## Bethania Lutheran School

## Scope and Sequence

Mathematics Prep - Year 6

## Prep

By the end of the Foundation year, students make connections between number names, numerals and quantities up to 10. They compare objects using mass, length and capacity. Students connect events and the days of the week. They explain the order and duration of events. They use appropriate language to describe location. Students count to and from 20 and order small collections. They group objects based on common characteristics and sort shapes and objects. Students answer simple questions to collect information and make simple inferences.

| Number \& Algebra |
| :--- |
| Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and <br> from 20, moving from any starting point (ACMNA001) |

Term 1
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002) Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005)

Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point (ACMNA001)
Term 2
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002) Subitise small collections of objects (ACMNA003)
Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289)
Represent practical situations to model addition and sharing (ACMNA004)
Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point (ACMNA001)
Term 3 Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNAOO2) Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289) Represent practical situations to model addition and sharing (ACMNA004)

Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point (ACMNA001)
Term 4
Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002) Subitise small collections of objects (ACMNA003)

Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289) Represent practical situations to model addition and sharing (ACMNA004)
Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005)

| Measurement \& Geometry |  <br> Probability | Not yet <br> covered |
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Connect days of the week to familiar events and actions (ACMMG008)

Compare and order duration of events using everyday language of time (ACMMG007) Connect days of the week to familiar events and actions (ACMMG008)

Compare and order duration of events using everyday language of time (ACMMG007)

Connect days of the week to familiar events and actions (ACMMG008)

Compare and order duration of events using everyday language of time (ACMMG007)

## Compare and order duration of events using everyday

 language of time (ACMMG007)Connect days of the week to familiar events and actions (ACMMG008)

Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain reasoning in everyday language (ACMMG006)
Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009) Describe position and movement (ACMMG010)

Answer yes/no questions to collect information and make simple inferences (ACMSP011) (*incidental)

Answer yes/no questions to collect information and make simple inferences (ACMSP011) (*incidental)

Answer yes/no questions to collect information and make simple inferences (ACMSP011)

Answer yes/no questions to collect information and make simple inferences (ACMSP011) strong in Values

## Bethania Lutheran School

## Year 1

By the end of Year 1, students describe number sequences resulting from skip counting by $2 \mathrm{~s}, 5 \mathrm{~s}$ and 10 s . They identify representations of one half. They recognise Australian coins according to their value. Students explain time durations. They describe two-dimensional shapes and three-dimensional objects. Students describe data displays.
Students count to and from 100 and locate numbers on a number line. They carry out simple additions and subtractions using counting strategies. They partition numbers using place value. They continue simple patterns involving numbers and objects. Students order objects based on lengths and capacities using informal units. They tell time to the half-hour. They use the language of direction to move from place to place. Students classify outcomes of simple familiar events. They collect data by asking questions, draw simple data displays and make simple inferences.

|  | Number \& Algebra | Measurement \& Geometry | Statistics \& Probability | Not yet covered |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Term } \\ 1 \end{gathered}$ | Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (ACMNA012). <br> Recognise, model, read, write and order numbers to at least 100 . Locate these numbers on a number line (ACMNA013). <br> Count collections to 100 by partitioning numbers using place value (ACMNA014). <br> Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015). <br> Investigate and describe number patterns formed by skip-counting and patterns with objects (ACMNA018). | Recognise and classity familiar twodimensional shapes and threedimensional objects using obvious features (ACMMGO22). <br> Describe duration using months, weeks, days and hours (ACMMG021). |  |  |
| Term 2 | Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (ACMNA012). <br> Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013). <br> Count collections to 100 by partitioning numbers using place value (ACMNA014). <br> Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015). <br> Investigate and describe number patterns formed by skip-counting and patterns with objects (ACMNA018). | Describe duration using months, weeks, days and hours (ACMMG021). |  |  |
| $\begin{gathered} \text { Term } \\ 3 \end{gathered}$ | Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (ACMNA012). <br> Recognise, model, read, write and order numbers to at least 100 . Locate these numbers on a number line (ACMNA013). <br> Count collections to 100 by partitioning numbers using place value (ACMNA014). <br> Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015). <br> Recognise, describe and order Australian coins according to their value (ACMNA017). <br> Investigate and describe number patterns formed by skip-counting and patterns with objects (ACMNA018). | Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019). <br> Tell time to the half-hour (ACMMGO20). <br> Describe duration using months, weeks, days and hours (ACMMG021). <br> Recognise and classify familiar twodimensional shapes and threedimensional objects using obvious features (ACMMG022). | strong in | $1 S$ |
| strength in characterliving |  |  |  |  |

