# Mathletics <br> New Curriculum 

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## Early Stage 1

## 1 Number and Algebra

### 1.1 Representing whole numbers

| MAE-RWN-01 <br> Demonstrates an understanding of how whole numbers indicate quantity |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Representing whole numbers ES1 | Count to 5 |
|  | How Many? |
|  | Dot Display |
|  | Counting Up to 20 |
|  | Counting Back Within 20 |
|  | Before, After and Between to 20 |
|  | How Many Dots? |
|  | Counting Forwards |
|  | Counting Backwards |
|  | Order Numbers to 10 |
|  | Order Numbers to 20 |
|  | 1 to 30 (Ordering) |
|  | Compare Numbers to 20 |
|  | 1st to 31st |
|  | Ordinal Numbers |


| MAE-RWN-02  <br> Reads numerals and represents whole numbers to at least 20  <br> Course Topic  |  |
| :--- | :--- |
| Representing whole <br> numbers ES1 | Matching numbers to 10 |
|  | Matching numbers to 20 |
|  | Making Teen Numbers |
|  | Reading Numbers to 30 |

### 1.2 Combining and separating quantities

| MAE-CSQ-01 <br> Reasons about number <br> relations to model addition and subtraction by combining and <br> separating, and comparing collections |  |
| :--- | :--- |
| Activities Title |  |
| Course Topic <br> Combining \& separating <br> quantities ES1 | More, less or the same to 10 |

## MAE-CSQ-02

Represents the relations between the parts that form the whole, with numbers up to 10

Course Topic
Combining \& separating quantities ES1

## Activities Title

## Adding to 5

Adding to make 5 and 10
Model Addition
Adding to Ten
Adding to 10 Word Problems
Model Subtraction
Subtracting From 5
Subtracting from Ten

### 1.3 Forming groups

| Recognises, describes and continues repeating patterns |  |
| :--- | :--- |
| Course Topic |  |$l |$| Mctivities Title |
| :--- |
| Forming Groups - Patterns <br> ES1 |
|  |  |
|  |  |

MAE-FG-02
Forms equal groups by sharing and counting collections of objects

| Course Topic | Activities Title |
| :--- | :--- |
| Forming groups ES1 | Share the Treasure |
|  | Fill the jars |
|  | Groups |

## 2. Measurement and Space

### 2.1 Geometric measure

| MAE-GM-01 |  |
| :--- | :--- |
| Describes position and gives and follows simple directions |  |
| Course Topic |  |
| Geometric measure - <br> Position ES1 | Where is it? |
|  | Left or Right? |


| MAE-GM-02 <br> Describes and compares lengths |  |
| :--- | :--- |
| Course Topic | Activities Title |
| Geometric measure - <br> Length ES1 | Everyday Length |
|  | Compare Length |


| MAE-GM-03 |  |
| :--- | :--- |
| Identifies half the length and the halfway point |  |
| Course Topic | Activities Title |
| Teacher directed |  |

### 2.2 Two-dimensional spatial structure

| MAE-2DS-01 <br> Sorts, describes, names and makes two-dimensional shapes, including triangles, circles, <br> squares and rectangles |  |
| :--- | :--- |
| Course Topic | Activities Title |
| 2D spatial structure - 2D <br> shapes ES1 | Collect Simple Shapes |
|  | Biggest shape |


| MAE-2DS-02 |  |
| :--- | :--- |
| Describes and compares areas of similar shapes |  |
| Course Topic |  |
| 2D spatial structure - 2D <br> shapes ES1 | Biggest shape Title |

### 2.3 Three-dimensional spatial structure

| MAE-3DS-01 |  |
| :--- | :--- |
| Manipulates, describes and sorts three-dimensional objects |  |
| Course Topic | Activities Title |
| 3D spatial structure - 3D <br> objects ES1 | Same and Different |
|  | Match the Solid 1 |


| MAE-3DS-02 <br>  <br> Course Topic |  |
| :--- | :--- |
| Describes and compares volumes |  |
| 3D spatial structure - <br> Volume ES1 | How Full? |
|  | Filling Fast! |

### 2.4 Non-spatial measure

## MAE-NSM-01

Describes and compares the masses of objects
Course Topic

## Activities Title

Non-spatial measure -
Balancing Act
Mass ES1

## MAE-NSM-02

Sequences events and reads hour time on clocks

| Course Topic |  |
| :--- | :--- |
| Non-spatial measure - Time <br> ES1 | Days of the Week |
|  | Days: After and Before |
|  | Weekdays and Weekends |
|  | Tomorrow and Yesterday (Scaffolded) |
|  | Tomorrow and Yesterday (without scaffold) |
|  | Hour Times |
|  | Tell Time to the Hour (UK) |

