Year 5 Mathematics

Achievement Standard

By the end of Year 5, students use place value to write and order decimals including decimals greater than one. They express natural numbers as products of factors and identify multiples. Students order and represent, add and subtract fractions with the same or related denominators. They represent common percentages and connect them to their fraction and decimal equivalents. Students use their proficiency with multiplication facts and efficient calculation strategies to multiply large numbers by one- and two-digit numbers and divide by single-digit numbers. They check the reasonableness of their calculations using estimation. Students use mathematical modelling to solve financial and other practical problems, formulating and solving problems, choosing arithmetic operations and interpreting results in terms of the situation. They apply properties of numbers and operations to find unknown values in numerical equations involving multiplication and division. Students create and use algorithms to identify and explain patterns in the factors and multiples of numbers.

They choose and use appropriate metric units to measure the attributes of length, mass and capacity, and to solve problems involving perimeter and area. Students convert between 12- and 24-hour time. They estimate, construct and measure angles in degrees. Students use grid coordinates to locate and move positions. They connect objects to their two-dimensional nets. Students perform and describe the results of transformations and identify any symmetries.

They plan and conduct statistical investigations that collect nominal and ordinal categorical and discrete numerical data using digital tools. Students identify the mode and interpret the shape of distributions of data in context. They interpret and compare data represented in line graphs. Students conduct repeated chance experiments, list the possible outcomes, estimate likelihoods and make comparisons between those with and without equally likely outcomes.

Assessable Elements

An overall level of achievement in this subject is determined by the teacher's on-balance judgment of the evidence presented in students' summative assessment across the following:

- **Fluency**
- **Problem Solving**
- **Reasoning**
- **Understanding**

Delivery (mode, time requirements, lessons)

Students have access to scheduled lessons each week. Lessons are delivered via our learning management system. Students are also expected to undertake independent study to complete tasks and assessments in accordance with the Work Rate Calendar.

Student Requirements

Computer, internet access, email, printer, scanner, headset with microphone, stationery, resource list and SRS list.

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Units, Learning Experiences and Summative Assessment		
Semester 1	Term 1	**Unit 1** Students will explore practical applications of mathematics, starting with understanding **maths in everyday life** through real-world scenarios like budgeting, shopping, and planning trips. They'll deepen their understanding of **addition, subtraction**, and **multiplication**, using techniques such as **split & multiply** and **area models**, and learn how to solve problems using strategies like **guessing and checking** and **acting out problems**. Key investigations, will combine time zone knowledge, **reading timetables**, and **directional language** to provide a hands-on approach to applying math in geography, while students also analyze **line graphs** and **categorical data** to develop their data handling and graphing skills.
		Summative Assessment: • . Students will demonstrate their knowledge and understanding through a combination of hands-on investigations and tests throughout the term.
	Term 2	**Unit 2** students will build on their foundational math skills by exploring **percentages** and applying them in real-world contexts like the **Breakfast Club** investigation, which involves planning meals and budgeting. They'll dive deeper into **place value beyond millions** and learn how to **calculate area** and **perimeter** for different shapes, including **rectangles**, while also examining **rotational symmetry** and **transformations** such as **translations, reflections, and rotations**. Hands-on investigations, will challenge students to use these skills to solve complex design problems, while data handling through **dot plots**, **column graphs**, and **line graphs** will further develop their ability to interpret and present information visually.
		Summative Assessment: • Students will demonstrate their knowledge and understanding through a combination of hands-on investigations and tests throughout the term.
Semester 2	Term 3	**Unit 3** Students will explore key concepts like **multiples**, **factors**, and **division with remainders** through engaging investigations, where they'll apply these concepts to solve problems. They will also delve into **fractions**, learning to add and subtract them, as well as comparing and converting between **mixed numerals**, **improper fractions**, and **decimals**. In addition, students will investigate **coordinates** to locate positions and classify angles, while also improving their **problem-solving strategies** through exercises like **working backwards** and **finding smaller parts of a larger problem**.
		Summative Assessment: • Students will demonstrate their knowledge and understanding through a combination of hands-on investigations and tests throughout the term.
	Term 4	**Unit 4** students will focus on **multiplication** using the area model and **measuring** with **litres** and **millilitres**, applying their knowledge through practical investigations like **Down the Drain** and **Score a Duck**. They will also explore concepts of **probability**, examining fair and unfair outcomes, and learning to calculate the **measures of probability** and **comparing probabilities** in different scenarios. Additionally, students will enhance their skills in **place value**, **division with remainders**, and **measurement**, while engaging in problem-solving activities and puzzles to consolidate their learning and prepare for assessments.
		Summative Assessment: • Students will demonstrate their knowledge and understanding through a combination of hands-on investigations and tests throughout the term.

Disclaimer All of the above information is accurate at the time of development.