



Chapel Hill State School

Maths Curriculum and Assessment Overview 2024

YEAR 4



Curriculum Intent

Year Level Description

The proficiency strands *Understanding, Fluency, Problem Solving and Reasoning* are an integral part of mathematics content across the three content strands: Number and Algebra, Measurement and Geometry, and Statistics and Probability. The proficiencies reinforce the significance of working mathematically within the content and describe how the content is explored or developed. They provide the language to build in the developmental aspects of the learning of mathematics.

At this year level:

Understanding includes making connections between representations of numbers, partitioning and combining numbers flexibly, extending place value to decimals, using appropriate language to communicate times, and describing properties of symmetrical shapes.

Fluency includes recalling multiplication tables, communicating sequences of simple fractions, using instruments to measure accurately, creating patterns with shapes and their transformations, and collecting and recording data.

Problem Solving includes formulating, modelling and recording authentic situations involving operations, comparing large numbers with each other, comparing time durations, and using properties of numbers to continue patterns.

Reasoning includes using generalising from number properties and results of calculations, deriving strategies for unfamiliar multiplication and division tasks, comparing angles, communicating information using graphical displays and evaluating the appropriateness of different displays.

Achievement Standards

Spiral Progression and Alignment

Developing the same concepts from one grade level to the next in increasing complexity and application.

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 10 000. 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.

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 x 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.

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 times. 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.

