**MULTIPLICATION SCOPE & SEQUENCE FOR AUSVELS CURRICULUM/ STEPPING STONES**

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| **AusVELS level and related Growth Point** | **Stepping Stones Modules linked to AusVELS content descriptions** | **Mathedology** | **Big Books** | **Slate Resources** |
| Foundation  Level 1  *By the end of Year 1 the students will be able to model division; when all things are perceived.*  *Skip Counting & sharing*  Level 2  *By the end of Grade 2 the students will be connecting multiplication & division. In Stepping Stones modelling is used; MAI Includes partial modelling in Multiplication & Division. Children should be able to apply their knowledge of halves & quarters; they should be able to use & understand the language of division such as equal parts* | Module 15  15.1 Counting in Steps of two & five (one & two digit numbers)  16.2 Writing Equal Groups  16.3 Adding Equal Groups  16.4 Describing Arrays  **Recognise & represent multiplication as grouping into equal repeated addition, groups & arrays**  **Module 8**  8.3 Introducing arrays to represent multiplication  8.4 Introducing the “x”  symbol  **Module 11**  11.7 Interpreting the “x”  symbol  11.8 Introducing the turnaround facts for multiplication  **Module 15**  15.1 Constructing Growing Patterns involving Multiplication  15.2 Working with the array  15.3 Using Doubles to multiply by two( one digit numbers)  **Module 16**  16.1 Using Division Language  16.2 Relating Multiplication & Division | CMSF An Introduction to Teaching Multiplication Facts  CMS 1 Teaching the “use 10 strategy for multiplication number facts (x5)  FACILITATOR NOTES  CMS 2 Teaching the doubling strategy for multiplication number facts (x2, x4, x8)  FACILITATOR NOTES  CMS 3 Teaching the build up & build down strategies for multiplication number facts (x6, x9) | “The Space Party”  The Big Bug Band  The Space Party  Munch & Crunch | **Fundamentals**  Double Barrel (Doubling Multiples of 10)  Double Bucket (Doubling Multiples of 5 &10)  **Flare**  Number Board  Number Line  Pan Balance |

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| Level 3  ***GP 3***  ***Partial Modelling Multiplication & Division***  Unifix trays- Tennis Balls -Dot arrays  STRATEGIES- Skip Count & Known Fact  ***GP 4 Abstracting Multiplication & Division***  Biscuits on a tray- Number of legs- Children at the Movies  STRATEGIES- Repeated Addition-Skip Count & Known Fact  *GP 3.*  ***Abstracting multiplication and division*** *Solves multiplication and division problems where objects are not all modelled or perceived* | **Recall multiplication facts of two, three, five & ten & related division facts**  **Represent & solve problems involving multiplication using efficient mental & written strategies & appropriate digital technologies**  4.1 Using multiplication- equal groups  4.2 Using “x” with arrays  4.3 Interpreting multiplication sentences  4.4 Using tens to multiply by five  4.5 Working with fives facts & turnarounds  8.1 Revising multiplication models  8.2 Revising multiplication facts (x 2)  8.3 Working beyond multiplication facts (x 2)  ( two digit numbers)  13.1 Working with multiplication facts (x1)  13.2 Working with multiplication facts (x0)  13.3 Working beyond multiplication facts (x5)  (two digit numbers)  15.1 Exploring the relationship between multiplication & division  15.2 Using the equal groups model to relate multiplication & division  15.3 Using the array model to relate multiplication & division  15.4 Using the array model to write the related multiplication & division facts | CMSF An Introduction to Teaching Multiplication Facts  CMS 1 Teaching the “use 10 strategy for multiplication number facts (x5)  FACILITATOR NOTES  CMS 2 Teaching the doubling strategy for multiplication number facts (x2, x4, x8)  FACILITATOR NOTES  CMS 3 Teaching the build up & build down strategies for multiplication number facts (x6, x9) |  | **Fundamentals**  Pick a Product (Basic multiplication facts)  Times Tussle (Multiplying by fives & tens)  Double Double (Basic multiplication facts)  Do the D’s (Basic multiplication facts)  Double & Add (adding two digit numbers)  Double Double Again (Doubling to multiply by two & four)  Seeing Double (doubling to multiplying by two)  In Step (counting in steps by 2,5,10)  Missing Divisors (Dividing by 2,4,5,10)  Times That (multiplying by 5 & 10)  Times This (multiplying by 9 & 10)  Make a choice (Multiplying & Dividing by 5)  **Flare**  Number Board  Number Line  Pan Balance |

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| Level 4  ***GP 5* *Multiplication Strategies***  Interpreting Multiplication - Multiplication Problems-Cost of Stickers & Stickers in a pack  STRATEGIES- Array- Number line-Groups-Known Fact- Distributive Law- Skip Count  **GP5 Basic, derived and intuitive strategies for multiplication**  *Can solve a range of multiplication problems using strategies such as commutativity, skip counting and building up from known facts.* | **Recall multiplication facts up to 10 x10 & related division facts**  2.1 Working with division facts (dividing by 2)  2.2 Working with division facts (dividing by 5)  2.3 Connecting Multiplication & Division Facts  2.4 Reinforcing the link between Multiplication & Division facts  3.1 Working with multiplication facts (x4)  3.2 Working beyond the multiplication facts (x4) (two-digit numbers)  3.3 Working with multiplication facts (x8)  6.1 Working with multiplication facts (x9)  6.2 Working beyond the multiplication facts (x9) (two-digit numbers)  6.3 Working with multiplication facts (x6)  6.4 Working with the last multiplication facts (x3, x7)  8.1 Revising Multiplication Facts (x4, x8)  8.2 Writing Fact families (x4,x8)  8.3 Connecting Multiplication & Division  11.7 Working beyond of division facts (dividing by 2)  **Develop efficient mental & written Strategies & use appropriate digital technologies for multiplication & for division where there is no remainder**  2.1 Working with division facts (dividing by 2)  2.2 Working with division facts (dividing by 5)  2.3 Connecting Multiplication & Division Facts  2.4 Reinforcing the link between Multiplication & Division facts  3.1 Working with multiplication facts (x4)  3.2 Working beyond the multiplication facts (x4) (two-digit numbers)  3.3 Working with multiplication facts (x8)  6.1 Working with multiplication facts (x9)  6.2 Working beyond the multiplication facts (x9) (two-digit numbers)  6.3 Working with multiplication facts (x6)  6.4 Working with the last multiplication facts (x3, x7)  6.7 Using a mental strategy to calculate the cost of a purchase  7.1 Working beyond the multiplication facts (two-digit numbers)  7.2 Using a mental strategy to multiply ( three factors)  7.3 Finding Factors ( two digit numbers)  7.4 Exploring common multiples of 2,3,4,5  8.5 Using a mental strategy to solve problems involving grams  8.6 Writing fact families (x6,x9)  8.7 Connecting Multiplication & Division Facts  8.8.Reinforcing the link between Multiplication & Division Facts  10.1 Using a mental strategy to multiply beyond the facts  10.2 Extending multiplication to two digit numbers  10.3 Using Place Value to multiply(two digit numbers)  10.4 Solving Problems involving millilitres  14.1 Investigating square number patterns  14.2 Investigating oblong number patterns  14.3 Investigating multiplication number patterns  14.4 Using Place Value to multiply (two digit numbers)  14.5 Working towards a written strategy for multiplication ( two digit)  14.6 Solving Problems with Mass  16.1 Using factors to multiply (one & two digit numbers)  16.2Using a mental strategy to multiply beyond the number facts (two digit numbers)  16.3 Working towards a written strategy for multiplication (one & two digit numbers)  16.4 Calculating the cost of a purchase- whole dollars  16.5 Calculating the cost of a purchase- whole dollars & cents  16.6 Solving problems involving money (dollars & cents)  16.7 Calculating change (dollars & cents)  16.8 Using a mental or written strategy to solve problems involving money. | CMSF An Introduction to Teaching Multiplication Facts  CMS 1 Teaching the “use 10 strategy for multiplication number facts (x5)  FACILITATOR NOTES  CMS 2 Teaching the doubling strategy for multiplication number facts (x2, x4, x8)  FACILITATOR NOTES  CMS 3 Teaching the build up & build down strategies for multiplication number facts (x6, x9) |  | **Fundamentals**  Multiplication Mania(Basic Multiplication Facts)  Take Your Pick (Multiplying by 5 & 10)  This or That (Using Multiple Operations)  Use Doubles (Doubling to Multiply by 2 & 4)  Do the D’s again (Doubling to Multiply by 24& 8)  Use a ten fact (Multiplication with 2 digit numbers)  That a fact (Multiplication- the last facts)  It’s a fact (Multiplication facts & beyond)  **Flare**  Number Boards  Number Line  Pan Balance |

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| Level 5  ***GP 6 Division Strategies***  Interpreting Division-Division Problems- Washing Windows  STRATEGIES- Known Fact- Chunking-Distributive Law- Skip Count  GP 6. **Basic, derived and intuitive strategies for division**  *Can solve a range of division problems using strategies such as fact families and building up from known facts* | **Identify & describe factors & multiples of whole numbers & use them to solve problems**  2.1 Investigating patterns using multiples  2.2 Investigating patterns made by multiples  2.3 Relating Multiples & factors  2.4 Constructing factor trees (two-digit numbers)  5.1 Working with factors & multiples  7.1 Factoring two & three digit numbers  7.2 Factoring to multiply two digit numbers  12.4 Applying Tests for divisibility (two & three digit numbers)  13.6 Finding prime numbers  13.7 Finding common multiples  **Solve problems involving Multiplication of large numbers by one- or two –digit numbers using efficient mental, written strategies & appropriate digital technologies**  ***Stepping Stones goes beyond by including multiplication of decimals***  7.1 Factoring two & three digit numbers  7.2 Factoring to multiply two digit numbers  7.3 Using compatible pairs to multiply  7.4 Doubling & halving to multiply (two digit numbers)  10.1 Using place value to multiply (one-two & three digit numbers)  10.2 Applying the distributive property to multiply two- digit numbers  10.3 Using the distributive property to multiply decimals (tenths)  10.4 Exploring mental strategies to multiply dollars & cents  10.5 Using a nearby number to multiply dollars & cents  15.3 Using patterns to explore two & three digit divisors |  |  | **Fundamentals**  Nice & Easy (Multiplying two-digit Numbers)  Friendly Factors(Multiplying two-digit Numbers)  Nice & Easy Too (Multiplying two-digit Numbers)  Perfect Pairs (Multiplying three single-digit Numbers)  Factor Find (Finding one digit Factors)  Fun Factors (working factors & multiples)  Use Factors (multiplying tow- digit numbers)  Operation Order(order of operations)  **Flare**  Number Board  Number Line  Pan Balance |

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| Level 6  ***GP 7 & 8 Extending & Applying Multiplication & Division:***  Off to the Circus-Stamp Collection –Trees in an Orchard- Sharing Pizza-Relay- Half as Many  STRATEGIES: Chunking-Distributive Law-Doubling & Halving  GP 7  .**Extending and applying multiplication and division**  *Can solve a range of multiplication and division problems (including multi-digit numbers) in practical contexts.* | **Select & apply efficient mental & written strategies & appropriate digital technologies to solve problems involving all four operations with whole numbers**  4.1 Using mental strategies to multiply two -digit numbers  4.2 Comparing mental strategies for multiplication (two -digit numbers)  5.1 Multiplying three digit numbers  5.3 Exploring multiplication patterns  5.4 Multiplying by tens  5.5 Recording the steps to multiply (two-digit numbers)  10.1 Using Partial Products for multiplication (two-digit numbers)  10.2 Analysing written methods for multiplication  (two-digit numbers)  10.6 Developing a formula  for calculating the area of oblongs  10.7 Working with area of oblongs  10.8 Working out surface area  **Multiply & Divide Decimals by powers of 10**  9.4 Multiplying & Dividing by 10, 100 & 1000  11.6 Converting between units of length- Millimetres, centimetres & metres  11.7 Converting units of length  11.8 Working with units of length  13.8 Converting units of measurement  **Multiply decimals by whole numbers & perform divisions that result in terminating decimals, with & without digital technologies**  4.3 Using a mental strategy to multiply dollars & cents  4.4 Using Place Value to multiply decimals (tenths & hundredths)  5.2 Using a written strategy to multiply dollars & cents  8.2 Partitioning to divide dollar & cent amounts  8.8 Applying mathematics in everyday situations- planning holidays  10.3 Exploring multiplication patterns involving decimals  10.4 Using whole numbers to solve multiplication problems involving tenths  10.5 Estimating areas involving tenths |  | *By the end of Year 6 students can solve a range of Division problems in Practical Context e.g. worded problems*  *In Stepping Stones there are opportunities for students to read, interpret & solve worded division problems including multi-digit numbers.* | **Fundamentals**  Decimal Doubles  (Multiplying Decimals)  Factor fun (Multiplying two- digit numbers)  Fast Factors (Factoring three-digit numbers)  Percentage fun (three-digit numbers)  **Flare**  Pan Balance  Number line  Number Board |

