

Mathematics Grade 4 Milestones: TERM 1	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 4
Counting forwards and backwards in a variety of intervals (including 2s, 3s, 5s, 10s, 25s, 50s and 100s) between 0 and 1000	Ch 1: Animals, lesson 1: p1
Recognise and represent numbers in order to describe and compare them: <ul style="list-style-type: none"> expanded notation of numbers to 1000 common fractions with different denominators including halves, thirds, quarters and eighths common fractions in diagrammatic form decimal fractions of the form 0.5 in the context of measurement odd and even numbers to at least 1000 multiples of two single-digit numbers to at least 100 	Ch 1: Animals, lesson 8: p8
Recognise the place value of digits in whole numbers to a minimum of 3-digit numbers	Ch 2: Messages, lesson 6: p17
Perform mental calculation involving addition and subtraction of: <ul style="list-style-type: none"> a single-digit to a two-digit number e.g. 53+4, 63+4, 72-5, 62-5 2 two-digit numbers where one number is a whole ten e.g. 39+10, 39+30, 97-20, 23-10 	Ch 1: Animals, lesson 3: p3
Perform mental calculations involving multiplication of two single-digit numbers in number range dealt with	Ch 1: Animals, lesson 7: p7
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> building up and breaking down numbers rounding off doubling and halving using a number line 	Ch 3: Green around me, lesson 2: p23 Ch 4: Moneywise I, lesson 7: p38
Solve problems in context using a variety of strategies with numbers to 500 using a number chart if necessary	Ch 1: Animals, lesson 2: p2
Investigate and extend numeric and geometric patterns looking for general rules or a relationship, including patterns: <ul style="list-style-type: none"> represented in physical and diagrammatic form of learner's own creation 	Ch 1: Animals, lesson 1: p1 Ch 1: Animals, lesson 3: p3
Describe observed relationships of rules in own words	Ch 3: Green around me, lesson 3: p23
Determine the output values for given input values using: <ul style="list-style-type: none"> verbal description flow diagrams 	Ch 1: Animals, lesson 7: p7
Recognise, visualise and name 2-dimensional shapes and 3-dimensional objects in the environment including: <ul style="list-style-type: none"> rectangular prisms, spheres, cylinders and other objects prisms and pyramids circles and rectangles polygons in terms the number of sides up to 6-sided figures 	Ch 1: Animals, lesson 4: p4 Ch 1: Animals, lesson 5: p5
Describe, sort and compare 2-dimensional shapes and 3-dimensional objects from the environment according to geometric properties including: <ul style="list-style-type: none"> shapes of faces number of sides flat and curved surfaces, straight and curved sides 	Ch 1: Animals, lesson 5: p5
Investigate and compare 2-dimensional, shapes and 3-dimensional objects according to properties listed above: making 3-dimensional models using cut-out polygons (supplied)	Ch 4: Moneywise I, lesson 3: p34

Mathematics Grade 4 Milestones: TERM 2

MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 4
Counting forwards and backwards in a variety of intervals (including 2s, 3s, 5s, 9s, 10s, 11s, 25s, 50s and 100s) between 0 and 2000 Ways of counting in different cultures (including local) throughout history	Ch 6: Timelines, lesson 2: p52 Ch 8: Maths long ago, lessons 1 & 2: p71
Recognise and represent numbers in order to describe and compare them: <ul style="list-style-type: none"> expanded notation of numbers to 5000 common fractions with different denominators including halves, thirds, quarters, sixths and eighths common fractions in diagrammatic form decimal fractions of the form 0,5, 1,5 and 2,5 in the context of measurement multiples of 2 two-digit numbers where one number is a whole 10 to at least 200 	Ch 5: Friends, lesson 1: p41 Ch 6: Timelines, lesson 1: p52 Ch 7: My favourite things, lesson 2: p62
Recognise the place value of digits in whole numbers to a minimum of 4-digit numbers	Ch 5: Friends, lesson 7: p47
Recognise and use equivalent forms of the numbers listed above including: <ul style="list-style-type: none"> common fractions with denominators that are multiples of each other decimal fractions of the form 0,5, 1,5 and 2,5 and so on in the context of measurement 	Ch 6: Timelines, lesson 1: p51
Perform mental calculations involving addition, subtraction and multiplication within the number range dealt with	Ch 5: Friends, lesson 7: p47, lesson 8: p48
Solve problems in contexts such as: <ul style="list-style-type: none"> financial (buying, selling and simple budgets) measurements in Natural Sciences and Technology contexts 	Ch 4: Money wise 1, lesson 1: p31
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> building up and breaking down numbers rounding off and compensating doubling and halving using a number line using a calculator 	Ch 6: Timelines, lesson 2: p52 Ch 7: My favourite things, lesson 1: p61 Ch 8: Maths long ago, lesson 7: p78
Recognise and describe lines of symmetry in 2-dimensional shapes including those in nature and its cultural art forms	Ch 5: Friends, lesson 3: p43
Make 2-dimensional shapes, 3-dimensional objects and patterns from geometric objects and shapes (e.g. tangrams) with a focus on tiling (tessellations) and line symmetry.	Ch 6: Timelines, lesson 3: p54 Ch 8: Maths long ago, lesson 4: pp74, 75
Read, tell and write analogue, digital and 24-hour time to at least the nearest minute and second	Ch 8: Maths long ago, lesson 8: p79
Solve problems involving calculation and conversion between appropriate time units including seconds, minutes, hours, days, weeks, months and years	Ch 6: Timelines, lesson 3: p53
Use time-measuring instruments to appropriate levels of precision, including watches and clocks	Ch 8: Maths long ago, lesson 8: p79
Describe and illustrate ways of measuring and representing time in different cultures throughout history	Ch 6: Timelines, lesson 6: p57
Estimate, measure, record, compare and order 2-dimensional shapes and 3-dimensional objects using SI units with appropriate precision for: <ul style="list-style-type: none"> Mass (grams and kilograms) 	Ch 10: Machines, lesson 9: p99