## 3 Statistics and Probability

### 3.1 Data

## MAE-DATA-01

Contributes to collecting data and interprets data displays made from objects
Course Topic Activities Title
Data ES1

| Read Graphs |
| :--- |
| Picture Graphs: Who has the Goods? |

Add and Subtract Using Graphs
Sort It

## Stage 1

## 1 Number and Algebra

### 1.1 Representing Whole Numbers (A/B)

## MA1-RWN-01

Applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers

| Course Topic | Activities Title |
| :---: | :---: |
| Representing whole numbers S1 Part A | Concept of Zero |
|  | Everyday Money |
|  | Arranging Numbers |
|  | Number Lines |
|  | Going Up |
|  | Number line order |
|  | Going Down |
|  | Before, After \& Between to 100 |
|  | Compare Numbers to 50 |
|  | Compare Numbers to 100 |
|  | Odd or Even |
|  | Odd and Even Numbers 1 |
|  | Which is Bigger? |
|  | Which is Smaller? |
|  | Making Numbers Count |
|  | Making Big Numbers Count |
|  | Place Value 1 |
|  | Repartition Two-digit Numbers |
|  | 1 More, 2 Less |
|  | Model Numbers |

## MA1-RWN-02

Reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values

| Course Topic |  |
| :--- | :--- |
| Representing whole <br> numbers S1 Part B | Count by Twos Activities Title |
|  | Count by Tens |
|  | Nearest 10? |
|  | Nearest 100? |
|  | Place Value 2 |
|  | Partition and Rename 1 |
|  | Place Value Partitioning |
|  | Smallest and largest numbers |
|  | 1 More, 10 Less |

### 1.2 Combine and separate quantities (A)

| MA1-CSQ-01 |  |
| :---: | :---: |
| Uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning |  |
| Course Topic | Activities Title |
| Combining \& separating quantities S1 Part A | All about Ten |
|  | Addition Facts |
|  | Balance Numbers to 10 |
|  | Add 3 Numbers: Bonds to Multiples of 10 |
|  | Commutative Property of Addition |
|  | Add 3 Single Digit Numbers |
|  | Subtracting from 20 |
|  | Simple Subtraction |
|  | Problems: Addition and Subtraction |
|  | Doubles and Halves to 10 |
|  | Doubles and Near Doubles |

### 1.3 Combine and separate quantities (B)

| MA1-CSQ-01 |  |
| :---: | :---: |
| Uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning |  |
| Course Topic | Activities Title |
| Combining \& separating quantities S1 Part B | All about Twenty |
|  | Related Facts 1 |
|  | Balance Numbers to 20 |
|  | Adding In Any Order |
|  | Addictive Addition |
|  | Subtraction Facts to 18 |
|  | Subtract Tens |
|  | 10 More, 10 Less |
|  | Doubles and Halves to 20 |
|  | Fact Families: Add and Subtract |
|  | Add and Subtract Problems |
|  | Add 3 Numbers Using Bonds to 10 |
|  | Balance Additions to 20/Composing additions to 20 |

### 1.4 Forming groups (A)

| MA1-FG-01 <br> Uses the structure of equal <br> groups to solve multiplication problems, and shares or groups to <br> solve division problems |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| Course Topic |  |  |  |  |  |
| Forming groups S1 Part A | Counting by Twos Title |  |  |  |  |
|  | Counting by Fives |  |  |  |  |
|  | Counting by Tens |  |  |  |  |
|  | Grouping in Twos |  |  |  |  |
|  | Grouping in Fives |  |  |  |  |
|  | Grouping in Tens |  |  |  |  |
|  | Count by 2s, 5s and 10s |  |  |  |  |


|  | Counting on a 100 grid |
| :--- | :--- |
|  | Count Forward Patterns |
|  | Count Backward Patterns |
|  | Grouping in Threes |

### 1.5 Forming groups (B)

| MA1-FG-01 <br> Uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Forming groups S1 Part B | Model multiplication to $5 \times 5$ |
|  | Multiplication Arrays |
|  | Dividing Twos |
|  | Dividing Fives |
|  | Dividing Tens |
|  | Dividing Fours |
|  | Frog Jump Multiplication |
|  | Frog Jump Division |

## 2 Measurement and Space

### 2.1 Geometric measure (A/B) (Position)

| MA1-GM-01 |  |
| :--- | :--- |
| Represents and describes the positions of objects in familiar locations |  |
| Course Topic | Activities Title |
| Geometric measure - <br> Position S1 | Following Directions |