**RICH TASKS FOR MULTIPLICATION SCOPE & SEQUENCE**

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| Level F | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 0**  **Rabbit Ears**  **Feet Facts**  **Groups of Students**  **Mathematical Necklaces** | **Sine Tasks GP 1**  **Group Matching**  **Street Smart**  **Lots of**  **Counter Groups**  **Grouped by** … | |  |  |   **CURRICULUM AT WORK TASKS** RECOGNISE, CREATE AND DESCRCIBE NUMBER PATTERNS: Lots of legsRECOGNISE, CREATE AND DESCRIBE NUMBER PATTERNS: Fingers, toes, legs and nose (including a learning technology alternative)  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number*** [Beginning multiplication and division p13](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1513/0.html" \l "page=13" \t "_blank)  ***[Snake line and sewing tape](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4394/0.html" \t "_blank)***  ***Practical teaching strategies for children with learning difficulties*** Book 4 (numbers to 20)  ***Mental computation: a strategies approach*:** Developing computation p17-24, 29-38 | ***Learning Objects ([FUSE](https://fuse.education.vic.gov.au/pages/Teacher.aspx" \t "_blank) or [Scootle](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3" \t "_blank))*** Count and compare, Number trains  **Spreadsheets from *The Interactive Learning CD* in Number** [Doubling](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2432/0.html" \t "_blank), [Groups of (small)](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2444/0.html" \t "_blank), [Dividing](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2435/0.html" \t "_blank), [Finding half](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2418/0.html" \t "_blank)  **[Seeing Doubles](http://illuminations.nctm.org/LessonDetail.aspx?id=L875" \t "_blank)**  **[Smart Doubling](http://www.nzmaths.co.nz/resource/smart-doubling?parent_node=" \t "_blank)**  **[Marbles](http://www.nzmaths.co.nz/resource/marbles?parent_node=" \t "_blank)**  **[Dividing Dough](http://www.nzmaths.co.nz/resource/dividing-dough" \t "_blank)**  **[Bab](http://illuminations.nctm.org/LessonDetail.aspx?id=L170" \t "_blank)** | ***Teach whole numbers for understanding* [20 Count all in groups](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4497/0.html" \l "page=33" \t "_blank)** **[21 Model division (hands-on)](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4497/0.html" \l "page=46" \t "_blank)**  ***Continuum***  **[1.0 Counting groups of up to 20 objects](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N10002P.htm" \t "_blank)** Activity 1 Verbal counting sequence Activity 2 Efficient counting strategies Activity 3 Hidden collections  ***Assessment for Common Misunderstandings***  **[Level 3: Multiplicative thinking](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl3.htm" \t "_blank)**  ***People count*** [6 Basic multiplication](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html" \l "page=43" \t "_blank) |   Whole-class investigations ***Ann Downton’s Multiplication Tasks***  **Task 1**: There are 3 tables in the classroom and 4 children seated at each.  How many children are there altogether?  **Task 2**: If 3 children have 2 apples each,  How many apples are there altogether? |
| Level 1 | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 1**  **Group Matching**  **Street Smart**  **Lots of**  **Counter Groups**  **Grouped by** … | **Sine Tasks GP 2** | |  |  |   **CURRICULUM AT WORK TASKS** REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Counting group thingsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: A walk around the playgroundREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Let’s get together  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number***  [***Basic multiplication & division p13***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1517/0.html#page=13) | ***Learning Objects (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx) ***or***[***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***The multiplier, Pobble array, Arrays  ***Interactive Learning***  [***Array count***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2422/0.html),  [***Tables***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2646/0.html),  [***Multiplication facts***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2518/0.html) | ***Teach whole numbers for understanding***  [***21 Model multiplication and division (hands-on)***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4497/0.html#page=34)  ***Assessment for Common Misunderstandings***  [**Level 3: Multiplicative thinking**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl3.htm)  ***People count***  [***6 Basic multiplication***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=43) |     Whole-class investigations[*Maths300*](http://www.maths300.esa.edu.au/) Spiders and ants,  17 Eric The Sheep,  97 Tackling Times Tables**,**  51 Hunting for stars  ***Ann Downton’s Multiplication Tasks***  Task 1: One car has 4 wheels, how many wheels would 5 cars have?  Task 2: Put out 4 rows of 3 teddies. If you put out 2 more rows of teddies, how many teddies would there be altogether?  Please explain how you worked it out. |
| Level 2 | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 1**  **Group Matching**  **Street Smart**  **Lots of**  **Counter Groups**  **Grouped by** | **Sine Tasks GP 2**  **More Group Matching**  **Modelling Multiplication**  **Multiplication Bingo**  **Party Time**  **Line Them Up** | |  |  |   **CURRICULUM AT WORK TASKS** REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Counting group thingsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: A walk around the playgroundREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Party plansREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: In the orchard **REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: City car park** THE FOUR PROCESSES IN CONTEXT: Party timeTHE FOUR PROCESSES IN CONTEXT: MinibeastsTHE FOUR PROCESSES IN CONTEXT: Buses and trains  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number***  [***Basic multiplication & division p13***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1517/0.html#page=13)  [***Two meanings for division p25-28***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1511/0.html#page=22)  [***More on division p45-46***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1511/0.html#page=31)  [***Even more division p66***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1514/0.html#page=14)  [***Mathematics Task Centre***](http://www.blackdouglas.com.au/taskcentre/iceberg.htm)  4 Window Frames, 7 Consecutive Sums, 9 Row Points, 15 Domino Trails, 17 Truth Tiles 2, 30 Truth Tiles, 35 Crosses, 39 Criss-Cross Numbers, 45 Eric The Sheep, 52 Which Floor, 56 Challenge, 75 What's It Worth? 99 How Many Beans? 