MATHEMATICS Grade 4 Milestones: TERM 3	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 4
Counting forwards and backwards in a variety of intervals (including 2s, 3s, 4s, 5s, 9s, 10s, 11s, 25s, 50s and 100s) between 0 and 5000	Ch 11: Water wise, lesson 1: p101
Recognise and represent numbers in order to describe and compare them: <ul style="list-style-type: none"> whole numbers to at least 4 digits common fractions with different denominators including halves, thirds, quarters, fifths, sixths and eighths common fractions in diagrammatic form decimal fractions of the form 0.5, 1.5 and 2.5 in the context of measurement 	Ch 10: Machines, lesson 9: p92 Ch 9: Creepy crawlies, lesson 9: p89 Ch 10: Machines, assessment: p100
Recognise the place value of digits in whole numbers to a minimum of 4-digit numbers	Ch 9: Creepy crawlies, lesson 2: p82
Solve problems involving: <ul style="list-style-type: none"> comparing two or more quantities of the same kind (ratio) comparing two or more quantities of different kinds (rate, e.g. kg/R) 	Ch 10: Machines, lesson 9: p99
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> rounding off to the nearest 10, 100 or 1000 addition and subtraction of whole numbers with at least 4 digits addition of common fractions in context multiplication of at least whole 2-digit by 2-digit numbers to 200 division of at least a whole 3-digit by 2-digit numbers equal sharing with remainders 	Ch 9: Creepy crawlies, lesson 2: p82 Ch 9: Creepy crawlies, lesson 7: p87 Ch 9: Creepy crawlies, lesson 8: p88 Ch 10: Machines, lesson 2: p92
Perform mental calculations involving: <ul style="list-style-type: none"> addition and subtraction multiplication of at least whole numbers to at least 10 x 10 	Ch 9: Creepy crawlies, lesson 1: p81 Ch 10: Machines, lesson 8: p98
Write number sentences to describe a problem situation within a context	Ch 11: Water wise, lesson 2: p102
Solve or complete number sentences by inspection or by trial-and-improvement, checking the solutions by substitution (e.g. $x \div 4 = 12$)	Ch 10: Machines, lesson 2: p92
Determine through discussion and comparison, the equivalence of different descriptions of the same relationship or rule represented: <ul style="list-style-type: none"> verbally in a flow diagram by number sentences 	Ch 11: Water wise, lesson 4: p104
Estimate, measure, record, compare and order 2-dimensional shapes and 3-dimensional objects using SI units with appropriate precision for: <ul style="list-style-type: none"> capacity (millimetres and litres) 	Ch 11: Water wise, lesson 9: p109
Using appropriate measuring instruments to appropriate levels of precision including: <ul style="list-style-type: none"> measuring jugs to measure capacity 	Ch 11: Water wise, lesson 9: p109
Solve problems involving selecting, calculating with and converting between appropriate SI units listed above	Ch 11: Water wise, lesson 8: p108
Pose simple questions about own school and family environment and identify appropriate data sources	Ch 11: Water wise, lesson 5: p105
Collect data in the classroom and school environment to answer questions posed by the teacher and the class	Ch 9: Creepy crawlies, lesson 6: p86
Organise and record data using tallies and tables	Ch 10: Machines, lesson 1: p91

