

# WHOLE NUMBER OPERATIONS

## CURRICULUM THREADS

| Kindy                                    | Pre-Primary   | Year 1   | Year 2   | Year 3  | Year 4   | Year 5  | Year 6  |
|--|---|--|--|---|--|---|---|
| <b>THREAD 1</b><br><b>+ - OPERATIONS</b> | See also: "Place Value" Curriculum Threads<br>Compare, order and make correspondences between collections, initially to 20, and explain reasoning<br>ACMNA289<br>Represent practical situations to model addition and sharing<br>ACMNA004 | Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts<br>ACMNA015 | Explore the connection between addition and subtraction<br>ACMNA029<br>Solve simple addition and subtraction problems using a range of efficient mental and written strategies<br>ACMNA030 | Recognise and explain the connection between addition and subtraction<br>ACMNA054<br>Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation<br>ACMNA055 | Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9<br>ACMNA074   | Use efficient mental and written strategies and apply appropriate digital technologies to solve problems<br>ACMNA291<br>Identify and describe factors and multiples of whole numbers and use them to solve problems<br>ACMNA098                                 | Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers<br>ACMNA123  |
|  | <b>THREAD 2</b><br><b>x ÷ OPERATIONS</b>  |  |  | Recognise and represent multiplication as repeated addition, groups and arrays<br>ACMNA031<br>Recognise and represent division as grouping into equal sets and solve simple problems using these representations<br>ACMNA032                      | Recall multiplication facts of two, three, five and ten and related division facts<br>ACMNA056<br>Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies<br>ACMNA057 | Recall multiplication facts up to $10 \times 10$ and related division facts<br>ACMNA075<br>Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder<br>ACMNA076 | Solve problems involving multiplication of large numbers by 1 or 2 digit numbers using efficient mental, written strategies and appropriate digital technologies<br>ACMNA100<br>Solve problems involving division by a one digit number, including those that result in a remainder<br>ACMNA101 |

### Suggested Dr Paul Swan Materials

● Book  
 ● Game  
 ● Downloadable  
 ● Video  
 ● Manipulative Material  
 ● Interactive Material  
 ● Other