### 2.2 Geometric measure (A/B) (Length)

| Measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Geometric measure - | Comparing Length |
| Length S1 | Measuring Length with Blocks |
|  | Ordering Lengths (cm) |
|  | Which Unit of Measurement? |
|  | Which Measuring Tool? |

MA1-GM-03
Creates and recognises halves, quarters and eighths as part measures of a whole length

Teacher directed

### 2.3 Two-dimensional spatial structure (A/B)

| MA1-2DS-01 <br> Recognises, describes and represents shapes including quadrilaterals and other common polygons |  |
| :---: | :---: |
| Course Topic | Activities Title |
| 2D spatial structure - 2D shapes S1 | Complete the Pattern |
|  | Shapes |
|  | Symmetry |


| MA1-2DS-02 |  |
| :--- | :--- |
| Measures and compares areas using uniform informal units in rows and columns |  |
| Course Topic |  |
| 2D spatial structure - Area | Area of Shapes |
| S1 | Equal Areas |

### 2.4 Three-dimensional spatial structure (A/B) (3D objects)

| Recognises, describes and represents familiar three-dimensional objects |  |  |
| :--- | :--- | :---: |
| Course Topic | Mctivities Title |  |
| 3D spatial structure - 3D <br> objects S1 | Match the Solid 2 |  |
|  | Relate Shapes and Solids |  |
|  | How Many Faces? |  |
|  | How many Edges? |  |
|  | How many Vertices? |  |
|  | Faces, Edges and Vertices |  |

### 2.5 Three-dimensional spatial structure (A/B) (Volume)

| MA1-3DS-02 |  |
| :--- | :--- |
| Measures, records, compares and estimates internal volumes (capacities) and volumes using <br> uniform informal units |  |
| Course Topic | Activities Title |
| 3 3D spatial structure - <br> Volume S1 | How many Blocks? |
|  | Comparing Volume |
|  | Which Holds More? |

### 2.6 Non-spatial measure (A/B) (Mass)

| MA1-NSM-01 |  |
| :--- | :--- |
| Measures, records, compares and estimates the masses of objects using uniform informal units |  |

### 2.7 Non-spatial measure (A/B) (Time)

| MA1-NSM-02 <br> Describes, compares and orders durations of events, and reads half- and quarter-hour time |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Non-spatial measure - Time S1 | Months of the Year |
|  | Months After and Before |
|  | Using a Calendar |
|  | Seasons (AU/NZ) |
|  | Half Hour Times |
|  | Tell Time to the Half Hour (UK) |

## 3 Statistics and Probability

### 3.1 Data (A/B)

| MA1-DATA-01 |  |
| :--- | :--- |
| Gathers and organises data, displays data in lists, tables and picture graphs |  |
| Course Topic | Activities Title |
| Data S1 | Tallies |
|  | Making Picture Graphs: With Scale |

## MA1-DATA-02

Reasons about representations of data to describe and interpret the results

## Course Topic

Activities Title
Data S1
Picture Graphs: More or Less
Picture Graphs: Single-Unit Scale

### 3.2 Chance (A/B)

| MA1-CHAN-01 |  |
| :--- | :--- |
| Recognises and describes the element of chance in everyday events |  |
| Course Topic |  |
| Chance S1 | Will it Happen? |

## Stage 2

## 1 Number and Algebra

### 1.1 Representing numbers using place value (A)

| MA2-RN-01 <br> Applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Representing numbers place value S2 Part A | Place Value - Thousands |
|  | Expanding Numbers |
|  | Put in Order 1 |
|  | Ascending Order |
|  | Descending Order |
|  | Greater Than or Less Than 1 |
|  | Greater or Less to 100 |
|  | Place Value 3 |
|  | Partition and Rename 2 |
|  | Nearest 1000? |
|  | Missing Numbers 1 |


| MA2-RN-02 <br> Represents and compares decimals up to 2 decimal places using place value |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Representing numbers place value S2 Part A | Place Value - Thousands |
|  | Expanding Numbers |
|  | Put in Order 1 |
|  | Ascending Order |
|  | Descending Order |
|  | Greater Than or Less Than 1 |
|  | Greater or Less to 100 |
|  | Place Value 3 |
|  | Partition and Rename 2 |
|  | Nearest 1000? |
|  | Missing Numbers 1 |

