ACHIEVERS ARC

2027 P5 LESSON PLAN

SEMESTER 1 (NOV TO JAN)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Introduction to Rate of Work Done	Word Problems	Learn about problems involving the unitary method; cultivate practical application skills.
2	Arithmetic Progression	Counting	Lead students to explore the law of change between numbers, so as to improve students' observation and inquiry ability.
3	Introduction to Triangles	Geometry	Introduce students to the basics of triangles, learn about the properties of triangles, and solve problems to familiarise with finding the area and perimeter of triangles.
4	P4 Year End Review Test		
5	Whole Numbers up to 10 million	Number Theory	Build upon the understanding of place values; learn advanced techniques involving operations with whole numbers to improve calculation speed and precision.
6	Addition and Subtraction of Fractions	Calculation	Be familiar with how to add and/or subtract proper fractions, improper fractions and mixed numbers using the method of common denominators.
7	Multiplication of Fractions	Calculation	Be able to multiply proper fractions, improper fractions and mixed numbers as well as simplify fractions via cancellation.
8	Fractions Word Problems 1	Word Problems	Learn to solve common fraction application problems to hone practical application skills.
9	Fractions Word Problems 2	Word Problems	Learn to solve common fraction application problems to hone practical application skills.

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2027 P5 LESSON PLAN

SEMESTER 2 (JAN TO APR)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Height and Base of Triangles	Geometry	Be able to correctly identify base/height pairs within triangles.
2	Area of Triangles	Geometry	Build upon understanding of base/height pairs to perform basic calculation of areas of triangles within figures. Learn how to use equiarea transformation to solve complex problems.
3	Ratio	Calculation	Understand the concept the ratio and be able to form simple ratios in various situations.
4	Ratio Word Problems	Word Problems	Be able to apply the concepts learnt from the previous topic to solve real life word problems involving ratio.
5	Volume of Cuboids	Geometry	Determining volume with known dimensions of figures.
6	Volume of Liquids	Geometry	Be able to find volumes of complex figures and solve word problems involving volumes of liquids such as water filling problems.
7	Equivalent Substitution	Word Problems	Learn the basic properties of equations, understand the principle of equivalent substitution and cultivate basic equation modelling.
8	Heuristics	Word Problems	Be familiar with various heuristics concepts such as the Assumption Method and Excess-Shortage Problems.
9	Understanding Percentages	Calculation	Build on the foundation of fractions and decimals to learn the properties of percentages, and study the relationship among the three.
10	Percentage Word Problems	Word Problems	Learn to solve percentage application questions to comprehensively improve students' practical application ability.
11	Mid-Year Review Test		

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2027 P5 LESSON PLAN

SEMESTER 3 (APR TO AUG)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Economic Problems	Word Problems	Combine mathematics with economic problems to be able to calculate profit/loss, discounts, GST and simple interest, and understand the link between mathematics and real life situations.
2	Average	Word Problems	Understand the meaning of averages, and learn about the relationship between the sum, number of terms and average.
3	Quadrilateral Shapes	Geometry	Learn how to identify the different types of quadrilaterals based on their characteristics and solve for unknown angles and areas within quadrilaterals.
4	Area & Perimeter of Complex Shapes 1	Geometry	Be able to link students' knowledge of different shapes to calculate areas and perimeters of complex shapes.
5	Conversions and Measurements	Calculation	To be familiar with measurements and performing unit conversions.
6	Angles 2	Geometry	Learn about the different types of angles and how to identify them, as well as how to calculate unknown angles in basic figures.
7	Remainder Word Problems	Word Problems	Learn to solve word problems involving remainders and working backwards.
8	Rate	Word Problems	Understand the idea of rates, be able to identify rates in various scenarios and solve problems involving rates.
9	Sequential Patterns	Calculation	Improve numeracy to identify patterns in a certain number sequence and be able to apply the solving methodology to complex questions.
10	Comparing Multiple Quantities	Word Problems	Familiarise with solving word problems involving comparison of multiple quantities.
11	Advanced Angles	Geometry	Comprehensively study typical and frequently-tested angle problems to enable students to solve complex angle calculation problems.
12	Constant Total and Constant Difference	Word Problems	Be familiar with solving word problems which involve constant total and constant difference.

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2027 P5 LESSON PLAN

SEMESTER 4 (AUG TO OCT)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Advanced Percentage Word Problems	Word Problems	Learn to solve advanced percentage application questions to sharpen students' practical application ability.
2	Area & Perimeter of Complex Shapes 2	Geometry	Solve various kinds of area and perimeter problems, building on current knowledge of area and perimeter to tackle exam questions.
3	Advanced Area of Triangles	Geometry	Tackle problems involving triangles that requires students to combine knowledge of various area properties to solve complex area problems.
4	Number of units and Value of units	Word Problems	Understand how to identify No. of units and Value of units question types and learn methods used to solve them.
5	Rate of Work Done	Word Problems	Understand the relationship between time, total amount of work done and rate of work done.
6	Volume Word Problems	Word Problems	To be able to solve word problems involving volumes of complex figures and rates.
7	Triangles Involving Ratio	Geometry	Learn to observe triangles and find unknown lengths and areas in triangles involving proportions.
8	SA2 Preparation Sections A & B		
9	SA2 Preparation Section C		
10	3D Shapes	Geometry	Learn to observe triangles and find unknown lengths and areas in triangles involving proportions.
11	Introduction to Algebra	Calculation	Understand the use of algebra and be able to form algebraic expressions from word problems, be able to understand some basic properties and laws dealing with algebraic expressions.