|  |   |  |  |   |   |
|--|---|--|--|---|---|
| <p> <a href="#">Make it Count</a> includes games</p> <p> <a href="#">Teaching with Ten Frames</a> includes games</p> <p> <a href="#">Bead Strings</a></p> <p> <a href="#">Ten Frames</a></p> | <p> <a href="#">You Can Count On Me</a></p> <p> <a href="#">Shake 'n Spill Video</a></p> <p> <a href="#">"Lulu" Video</a></p> | <p> <a href="#">Astronaut Addition</a></p> <p> <a href="#">Double Agent</a></p> <p> <a href="#">Double Dribble</a></p> <p> <a href="#">Robot Race</a></p> <p> <a href="#">Maths Basic Facts CD (Add / Sub)</a></p> <p> <a href="#">Space Race (via Abacus)</a></p> <p>See the range of <a href="#">downloadable games</a> on my website. e.g Arrays Game</p> | <p> <a href="#">Maths Handbook</a> pp32-33, 43-45, 49-54</p> <p> <a href="#">Calculators in Classrooms</a></p> <p> <a href="#">Dice Games for Tables</a></p> <p> <a href="#">Tackling Tables</a></p> <p> <a href="#">Monster Manor</a></p> <p> <a href="#">Martian Multiplication</a></p> <p> <a href="#">Skip Trip</a></p> <p> <a href="#">Maths Basic Facts CD (x / ÷)</a></p> <p> <a href="#">ROWCO Card Game</a></p> | <p> <a href="#">Multispin</a></p> <p> <a href="#">Spindiv</a></p> <p> <a href="#">Race Car Rally Division 2-9</a></p> <p> <a href="#">Gold Rush</a></p> <p> <a href="#">Flushed</a></p> <p><a href="#">Downloadable Games</a></p> | <p> <a href="#">Division Decision</a> (Available from Abacus Educational Suppliers)</p> <p> <a href="#">COMBO Card Game</a></p> <p> <a href="#">Mining Boom</a></p> |
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| <b>Other Helpful Sources</b> |   |  |  |  |  |   |   |
|                              | <p><b>First Steps: Number Book 1</b><br/>Ch 3: KU 2 pg 24<br/>4 pg 40<br/>5 pg 52<br/>6 pg 60</p> <p><b>Number Bk 2</b><br/>Ch 3: KU 1 pg 12<br/>2 pg 20<br/>Ch 4: KU 1 pg 98<br/>2 pg 106</p> <p><a href="#">Centre for Innovation in Education: Chapter 10: Number Operations</a></p> | <p><b>First Steps: Number Book 2</b><br/>Ch 3: KU 1 pg 12<br/>2 pg 20<br/>8 pg 74<br/>Ch 4: KU 1 pg 98<br/>2 pg 106<br/>8 pg 162<br/>Ch 5: KU 4 pg 234</p> | <p><b>First Steps: Number Book 2</b><br/>Ch 3: KU 1 pg 12<br/>2 pg 20<br/>8 pg 74<br/>Ch 4: KU 1 pg 98<br/>2 pg 106<br/>5 pg 132</p> <p><b>First Steps: Number Book 2</b><br/>Ch 3: KU 3 pg 28<br/>4 pg 40<br/>5 pg 52</p> | <p><b>First Steps: Number Book 2</b><br/>Ch 3: KU 1 pg 12<br/>2 pg 20<br/>8 pg 74<br/>Ch 4: KU 1 pg 98<br/>2 pg 106<br/>4 pg 122<br/>5 pg 132</p> <p><b>First Steps: Number Book 2</b><br/>Ch 4: KU 1 pg 98<br/>3 pg 114<br/>4 pg 122<br/>5 pg 132<br/>6 pg 144<br/>Ch 5: KU 4 pg 234<br/>5 pg 242</p> | <p><b>First Steps: Number Book 2</b><br/>Ch 5: KU 1 pg 200<br/>2 pg 212<br/>3 pg 224<br/>4 pg 234<br/>5 pg 242</p> <p><b>First Steps: Number Book 2</b><br/>Ch 4: KU 1 pg 98<br/>3 pg 114<br/>4 pg 122<br/>5 pg 132<br/>6 pg 144<br/>Ch 5: KU 4 pg 234<br/>5 pg 242</p>                                | <p><b>First Steps: Number Book 2</b><br/>Ch 4: KU 1 pg 98<br/>3 pg 114<br/>4 pg 122<br/>5 pg 132<br/>Ch 5: KU 4 pg 234<br/>5 pg 242</p> <p><b>First Steps: Number Book 2</b><br/>Ch 4: KU 1 pg 98<br/>3 pg 114<br/>4 pg 122<br/>5 pg 132<br/>6 pg 144<br/>Ch 5: KU 4 pg 234<br/>5 pg 242<br/>6 pg 250</p> | <p><b>First Steps: Number Book 2</b><br/>Ch 3: KU 4 pg 40<br/>5 pg 52<br/>6 pg 62</p> <p><b>First Steps: Number Book 2</b><br/>Ch 3: KU 4 pg 40<br/>5 pg 52<br/>6 pg 62</p> |
| <b>Picture Books</b>         |   |  |  |  |  |   |   |
|                              |   | <p><b>Math Fables</b><br/>- by Greg Tang</p>   | <p><b>Minnie's Diner</b><br/>- by Dayle Ann Dodds</p> <p><b>One Hundred Hungry Ants</b><br/>- by Elinor J. Pinczes</p>   | <p><b>Math Appeal</b><br/>- by Greg Tang</p> <p><b>Maths Curse</b><br/>- by John Scieszka &amp; Lane Smith</p> <p><b>Uno's Garden</b><br/>- by Graeme Base</p> <p><b>The Magic School Bus</b><br/>- by Joanna Cole</p>   | <p><b>Math Potatoes</b><br/>- by Greg Tang</p>   | <p><b>The Maths Quest</b><br/>- by Danny Glover</p>   |   |
|                              |   |  |  |  | <p><b>A Remainder of One</b><br/>- by Elinor J. Pinczes</p> <p><b>If...</b><br/>- by David J. Smith</p> <p><b>Anno's Mysterious Multiplying Jar</b><br/>- by Masaichiro &amp; Mitsumasa Anno</p> <p><b>Lifetime</b><br/>- by Lola M. Schaefer</p> <p><b>Counting on Frank</b><br/>- by Rod Clement</p> |   |   |

