



## Singapore Maths Innovative Learning Experience (SMILE Singapore)

### Primary 5 Content List

#### Primary 5

Enhance and expand problem-solving proficiency through techniques like tables, model diagrams and more, to solve real life word problems. See and extend their application into areas of Rate, Ratios and Percentage. Plenty of practice opportunities to break down problems into simpler components. With this base knowledge gained, your child can springboard into Primary Six confidently.

#### Content List

##### Whole Numbers

| Title       | Synopsis  |
|-------------|---|
| Lesson 1    | Identify number patterns in number sequence.  |
| Lesson 2    | Solving word problems involving the four operations.                                  |
| Lesson 3    | Using "Guess and check" concept to solve a word problem.                              |
| Lesson 4    | Using "Constant difference" concept to solve a word problem.                          |
| Lesson 5    | Practice using "Constant difference" concept to solve a word problem.                 |
| Worksheet 1 | Homework for Lessons 2 to 5.  |
| Lesson 6    | Using "Work backwards" concept to solve a word problem.                               |
| Lesson 7    | Practice using "Work backwards" concept to solve a word problem.                      |
| Worksheet 2 | Homework for Lessons 6 and 7.   |
| Lesson 8    | Using the "Guess and check with assumption" concept to solve a word problem.          |
| Lesson 9    | Practice using "Guess and check with assumption" concept to solve a word problem.     |
| Lesson 10   | Using the "Guess and check with assumption" concept to solve a word problem.          |
| Lesson 11   | Practice using the "Guess and check with assumption" concept to solve a word problem. |
| Worksheet 3 | Homework for Lessons 8 to 11.   |
| Quiz 1      | Recap of Lessons 3 to 11.   |
| Lesson 12   | Using "Constant total" concept to solve a word problem.                               |
| Lesson 13   | Practice using "Constant total" concept to solve a word problem.                      |
| Worksheet 4 | Homework for Lessons 12 and 13.   |
| Lesson 14   | Using "Constant part" concept to solve a word problem.                                |
| Lesson 15   | Practice using "Constant part" concept to solve a word problem.                       |
| Worksheet 5 | Homework for Lessons 14 and 15.   |
| Lesson 16   | Using "Total changed" concept to solve a word problem.                                |
| Lesson 17   | Practice using "Total changed" concept to solve a word problem.                       |
| Worksheet 6 | Homework for Lessons 16 and 17.   |

|              |   |
|--------------|---|
| Quiz 2       | Recap of Lessons 12 to 17.  |
| Lesson 18    | Solving word problems that have two given relationships.            |
| Lesson 19    | Practice solving word problems that have two given relationships.   |
| Lesson 20    | Practice solving word problems that have two given relationships.   |
| Worksheet 7  | Homework for Lessons 18 to 20.                                      |
| Lesson 21    | Solving a word problem that has three given relationships.          |
| Lesson 22    | Practice using simultaneous concept to solve a word problem.        |
| Worksheet 8  | Homework for Lessons 21 and 22.                                     |
| Quiz 3       | Recap of Lessons 18 to 22.  |
| Lesson 23    | Using "Excess-shortage" concept to solve a word problem.            |
| Lesson 24    | Practice using "Excess-shortage" concept to solve a word problem.   |
| Worksheet 9  | Homework for Lessons 23 and 24.                                     |
| Lesson 25    | Using "Excess-excess" concept to solve a word problem.              |
| Lesson 26    | Practice using "Excess-excess" concept to solve a word problem.     |
| Worksheet 10 | Homework for Lessons 25 and 26.                                     |
| Lesson 27    | Using "Shortage-shortage" concept to solve a word problem.          |
| Lesson 28    | Practice using "Shortage-shortage" concept to solve a word problem. |
| Worksheet 11 | Homework for Lessons 27 and 28.                                     |
| Quiz 4       | Recap of Lessons 23 to 28.  |