## Bethania Lutheran School

## Term

Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013),
Count collections to 100 by partitioning numbers using place value (ACMNA014).

Give and follow directions to familia locations (ACMMG023).
describe them using everyc 'won't happen' or 'might happen' (ACMSP024).

Choose simple questions and gather responses and make simple inferences (ACMSP262).

Recognise and describe one-half as one of two equal parts of a whole (ACMNA016).
Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays drawing repre
(ACMSP263).
strong in values
strength in character

## Bethania Lutheran School

## Year 2

By the end of Year 2, students recognise increasing and decreasing number sequences involving $2 \mathrm{~s}, 3 \mathrm{~s}$ and 5 s . They represent multiplication and division by grouping into sets. They associate collections of Australian coins with their value. Students identify the missing element in a number sequence. Students recognise the features of three-dimensional objects. They interpret simple maps of familiar locations. They explain the effects of one-step transformations. Students make sense of collected information.
Students count to and from 1000. They perform simple addition and subtraction calculations using a range of strategies. They divide collections and shapes into halves, quarters and eighths Students order shapes and objects using informal units. They tell time to the quarter-hour and use a calendar to identify the date and the months included in seasons. They draw twodimensional shapes. They describe outcomes for everyday events. Students collect, organise and represent data to make simple inferences

|  | Number \& Algebra | Measurement \& Geometry | Statistics \& Probability | Not yet covered |
| :---: | :---: | :---: | :---: | :---: |
| Term 1 | Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point, then moving to other sequences (ACMNA026) <br> Recognise, model, represent and order numbers to at least 1000 <br> (ACMNA027) <br> Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028) <br> Describe patterns with numbers and identify missing elements (ACMNA035) |  | Statistics and Probability <br> Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (ACMSP047) <br> Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048) <br> Collect, check and classify data (ACMSP049) <br> Create displays of data using lists, table and picture graphs and interpret them <br> (ACMSP050) |  |
| Term 2 | Explore the connection between addition and subtraction (ACMNA029) <br> Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030) <br> Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030) <br> Solve problems by using number sentences for addition or subtraction (ACMNA036) | Compare masses of objects using balance scales (ACMMG038) <br> Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037) |  |  |
| Term 3 |  | Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039) <br> Name and order months and seasons (ACMMG040) <br> Use a calendar to identify the date and determine the number of days in each month (ACMMG041) <br> Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042) <br> Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045) <br> Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044) |  |  |

## Bethania Lutheran School

Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)

Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)

Count and order small collections of Australian coins and notes according to
their value (ACMNA034)
strong in values strength in character

## Bethania Lutheran School

## Year 3

By the end of Year 3, students recognise the connection between addition and subtraction and solve problems using efficient strategies for multiplication. They model and represent unit fractions. They represent money values in various ways. Students identify symmetry in the environment. They match positions on maps with given information. Students recognise angles in real situations. They interpret and compare data displays.
Students count to and from 10000 . They classify numbers as either odd or even. They recall addition and multiplication facts for single-digit numbers. Students correctly count out change from financial transactions. They continue number patterns involving addition and subtraction. Students use metric units for length, mass and capacity. They tell time to the nearest minute. Students make models of three-dimensional objects. Students conduct chance experiments and list possible outcomes. They conduct simple data investigations for categorical variables.

