partitioning, Easy Combinations to 10, 50, 100, Compensation with tidy numbers, Near doubles, inverse operations, number bonds to 100 * Mentally add three or more two digit numbers   *Refer to the progression of strategies document for further information* |
| **Represent and solve subtraction problems (including real life and word) involving 2 digit numbers, using appropriate strategies**   * For example: Counting back, counting back in 10’s, bridging back through 10, number families * Creates verbal action stories to represent subtraction problems   *Refer to the progression of strategies document for further information* | Solve subtraction problems (including real life and word) using appropriate written and mental strategies   * For example: Jump strategy, Bridging back through 10, Place Value Partitioning (Split Strategy), Compensation, Inverse Operation (don’t subtract add) * Subtract whole numbers using expanded formal written strategies   *Refer to the progression of strategies document for further information* | Solve subtraction problems (including real life and word) using appropriate efficient mental and written strategies   * For example:  Jump strategy; Bridging back through 10; Place value partitioning (split strategy); Compensation with tidy numbers; Inverse operations (don’t subtract add) * Subtract two digit or three digit numbers from a three digit number using formal written strategies   *Refer to the progression of strategies document for further information* |
| **Model multiplication and division using groups and/or arrays**   * Group and shares collections of objects equally, recording the grouping and sharing informally * Model the relationship between multiplication and division using arrays | Model multiplication and division using groups and/or arrays   * Model the relationship between multiplication and division using tokens and drawing arrays on squared paper | Model multiplication and division using groups and /or arrays   * Model the relationship between multiplication and division using tokens and drawing arrays on squared / graph paper, making connections to area. |
| **Skip count by twos, fives and tens starting from zero**   * Skip count by 2’s, 5’s and 10’s making connections to multiplication tables | Recall multiplication and division facts to at least two, three, five and ten times tables   * Securely recall of multiplication and related division number facts to at least 2’s, 3’s, 5’s, 10’s times tables | Recall multiplication facts up to 10 x 10 and related division facts   * Securely recall of multiplication and related division number facts to 10 x 10 times tables |
|  | Solve multiplication problems (including real life and word)  using appropriate written and mental strategies   * For example: Doubling strategies, Place Value Partitioning (split strategy), Inverse operations (using fact families)   *Refer to the progression of strategies document for further information* | Solve problems involving multiplication (including real life and word) using efficient mental and written strategies   * For example: Doubling strategies, Split strategy, rounding and compensation, Inverse operation - using fact families, using facts and multiples * Carry out short multiplication using a written method   *Refer to the progression of strategies document for further information* |
| **Recognise and represent division as grouping into equal sets and solve simple problems using these representations** | Solve division problems (including real life and word) using written and mental strategies for division without remainders   * For example: Sharing, Halving Strategies, Fact Families   *Refer to the progression of strategies document for further information* | Solve problems involving division by a one digit number, including those with remainders   * For example: Halving strategies, Split strategy, Fact families, apply rules of divisibility, Using factors and multiples . * Carry out short division using a written method   *Refer to the progression of strategies document for further information* |
| **Use estimation to check reasonableness of answers to calculations** | Use estimation and rounding to check the reasonableness of answers to calculations | Use estimation and rounding to check the reasonableness of answers to calculations |