### 1.2 Representing numbers using place value (B)

## MA2-RN-01

Applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands

| Course Topic | Activities Title |
| :--- | :--- |
| Representing numbers - <br> place value S2 Part B | Expanded Notation |
|  | Numbers in Words |
|  | Partition and Rename 3 |
|  | Rounding Numbers |
|  | Numbers from Words to Digits 1 |
|  | Missing Numbers 2 |

## MA2-RN-02

Represents and compares decimals up to 2 decimal places using place value

Course Topic
Representing numbers place value S2 Part B

## Activities Title

## Expanded Notation

Numbers in Words
Partition and Rename 3
Rounding Numbers
Numbers from Words to Digits 1
Missing Numbers 2

### 1.3 Additive relations (A)

MA2-AR-01
Selects and uses mental and written strategies for addition and subtraction involving 2-and 3digit numbers

Course Topic
Additive relations S2 Part A

Add Two 2-Digit Numbers
Adding to 2-digit numbers
Complements to 50 and 100
Add 3 Numbers: Bonds to 100
Compensation - Add
Estimate Sums
Column Subtraction
2-Digit Differences: Regroup
Repartition to Subtract
Compensation - Subtract
Estimate Differences
Bump Add and Subtract
Bar Model Problems 1
Bar Model Problems 2
Strategies for Column Addition
Columns that Add
Column Addition 1

### 1.4 Additive relations (B)

| MA2-AR-02 <br> Completes number sentences involving addition and subtraction by finding missing values <br> Course Topic |  |  | Activities Title |
| :--- | :--- | :---: | :---: |
| Additive relations S2 Part B | Missing Values |  |  |
|  | Split Add and Subtract |  |  |
|  | Pyramid Puzzles 1 |  |  |
|  | Partition Puzzles 1 |  |  |
|  | Addition Properties |  |  |
|  | Missing Numbers |  |  |

### 1.5 Multiplicative relations (A)

| MA2-MR-01 <br> Represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Multiplicative relations S2 Part A | Count by Fives |
|  | Skip Counting |
|  | Counting up in 4s |
|  | Skip Counting with Coins |
|  | Grouping in Fours |
|  | Grouping in Sevens |
|  | Grouping in Eights |
|  | Arrays 1 |
|  | Arrays 2 |
|  | Fact Families: Multiply and Divide |
|  | Multiplication Turnarounds |
|  | Halve it! |
|  | Find the Missing Number 1 |
|  | Missing Numbers: Variables |


| MA2-MR-02 <br> Completes number sentences involving multiplication and division by finding missing values |  |
| :---: | :---: |
|  |  |
| Course Topic | Activities Title |
| Multiplicative relations S2 Part A | Count by Fives |
|  | Skip Counting |
|  | Counting up in 4s |
|  | Skip Counting with Coins |
|  | Grouping in Fours |
|  | Grouping in Sevens |
|  | Grouping in Eights |
|  | Arrays 1 |
|  | Arrays 2 |
|  | Fact Families: Multiply and Divide |
|  | Multiplication Turnarounds |
|  | Halve it! |
|  | Find the Missing Number 1 |
|  | Missing Numbers: Variables |

### 1.6 Multiplicative relations (B)

| MA2-MR-01 <br> Represents and uses the structure of multiplicative relations to $10 \times 10$ to solve problems <br> Course Topic |  |  | Activities Title |
| :--- | :--- | :---: | :---: |
| Multiplicative relations S2 <br> Part B | Multiples of |  |  |
|  | Increasing Patterns |  |  |
|  | Decreasing Patterns |  |  |
|  | Grouping in Sixes |  |  |
|  | Grouping in Nines |  |  |
|  | Multiplication Turn-Abouts |  |  |
|  | Related Facts 2 |  |  |
|  | Times Tables |  |  |


|  | Bar model $\times \div$ |
| :---: | :---: |
|  | Grid Methods 1 |
|  | Problems: Times and Divide |
|  | Find the Missing Number 2 |
|  | Missing Numbers: $\times$ and $\div$ facts |
|  | Multiplying by 10, 100, 1000 |
|  | Dividing Sixes |
|  | Dividing Nines |
|  | Dividing Sevens |
|  | Dividing Eights |
|  | Mental Methods Division |

## MA2-MR-02

Completes number sentences involving multiplication and division by finding missing values

| Course Topic | Activities Title |
| :---: | :---: |
| Multiplicative relations S2 Part B | Multiples of |
|  | Increasing Patterns |
|  | Decreasing Patterns |
|  | Grouping in Sixes |
|  | Grouping in Nines |
|  | Multiplication Turn-Abouts |
|  | Related Facts 2 |
|  | Times Tables |
|  | Bar model $\times$ : |
|  | Grid Methods 1 |
|  | Problems: Times and Divide |
|  | Find the Missing Number 2 |
|  | Missing Numbers: $\times$ and $\div$ facts |
|  | Multiplying by 10, 100, 1000 |
|  | Dividing Sixes |
|  | Dividing Nines |
|  | Dividing Sevens |
|  | Dividing Eights |
|  | Mental Methods Division |