<p>Draw graphs and interpret data (ungrouped)</p> <ul style="list-style-type: none">• pictographs with a one-to-one correspondence between data and representation (e.g. one picture = one person)• bar graphs	<p>Ch 11: Water wise, lesson 6: p106 Ch 10: Machines, lesson 6: p96</p>
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Mathematics Grade 4 Milestones: TERM 4	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 4
Count forwards and backwards in a variety of intervals (including 2s, 3s, 4s, 5s, 9s, 10s, 11s, 20s, 25s, 50s and 100s) between 0 and 10 000	Ch 14: Building blocks, lesson 2: p132
Recognise and represent numbers in order to describe and compare them: <ul style="list-style-type: none"> • whole numbers to at least 4 digits • common fractions with different denominators including halves, thirds, quarters, fifths, sixths, sevenths and eighths • multiples of single-digit numbers to at least 100 	Ch 13: Caring about people, lesson 1: p121 Ch 13: Caring about people, lesson 2: p122
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> • building up and breaking down numbers • rounding off and compensating • doubling and halving • using a number line • using a calculator 	Ch 12: Moneywise 2, lesson 1: p111 Ch 15: Transport, lesson 6: p146
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> • rounding off to the nearest 10, 100 or 1000 • addition and subtraction of whole numbers with at least 4 digits • addition of common fractions in context • multiplication of at least whole 2-digit by 2-digit numbers to 200 • multiplication of 3-digit by 1-digit numbers • division of at least a whole 3-digit by 1-digit numbers • equal sharing with remainders 	Ch 13: Caring about people, lesson 6: p126 Ch 13: Caring about people, lesson 8: p128 Ch 14: Building blocks, lesson 7: p137
Use a range of strategies to check solutions and judge reasonableness of solutions	Ch 13: Caring about people, lesson 7: p127
Recognise, describe and use: <ul style="list-style-type: none"> • the reciprocal relationship between multiplication and division (e.g. if $5 \times 3 = 15$, then $15 \div 3 = 5$) • the equivalence of divisions and fractions (e.g. $1 \div 8 = 1/8$) • the commutative, associative and distributive properties with whole numbers (learners able to use properties; not necessarily know the names) 	Ch 15: Transport, lesson 2: p142
Recognise and describe 2-dimensional shapes, 3-dimensional objects and patterns in terms of geometric properties	Ch 14: Building blocks, lesson 4: p134
Describe changes in the view of an object held in different positions	Ch 10: Machines, lesson 5: p95
Locate positions on a coded (labelled) grid including: <ul style="list-style-type: none"> • maps from given instructions • column and row 	Ch 13: Caring about people, lesson 5: p125
Investigate and approximate: <ul style="list-style-type: none"> • perimeter using rulers or measuring tapes • area of polygons (using square grids and tiling) to develop understanding of square units • volume/capacity of 3-dimensional objects (by packing or filling them) in order to develop an understanding of cubic units 	Ch 12: Moneywise 2, lesson 9: p119 Ch 14: Building blocks, lesson 9: p139
Critically read and interpret data presented in a variety of ways (including own representations, representations in the media) to draw conclusions and make predictions sensitive to the role of: <ul style="list-style-type: none"> • context (e.g. rural or urban) • other human rights issues 	Ch 13: Caring about people, lesson 9: p129 Ch 12: Moneywise 2, lesson 8: p118
Compare and classify events in daily life as: <ul style="list-style-type: none"> • certain they will happen • certain they will not happen • uncertain 	Ch 12: Moneywise 2, lesson 6: p116
Count the number of possible outcomes for simple trials	Ch 13: Caring about people, lesson 7: p127

Mathematics Grade 5 Milestones: TERM 1	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 5
Count forwards and backwards in whole number intervals and fractions	Ch 1: Water, lesson 9: p9
Ways of writing numbers in different cultures (including local) throughout history	Ch 5: Technology, lesson 1: p98
Recognise the place value of digits in whole numbers to 4 digits	Ch 1: Water, lesson 1: p1
Recognise and represent in order to compare: <ul style="list-style-type: none"> to a minimum of 4-digit whole numbers common fractions to eighths decimal fractions of the form 0,5, 1,5 and 2,5 and so on in the context of measurement 	Ch 1: Water, lesson 2: p2
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> rounding off to the nearest 10, 100 or 1000 addition and subtraction of whole numbers with at least 4 digits addition of common fractions in context multiplication of at least whole 2-digit by 2-digit numbers to 500 multiplication of 3-digit by 1-digit numbers division of at least a whole 3-digit by 1-digit numbers equal sharing with remainders 	Ch 1: Water, lesson 4: p4 Ch 2: Moneywise, lesson 6: p32, 33 Ch 2: Moneywise, lesson 7: p34, 35
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> building up and breaking down numbers, [including expanded notation] including expanded notation rounding off and compensating doubling and halving using a number line using a calculator 	Ch 1: Water, lesson 3: p3 Ch 2: Moneywise, lesson 4: p30 Ch 2: Moneywise, lesson 5: p31
Mental calculations involving addition, subtraction and multiplication (10 x 10)	Ch 2: Moneywise, lesson 5: p31
Write number sentences to describe a problem situation within a context	Ch 2: Moneywise, lesson 3: p29
Investigate and extend numeric and geometric patterns looking for general rules or a relationship, including patterns: <ul style="list-style-type: none"> represented in physical and diagrammatic form of learner's own creation 	Ch 1: Water, lesson 6: p6
Describe observed relationships of rules in own words	Ch 2: Moneywise, lesson 4: p30
Determine output values for given input values using: <ul style="list-style-type: none"> verbal description flow diagrams 	Ch 2: Moneywise, lesson 20: p48
Recognise, visualise and name 2-dimensional shapes and 3-dimensional objects focussing on: <ul style="list-style-type: none"> similarities and differences between cubes and rectangular prisms similarities and differences between squares and rectangles 	Ch 1: Water, lesson 16: p16, lesson 17: p17 Ch 1: Water, lesson 18: p18
Describe, sort and compare 2-dimensional shapes and 3-dimensional objects in terms of properties: <ul style="list-style-type: none"> number and/or shape of faces number and/or length of sides 	Ch 1: Water, lesson 7: p7
Investigate and compare 2-dimensional shapes and 3-dimensional objects according to the properties listed above: <ul style="list-style-type: none"> make models of geometric objects using polygons they have cut out cutting open models or geometric objects (e.g. boxes) to trace their nets drawing shapes on grid paper 	Ch 2: Moneywise, lesson 12: p40 Ch 2: Moneywise, lesson 13: p41 Ch 2: Moneywise, lesson 14: p42