**Year 4**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Model addition and subtraction of whole numbers**   * Model addition of two digit numbers using tokens, bundling sticks and/or base 10 blocks * Model subtraction of whole numbers using tokens, bundling sticks and/or base 10 blocks | Model addition and subtraction of whole numbers   * Model addition of three digit numbers using trading game with base 10 blocks | Model addition and subtraction of decimal fractions up to hundredths   * Model addition and subtraction of decimal fractions up to hundredths using base 10. |
| **Solve addition problems (including real life and word) using appropriate written and mental strategies**   * For example: Jump Strategy; Bridging to/through 10; Place Value Partitioning; Easy Combinations to 10, 50, 100; Compensation * Add whole numbers using expanded formal written strategies   *Refer to the progression of strategies document for further information* | Solve addition problems (including real life and word) using appropriate efficient mental and written strategies   * For example: Jump Strategy; Bridging to/through 10; Place Value Partitioning; Easy Combinations to 10, 50, 100; Compensation with tidy numbers; Near doubles; inverse operations; number bonds to 100 * Mentally add three or more two digit numbers * Add whole numbers using a formal written strategy   *Refer to the progression of strategies document for further information* | Solve addition problems (including real life and word) involving decimals in the form of money and measurement   * For example: Jump Strategy; Bridging to/through 1/ 0.1; Place Value Partitioning; Compensation; Known Facts * Add decimal numbers using a formal written strategy   *Refer to the progression of strategies document for further information* |
| **Solve subtraction problems (including real life and word) using appropriate written and mental strategies**   * For example: Jump strategy, Bridging back through 10, Place Value Partitioning (Split Strategy), Compensation, Inverse Operation (don’t subtract add) * Subtract whole numbers using expanded formal written strategies   Refer to the progression of strategies document for further information | Solve subtraction problems (including real life and word) using appropriate efficient mental and written strategies   * For example:  Jump strategy; Bridging back through 10; Place value partitioning (split strategy); Compensation with tidy numbers; Inverse operations (don’t subtract add) * Subtract two digit or three digit numbers from a three digit number using formal written strategies   *Refer to the progression of strategies document for further information* | Solve subtraction problems (including real life and word) involving decimals in the form of money and measurement   * For example: Jump Strategy; Place Value Partitioning (Split Strategy); Compensation; Inverse Operation (Don’t subtract, add)   *Refer to the progression of strategies document for further information* |
| **Model multiplication and division using groups and/or arrays**   * Model the relationship between multiplication and division using tokens and drawing arrays on squared paper | Model multiplication and division using groups and /or arrays   * Model the relationship between multiplication and division using tokens and drawing arrays on squared / graph paper, making connections to area. |  |
| **Recall multiplication and division facts to at least two, three, five and ten times tables**   * Securely recall of multiplication and related division number facts to at least 2’s, 3’s, 5’s, 10’s times tables | Recall multiplication facts up to 10 x 10 and related division facts   * Securely recall of multiplication and related division number facts to 10 x 10 times tables | Uses known multiplication facts to mentally multiply two digit numbers by a one digit number |
| **Solve multiplication problems (including real life and word) using appropriate written and mental strategies**   * For example: Doubling strategies, Place Value Partitioning (split strategy), Inverse operations (using fact families)   *Refer to the progression of strategies document for further information* | Solve problems involving multiplication (including real life and word) using efficient mental and written strategies   * For example: Doubling strategies; Split strategy; rounding and compensation; Inverse operation - using fact families; using facts and multiples * Carry out short multiplication using a written method * Multiply whole numbers by 10, 100, 1000   *Refer to the progression of strategies document for further information* | Solve problems (including real life and word) involving multiplication of large numbers by one or two digit numbers using efficient mental and written strategies   * For example: Place Value Partitioning; Doubling and Halving; Known Facts; Rounding and Compensating * Carry out short multiplication using a formal method * Carry out long multiplication using an expanded formal written method   *Refer to the progression of strategies document for further information* |
| **Solve division problems (including real life and word) using written and mental strategies for division without remainders**   * For example: Sharing, Halving Strategies, Fact Families   *Refer to the progression of strategies document for further information* | Solve problems involving division by a one digit number, including those with remainders   * For example: Halving strategies; Split strategy; Fact families; apply rules of divisibility; Using factors and multiples, Grouping * Carry out short division using a written method * Divide whole numbers by 10,100   *Refer to the progression of strategies document for further information* | Develop efficient mental and written strategies for division representing remainders as fraction   * For example: Halving, Partitioning, Chunking, Inverse Operation * Carry out short division using a formal written method   *Refer to the progression of strategies document for further information* |
| **Use estimation and rounding to check the reasonableness of answers to calculations** | Use estimation and rounding to check the reasonableness of answers to calculations | Use estimation and rounding to check the reasonableness of answers to calculations |