### 1.7 Partitioned fractions (A)

## MA2-PF-01

Represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths)

| Course Topic | Activities Title |
| :--- | :--- |
| Partitioned fractions S2 | Halves |
|  | Is it Half? |
|  | Halves and Quarters |
|  | Thirds and Sixths |
|  | Shade fractions |
|  | Identifying Fractions on a Number Line |
|  | Equivalent Fraction Wall 1 |

### 1.8 Partitioned fractions (B)

MA2-PF-01
Represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths)

| Course Topic | Activities Title |
| :--- | :--- |
| Partitioned fractions S2 <br> Part B | Compare Fractions 1a |
|  | Compare Fractions 1b |
|  | Comparing Fractions 1 |

## 2 Measurement and Space

### 2.1 Geometric measure (A/B)

| MA2-GM-01 |  |
| :--- | :--- |
| Uses grid maps and directional language to locate positions and follow routes |  |
| Course Topic |  |
| Geometric measure - <br> Position S2 | Coordinate Meeting Place |
|  | What Direction was That? |
|  | Using a key |
|  | Map Coordinates |


| MA2-GM-02 <br> Measures and estimates lengths in metres, centimetres and millimetres |  |
| :--- | :--- |
| Course Topic | Activities Title |
| Geometric measure - <br> Length S2 | How Long is That? |
|  | Measuring Length |
|  | Perimeter of Shapes |
|  | Converting cm and mm |
|  | Centimetres and Metres |


| MA2-GM-03 |  |
| :--- | :--- |
| Identifies angles and classifies them by comparing to a right angle |  |
| Course Topic |  |
| Geometric measure - <br> Angles S2 | Equal Angles |
|  | Comparing Angles |
|  | Right Angle Relation |
|  | What Type of Angle? |

### 2.2 Two-dimensional spatial structure (A/B)

| MA2-2DS-01 |  |
| :--- | :--- |
| Compares two-dimensional shapes and describes their features |  |
| Course Topic | Activities Title |
| 2D spatial structure - 2D <br> shapes S2 | Collect More Shapes |
|  | Collect the Shapes 2 |
|  | Count Sides and Corners |

## MA2-2DS-02

Performs transformations by combining and splitting two-dimensional shapes

## Course Topic <br> Activities Title

## Teacher directed

| MA2-2DS-03 |  |
| :--- | :--- |
| Estimates, measures and compares areas using square centimetres and square metres |  |
| Course Topic | Activities Title |
| 2D spatial structure - 2D <br> shapes S2 | Collect More Shapes |
|  | Collect the Shapes 2 |
|  | Count Sides and Corners |

### 2.3 Three-dimensional spatial structure (A/B)

| MA2-3DS-01 <br> Makes and sketches models and nets of three-dimensional objects including prisms and <br> pyramids |  |
| :--- | :--- |
| Course Topic | Activities Title |
| 3D spatial structure - 3D <br> objects S2 | Prisms and Pyramids |
|  | Collect the Objects |
|  | Match the Object |
|  | Faces, Edges, and Vertices 1 |
|  | Naming 3D Objects |


| MA2-3DS-02 <br> Estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres |  |
| :---: | :---: |
|  |  |
| Course Topic | Activities Title |
| 3D spatial structure Volume S2 | Ordering Volumes (I) |
|  | Using a Litre |
|  | Litre Conversions |

### 2.4 Non spatial measure (A/B)

## MA2-NSM-01

Estimates, measures and compares the masses of objects using kilograms and grams

| Course Topic | Activities Title |
| :--- | :--- |
| Non-spatial measure - <br> Mass S2 | How Heavy? |
|  | Ordering Mass (g) |
| Son-spatial measure - Time | Five Minute Times |
|  | What's the Temperature (Celsius)? |
|  | What is the Time? |
|  | Quarter To and Quarter Past |

## MA2-NSM-02

Represents and interprets analogue and digital time in hours, minutes and seconds

| Course Topic |  |
| :--- | :--- |
| Non-spatial measure - <br> Mass S2 | How Heavy? |
|  | Ordering Mass (g) |
| Non-spatial measure - Time | Five Minute Times |
| S2 | What's the Temperature (Celsius)? |
|  | What is the Time? |
|  | Quarter To and Quarter Past |