Mathematics Grade 5 Milestones: TERM 2	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 5
Counting forwards and backwards in whole number intervals and fractions	Ch 3: Green landscapes, lesson 1: p51
Recognise the place value of digits in whole numbers to a minimum of 5-digit numbers	Ch 4: My country, lesson 5: p77
Recognise and represent in order to compare:	Ch 3: Green landscapes, lesson 2: p52
<ul style="list-style-type: none"> to a minimum of 5-digit whole numbers common fractions to twelfths decimal fractions of the form 0,5, 1,5 and 2,5 and so on in the context of measurement [multiples of single-digit numbers to at least 100 0 in terms of additive inverses 1 in terms of multiplicative inverses] 	Ch 3: Green landscapes, lesson 3: p53
Recognise and use equivalent forms of the numbers listed above including:	Ch 3: Green landscapes, lesson 4: p54
<ul style="list-style-type: none"> common fractions with denominators that are multiples of each other decimal fractions of the form 0,5, 1,5 and 2,5 and so on in the context of measurement 	Ch 3: Green landscapes, lesson 5: p55
	Ch 4: My country, lesson 10: p82
Estimate and calculate by selecting and using operations and techniques appropriate to solve problems that involve:	Ch 3: Green landscapes, lesson 6: p56
<ul style="list-style-type: none"> rounding off to the nearest 5, 10, 100 or 1000 addition and subtraction of whole numbers with at least 5 digits addition of common fractions with the same denominator multiplication of at least whole 2-digit by 2-digit numbers to at least 1000 multiplication of 3-digit by 1-digit numbers division of at least a whole 3-digit by 1-digit numbers finding fractions of whole numbers which result in whole numbers 	Ch 3: Green landscapes, lesson 7: p57
	Ch 3: Green landscapes, lesson 8: p58
Solve problems in contexts such as:	Ch 2: Money wise, lesson 20: p48
<ul style="list-style-type: none"> financial (buying, selling, profit, loss, simple budgets) measurements in Natural Sciences and Technology contexts 	
Write number sentences to describe a problem situation within a context	Ch 4: My country, lesson 1: p74
Investigate and extend numeric and geometric patterns looking for general rules or a relationship, including patterns:	Ch 3: Green landscapes, lesson 21: p71
<ul style="list-style-type: none"> found in natural and cultural contexts of learner's own creation 	
Recognise, describe and perform rotations (turns), reflections (flips) and translations (slides) using geometric figures and solids	Ch 3: Green landscapes, lesson 16,17: p66, 67
Make 2-dimensional shapes, 3-dimensional objects and patterns from geometric shapes and describe these in terms of:	Ch 3: Green landscapes, lesson 18: p68
<ul style="list-style-type: none"> tessellations line and rotational symmetry movement including rotations, reflections and translations 	Ch 3: Green landscapes, lesson 19: p69
	Ch 3: Green landscapes, lesson 20: p70
Read, tell and write analogue, digital and 24-hour time to at least the nearest minute and second	Ch 1: Water, lesson 23: p25
Solve problems involving calculation and conversion between appropriate time units including decades, centuries and millennia	Ch 4: My country, lesson 14: p86
Use time measuring instruments to appropriate levels of precision including watches and stopwatches	Ch 4: My country, lesson 15: p87
Describe and illustrate ways of representing time in different cultures throughout history	Ch 5: Technology, lesson 17: p115

