ACHIEVERS ARC

2027 P4 LESSON PLAN

SEMESTER 1 (NOV TO JAN)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Numbers to 100 000	Number Theory	Introduce knowledge and calculations of numbers up to 100 000.
2	Multiplication Problems	Calculation	Learning how to solve vertical multiplication and multiplication of bigger numbers.
3	Division Problems	Calculation	Learn to use vertical division for up to 4-digit by 1-digit numbers; apply vertical division to solve word problems.
4	Factors and Multiples	Number Theory	Introduce knowledge of factors and multiples; learn to find factors, multiples, common factors, and common multiples of given numbers.
5	Highest Common Factor and Lowest Common Multiple	Word Problems	Learning how to make tables and listing of information using the parts given by questions.
6	Comparison Word Problems	Word Problems	Learn about the various comparison word problems and the relevant methods used to solve them.
7	Angles and Line Symmetry	Geometry	Learn about angles and how to read angles with a protractor. Identify and complete symmetric figures as well as determine lines of symmetry; improve visualisation skills and geometric understanding.
8	Mixed Numbers and Improper Fractions	Calculation	Learn about proper fractions and improper fractions to solidify Math foundation for higher-order problems.
9	Review Test		

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2027 P4 LESSON PLAN

SEMESTER 2 (JAN TO APR)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Applications of Fractions	Word Problems	Use models to solve fraction application questions; improve graphic-numerical representative abilities and develop practical application skills.
2	Unitary Word Problems	Word Problems	Learn about the various unitary word problems and the relevant methods used to solve them.
3	Equal stage (Fractions)	Word Problems	Learn about fraction equal stages problems and the relevant methods used to solve them.
4	Rectangles and Squares 1	Geometry	Introduce the properties of rectangles and squares to deepen understanding of these two shapes.
5	Rectangles and Squares 2	Geometry	Learn about the concept of translation and utlise this knowledge to solve for perimeter of complex figures; Learn to find area of irregular shapes.
6	Area and Perimeter 1	Geometry	Learn to find the perimeter of combined figures, and solve for the perimeter of irregular figures through the translation method, so as to cultivate students' transformative thinking and dynamic perception of figures.
7	Advanced Sum and Difference	Word Problems	Learn about word problems involving the four operations; improve analysing abilities and practical application skills.
8	Time	Word Problems	Understand the 24-hour clock commonly used in daily life, learn to flexibly convert 12-hour clock time to 24-hour clock time and vice versa.
9	Number Patterns	Counting	Visualising patterns within multiple number sequences and finding methods for the calculation of multiple unknown terms.
10	Mid Year Revision Test		
11	Work in Sets	Word Problems	Learn about remainder problems to enhance the understanding of patterns.

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2027 P4 LESSON PLAN

SEMESTER 3 (APR TO AUG)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Constant Total	Word Problems	Learn about constant total problems and the relevant methods used to solve them.
2	Excess and Shortage	Word Problems	Introduce the method to solve excess and shortage problems by drawing diagrams, exposing students to the beauty of real-world Math application.
3	Assumption and Grouping	Word Problems	Understand the concept of Chicken Rabbit and be able to apply the Assumption and Grouping Methods to solve advanced problems.
4	Preliminary Decimals	Calculation	Learn the definition of decimals. Be able to identify decimal place values, compare and order decimals, and perform rounding of decimals. Understand the basic relationship between decimals and fractions, and how to convert between fractions and decimals.
5	Addition and Subtraction of Decimals	Calculation	Learn the rules of addition and subtraction of decimals, and learn to use decimal addition and subtraction calculations to solve problems in real life, so as to improve students' calculation fluency.
6	Multiplication & Division of Decimals	Calculation	Learn to multiply and divide whole numbers and decimals so as to improve students' calculation fluency.
7	Age Problems	Word Problems	Learn to combine classic age problems together with Difference and Multiple questions; Demonstrate ability to solve questions using models to enhance understanding of the questions.
8	Fractions and Decimals Problems	Calculation	Learn to find an unknown fraction or decimal on a number line, and solve various types of fraction and decimal application problems.
9	Fractions Word Problems	Word Problems	Revisit the understanding of basic and complex fractions; to solve fraction application questions.
10	Decimal Word Problems	Word Problems	Build on the foundation of decimals multiplication and division to strengthen understanding of decimal points, and improve calculation fluency.
11	Review Test		
12	Number of units & Value of units	Word Problems	Understand how to identify No. of units and Value of units question types and problem solving methods.

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2027 P4 LESSON PLAN

SEMESTER 4 (AUG TO OCT)

LESSON	LESSON NAME	MODULE	LEARNING OBJECTIVES
1	Preliminary Statistics	Counting	Use statistical tables and graphs to solve practical problems closely related to students' lives, so as to cultivate data processing capabilities.
2	3D shapes and Pie Charts	Geometry	Breakdown and analyse statistical data in pie charts. Understand how to read pie charts with and without angles. Visualise and deconstruct 3D figures into 2D nets.
3	Area and Perimeter 2	Geometry	Learn to break down figures into regular shapes, so as to improve students' ability to think about problems from multiple angles and cultivate abstract generalization ability and ability to understand figures.
4	Difference and Multiple	Word Problems	Be familiar with solving word problems which involve difference and multiple.
5	Complex Word Problems	Word Problems	Familiarise with solving various complex word problems.
6	Figure Patterns	Calculation	Deepen understanding of number patterns in sequences and tables; enhance observation, deduction, and calculation skills.
7	Equivalent Substitution	Calculation	Apply the equivalent substitution method to solve problems, strengthening students' practical application knowledge and developing critical thinking skills.
8	SA2 Preparation Sections A & B		
9	SA2 Preparation Section C		
10	BODMAS calculation	Calculation	Learn how to calculate mathematical expressions according to BODMAS order of operations and how to calculate quickly with tips and tricks.
11	Angles 1	Geometry	Learn about the different types of angles and how to identify them, as well as how to calculate unknown angles in basic figures.