Year 4		Maths Curriculum and Assessment Overview		Chapel Hill State School			
Term 1		Term 2		Term 3		Term 4	
Unit 1 and Unit 2		Unit 1 and Unit 2		Unit 3		Unit 4	
<p>Number and Algebra</p> <p><i>Number and Place Value</i></p> <ul style="list-style-type: none"> • Make connections between representations of numbers • Partition and combine numbers flexibly • Recall multiplication facts • Formulate, model and record authentic situations involving operations • Compare large numbers • Generalise from number properties and results of calculations • Derive strategies for unfamiliar multiplication and division tasks • Identify odd and even numbers • Make generalisations about the properties and adding, subtracting, multiplying and dividing of odd and even numbers <p><i>Fractions and Decimals</i></p> <ul style="list-style-type: none"> • Communicate sequences of simple fractions <p><i>Patterns and Algebra</i></p> <ul style="list-style-type: none"> • Use properties of numbers to continue patterns <p>Measurement and Geometry</p> <p><i>Using Units of Measurement</i></p> <ul style="list-style-type: none"> • Use appropriate language to communicate times • Compare time durations • Use instruments to accurately measure lengths <p><i>Location and Transformation</i></p> <ul style="list-style-type: none"> • Investigate the features on maps and plans • Identify the need for legends • Investigate the language of location, direction and movement • Find locations using turns and everyday directional language • Identify compass cardinal points and investigate compass directions on maps • Investigate the purpose of scale and apply scale to maps and plans • Explore mapping conventions and plan and plot routes on maps • Explore appropriate measurement units and calculate distances using scales <p><i>Geometric Reasoning</i></p> <ul style="list-style-type: none"> • Identify angles and construct and label right angles • Identify and construct angles not equal to a right angle • Mark angles not equal to a right angle 		<p>Number and Algebra</p> <p><i>Number and place value</i></p> <ul style="list-style-type: none"> • Recognise, read and represent 5-digit numbers • Identify and describe place value in five-digit numbers • Partition numbers using standard and non-standard place value parts • Compare and order 5-digit numbers • Recall of 3s, 6s, 9s facts and solve multiplication and division problems • Use informal recording methods for calculations • Apply mental and written strategies to computation <p><i>Fractions and Decimals</i></p> <ul style="list-style-type: none"> • Revisit and develop understanding of proportion and relationships between fractions in the halves family and thirds family • Count and represent fractions on number lines • Represent fractions using a range of models • Solve fraction problems in familiar contexts. <p><i>Money and Financial Mathematics</i></p> <ul style="list-style-type: none"> • Read and represent money amounts • Investigate change, rounding to five cents • Explore strategies to calculate change • Solve problems involving purchases and the calculation of change • Explore Asian currency and calculate foreign currencies <p>Measurement and Geometry</p> <p><i>Shape</i></p> <ul style="list-style-type: none"> • Explore properties of polygons and quadrilaterals • Identify combined shapes • Investigate properties of shapes within tangrams • Create polygons and combined shapes using tangrams <p>Statistics and Probability</p> <p><i>Chance</i></p> <ul style="list-style-type: none"> • Compare dependent and independent events • Describe probabilities of everyday events <p><i>Data Representation and Interpretation</i></p> <ul style="list-style-type: none"> • Collect and record data • Communicate information using graphical displays • Evaluate the appropriateness of different displays 		<p>Number and Algebra</p> <p><i>Number and Place Value</i></p> <ul style="list-style-type: none"> • Interpret number representations • Sequence number values • Apply number concepts and place value understanding to the calculation of addition, subtraction, multiplication and division • Develop fluency with multiplication fact families • Apply mental and written computation strategies • Recall multiplication and division facts and apply place value to partition and regroup numbers to assist calculations <p><i>Fractions and Decimals</i></p> <ul style="list-style-type: none"> • Partition to create fraction families • Identify, model and represent equivalent fractions • Count by fractions • Solve simple calculations involving fractions with like denominators • Model and represent tenths and hundredths • Make links between fractions and decimals • Count by decimals • Compare and sequence decimals <p><i>Money and Financial Mathematics</i></p> <ul style="list-style-type: none"> • Represent, calculate and round amounts of money required for purchases and change <p><i>Patterns and Algebra</i></p> <ul style="list-style-type: none"> • Use equivalent addition and subtraction number sentences to find unknown quantities <p>Measurement and Geometry</p> <p><i>Using Units of Measurement</i></p> <ul style="list-style-type: none"> • Use scaled instruments to measure and compare length, mass, capacity and temperature • Measure areas using informal units and investigate standard units of measurement. <p><i>Shape</i></p> <ul style="list-style-type: none"> • Compare the areas of regular and irregular shapes using informal units of area measurement <p><i>Location and Transformation</i></p> <ul style="list-style-type: none"> • Investigate different types of symmetry • Analyse and create symmetrical designs 		<p>Number and Algebra</p> <p><i>Number and Place Value</i></p> <ul style="list-style-type: none"> • Calculate addition and subtraction using a range of mental and written strategies • Recall multiplication and related division facts • Calculate multiplication and division using a range of mental and written strategies • Solve problems involving the four operations • Use estimation and rounding • Apply mental strategies to add, subtract, multiply and divide 2 and 3 digit numbers <p><i>Fractions and Decimals</i></p> <ul style="list-style-type: none"> • Count and identify equivalent fractions • Locate fractions on a number line • Read and write decimals • Identify fractions and corresponding decimals • Compare and order decimals (to hundredths) <p><i>Money and Financial Mathematics</i></p> <ul style="list-style-type: none"> • Calculate change to the nearest five cents • Solve problems involving purchases <p><i>Patterns and Algebra</i></p> <ul style="list-style-type: none"> • Use equivalent multiplication and division number sentences to find unknown quantities <p>Statistics and Probability</p> <p><i>Data Representation and Interpretation</i></p> <ul style="list-style-type: none"> • Write questions to collect data • Collect and record data • Display and interpret data 	
Assessment							
<p>U1 Recalling and using Multiplication and Division facts</p> <p><i>Short answer questions</i></p> <p>Students recall multiplication and division facts, identify and explain unknown quantities and solve problems using appropriate strategies for multiplication and division.</p> <p>* Includes Diagnostic Test</p> <p>U2 Using the Properties of Odd and Even Numbers</p> <p><i>Short answer questions</i></p> <p>Students use the relationships between the four operations and odd and even numbers.</p> <p>* Includes Diagnostic Test</p>		<p>U2 Recalling Multiplication and Division Facts</p> <p><i>Short answer questions</i></p> <p>Students recall multiplication and division facts – accuracy and fluency</p> <p>U1 Identifying and Explaining Chance Events</p> <p><i>Short answer questions</i></p> <p>Students identify dependent and independent events and explain the chance of everyday events occurring.</p> <p>U2 Interpreting Simple Maps and Classifying Angles</p> <p><i>Short answer questions</i></p> <p>Students interpret information contained in simple maps and classify angles in relation to a right angle.</p> <p>(Linked to U2 HASS)</p>		<p>Recognising and Locating Fractions</p> <p><i>Short answer questions</i></p> <p>Students locate familiar fractions on a number line and recognise common equivalent fractions in familiar contexts.</p> <p>* Includes Diagnostic Test</p> <p>Comparing Areas and Using Measurement</p> <p><i>Short answer questions</i></p> <p>Students compare areas of regular and compare areas of regular and irregular shapes using informal units. Students use scaled instruments to measure temperature, mass, capacity and length.</p> <p>Recalling Multiplication and Division Facts</p> <p><i>Short answer questions</i></p> <p>Students recall multiplication and division facts</p>		<p>Solving Purchasing Problems</p> <p><i>Short answer questions</i></p> <p>Students solve simple purchasing problems including the calculation of change.</p> <p>* Includes Diagnostic Test</p> <p>Analysing Data</p> <p><i>Short answer questions</i></p> <p>Students define the different methods for data collection and representation and evaluate their effectiveness. They construct data displays from given or collected data.</p> <p>Connecting Decimals and Fractions</p> <p><i>Short answer questions</i></p> <p>Students demonstrate and explain the connections between fractions and decimals to hundredths</p> <p>* Includes Diagnostic Test</p>	

Achievement Standard – Elements Assessed

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