Estimate, measure, record, compare and order 2-dimensional shapes and 3-dimensional objects using SI units with appropriate precision for: <ul style="list-style-type: none"> • Mass (grams and kilograms) • Capacity (millilitres and litres) • Length (millimetres, centimetres, metres and kilometres) • Temperature (degree Celsius scale) 	Ch 4: My country, lesson 16: p 88 Ch 4: My country, lesson 17: p 89 Ch 3: Green landscapes, lesson 10: p60 Ch 4: My country, lesson 7: p79
Solve problems involving selecting, calculating with and converting between appropriate SI units above	Ch 3: Green landscapes, lesson 9: p59
Organise and record data using tallies and tables	Ch 4: My country, lesson 22: p94
Examine ungrouped numerical data to determine the most frequently occurring score (mode) of the data	Ch 4: My country, lesson 23: p95
Describe central tendencies using the mode of the data collected	Ch 4: My country, lesson 23: p95

Mathematics Grade 5 Milestones: TERM 3	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 5
Count forwards and backwards in whole number intervals and fractions	Ch 5: Technology, lesson 3: p100
Recognise the place value of digits in whole numbers to a minimum of 6-digit numbers	Ch 5: Technology, lesson 5: p102
Recognise and represent in order to compare: <ul style="list-style-type: none"> to a minimum of 6-digit whole numbers common fractions to twelfths multiples of single-digit numbers to at least 100 factors of any 2-digit whole number 	Ch 5: Technology, lesson 2: p99 Ch 5: Technology, lesson 4: p101
Solve problems involving: <ul style="list-style-type: none"> comparing two or more quantities of the same kind (ratio) 	Ch 5: Technology, lesson 7: p104, lesson 8: p105
Estimate and calculate by selecting and using operations and techniques appropriate to solve problems that involve: <ul style="list-style-type: none"> rounding off to the nearest 5, 10, 100 or 1000 [addition and subtraction of whole numbers with at least 5 digits] addition and subtraction of common fractions with the same denominator and whole numbers with common fractions (mixed numbers) multiplication of at least whole 3-digit by 2-digit numbers division of at least a whole 3-digit by 2-digit numbers finding fractions of whole numbers which result in whole numbers 	Ch 6: Sport, lesson 7: p127 Ch 6: Sport, lesson 10: p130 Ch 6: Sport, lesson 13: p133 Ch 6: Sport, lesson 11: p131
Perform mental calculations involving: <ul style="list-style-type: none"> addition and subtraction multiplication of whole numbers to at least 10×10 	Ch 6: Sport, lesson 6: p126
Solve or complete number sentences by inspection or by trial-and-improvement, checking the solution by substitution (e.g. $x \div 4 = 12$)	Ch 6: Sport, lesson 10: p130
Write number sentences to describe a problem situation within a context	Ch 6: Sport, lesson 10: p130
Investigate and extend numeric and geometric patterns looking for general rules or a relationship, including patterns: <ul style="list-style-type: none"> not limited to sequences involving constant difference or ratio 	Ch 6: Sport, lesson 15: p135
Determine through discussion and comparison, the equivalence of different descriptions of the same relationship or rule represented: <ul style="list-style-type: none"> verbally in flow diagrams by number sentences 	Ch 6: Sport, lesson 16: p136
Describes and sketches views of a simple 3-dimensional object in different positions	Ch 5: Technology, lesson 16: p114
Investigate and approximate: <ul style="list-style-type: none"> perimeter using rulers or measuring tapes area of polygons (using square grids and tiling) to develop an understanding of square units 	Ch 5: Technology, lesson 21: p116 Ch 5: Technology, lesson 23: p118 Ch 5: Technology, lesson 24: p119
Pose simple questions about own school and family environment, and identify appropriate data sources	Ch 6: Sport, lesson 3: p123
Make and use simple data collection sheets that involve counting objects in order to collect data to answer questions posed by the teacher and the class	Ch 5: Technology, lesson 8: p105
Organise and record data using tallies and tables	Ch 5: Technology, lesson 8: p105
Examine ungrouped numerical data to determine mode	Ch 6: Sport, lesson 3: p123
Draw graphs and interpret data (ungrouped): <ul style="list-style-type: none"> pictographs with a many-to-one correspondence and appropriate keys e.g. one picture = 10 persons bar graphs 	Ch 4: My country, lesson 21: p95