## 3 Statistics and Probability

### 3.1 Data (A/B)

| MA2-DATA-01 |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: |
| Collects discrete data and constructs graphs using a given scale |  |  |  |  |
| Course Topic |  |  |  | Activities Title |
| Data S2 | Sorting Data |  |  |  |
|  | Column Graphs |  |  |  |
|  | Pictographs |  |  |  |
|  | Picture Graphs: with scale \& half symbols |  |  |  |
|  | Reading from a Column Graph |  |  |  |


| MA2-DATA-02 |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: |
| Interprets data in tables, dot plots and column graphs |  |  |  |  |
| Course Topic |  |  |  | Activities Title |
| Data S2 | Sorting Data |  |  |  |
|  | Column Graphs |  |  |  |
|  | Pictographs |  |  |  |
|  | Picture Graphs: with scale \& half symbols |  |  |  |
|  | Reading from a Column Graph |  |  |  |

### 3.3 Chance (A/B)

| MA2-CHAN-01 |  |
| :--- | :--- |
| Records and compares the results of chance experiments |  |
| Course Topic | Activities Title |
| Chance S2 | Most Likely and Least Likely |
|  | How many Combinations? |
|  | Introductory probability |

## Stage 3

## 1 Number and Algebra

### 1.1 Represents numbers (A)

| Mpplies an understanding of place value and the role of zero to represent the properties of <br> numbers |  |
| :--- | :--- |
| Course Topic | Activities Title |
| Represents numbers S3 <br> Part A | Numbers from Words to Digits 2 |
|  | Numbers from Words to Digits 3 |
|  | Place Value - Millions |
|  | Place Value to Millions |
|  | Place Value to Billions |
|  | Equal, Less or Greater than? |
|  | Comparing Numbers |


| MA3-RN-02 |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Decimals S3 Part A | Decimals from Words to Digits 1 |
|  | Decimals from Words to Digits 2 |
|  | Decimal Place Value |
|  | Who's got the Money? |
|  | Nearest Whole Number |
|  | Comparing Decimals 1 |
|  | Comparing Decimals |
|  | Comparing Decimals 2 |
|  | Decimal Order |
|  | Decimal Order 2 |
|  | Decimals on the Number Line |
|  | Rounding Decimals 1 |
|  | Decimal Order 1 |

### 1.2 Represents numbers (B)

| MA3-RN-02 <br> Compares and orders decimals up to 3 decimal places |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Decimals \& percentages S3 | Modelling Percentages |
| Part B | Percents and Decimals |
|  | Calculating Percentages (Mental) |
|  | Match Decimals and Percentages |
|  | Complementary Percentages |
|  | Percentage of an amount using Fractions ( $<100 \%$ ) |

### 1.3 Additive relations (A)

| MA3-AR-01 |  |  |
| :---: | :--- | :---: |
| Selects and applies appropriate strategies to solve addition and subtraction problems |  |  |
| Course Topic | Activities Title |  |
| Additive relations S3 Part A | Magic Mental Addition/Mental Addition (US) |  |
|  | Magic Mental Subtraction/Mental Subtraction (US) |  |
|  | Pyramid Puzzles 2 |  |
|  | Partition Puzzles 2 |  |
|  | Estimation: Add and Subtract |  |

### 1.4 Additive relations (B)

## MA3-AR-01

Selects and applies appropriate strategies to solve addition and subtraction problems

| Course Topic | Activities Title |
| :---: | :---: |
| Additive relations S3 Part B | Add Three 2-Digit Numbers: Regroup |
|  | Add 3-Digit Numbers |
|  | Add 3-Digit Numbers: Regroup |
|  | Adding Colossal Columns |
|  | Add Multi-Digit Numbers 1 |
|  | Jump Add and Subtract |
|  | Complements to 10, 20, 50 |
|  | Magic Symbols 1 |
|  | Adding Decimals |
|  | Add Decimals 2 |
|  | Subtracting Colossal Columns |
|  | 3-Digit Differences |
|  | 3-Digit Differences: 1 Regrouping |
|  | 3-Digit Differences: 2 Regroupings |
|  | 3-Digit Differences with Zeros |
|  | Subtracting Decimals |
|  | Subtract Decimals 2 |
|  | Magic Symbols 2 |

### 1.5 Multiplicative relations (A)

## MA3-MR-01

Selects and applies appropriate strategies to solve multiplication and division problems