120 Nim, 127 Highest Number 1, 211 Soft Drink Crates, 218 Guessing Colours Game  ***Practical teaching strategies for children with learning difficulties***  Book 5 (numbers to 100)  ***Mental computation: a strategies approach***  Developing computation p17-24, 29-38Module 3 Basic facts (Multiplication, Division) | ***Learning Objects (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx)***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***The multiplier, Pebble array, Arrays  ***Interactive Learning***  [***Array count***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2422/0.html),  [***Tables***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2646/0.html),  [***Multiplication facts***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2518/0.html),  [***Missing numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2492/0.html),  [***Multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2412/0.html),  [***Number line multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2491/0.html),  [***Multo Random***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2458/0.html),  [***Multiple patterns***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2405/0.html),  ***[Whole number operations](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/4585/0.html)***  ***[Divide or multiply](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/4585/0.html)***  [***How many columns?***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/4587/0.html)  [***How many rows?***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/4586/0.html) | ***Teach whole numbers for understanding***  [***21 Model multiplication and division (hands-on)***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4497/0.html#page=34)  ***Continuum***  [**2.25 Early division ideas**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N22502P.htm)  Activity 1 Modelling quotition  Activity 2 A first look at remainders  Activity 3 Number line and repeated subtraction  [**2.75 Better multiplication strategies**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27502P.htm)  Activity 1 How many chocolates?  Activity 2 Partially covered arrays  [**2.75 Fact families for multiplication and division**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27501P.htm)  Activity 1 fact families from arrays  Activity 2 Recognising different fact families  Activity 3 Fact family fortune  Activity 4 fact family bonanza  ***Assessment for Common Misunderstandings***  [**Level 3: Multiplicative thinking**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl3.htm)  ***People count***  [***6 Basic multiplication***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=43)  [***7 Basic division***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=53) |   Whole-class investigations [***Maths300***](http://www.maths300.esa.edu.au/)  Spiders and ants,  17 Eric The Sheep,  97 Tackling Times Tables**,**  51 Hunting for stars  ***Ann Downton’s Multiplication Tasks***  Task 1: Mum bought 6 boxes of cupcakes. There were 4 cupcakes in each box.  How many cupcakes did she buy?  Task 2: One sticker costs 5 cents, how much would 4 stickers cost? |
| Level 3 | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 2**  **More Group Matching**  **Modelling Multiplication**  **Multiplication Bingo**  **Party Time**  **Line Them Up** | **Sine Tasks GP 3** | |  |  |   **CURRICULUM AT WORK TASKS** REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Heart beatsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Investigation—Class picnicREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Travel agent (including a learning technology variation)REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Toll chargesREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Storybook travelREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: What is your name worth?REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Multiplication brainbustersREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: The school canteen (including a learning technology variation)REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Practical situationsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Kenju’s forestTHE FOUR PROCESSESS IN CONTEXT: Number magic (including learning technology)THE FOUR PROCESSESS IN CONTEXT: Everyday situationsTHE FOUR PROCESSES IN CONTEXT: Fantastic featsTHE FOUR PROCESSESS IN CONTEXT: Mystery numberTHE FOUR PROCESSESS IN CONTEXT: Sticky keyTHE FOUR PROCESSESS IN CONTEXT: Excursion costsTHE FOUR PROCESSES IN CONTEXT: Alexander who used to be rich last SundayTHE FOUR PROCESSES IN CONTEXT: A classroom shop  |  | | --- | |  |  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number***  [**Early multiplying p24**](http://tm4u.mav.vic.edu.au/component/jdownloads/view.download/157/1511.html#page=10)  [**More on multiplying 44**](http://tm4u.mav.vic.edu.au/component/jdownloads/view.download/157/1511.html#page=30)  [**Still more multiplying 65**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1514/0.html#page=13)  [**Mathematics Task Centre**](http://www.blackdouglas.com.au/taskcentre/iceberg.htm)  4 Window Frames, 7 Consecutive Sums, 9 Row Points, 15 Domino Trails, 17 Truth Tiles 2, 30 Truth Tiles, 35 Crosses, 39 Criss-Cross Numbers, 45 Eric The Sheep, 52 Which Floor, 56 Challenge, 75 What's It Worth? 99 How Many Beans? 120 Nim, 127 Highest Number 1, 211 Soft Drink Crates, 218 Guessing Colours Game  [**Snake lines and sewing tape**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4394/0.html)  ***Practical teaching strategies for children with learning difficulties***  Book 5 (numbers to 100)  ***Mental computation: a strategies approach***  Developing computation p17-24, 29-38Module 3 Basic facts (Multiplication, Division)  Module 4 Two-digit whole numbers | ***Learning Objects (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx)***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  The multiplier, Pebble arrays, Arrays  ***Interactive Learning***  [***Array count***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2422/0.html),  [***Array Multiply***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2511/0.html),  [***Tables***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2646/0.html),  [***Multiplication facts***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2518/0.html),  [***Missing numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2492/0.html),  [***Multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2412/0.html),  [***Number line multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2491/0.html),  [***Multo Random***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2458/0.html),  [***Multiple patterns***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2405/0.html),  [***Multiply by 1 or 2 digits***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2495/0.html),  [***Whole number operations***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2587/0.html) | ***Teach whole numbers for understanding***  [**22 Abstracting multiplication and division**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4497/0.html#page=38)  [**23 Basic, derived and intuitive strategies for multiplication  (such as commutativity, skip counting and building up from known facts)**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4497/0.html#page=31)  ***Continuum***  [**2.25 Early division ideas**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N22502P.htm)Activity 1 Modelling quotition Activity 2 A first look at remainders Activity 3 Number line and repeated subtraction  [**2.75 Better multiplication