|  | Number \& Algebra | Measurement \& Geometry | Statistics \& Probability | Not yet covered |
| :---: | :---: | :---: | :---: | :---: |
| Term 1 | Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051) <br> Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060) <br> Recognise, model, represent and order numbers to at least 10000 (ACMNA052) <br> Apply place value to partition, rearrange and regroup numbers to at least 10000 to assist calculations and solve problems (ACMNA053) <br> Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055) <br> Recognise and explain the connection between addition and subtraction (ACMNA054) | Tell time to the minute and investigate the relationship between units of time (ACMMG062) |  |  |
| Term 2 | Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055) <br> Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056) <br> Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057) | Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061) <br> Tell time to the minute and investigate the relationship between units of time (ACMMG062) <br> Create and interpret simple grid maps to show position and pathways (ACMMG065) | Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068) <br> Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies (ACMSP069) <br> Interpret and compare data displays (ACMSP070) |  |
| Term 3 | Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056) <br> Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057) | Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061) <br> Make models of three-dimensional objects and describe key features (ACMMG063) Identify symmetry in the environment (ACMMG066) <br> Identify angles as measures of turn and compare angle sizes in everyday situations (ACMMG064) | Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067) <br> strong in Valu |  |

## Bethania Lutheran School

Term
Model and represent unit fractions including $1 / 2,1 / 4,1 / 3,1 / 5$ and their multiples to a complete
whole (ACMNA058)
Represent money values in multiple ways and count the change required for simple transactions to
the nearest five cents (ACMNA059)
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strength in character

## Bethania Lutheran School

Year 4
By the end of Year 4, students choose appropriate strategies for calculations involving multiplication and division. They recognise common equivalent fractions in familiar contexts and make connections between fraction and decimal notations up to two decimal places. Students solve simple purchasing problems. They identify and explain strategies for finding unknown quantities in number sentences They describe number patterns resulting from multiplication. Students compare areas of regular and irregular shapes using informal units. They solve problems involving time duration. They interpret information contained in maps. Students identify dependent and independent events. They describe different methods for data collection and representation, and evaluate their effectiveness. Students use the properties of odd and even numbers. They recall multiplication facts to $10 \times 10$ and related division facts. Students locate familiar fractions on a number line. They continue number sequences involving multiples of single digit numbers. Students use scaled instruments to measure temperatures, lengths, shapes and objects. They convert between units of time. Students create symmetrical shapes and patterns. They classify angles in relation to a right angle. Students list the probabilities of everyday events. They construct data displays from given or collected data.

|  | Number \& Algebra | Measurement \& Geometry | Statistics \& Probability | Not yet covered |
| :---: | :---: | :---: | :---: | :---: |
| Term 1 | NUMBER, ADDITION \& SUBTRACTION: <br> Investigate and use the properties of odd and even numbers (ACMNA071) <br> Recognise, represent and order numbers to at least tens of thousands (ACMNA072) <br> Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073) <br> Find unknown quantities in number sentences involving addition and subtraction and identify equivalent number sentences involving addition and subtraction (ACMNA083) | Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090) |  |  |
| Term 2 | NUMBER, ADDITION \& SUBTRACTION: (Continued) Investigate and use the properties of odd and even numbers (ACMNA071) <br> Recognise, represent and order numbers to at least tens of thousands (ACMNA072) <br> Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073) <br> Find unknown quantities in number sentences involving addition and subtraction and identify equivalent number sentences involving addition and subtraction (ACMNA083) |  |  |  |
| Term 3 | MULTIPLICATION \& DVIISION: <br> Investigate number sequences involving multiples of $3,4,6,7,8$, and 9 (ACMNA074) <br> Recall multiplication facts up to $10 \times 10$ and related division facts (ACMNA075) <br> Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076) <br> Explore and describe number patterns resulting from performing multiplication (ACMNA081) <br> Solve word problems by using number sentences involving multipication or division where there is no remainder (ACMNA082) | TIME: <br> Convert between units of time (ACMMG085) <br> Use 'am' and 'pm' notation and solve simple time problems (ACMMG086) <br> SHAPES \& ANGLES: <br> Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091) <br> Compare angles and classify them as equal to, greater than, or less than, a right angle (ACMMG089) |  |  |
| strength in character |  |  |  |  |