## Course Topic

Multiplicative relations S3
Part A

## Activities Title

Lowest Common Multiple
Find the Factor
Factors
Highest Common Factor
Prime or Composite?
Solve Equations: Multiply, Divide 1
Multiply 2 Digits Area Model
Multiply 3 single-digit numbers
Multiply Multiples of 10
Multiply More Multiples of 10
Multiplying Whole Numbers by 10, 100, and 1000

|  | Double and Halve to Multiply |
| :--- | :--- |
|  | Mental Methods Multiplication 1 |
|  | Estimation: Multiply and Divide |
|  | Estimate Products |
|  | Remainders by Arrays |
|  | Remainders by Tables |
|  | Dividing by 10,100,1000 |

## MA3-MR-02

Constructs and completes number sentences involving multiplicative relations, applying the order of operations to calculations

| Course Topic | Activities Title |
| :--- | :--- |
| Multiplicative relations S2 <br> Part A | Multiply: 1-Digit Number |
|  | Multiply: 2-Digit Number, Regroup |
|  | Long Multiplication |
|  | Mental Methods Division 1 |
|  | Mental Methods Division 2 |
|  | Mental Methods Division 3 |

### 1.6 Multiplicative relations (B)

## MA3-MR-01

Selects and applies appropriate strategies to solve multiplication and division problems

| Course Topic | Activities Title |
| :--- | :--- |
| Part B |  | Grid Methods 2 $\quad$ Grid Methods 3

## MA3-MR-02

Constructs and completes number sentences involving multiplicative relations, applying the order of operations to calculations

| Course Topic | Activities Title |
| :--- | :--- |
| Multiplicative relations S3 <br> Part B | Grid Methods 2 |
|  | Grid Methods 3 |
|  | Equivalent Facts: Multiply |
|  | Division Facts to Twelve |
|  | Short Division |
|  | Multiply Decimals and Powers of 10 |
|  | Estimate Quotients |
|  | Divide by Powers of 10 |


|  | Table of Values |
| :--- | :--- |
|  | Patterns - Decreasing |
|  | Order of Operations 1 (BIDMAS)/Order of Operations 1 <br> (BEDMAS) |
|  | Identifying Errors in Applying the Order of Operations |

### 1.7 Representing quantity fractions (A)

| MA3-RQF-01 <br> Compares and orders fractions with denominators of $2,3,4,5,6,8$ and 10 |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Representing quantity fractions S3 Part A | Add: Common Denominator |
|  | Subtract: Common Denominator |
|  | Common Denominator |
|  | Unit Fractions |
|  | One Take Fraction |
|  | Add Subtract Fractions 1 |


| MA3-RQF-02 |  |
| :--- | :--- |
| Determines $1 / 2,1 / 4,1 / 5$, and $1 / 10$ of measures and quantities |  |
| Course Topic |  |
| Representing quantity <br> fractions S3 Part A | Add: Common Denominator |
|  | Subtract: Common Denominator |
|  | Common Denominator |
|  | Unit Fractions |
|  | One Take Fraction |
|  | Add Subtract Fractions 1 |

### 1.8 Representing quantity fractions (B)

| MA3-RQF-01 |  |
| :---: | :---: |
| Course Topic | Activities Title |
| Representing quantity fractions S3 Part B | Compare Fractions 2 |
|  | Shading Equivalent Fractions |
|  | Selecting Equivalent Fractions |
|  | The Equivalent Fraction |
|  | Equivalent Fraction Wall 2 |
|  | Equivalent Fractions on a Number Line 1 |
|  | Equivalent Fractions on a Number Line 2 |
|  | Counting with Fractions on a Number Line |
|  | What Mixed Number Is Shaded? |
|  | Fractions of a Collection 1 |
|  | Fractions of a Collection 2 |
|  | Fraction Fruit Sets 1 |
|  | Fraction Fruit Sets 2 |
|  | Fractions of a Collection |

## MA3-RQF-02

Determines $1 / 2,1 / 4,1 / 5$, and $1 / 10$ of measures and quantities

| Course Topic |  |
| :--- | :--- |
| Representing quantity <br> fractions S3 Part B | Compare Fractions 2 |
|  | Shading Equivalent Fractions |
|  | Selecting Equivalent Fractions |
|  | The Equivalent Fraction |
|  | Equivalent Fraction Wall 2 |
|  | Equivalent Fractions on a Number Line 1 |
|  | Equivalent Fractions on a Number Line 2 |
|  | Counting with Fractions on a Number Line |
|  | What Mixed Number Is Shaded? |
|  | Fractions of a Collection 1 |
|  | Fractions of a Collection 2 |
|  | Fraction Fruit Sets 1 |
|  | Fraction Fruit Sets 2 |
|  | Fractions of a Collection |