strategies**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27502P.htm)Activity 1 How many chocolates? Activity 2 Partially covered arrays  [**2.75 Fact families for multiplication and division**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27501P.htm)Activity 1 fact families from arrays Activity 2 Recognising different fact families Activity 3 Fact family fortune Activity 4 fact family bonanza  ***Assessment for common misunderstandings***  [***Level 3: Multiplicative thinking***](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl3.htm)  ***People count***  [***6 Basic multiplication***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=43) |   **Whole-class investigations**  [***Maths300***](http://www.maths300.esa.edu.au/)Cookie count, Tables for 25  ***Learning Objects (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx)***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***Multiplying and dividing with arrays  ***Units of work (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx) ***or***[***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  Multiplying and dividing with arrays  [***Maths300***](http://www.maths300.esa.edu.au/)  17 Eric The Sheep,  97 Tackling Times Tables  ***RIME 5&6*** [***Times 11***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/291=4170/0.html)  ***Ann Downton’s Multiplication Tasks***  **Task 1:** Jamie collected 4 seashells.  Simone has 3 times as many. How many seashells does Simone have?  **Task 2**: Tara had a sheet of stickers. There were 6 stickers in each row and 7 rows of stickers. How many stickers did she have altogether? |
| Level 4 | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 3** | **Sine Tasks GP 4** | |  | **Colour to Win**  **Connect Three in the Grid**  **Fill in the Blanks**  **Fact Trees**  **Coin Toss** |   **CURRICULUM AT WORK TASKS** REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Heart beatsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Investigation—Class picnicREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Travel agent (including a learning technology variation)REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Toll chargesREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Storybook travelREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: What is your name worth?REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Multiplication brainbustersREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: The school canteen (including a learning technology variation)REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Practical situationsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Kenju’s forestTHE FOUR PROCESSESS IN CONTEXT: Number magic (including learning technology)THE FOUR PROCESSESS IN CONTEXT: Everyday situationsTHE FOUR PROCESSES IN CONTEXT: Fantastic featsTHE FOUR PROCESSESS IN CONTEXT: Mystery numberTHE FOUR PROCESSESS IN CONTEXT: Sticky keyTHE FOUR PROCESSESS IN CONTEXT: Excursion costsTHE FOUR PROCESSES IN CONTEXT: Alexander who used to be rich last SundayTHE FOUR PROCESSES IN CONTEXT: A classroom shop  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number***  [***Early mult and divide p13***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1517/0.html#page=13)  [***Mult and divide to 100 p24-28***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1511/0.html#page=21)  [***Mult and divide to 200 p44-46***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1511/0.html#page=30)  [***Mult and divide to 1000 p65-66***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1514/0.html#page=24)  [***Mathematics Task Centre***](http://www.blackdouglas.com.au/taskcentre/iceberg.htm)  4 Window Frames, 7 Consecutive Sums, 9 Row Points, 15 Domino Trails, 17 Truth Tiles 2, 30 Truth Tiles, 35 Crosses, 39 Criss-Cross Numbers, 45 Eric The Sheep, 52 Which Floor, 56 Challenge, 75 What's It Worth? 99 How Many Beans? 120 Nim, 127 Highest Number 1, 211 Soft Drink Crates, 218 Guessing Colours Game  [***Multiply and divide with Base ten blocks***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4395/0.html)  [***Snake lines and sewing tape***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4394/0.html) | ***Learning Objects (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx)***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  The multiplier, Pebble array, Arrays, The divider, Divide it up, School canteen  Mental calculation strategies - multiplication and division (Collection)  ***Interactive Learning***  [***Array count***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2422/0.html), [***Array Multiply***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2511/0.html), [***Tables***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2646/0.html), [***Multiplication facts***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2518/0.html), [***Missing numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2492/0.html), [***Multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2412/0.html),  [***Number line multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2491/0.html), [***Multo Random***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2458/0.html), [***Multiple patterns***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2405/0.html),  [***Whole number operations***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2587/0.html), [***Multiply by 1 or 2 digits***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2495/0.html)  [***Dividing up to 100***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2378/0.html), [***Division facts***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2393/0.html), [***10 or 100 times what?***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2493/0.html), [***Backwards multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2484/0.html),  [***Common factor***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2410/0.html), [***Divide by 1 or 2 digits***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2496/0.html), [***Division in pictures***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2505/0.html), [***Energy use***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2453/0.html) | **TEACHING**  ***Teach whole numbers for understanding***  [**27 Distributive laws (Do it to both)**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=4)  [**28 Round & estimate for single-digit multiplication**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=5)  [**30 Multiply any number by a single digit**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=7)  [**34 Divide by one digit**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=11)  ***Continuum***  [**2.25 Early division ideas**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N22502P.htm)  Activity 1 Modelling quotition  Activity 2 A first look at remainders  Activity 3 Number line and repeated subtraction  [**2.75 Better multiplication strategies**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27502P.htm)  Activity 1 How many chocolates?  