ACHIEVERS ARC

2027 小五年级课程表

第 1 学期（11 月 至 1 月）

课	标题	模块	教学目标
1	归一问题进阶	应用题	通过分析复杂归一问题的题干，养成勾画关键信息的习惯，在解决应用题过程中进一步加深对除法含义的理解。
2	等差数列	计算	带领孩子探索数与数之间的变化规律，提升孩子的观察及探究能力。
3	三角形初步	几何	向学生介绍三角形的基础知识，了解三角形的性质，并解决三角形的面积和周长问题。
4	年终复习测试		
5	1000万以下的整数	数论	加强对数位的理解，学习整数运算的高级技巧，以提高计算速度和精确度。
6	分数加减法	计算	学习真分数、假分数、带分数的加减法运算，熟练假分数与带分数的相互转换，进一步理解分数含义。
7	分数乘法	计算	能够理解真分数、假分数、带分数的乘法运算，通过约分来简化分数结果，为后期分数应用题做铺垫。
8	分数应用题 1	应用题	学会如何在题目中找出关键信息，将信息转化成数学算式，解决实际问题。
9	分数应用题 2	应用题	学会如何在题目中找出关键信息，将信息转化成数学算式，解决实际问题。

ACHIEVERS ARC

2027 小五年级课程表

第 2 学期（1 月 至 4 月）

课	标题	模块	教学目标
1	三角形的高和底	几何	了解底和高的概念，找到三角形中的多组底和高。为下一讲三角形面积打好基础。
2	三角形面积	几何	熟练掌握三角形面积的计算方法，能通过底和高求出面积，也能根据面积反求底或高。
3	比例	计算	学习比和比例的概念，了解比和比例的基本性质，理解应用题中比和比例代表的含义。
4	比例应用题	应用题	通过比和比例的计算，解决各种各样的比例应用题，为**PSLE**相关考点打下基础。
5	立体图形的体积	几何	掌握基础立方体求体积的方法，并且能用体积反求未知数据，培养孩子空间想象能力。
6	液体的体积	几何	学习求复杂立方体的体积，用学过的知识来解决水中浸物问题，培养空间想象能力。
7	等量代换	应用题	学习解决典型的小数应用题，提高小数知识的实际应用能力，规范应用题做题步骤。
8	开放式问题	应用题	熟悉各种开放式的题目，如假设法和盈亏问题。
9	百分数的认识	计算	学习方程的基本属性，了解等量代换原理，培养基本的方程建模能力。
10	百分数应用题	应用题	学会解决百分比相关的应用题，提高孩子的综合能力和应用能力。
11	年中考试复习		

ACHIEVERS ARC

2027 小五年级课程表

第 3 学期（4 月 至 8 月）

课	标题	模块	教学目标
1	经济问题	应用题	将数学与经济问题相结合，能够计算利润/损失、折扣、商品及服务税和利息，并理解数学与现实生活之间的联系。
2	平均数问题	应用题	理解平均数的含义，了解总和、项数和平均数之间的关系。
3	四边形	几何	学习如何根据四边形的特征识别不同类型的四边形，并求解四边形中的未知角和未知面积。
4	复杂图形的面积与周长 1	几何	综合运用之前所学的平面几何相关知识，通过多样方法，巧求复杂图形的面积和周长，培养孩子良好的几何做题习惯和缜密的思维方式。
5	转换与测量	计算	熟悉测量和进行单位转换。
6	角度 2	几何	了解不同类型的角和如何识别它们，以及如何计算基本图形中的未知角。
7	余数应用题	应用题	学习解决涉及余数和倒推的应用题。
8	速率	应用题	了解时间、工作效率、工作总量的三量关系，熟练运用公式解决实际问题。
9	数列找规律	计算	提高计算能力，在给定的数列中找出规律，并总结规律，提升数感和数据分析能力。
10	多数量应用题	应用题	熟悉解决涉及多数量比较的进阶应用题。
11	角度计算综合	几何	全面学习典型、常考的角度问题，让孩子能够解决复杂的角度计算问题。
12	总和差不变应用题	应用题	解决涉及总量和差不变的应用题。

ACHIEVERS ARC

2027 小五年级课程表

第 4 学期（8 月 至 10 月）

课	标题	模块	教学目标
1	百分数应用题进阶	应用题	学习解决进阶百分比应用题，磨练孩子的实际应用能力。
2	复杂图形的面积与周长 2	几何	解决各种面积和周长问题，在现有的面积和周长知识的基础上，解决考试问题。
3	三角形面积进阶	几何	结合各种面积属性的知识来解决复杂的三角形面积问题。
4	单位数 乘 单位价值	应用题	了解如何识别单位数量和单位价值的问题类型，并学习用于解决这类问题的方法。
5	比率	应用题	了解时间、工作效率、工作总量的三量关系，熟练运用公式解决实际问题 。
6	体积应用题	应用题	解决涉及速率的体积进阶应用题。
7	三角形里的比例	应用题	学习观察三角形，在涉及比例的三角形中寻找未知的长度和面积。
8	年终考试复习 A & B		
9	年终考试复习 C		
10	立体图形与空间想象	几何	学习三维图和扩展图等，帮助孩子进一步提高空间表达能力。
11	方程初步	计算	学习方程的概念，将题目所给的文字信息转化为方程算式，进一步熟练掌握带字母的运算。