

Math

Syllabus: Grade 6

Rationale for Learning Mathematics *Gain an appreciation for the important role mathematics plays in modern society. *Develop enough mathematical literacy to enable students to function at their maximum potential in a modern economy. *Develop the ability to estimate solutions, compute accurately, assess the reasonableness of their answers, and reason logically and critically.	Class Rules: <ol style="list-style-type: none">1. Arrive on time, prepared, and ready to learn2. Respect yourself and others3. Make friends and be thoughtful4. Take turns speaking and listening5. Say Please and Thank you6. Try your best!
Math Strands The Palau mathematics curriculum framework is organized under the following 5 STRANDS, or content themes, that run across grades 1 through 12. <ol style="list-style-type: none">1. Number Sense, Properties, and Operations2. Unit Systems and Measurement3. Spatial Sense and Geometry4. Data, Statistical Analysis, and Probability5. Patterns, Functions, and Algebra	Math Resources and Materials Grade 6 Primary Math Textbooks (Singapore math textbooks aligned to U.S) Volume A & B Computation of Letter Grade: <ul style="list-style-type: none">• 90%-100%. A• 80%-89%. B• 70%-79%. C• 65%-69%. D• 0%-64%. F Methods of Evaluation: Quarterly grade for Grade 1-8 is based on : A. 85% = Class Average * Class Average = 70% Test + 30% Other Components such as quizzes, group works, classwork, homework, self-assessments, experiments/demonstrations/research/project B. 15% = Quarter Exam

Strand/Topics	Grade 6
Number Sense, Properties, and Operations	<ul style="list-style-type: none"> • Define ratio and write a ratio in two different forms ($a:b$, $\frac{a}{b}$, or a to b) • Define proportion (as a statement of equality between two different ratios) and write a proportion in two different forms. (Express a proportion as a fraction or a ratio.) • Round multi-digit whole numbers to any place using place value understanding. Define and determine the <i>least common multiple</i> of two whole numbers. • Use ratio and rate reasoning to solve real- world and mathematical problems. Interpret the symbol for percent (%) as a fraction and as a decimal. • Rewrite or express percentages as decimals and fractions, and vice versa. • Solve word problems that involve percentages and also finding the whole, given a part and the percent. Interpret speed as the rate of distance traveled per unit of time. • Solve multi-step word problems involving two parts traveled at different speeds • Divide a whole number or a fraction by a unit fraction (a fraction with 1 in its numerator) • Divide a fraction by a whole number and vice versa (a whole number by a fraction). • Solve contextual word problems that involve fractions. • Determine ordering and absolute value of rational numbers • Find the product of two fractions and solve context problems involving real-world contexts. • Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. • Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. • Compute quotients of fractions, and solve word problems involving division of fractions by fractions.
Unit Systems and Measurement	<ul style="list-style-type: none"> • Convert diameter into radius, finding diameter when given circumference, or radius when given circumference, and vice versa • Find the area of polygons by composing into rectangles or <u>decomposing into</u> triangles and other shapes. • Identify the center, diameter, and radius of a circle. • Construct circles of a given radius or diameter. • Measure the circumference of circles and relate circumference to perimeter. • Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. • Use other methods or formula for the capacity or volume of a rectangular prism, cube, and cuboid when given its side. • Find the edge of a cube when given its volume. • Find the unknown dimension of a cuboid when given the volume and two dimensions.

Strand/Topics	Grade 6
Spatial Sense and Geometry	<ul style="list-style-type: none"> Find the area of polygons by composing into rectangles or decomposing into triangles and other shapes. Find the area of compound figures made up of semicircles and quarter circles, rectangles, triangles, and etc. Find the unknown dimension of a cuboid when given its volume and the area of the face perpendicular to the unknown dimension. Convert the volume of a liquid from cm^3 to liters and viceversa. Solve multi-step word problems that involve the volume of a liquid in a rectangular tank. Use the properties of triangles and quadrilaterals to evaluate angles. Find unknown angles in problems that involve triangles and /or quadrilaterals.
Data, Statistical Analysis, and Probability	<ul style="list-style-type: none"> Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. Interpret different types of graphs and line plots (c.g., pictograph, bar graph, circle graph, broken line, graph), tables, charts, schedules, dot plots, and box plots.
Patterns, Functions, and Algebra	<ul style="list-style-type: none"> Use letters to represent unknown numbers. Write an algebraic expression in one variable (unknown). Simplify algebraic expressions with one variable by adding or subtracting like terms (algebraic terms). Evaluate algebraic expressions using substitution. Find the value of a simple algebraic expression using substitution method.