Activity 2 Partially covered arrays  [**2.75 Fact families for multiplication and division**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27501P.htm)  Activity 1 fact families from arrays  Activity 2 Recognising different fact families  Activity 3 Fact family fortune Activity 4 fact family bonanza  ***Assessment for common misunderstandings***  [**Level 3: Multiplicative thinking**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl3.htm)  ***Mental computation: a strategies approach*:**  Developing computation p17-24, 29-38Module 3 Basic facts (Multiplication, Division) Module 4 Two-digit whole numbers  ***Building numeracy (George Booker)***  Multiplication and division screening tests A and B and related interventions  ***People count***  [***6 Basic multiplication***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=43)  [***7 Basic division***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=53)  ***Practical teaching strategies for children with learning difficulties***  Book 5 (numbers to 100) |  Whole-class investigations [***Maths300***](http://www.maths300.esa.edu.au/)  17 Eric The Sheep, 97 Tackling Times Tables, 51 Hunting for stars  ***Units of work (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx)***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  Patterns and sequences  Multiplying and dividing with arrays  Exploring division and multiplication  ***RIME 5&6*** [***Times 11***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/291=4170/0.html)  ***Ann Downton’s Multiplication Tasks***  Task 1: In a paddock 6 geese and 5 cows are eating the grass.  How many legs are there altogether?  Task 2: At the car park there are 12 cars in each row.  How many cars would there be in five rows? |
| Level 5 | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 4** | **Sine Tasks GP 5** | | **Colour to Win**  **Connect Three in the Grid**  **Fill in the Blanks**  **Fact Trees**  **Coin Toss** | **Modelling Multiplication Again**  **Multiplication Rules That You Known**  **Multiplication Snap**  **Choose Five**  **Vowels and Consonants in your name** |   **CURRICULUM AT WORK TASKS** THE FOUR PROCESSES IN CONTEXT: Investigation—The canteen (including learning technology)THE FOUR PROCESSES IN CONTEXT: Parking lotTHE FOUR PROCESSES IN CONTEXT: Ticket takingsTHE FOUR PROCESSES IN CONTEXT: Measurement problemsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: AveragesREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Lasting lengthsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: AirportREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: What is a light year?REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Project—Telephone chargesREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Exploring with calculators  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number***  [***Divide p66***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1514/0.html#page=14)  [***Multiply p87-88***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1514/0.html#page=35)  [***Round and estimate p93-94***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1514/0.html#page=41)  [***Number facts p123***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1516/0.html#page=21)  [***Division p134-137***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1516/0.html#page=32)  [***Division p180***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1512/0.html#page=34)  ***Active Learning (Number & Algebra)***   [***N2 Building the greatest***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=18)  [***N4 Number facts through card games***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=20)  [***N5 Patterns in the multiplication table***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=21)  [***N6 Sticky numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=22)  [***N7 Mirror products***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=23) [***N8 Sequences***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=24)  [***N9 Remainder game***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=25)  [***N11 Checkmath***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=27)  [***N12 Divisibility***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=29)  [***N13 Card games for factors***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=30) [***N15 Factorgrams***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=32)  ***Active Learning 2 (Number and Algebra)***  [***N3 Multiply and divide***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/138/1390/0.html#page=39)  [***N12 Remainders***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/138/1390/0.html#page=50)  [**Multiply & divide whole numbers with base 10 blocks**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4395/0.html)  [**MAV-money (WN)**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4391/0.html)  [**Snake line and sewing tape**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/313/4394/0.html)  [**Numeracy games (cards or dice)**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/301/4315/0.html) | ***Learning Objects***  ***(***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx)***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  Financial maths - purchasing and pricing (Collection)   Comparative pricing using calculations and linear graphs (Collection)  ***Interactive Learning***  *Multiply or divide*  [***One digit multiply***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2477/0.html), [***Single digit multiply***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2629/0.html), [***Tables***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2646/0.html), [***Multiplication facts***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2518/0.html), [***Multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2412/0.html),  [***Number line multiplying***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2491/0.html), [***MultoRandom***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2458/0.html),  [***Multiply with powers of 10***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2396/0.html), [***Divide with powers of 10***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2465/0.html),  ***[Powers of ten (x)](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2565/0.html)***,  [***Single digit divide***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2593/0.html), [***Guzintas***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2413/0.html), [***Division in a table***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2451/0.html),  [***Whole number operations***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2587/0.html), [***10 quick questions (Whole numbers)***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/301/4346/0.html)  *Distributive law and two digit multiplication*  [***Distributive laws***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2468/0.html), [***Distributive multiply***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2402/0.html), [***Distributive divide***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2440/0.html),  [***Two digit multiply***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2621/0.html), [***Multiplication in a table***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2397/0.html).  *Multiples or factors*  [***Multiple patterns***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2405/0.html), [***Multiples***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2517/0.html), [***Suzie's shells***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2624/0.html), [***Biorhythms***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2450/0.html), [***Left-overs***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2398/0.html),  [***Aliquot***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2478/0.html), [***Lockers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2487/0.html), [***Number of divisors***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2429/0.html), [***Common factor***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2414/0.html)  [**standards.nctm.org/document/eexamples/index.htm**](http://tm4u.mav.vic.edu.au/standards.nctm.org/document/eexamples/index.htm)  6.1 Learning about Multiplication Using Dynamic Sketches of an Area Model  [**http://illuminations.nctm.org/Activities.aspx**](http://illuminations.nctm.org/Activities.aspx)Product game, Factor game, Factorize | ***Teach whole numbers for understanding***  [**28 Round & estimate for single-digit multiplication**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=5)  [**29 Multiply a multiple of 10 by a single digit**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=6)  [**30 Multiply any number by a single digit**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=7)  [**31 Multiply by 10, 20, 30 etc**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=8)  [**32 Multiply any two 2-digit number**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=9)  [**33 Round & estimate for two-digit multiplication**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=10)  [**34 Divide by one digit**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=11)  [**35 Round & estimate division**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=13)  [**40 Multiples**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=19)  [**41 Common multiples and LCM**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=20)  [**42 Factors**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=21)  [**43 Common factors and HCF**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=22)  ***Continuum***  [**2.25 Early division ideas**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N22502P.htm)  Activity 1: Modelling quotition Activity 2: A first look at remainders Activity 3: Number line and repeated subtraction  [**2.75 Better multiplication strategies**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N27502P.htm)  Activity 1: How many chocolates? Activity 2: Partially covered arrays  [**2.75 Properties of operations**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/structure/st275ip.htm)  Activity 1: Demonstrating and using the distributive property Activity 2: Mental computation example Activity 3: Properties that don't work Activity 4: Distributive property used with subtraction  [**3.0 Recall of multiplication facts**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N30006P.htm)  Activity 1: Set realistic goals Activity 2: Stress number patterns and properties Activity 3: Enlist help of parents Activity 4: Strengthen students' metacognition Activity 5: Use games with a chance element  [**3.75 Identifying factors and multiplication**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N37501P.htm)  Activity 1: Making rectangles Activity 2: What goers in? Activity 3: Factor grab game Activity 4: What else goes in? Activity 5: Shuffling factors Activity 6: Today's number is â€¦  [**4.0 Partial products in multiplication**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N40002P.htm)  Activity 1: Multiplication of whole numbers showing partial products Activity 2: Multiplication of whole numbers using lattice multiplication  ***Assessment for Common Misunderstandings:***  [**Level 2 Place value**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl2.htm)[**Level 3 Multiplicative thinking**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/common/commisslvl3.htm)  ***Scaffolding Numeracy in the Middle Years:***  [**LAF Zone 3 Sensing,**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/snmy/learnplans.htm)  [**LAF Zone 4 Strategy exploring,**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/snmy/learnplans.htm)  [**LAF Zone 5 Strategy refining**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/snmy/learnplans.htm)  [**LAF Zone 6 Strategy extending**](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/snmy/learnplans.htm) |  Whole-class investigations ***Mathematics Assessment for Learning: Rich tasks and work samples***  10 Cubes and hoops, 11 Booze buses  ***Units of work (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx) ***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***School canteen Multiplying and dividing with arrays  [***Maths300***](http://www.maths300.esa.edu.au/)12 Gauss Beats The Teacher, 14 The Farmer's Puzzle, 30 Truth Tiles, 52 Multo, 66 Dominoes,  78 Row Points, 84 Number Charts, 99 What's It Worth? 101 Odds & Evens, 62 4&20 Blackbirds,  71 Eureka  ***RIME 5&6***[***Times 11***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/291/4170/0.html)  ***RIME (Number)***  [***2 Estimating multiplication***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4265/0.html), [***3 Times 99***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4356/0.html), [***4 Odds and evens***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4239/0.html), [***5 Readability***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4357/0.html), [***6 Smorgasbord***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4351/0.html),  [***7 Checkmath***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4350/0.html), [***8 Line up***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4260/0.html), [***10 Factorgrams***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4264/0.html), [***14 Add the numbers 1 to 100***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4247/0.html), [***15 Circle patterns***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4280/0.html),  [***18 Happy numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/298/4267/0.html)  ***People count***  [***5 Place value, addition and subtraction***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#Page=35)  [***8 Tables, multiples, factors and prime numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#Page=62)  [***9 Multiplication by powers of 10***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#Page=75)  [***10 Order of operations and the distributive laws***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#Page=86)  [***11 Place value, distributive law and multiplication***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#Page=97)  [***12 Place value, distributive law and division***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#Page=107)  ***Ann Downton’s Multiplication Tasks***  Task 1:In a barn there are 15 animals. Some of them are flies and some are horses. How many horses and flies are there if there are 72 legs altogether?  Task 2: A Jetstar’s 737 plane has 8 seats in each row. The seat row numbers go up to 36. How many passengers can the plane hold? |