Mathematics Grade 5 Milestones: TERM 4

MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GR5
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> • adding and subtracting in columns • building up and breaking down numbers • rounding off and compensating • doubling and halving • using a calculator 	Ch 8: Past, present, future, lesson 6: p158 Ch 8: Past, present, future, lesson 7: p159
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> • rounding off to the nearest 5, 10, 100 or 1000 • addition and subtraction of whole numbers with at least 6 digits • multiplication of at least whole 3-digit by 2-digit numbers • division of at least a whole 3-digit by 2-digit numbers • equivalent fractions 	Ch 8: Past, present, future, lesson 4: p156
Solve problems involving: <ul style="list-style-type: none"> • comparing two or more quantities of different kinds (rate, e.g. learners/teachers) 	Ch 5: Technology, lesson 7: p104
Use a range of techniques to check solutions and judge the reasonableness of solutions	Ch 8: Past, present, future, lesson 4: p156
Write number sentences to describe a problem situation within a context	Ch 8: Past, present, future, lesson 7: p159
Recognise, describe and use: <ul style="list-style-type: none"> • the reciprocal relationship between multiplication and division e.g. if $5 \times 3 = 15$, then 15 (divided by) 3 = 5 • the equivalence of division and fractions e.g. 1 (divided by) 8 = $\frac{1}{8}$ • the commutative, associative and distributive properties with whole numbers (use properties but not necessarily know the names) 	Ch 8: Past, present, future, lesson 4: p156
Recognise and describe 2-dimensional shapes, 3-dimensional objects and patterns in terms of geometric properties	Ch 8: Past, present, future, lesson 14: p165
Locate positions on a coded (labelled) grid including maps and trace a path between positions from verbal and written instructions	Ch 5: Technology, lesson 13: p110
Investigate and approximate: <ul style="list-style-type: none"> • volume/capacity of 3-dimensional objects in order to develop an understanding of cubic units 	Ch 8: Past, present, future, lesson 23: p174
Recognise and describe right angles in 2-dimensional shapes, 3-dimensional objects and the environment	Ch 4: My country, lesson 19: p91
Compare, classify and order events from daily life on a scale from 'certain that they will happen' to 'certain they will not happen'	Ch 7: The world of people, lesson 7: p150
List possible outcomes for simple experiments (including tossing a coin, rolling a die and spinning a spinner)	Ch 7: The world of people, lesson 8: p151
Count the frequency of actual outcomes for a series of trials	Ch 8: Past, present, future, lesson 26: p177

Mathematics Grade 6 Milestones: TERM 1	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 6
Count forwards and backwards in decimals	Ch 1: Community, lesson 7: p7
Describe and illustrate number systems different to own e.g. Roman Number systems, Egyptians etc.	Ch 1: Community, lesson 19: p21
Recognise the place value of digits in whole numbers to 6 digits	Ch 1: Community, lesson 1: p1
Recognise and represent numbers in order to compare: <ul style="list-style-type: none"> to a minimum of 6-digit whole numbers common fractions including specifically tenths 0 in terms of its additive property 1 in terms of its multiplicative property 	Ch 1: Community, lesson 9: p9 Ch 2: Our changing world, lesson 6: p32
Recognise, represent and compare: <ul style="list-style-type: none"> multiples and factors of 2-digit whole numbers 	Ch 1: Community, lesson 21: p23
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> rounding off to the nearest 5, 10, 100 or 1000 addition and subtraction of whole numbers addition of whole numbers with common fractions (mixed numbers) multiplication of at least whole 3-digit by 2-digit numbers division of at least whole 3-digit by 2-digit numbers finding fractions of whole numbers equivalent fractions multiple operations of whole numbers with or without brackets 	Ch 1: Community, lesson 4: p4 Ch 1: Community, lesson 22: p24 Ch 2: Our changing world, lesson 1: p26, 27
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> adding and subtracting in columns building up and breaking down numbers rounding off and compensating using a calculator 	Ch 1: Community, lesson 3: p3 Ch 1: Community, lesson 8: p8
Mental calculations using a range of techniques for addition, subtraction and multiplication in the number range dealt with	Ch 1: Community, lesson 20: p22
Write number sentences to describe a problem situation within a context	Ch 2: Our changing world, lesson 17: p43
Investigate and extend numeric and geometric patterns looking for a general rule or relationships: <ul style="list-style-type: none"> represented in physical or diagrammatic form of learner's own creation 	Ch 1: Community, lesson 13: p13
Describe observed relationships or rules in own words	Ch 2: Our changing world, lesson 8: p34
Determine output values for given input values or input values for given output values using: <ul style="list-style-type: none"> verbal description flow diagrams tables 	Ch 1: Community, lesson 20: p22
Recognise, visualise and name 2-dimensional shapes and 3-dimensional objects focussing on: <ul style="list-style-type: none"> similarities and differences between tetrahedrons and other pyramids similarities and differences between rectangles and parallelograms 	Ch 1: Community, lesson 15: p15 Ch 1: Community, lesson 16: p16, 17
Describe and classify 2-dimensional shapes and 3-dimensional objects in terms of properties: <ul style="list-style-type: none"> faces, vertices and edges length of sides angle size of corners 	Ch 1: Community, lesson 5: p5 Ch 1: Community, lesson 18: p20