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2027 小四年级课程表

第 1 学期（11 月 至 1 月）

课	标题	模块	教学目标
1	十万以内数的认识	数论	认识十万以内的数及计算；培养孩子的数感，提升数学学习的兴趣与信心。
2	乘法竖式	计算	学习计算乘法竖式以及大数乘法计算
3	除法竖式	计算	深入学习整数除法竖式的算法和算理，了解不同情况下竖式的书写格式，提升孩子的基础运算能力。
4	因数与倍数	数论	通过动手操作写出不同的乘法算式，来认识倍数和因数之间的关系，培养孩子抽象概括能力。
5	列表法	应用题	学习如何通过列表法总结归纳题干内容解决应用题
6	比较型应用题	应用题	了解学习常见的比较类应用题，掌握相关解题思路和方法
7	角度 & 轴对称	几何	了解什么是角，以及如何使用量角器读取角度。 了解轴对称图形概念，学会找出图形的对称轴。引导孩子通过对称解决复杂图形问题。
8	带分数与假分数	计算	学习带分数和假分数，掌握分数的不同分类，为高年级分数的再认识的综合学习奠定基础。
9	学期复习测试		

ACHIEVERS ARC

2027 小四年级课程表

第 2 学期（1 月 至 4 月）

课	标题	模块	教学目标
1	分数应用题	应用题	用模型思想解决分数应用题；形成数形结合的数学思想能力，进一步熟练分数四则运算。
2	单价法应用题	应用题	学习常见的单价法应用题以及相关解题思路和方法。
3	等量问题（分数）	应用题	学习基础分数等量应用题以及相关解题思路和方法。
4	长方形和正方形 1	几何	通过观察总结常见长方形和正方形的特点和性质，进一步加深孩子对图形的掌握和理解。
5	长方形和正方形 2	几何	学习如何通过变形法找到复杂图形的周长，练习找不规则图形周长问题。
6	周长与面积 1	几何	解决组合图形周长的问题，深入学习通过平移法解决不规则平面图形周长的问题，培养转化思想及孩子对图形的动态感知能力。
7	和差问题进阶	应用题	解决实际和差应用题，规范应用题做题方法，通过画图将抽象问题具象化。
8	24 小时制	应用题	学习24小时概念，能够灵活实现12小时制与24小时制的互换。
9	数串规律 1	计算	让孩子学会观察数串，并总结归纳出其中的规律，从而系统掌握观察总结规律的方法，积累常见的数串规律，提升数感。
10	年中考试复习		
11	周期问题	应用题	重点学习单周期、双周期、日期中的周期问题，感受周而复始循环往复的自然规律，提升孩子的实践应用能力。

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2027 小四年级课程表

第 3 学期（4 月 至 8 月）

课	标题	模块	教学目标
1	总不变问题	应用题	解决涉及总不变的应用题。
2	盈亏问题	应用题	通过画图的方式来探究解决盈亏问题方法，将数学思维运用到实际生活当中，感受数学的应用之美。
3	假设法	应用题	通过基础的鸡兔同笼问题假设和组合法，解决变形的鸡兔同笼问题，能够举一反三解决实际问题。
4	认识小数	计算	结合生活实际，了解小数的由来及定义；学习基本的分小关系，学会简单的分小互化及小数比较大小。
5	小数加减法	计算	学习小数的加减法规则，并学会用小数加减计算去解决实际生活中的问题，提升孩子运算求解的能力。
6	小数乘除法	计算	学习一系列小数与整数、小数与小数之间的乘除法等知识，提升孩子的运算求解能力。
7	年龄问题综合	应用题	学会将经典的年龄问题与差倍问题结合在一起；展示使用模型解题的能力，增强孩子的应用能力。
8	分数与小数问题	计算	学习在数线上找未知的分数或小数，并接触各种分数与小数问题，以磨练涉及分数和小数的问题解决能力。
9	分数问题综合	应用题	重温对基本分数和复数的理解、练习分数应用问题。
10	小数应用题	应用题	掌握小数基础乘除计算知识后，去解决典型小数应用题，帮助孩子提升实践应用能力。
11	学期复习测试		
12	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。

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2027 小四年级课程表

第 4 学期（8 月 至 10 月）

课	标题	模块	教学目标
1	统计图表	计算	利用统计表和统计图，解决与孩子生活中息息相关的实际问题，培养孩子的数据处理能力。
2	3D 形状 & 扇形统计图	数论	能够统计、分析数据，并转换为图表（饼状图），培养孩子信息收集和整理的能力。学会解读各类饼图，对三维图形进行可视化处理，并将其拆解为二维展开图。
3	周长与面积 2	几何	解决组合图形面积的问题，学会将特殊图形转化成规则图形，提升孩子多角度思考问题的能力和对图形的认知能力。
4	差和倍应用题	应用题	解决涉及差和倍应用题。
5	应用题进阶	应用题	熟悉解决各种进阶应用题。
6	图形规律	计算	通过观察图形找规律，提升观察能力和抽象总结能力。
7	等量代换	计算	应用等量代换原理解决问题，加强学生的实际应用知识，培养批判性思维能力。
8	年终考试复习 部分 A & B		
9	年终考试复习 部分 C		
10	四则运算	计算	进一步练习四则运算，提升计算的准确率和速度。为校内考试和PSLE相关考点打好基础。
11	角度 1	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。