| Level 6 | **MULTIPLICATION**   |  |  | | --- | --- | | **Sine Tasks GP 5** | **Sine Tasks GP 7** | | **Modelling Multiplication Again**  **Multiplication Rules That You Known**  **Multiplication Snap**  **Choose Five**  **Vowels and Consonants in your name** | **Let’s Go Shopping**  **Clumps**  **Telephone Maths Again**  **Nappy Maths**  **What’s in a name?** |   **CURRICULUM AT WORK TASKS** THE FOUR PROCESSES IN CONTEXT: Investigation—The canteen (including learning technology)THE FOUR PROCESSES IN CONTEXT: Parking lotTHE FOUR PROCESSES IN CONTEXT: Ticket takingsTHE FOUR PROCESSES IN CONTEXT: Measurement problemsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: AveragesREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Lasting lengthsREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: AirportREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: What is a light year?REPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Project—Telephone chargesREPRESENT, CREATE, MODEL AND SOLVE PROBLEMS: Exploring with calculatorsEXPLORE SPATIAL AND NUMERICAL PATTERNS: Rectangle PatternsEXPLORE SPATIAL AND NUMERICAL PATTERNS: Alphabet patternEXPLORE SPATIAL AND NUMERICAL PATTERNS: Look for a patternEXPLORE SPATIAL AND NUMERICAL PATTERNS: Pyramid puzzlesEXPLORE SPATIAL AND NUMERICAL PATTERNS: Patterns in multiplication and divisionRECOGNISE, CREATE AND DESCRIBE NUMBER PATTERNS: PatternsRECOGNISE, CREATE AND DESCRIBE NUMBER PATTERNS: Investigating number patternsRECOGNISE, CREATE AND DESCRIBE NUMBER PATTERNS: Multiplication patternsRECOGNISE, CREATE AND DESCRIBE NUMBER PATTERNS: Number machinesRECOGNISE, CREATE AND DESCRIBE NUMBER PATTERNS: Division theories  |  |  |  | | --- | --- | --- | | Hands-on | ICT | **Teaching** | | ***Guidelines in Number*** [Operations: p168-187](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1512/0.html#page=22) [Problem solving: p188-191](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/157/1512/0.html#page=42)  ***Active Learning (Number & Algebra)*** [N14 Investigating primes](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=31) [N15 Factorgram diagrams](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/123/1089/0.html#page=32)  ***Active Learning 2 (Number & Algebra)*** [A8 Using triangle numbers](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/138/1392/0.html#page=22) | ***Learning Objects (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx) ***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  Sieve of Eratosthanes   Mental calculation strategies - multiplication and division (Collection)  Comparative pricing using calculations and linear graphs (Collection)  ***Interactive Learning***  [***Prime spiral***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2575/0.html), [***Primed spiral***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2636/0.html), [***Prime sieve***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2639/0.html)  [***Square numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2616/0.html), [***Sums of squares of digits***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2568/0.html), [***Triangle numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/211/2868/0.html)  [***Factor tree***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2443/0.html), [***Prime factors***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2627/0.html), [***Factorgrams***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/187/2457/0.html) | ***Teach whole numbers for understanding*** [**44 Prime and composite numbers**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=23)[**45 Prime factors**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=24)  ***Building numeracy (George Booker)*** Multiplication and division screening tests A and B and related interventions  ***People count*** [8 Tables, multiples, factors and prime numbers](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=62) [83 Number patterns](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3541/0.html#page=11) |    Whole-class investigations  |  |  | | --- | --- | | ***Mathematics Assessment for Learning: Rich tasks and work samples***  10 Cubes and hoops, 11 Booze buses  ***Building numeracy (Booker)***  Multiplication tests A and B and related interventions  ***Units of work (***[***FUSE***](https://fuse.education.vic.gov.au/pages/Teacher.aspx) ***or*** [***Scootle***](http://www.scootle.edu.au/ec/curriculum?learningarea=%22Mathematics%22&menu=3)***)***  School canteen  [***Maths300***](http://www.maths300.esa.edu.au/)  17 Eric The Sheep  97 Tackling Times Tables,  51 Hunting for stars  ***RIME 5&6***  [***Times 11***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/291/4170/0.html)  ***Teach whole numbers for understanding***  [**44 Prime and composite numbers**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=23)  [**45 Prime factors**](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/306/4500/0.html#page=24)  ***People count***  [***8 Tables, multiples, factors and prime numbers***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3838/0.html#page=62)  [***83 Number patterns***](http://tm4u.mav.vic.edu.au/component/jdownloads/finish/275/3541/0.html#page=11)  SCAFFOLDING NUMERACY IN THE MIDDLE YEARS  <http://www.education.vic.gov.au/studentlearning/teachingresources/maths/snmy/default.htm> | ***Ann Downton’s Multiplication Tasks***  **Task 1:**  Sam is paving the path. The path is 8 paving stones wide. How many rows can he tile if he has 487 paving stones?  **Task 2**:  Maddy has a lounge where she needs 33 carpet tiles in one direction and  16 in the other.  How many carpet tiles will she have to buy to cover the floor of the lounge floor?  **LITERATURE**  **Title: *Annos Mysterious Multiplying Jar***  **Author: Masichiro & Mitumasa Anno**  **Publisher:**  Title: *Kenjus Forest*  Author: Junko Morimoto  Publisher:  Title: *One is Snail Ten is a Crab*  Author: **April Pulley** Sayre & Jeff Sayre  Publisher:    Title: *How much is a million?*  Author: David M. Schwartz  Publisher: HarperCollinsPublishers  **\\Server\shared work\TEACHERS\Curriculum\MATHS\STORY BOOKS\FRONT COVERS\IMG_2711.JPGTitle**: ***Math Curse***  **Author**: Jon Scieszka & Lane Smith  **Publisher**: Penguin, USA  **Title**: ***A remainder of one***  **Author**: Elinor Pinczes  **Publisher**: Anderson Press, London  **Title**: ***The King’s Chessboard***  **Author:**  **Publisher**: Penguin Books, New York | |  |  | |