Mathematics Grade 6 Milestones: TERM 2	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 6
Counting forwards and backwards in decimals	Ch 3: Space, lesson 19: p72, 73
Recognise the place value of digits: <ul style="list-style-type: none"> • whole numbers to a minimum of 7-digit numbers • decimal fractions to at least 1 decimal place 	Ch 3: Space, lesson 1: p51 Ch 4: Sports and games, lesson 2: p77
Recognise and use equivalent forms of the numbers listed above including: <ul style="list-style-type: none"> • common fractions with 1 digit denominators • decimal fractions to at least 1 decimal place 	Ch 3: Space, lesson 4: p54, 55 Ch 3: Space, lesson 19: p72, 73
Solve problems in contexts such as: <ul style="list-style-type: none"> • financial (buying and selling, profit and loss, simple budgets) • measurements in Natural Science and Technology contexts 	Ch 3: Space, lesson 18: p71
Mental calculations involving: <ul style="list-style-type: none"> • addition and subtraction • multiplication of whole numbers to 12 x 12 	Ch 3: Space, lesson 6: p57
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> • rounding off to the nearest 5, 10, 100 or 1000 • addition and subtraction of whole numbers • addition and subtraction of common fractions with denominators which are multiples of each other and whole numbers with common fractions (mixed numbers) • multiplication of at least whole 4-digit by 1-digit numbers • division of at least whole 4-digit by 3-digit numbers • addition and subtraction of positive decimals with at least 1 decimal place • multiple operations of whole numbers with or without brackets 	Ch 3: Space, lesson 3: p53 Ch 4: Sports and games, lesson 5: p80 Ch 4: Sports and games, lesson 6: p81 Ch 4: Sports and games, lesson 7: p82, 83
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> • multiplying in columns • building up and breaking down numbers • rounding off and compensating • using a calculator 	Ch 4: Sports and games, lesson 1: p76
Use a range of techniques to check solutions and judge reasonableness of solutions	Ch 3: Space, lesson 9: p85
Write number sentences to describe a problem situation within a context	Ch 3: Space, lesson 9: p85
Investigate and extend numeric and geometric patterns looking for general rules or relationships: <ul style="list-style-type: none"> • represented in physical or diagrammatic form • not limited to sequences involving constant difference or ratio 	Ch 3: Space, lesson 15: p66, 67
Describe observed relationships or rules in own words	Ch 3: Space, lesson 15: p66, 67
Use the vocabulary and properties of rotations, reflections and translations to describe relationships between 2-dimensional shapes, 3-dimensional objects (including transformation and symmetry)	Ch 3: Space, lesson 13: p64
Draw enlargements and reductions of 2-dimensional shapes using grid paper to compare their size and shape	Ch 5: Conservation, lesson 15: p117
Read, tell and write analogue, digital and 24-hour time to the nearest minute and second	Ch 1: Community, lesson 6: p6
Solve problems involving calculation and conversion between appropriate time units including time zones and differences	Ch 4: Sports and games, lesson 10: p86
Describe and illustrate ways of representing time in different cultures throughout history	Ch 5: Conservation, lesson 14: p115

Mathematics Grade 6 Milestones: TERM 3

MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 6
Counting forwards and backwards in decimals	Ch 5: Conservation, lesson 2: p102
Recognise the place value of digits: <ul style="list-style-type: none"> • whole numbers to a minimum of 8-digit numbers • decimal fractions to at least 2 decimal places 	Ch 6: Money wise, lesson 1, 2: p126, 127
Recognise and use equivalent forms of the numbers listed above including: <ul style="list-style-type: none"> • common fractions with 1-digit and 2-digit denominators • decimal fractions to at least 2 decimal places 	Ch 5: Conservation, lesson 5: p105
Solve problems in contexts such as: <ul style="list-style-type: none"> • financial (reading and interpreting accounts, and discount) • measurements in Natural Science and Technology contexts 	Ch 6: Money wise, lesson 1: p126 Ch 6: Money wise, lesson 4: p129 Ch 6: Money wise, lesson 5: p130
Solve problems involving: <ul style="list-style-type: none"> • comparing two or more quantities of the same kind (ratio) 	Ch 6: Money wise, lesson 4: p129
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> • addition and subtraction of common fractions with denominators which are multiples of each other and whole numbers with common fractions (mixed numbers) • multiplication of at least whole 4-digit by 2-digit numbers • division of at least 4-digit by 2-digit numbers • equivalent fractions • addition and subtraction of positive decimals with at least 2 decimal places • multiple operations of whole numbers with or without brackets 	Ch 5: Conservation, lesson 2: p102 Ch 5: Conservation, lesson 3: p103 Ch 5: Conservation, lesson 4: p104
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> • adding and subtracting and multiplying in columns • long division • building up and breaking down numbers • rounding off and compensating • using a calculator 	Ch 5: Conservation, lesson 8: p108 Ch 6: Money wise, lesson 3: p128 Ch 6: Money wise, lesson 3: p128 Ch 6: Money wise, lesson 6: p131
Recognise, describe and use: <ul style="list-style-type: none"> • the commutative, associative and distributive properties of whole numbers (learners should be able to use the properties but not necessarily know the names) 	Ch 6: Money wise, lesson 8: p134
Perform mental calculations involving: <ul style="list-style-type: none"> • addition and subtraction • multiplication of whole numbers to at least 12 x 12 	Ch 6: Money wise, lesson 8: p134
Write number sentences to describe a problem situation within a context	Ch 5: Conservation, lesson 18: p120, 121
Solve or complete number sentences by inspection or by trial-and-improvement, checking the solution by substitution	Ch 5: Conservation, lesson 19: p122
Investigate and extend numeric and geometric patterns looking for a general rule or relationships: <ul style="list-style-type: none"> • found in natural and cultural context • learner's own creation 	Ch 5: Conservation, lesson 9: p109
Determine through discussion and comparison, the equivalence of different descriptions of the same relationship or rule represented: <ul style="list-style-type: none"> • verbally • in flow diagrams • by number sentences • in tables 	Ch 5: Conservation, lesson 10: p110
Draw and interpret sketches of simple 3-dimensional objects from different positions (perspectives)	Ch 7: Africa, lesson 10: p160
Describe and illustrate ways of measuring in different cultures throughout history, including informal measuring systems	Ch 5: Conservation, lesson 14: p115