**Year 5**

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| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Model addition and subtraction of whole numbers**   * Model addition of three digit numbers using trading game with base 10 blocks | Model addition and subtraction of decimal fractions up to hundredths   * Model addition and subtraction of decimal fractions up to hundredths using base 10. |  |
| **Solve addition problems (including real life and word) using appropriate efficient mental and written strategies**   * For example: Jump Strategy; Bridging to/through 10; Place Value Partitioning; Easy Combinations to 10, 50, 100; Compensation with tidy numbers; Near doubles; inverse operations; number bonds to 100 * Mentally add three or more two digit numbers * Add whole numbers using a formal written strategy   *Refer to the progression of strategies document for further information* | Solve addition problems (including real life and word) involving decimals in the form of money and measurement   * For example: Jump Strategy; Bridging to/through 1/ 0.1; Place Value Partitioning; Compensation; Known Facts * Add decimal numbers using an expanded formal written method   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies to add integers and decimals   * For example: Jump Strategy; Bridging to/through 1/ 0.1; Place Value Partitioning; Compensation; Known Facts * Add decimal numbers using a formal written method   *Refer to the progression of strategies document for further information* |
| **Solve subtraction problems (including real life and word) using appropriate efficient mental and written strategies**   * For example:  Jump strategy; Bridging back through 10; Place value partitioning (split strategy); Compensation with tidy numbers; Inverse operations (don’t subtract add) * Subtract two digit or three digit numbers from a three digit number using formal written strategies   *Refer to the progression of strategies document for further information* | Solve subtraction problems (including real life and word) involving decimals in the form of money and measurement   * For example: Jump Strategy; Place Value Partitioning (Split Strategy); Compensation; Inverse Operation (Don’t subtract, add)   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies subtract integers and decimals   * For example: Jump Strategy; Place Value Partitioning (Split Strategy); Compensation; Inverse Operation (Don’t subtract, add)   *Refer to the progression of strategies document for further information* |
| **Model multiplication and division using groups and /or arrays**   * Model the relationship between multiplication and division using tokens and drawing arrays on squared / graph paper, making connections to area. |  | Model multiplication and division of decimals by a single digit integer   * Model the multiplication and division of decimals by an integer using base 10 equipment. |
| **Recall multiplication facts up to 10 x 10 and related division facts**   * Securely recall of multiplication and related division number facts to 10 x 10 times tables | Uses known multiplication facts to mentally multiply two digit numbers by a one digit number |  |
| **Solve problems involving multiplication (including real life and word) using efficient mental and written strategies**   * For example: Doubling strategies; Split strategy; rounding and compensation; Inverse operation - using fact families; using facts and multiples * Carry out short multiplication using a written method * Multiply whole numbers by 10, 100, 1000   *Refer to the progression of strategies document for further information* | Solve problems (including real life and word) involving multiplication of large numbers by one or two digit numbers using efficient mental and written strategies   * For example: Place Value Partitioning; Doubling and Halving; Known Facts; Rounding and Compensating * Carry out short multiplication using a formal method * Carry out long multiplication using an expanded formal written method   *Refer to the progression of strategies document for further information* | Use efficient written methods to multiply decimal fractions by a one digit integer   * For example: Place Value Partitioning, short multiplication using an expanded or formal method   *Refer to the progression of strategies document for further information* |
| **Solve problems involving division by a one digit number, including those with remainders**   * For example: Halving strategies; Split strategy; Fact families; apply rules of divisibility; Using factors and multiples, Grouping * Carry out short division using a written method * Divide whole numbers by 10,100   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies for division   * For example: Halving, Partitioning, Chunking, Inverse Operation * Carry out short division using a formal written method   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies for division representing remainders as a fraction   * Carry out division using a formal written method representing the remainder as a fraction / decimal fraction. |
| **Use estimation and rounding to check the reasonableness of answers to calculations** | Use estimation and rounding to check the reasonableness of answers to calculations | Use estimation and rounding to check the reasonableness of answers to calculations |

**Year 6**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

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| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent. | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Model addition and subtraction of decimal fractions up to hundredths**   * Model addition and subtraction of decimal fractions up to hundredths using base 10. |  |  |
| **Solve addition problems (including real life and word) involving decimals in the form of money and measurement**   * For example: Jump Strategy; Bridging to/through 1/ 0.1; Place Value Partitioning; Compensation; Known Facts * Add decimal numbers using an expanded formal written method   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies to add integers and decimals   * For example: Jump Strategy; Bridging to/through 1/ 0.1; Place Value Partitioning; Compensation; Known Facts * Add decimal numbers using a formal written method   *Refer to the progression of strategies document for further information* |  |
| **Solve subtraction problems (including real life and word) involving decimals in the form of money and measurement**   * For example: Jump Strategy; Place Value Partitioning (Split Strategy); Compensation; Inverse Operation (Don’t subtract, add)   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies to subtract integers and decimals   * For example: Jump Strategy; Place Value Partitioning (Split Strategy); Compensation; Inverse Operation (Don’t subtract, add)   *Refer to the progression of strategies document for further information* |  |
|  | Model multiplication and division of decimals by a single digit integer   * Model the multiplication and division of decimals by an integer using base 10 equipment. |  |
| **Use known multiplication facts to mentally multiply two digit numbers by a one digit number** |  |  |
| **Solve problems (including real life and word) involving multiplication of large numbers by one or two digit numbers using efficient mental and written strategies**   * For example: Place Value Partitioning; Doubling and Halving; Known Facts; Rounding and Compensating * Carry out short multiplication using a formal method * Carry out long multiplication using an expanded formal written method   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies to multiply decimal fractions by a one digit integer   * For example: Place Value Partitioning, short multiplication using an expanded or formal method   *Refer to the progression of strategies document for further information* | Use efficient written methods to multiply decimals   * Changing the decimals to equivalent fractions and multiplying the numerators and denominators * Write the terms as whole numbers multiplying then replacing the decimal point related to the number of decimal places in the question. |
| **Use efficient mental and written strategies for division**   * For example: Halving, Partitioning, Chunking, Inverse Operation * Carry out short division using a formal written method   *Refer to the progression of strategies document for further information* | Use efficient mental and written strategies for division representing remainders as a fraction   * Carry out division using a formal written method representing the remainder as a fraction / decimal fraction. | Use efficient written methods to divide decimal fractions by a one digit integer   * For example: short division using an expanded or formal method   Use efficient written methods to divide decimals   * Long division using a formal method where both decimal points are moved right until the divisor is a whole number. |
| **Use estimation and rounding to check the reasonableness of answers to calculations** | Use estimation and rounding to check the reasonableness of answers to calculations | Use estimation and rounding to check the reasonableness of answers to calculations |