## 2 Measurement and Space

### 2.1 Geometric measure (A/B)

| Locates and describes points on a coordinate plane |  |
| :--- | :--- |
| Course Topic | Activities Title |
| Geometric measure - <br> Position S3 | Coordinate Graphs: 1st Quadrant |
|  | Ordered Pairs |
|  | Horizontal and Vertical Change |
|  | Flip, Side, Turn |
|  | Transformations: Coordinate Plane |


| MA3-GM-02 <br> Selects and uses the appropriate unit and device to measure lengths and distances including <br> perimeters |  |  |
| :--- | :--- | :---: |
| Course Topic |  |  |
| Geometric measure - <br> Length S3 | Kilometre Conversions |  |
|  | Perimeter: Squares and Rectangles Title |  |
|  | Perimeter: Triangles 2 |  |
|  | Perimeter Detectives 1 |  |
|  | Converting Units of Length |  |
|  | Metres and Kilometres |  |
|  | Perimeter: Triangles |  |
|  | Perimeter Detectives 2 |  |
|  | Operations with Length |  |


| MA3-GM-03 <br> Measures and constructs angles, and identifies the relationships between angles on a straight <br> line and angles at a point |  |
| :--- | :--- |
| Course Topic | Activities Title |
| Geometric measure- <br> Angles S3 | Estimating Angles |
|  | Measuring Angles |

### 2.2 Two-dimensional spatial structure (A/B)

| Mnvestigates and classifies two-dimensional shapes, including triangles and quadrilaterals <br> based on their properties |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: |
| Course Topic |  |  |  |  |
| 2D spatial stial <br> shapes Title |  |  |  |  |

## MA3-2DS-02

Selects and uses the appropriate unit to calculate areas, including areas of rectangles

Course Topic
2D spatial structure - Area
S3

Activities Title
Area: Squares and Rectangles
Calculate Areas of Squares and Rectangles
Converting Units of Area

### 2.3 Three-dimensional spatial structure (A/B)

| MA3-3DS-01 <br> Visualises, sketches and constructs three-dimensional objects, including prisms and pyramids, <br> making connections to two-dimensional representations |  |
| :--- | :--- |
| $\quad$ Activities Title |  |
| Course Topic |  |
| 3D spatial structure - 3D <br> objects S3 | What Prism Am I? |
|  | What Pyramid Am I? |

## MA3-3DS-02

Selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities

Course Topic
3D spatial structure -
Volume S3

Activities Title
Millilitres and Litres
Volume of Solids and Prisms $-1 \mathrm{~cm}^{3}$ blocks

### 2.4 Non spatial structure (A/B)

## MA3-NSM-01

Selects and uses the appropriate unit and device to measure the masses of objects

| Course Topic | Activities Title |
| :--- | :--- |
| Non-spatial measure - <br> Mass S3 | Kilogram Conversions |
|  | Grams and Kilograms |
|  | Converting Units of Mass |
|  | Mass Word Problems |

## MA3-NSM-02

Measures and compares duration, using 12-and 24 -hour time and am and pm notation

| Course Topic | Activities Title |
| :---: | :---: |
| Non-spatial measure - Time S3 | 24 Hour Time |
|  | Using Timetables |
|  | Time Conversions: Whole Numbers 1 |
|  | Time Conversions: Whole Numbers 2 |
|  | Time Conversions: Simple Fractions |
|  | Time Mentals |
|  | Elapsed Time |
|  | Time Conversions: Simple Decimals |
|  | Australian Time Zones |
|  | Time Zones |
|  | What Time Will It Be? |

## 3 Statistics and Probability

### 3.1 Data (A/B)

| MA3-DATA-01 |  |
| :---: | :---: |
| Constructs graphs using many-to-one scales |  |
| Course Topic | Activities Title |
| Data S3 | Interpreting Tables |
|  | Line Graphs: Interpretation |


| MA3-DATA-02 |  |
| :--- | :--- |
| Interprets data displays, including timelines and line graphs |  |
| Course Topic |  |
| Data S3 | Mode |
|  | Data Extremes and Range |

### 3.3 Chance (A/B)

| Conducts chance experiments and quantifies the probability |  |
| :--- | :--- |
| Course Topic | Activities Title |
| Chance S3 | Counting Techniques 1 |
|  | What are the Chances? |
|  | Change Gauge |
|  | Fair Games |

## Mathletics

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3P Learning