Mathematics Grade 6 Milestones: TERM 4	
MILESTONE	LESSON IN NEW DAY-BY-DAY MATHEMATICS GRADE 6
Counting forwards and backwards in decimals	Ch 7: Africa, lesson 21: p172
Recognise the place value of digits <ul style="list-style-type: none"> whole numbers to a minimum of 9-digit numbers decimal fractions to at least 2 decimal places 	Ch 8: Healthy living, lesson 7: p180
Recognise and use equivalent forms of the numbers listed above including: <ul style="list-style-type: none"> common fractions with 1-digit and 2 digit denominators decimal fractions to at least 2 decimal places percentages 	Ch 8: Healthy living, lesson 4: p177 Ch 8: Healthy living, lesson 8: p181
Estimate and calculate by selecting and using operations appropriate to solve problems that involve: <ul style="list-style-type: none"> addition and subtraction of common fractions with denominators which are multiples of each other and whole numbers with common fractions (mixed numbers) multiplication of at least whole 4-digit by 3-digit numbers division of at least 4-digit by 1-digit numbers finding fractions of whole numbers addition and subtraction of positive decimals with at least 2 decimal places finding percentages of whole numbers multiple operations of whole numbers with or without brackets 	Ch 7: Africa, lesson 2: p152 Ch 7: Africa, lesson 18: p169 Ch 8: Healthy living, lesson 5: p178
Use a range of techniques to perform written and mental calculations with whole numbers including: <ul style="list-style-type: none"> adding, subtracting and multiplying in columns long division building up and breaking down numbers rounding off and compensating using a calculator 	Ch 7: Africa, lesson 5: p155 Ch 8: Healthy living, lesson 22: p197
Perform mental calculations involving: <ul style="list-style-type: none"> addition and subtraction multiplication of whole numbers to at least 12 x 12 	Ch 8: Healthy living, lesson 9: p182
Solve problems involving: <ul style="list-style-type: none"> comparing two or more quantities of different kinds (rate, e.g. wages/day) 	Ch 8: Healthy living, lesson 2: p175
Write number sentences to describe a problem situation within a context	Ch 7: Africa, lesson 4: p154
Use a range of strategies to check solutions and judge the reasonableness of solutions	Ch 7: Africa, lesson 4: p154
Recognise, describe and use: <ul style="list-style-type: none"> divisibility rule for 2, 5, 10, 100 and 1000 	Ch 6: Money wise, lesson 7: p132
Investigate and extend numeric and geometric patterns looking for a general rule or relationships <ul style="list-style-type: none"> learner's own creation represented in tables 	Ch 7: Africa, lesson 11: p161
Describe observed relationships or rules in own words	Ch 7: Africa, lesson 7: p157
Recognise and describe natural and cultural 2-dimensional shapes, 3-dimensional objects and patterns in terms of geometric properties	Ch 7: Africa, lesson 1: p151
Locate positions on a coded grid, describe how to move between positions on a grid, and recognise maps as grids	Ch 5: Conservation, lesson 12: p112
Investigate and approximate: <ul style="list-style-type: none"> perimeter using ruler or measuring tapes area of polygons (using square grids) in order to develop rules for calculating areas of squares and rectangles volume/capacity of objects (by packing or filling them) in order to develop rules for calculating volumes of rectangular prisms 	Ch 8: Healthy living, lesson 16: p189 Ch 8: Healthy living, lesson 18: p192