## Bethania Lutheran School



## Bethania Lutheran School

## Year 5

By the end of Year 5, students solve simple problems involving the four operations using a range of strategies. They check the reasonableness of answers using estimation and rounding. Students identify and describe factors and multiples. They identify and explain strategies for finding unknown quantities in number sentences involving the four operations. They explain plans for simple budgets Students connect three-dimensional objects with their two-dimensional representations. They describe transformations of two-dimensional shapes and identify line and rotational symmetry. Students interpret different data sets.
Students order decimals and unit fractions and locate them on number lines. They add and subtract fractions with the same denominator. Students continue patterns by adding and subtracting fractions and decimals. They use appropriate units of measurement for length, area, volume, capacity and mass, and calculate perimeter and area of rectangles. They convert between 12-and 24 -hour time. Students use a grid reference system to locate landmarks. They measure and construct different angles. Students list outcomes of chance experiments with equally likely outcomes and assign probabilities between 0 and 1 . Students pose questions to gather data, and construct data displays appropriate for the data.

|  | Number \& Algebra | Measurement \& Geometry | Statistics \& Probability | Not yet covered |
| :---: | :---: | :---: | :---: | :---: |
| Term 1 | Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098) <br> Find unknown quantities in number sentences involving multiplication and division and identify equivalent number sentences involving multiplication and division (ACMNA121) <br> Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098) <br> Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100) <br> Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101) | Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111) |  |  |
| $\begin{gathered} \text { Term } \\ 2 \end{gathered}$ | Compare, order and represent decimals (ACMNA105) <br> Compare and order common unit fractions and locate and represent them on a number line (ACMNA102) <br> Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103) <br> Recognise that the place value system can be extended beyond hundredths (ACMNA104) <br> Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107) | Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113) | strongin | OS |



## Bethania Lutheran School

## Year 6

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume. They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They interpret secondary data displayed in the media.
Students locate fractions and integers on a number line. They calculate a simple fraction of a quantity. They add, subtract and multiply decimals and divide decimals where the result is rational. Students calculate common percentage discounts on sale items. They write correct number sentences using brackets and order of operations. Students locate an ordered pair in any one of the four quadrants on the Cartesian plane. They construct simple prisms and pyramids. Students describe probabilities using simple fractions, decimals and percentages

|  | Number \& Algebra | Measurement \& Geometry | Statistics \& Probability | Not yet covered |
| :---: | :---: | :---: | :---: | :---: |
| Term 1 | Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122) <br> Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123) <br> Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124) |  |  |  |
| Term 2 |  | Connect decimal representations to the metric system (ACMMG135) <br> Convert between common metric units of length, mass and capacity (ACMMG136) <br> Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137) <br> Connect volume and capacity and their units of measurement (ACMMG138) Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142) <br> Investigate and calculate percentage discounts of $10 \%, 25 \%$ and $50 \%$ on sale items, with and without digital technologies <br> (ACMNA132) |  |  |
| Term 3 |  |  | Describe probabilities using fractions, decimals and percentages (ACMSP144) <br> Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145) <br> Compare observed frequencies across experiments with expected frequencies (ACMSP146) <br> Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147) <br> Describe probabilities using fractionsfdeqiraplspig penneqntages (ACMSP144) |  |

## Bethania Lutheran School

## Term

 estimation and rounding to check the reasonableness of answers (ACMNA128)Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)

Multiply and divide decimals by powers of 10 (ACMNA130)
Make connections between equivalent fractions, decimals and percentages (ACMNA131)
Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)

Explore the use of brackets and order of operations to write number sentences (ACMNA134)