### **Rate**

| <b>Title</b> | <b>Synopsis</b>   |
|--------------|---|
| Lesson 1     | Reading rate from charts.                                     |
| Lesson 2     | Solving word problems on rate.                                |
| Worksheet 1  | Homework for Lessons 1 and 2.                                 |
| Quiz 1       | Recap of Lessons 1 and 2.                                     |
| Lesson 3     | Solving a rate problem involving volume.                      |
| Lesson 4     | Practice solving a rate problem involving volume.             |
| Worksheet 2  | Homework for Lessons 3 and 4.                                 |
| Quiz 2       | Recap of Lessons 3 and 4.                                     |
| Lesson 5     | Using inverse rates concept to solve a word problem.          |
| Lesson 6     | Practice using inverse rates concept to solve a word problem. |
| Worksheet 3  | Homework for Lessons 5 and 6.                                 |
| Quiz 3       | Recap of Lessons 5 and 6.                                     |
| Lesson 7     | Solving word problems involving direct proportion.            |
| Lesson 8     | Using direct proportion to solve a word problem.              |
| Lesson 9     | Practice using direct proportion to solve a word problem.     |
| Worksheet 4  | Homework for Lessons 7 to 9.                                  |
| Quiz 4       | Recap of Lessons 7 to 9.                                      |
| Lesson 10    | Solving 2 step problems involving rate.                       |
| Lesson 11    | Solving 3 step problems involving rate.                       |

### **Ratio**

| <b>Title</b> | <b>Synopsis</b>  |
|--------------|--|
| Lesson 1     | Express a ratio in its simplest form.  |
| Lesson 2     | Identify and write equivalent ratio.   |
| Lesson 3     | Finding the ratio of two or three given quantities.                                      |
| Lesson 4     | Find one quantity given the other quantity and their ratio.                              |
| Lesson 5     | Using "Constant part" concept to solve a word problem between two ratios.                |
| Lesson 6     | Practice using "Constant part" concept to solve a word problem between two ratios.       |
| Worksheet 1  | Homework for Lessons 1 to 6.   |
| Lesson 7     | Using "Constant total" concept to solve a word problem between two ratios.               |
| Lesson 8     | Practice using "Constant total" concept to solve a word problem between two ratios.      |
| Worksheet 2  | Homework for Lessons 7 and 8.  |
| Lesson 9     | Using "Constant difference" concept to solve a word problem between two ratios.          |
| Lesson 10    | Practice using "Constant difference" concept to solve a word problem between two ratios. |
| Lesson 11    | Using "Constant difference" concept to solve a word problem between two ratios.          |
| Lesson 12    | Practice using "Constant difference" concept to solve a word problem between two ratios. |
| Lesson 13    | Using "Constant difference" concept to solve a word problem between two ratios.          |
| Lesson 14    | Practice using "Constant difference" concept to solve a word problem between two ratios. |
| Worksheet 3  | Homework for Lessons 9 to 14.  |
| Lesson 15    | Using "Total changed" concept to solve a word problem between two ratios.                |
| Lesson 16    | Practice using "Total changed" concept to solve a word problem between two ratios.       |
| Worksheet 4  | Homework for Lessons 15 and 16.  |
| Quiz 1       | Recap of Lessons 1 to 16.  |
| Lesson 17    | Solving 3 step problems involving ratio.   |

### **Percentage**

| <b>Title</b> | <b>Synopsis</b>  |
|--------------|--|
| Lesson 1     | Understanding the use of the percentage symbol (%).      |
| Lesson 2     | Learn about discount, cost price and selling price.      |
| Lesson 3     | Practice solving a word problem on percentage discount.  |
| Worksheet 1  | Homework for Lessons 1 - 3.                              |
| Lesson 4     | Learn about principal amount and percentage interest.    |
| Lesson 5     | Practice solving a word problem on percentage interest.  |
| Worksheet 2  | Homework for Lessons 4 and 5.                            |
| Quiz 1       | Recap of Lessons 1 to 5.                                 |
| Lesson 6     | Solving up to 2 step word problems involving percentage. |

### **Fractions**

| <b>Title</b>       | <b>Synopsis</b>  |
|--------------------|--|
| Lesson 1           | Division of a proper fraction by a whole number.   |
| Lesson 2           | Multiplication of a proper fraction and a proper / improper fraction.  |
| Lesson 3           | Multiplication of an improper fraction and an improper fraction.   |
| Lesson 4           | Multiplication of a mixed number and a whole number.   |
| Lesson 5           | Addition and subtraction of mixed numbers  |
| Lesson 6           | Addition and subtraction of proper fractions   |
| Lesson 7           | Conversion between fractions and decimals.   |
| Lesson 8           | Write fractions and decimals as percentages and vice versa   |
| Lesson 9           | Making equal the “part” of the fraction and identifying the “whole” of the fraction.                                   |
| Lesson 10          | Practice solving a word problem on equal fractions.  |
| <b>Worksheet 1</b> | <b>Homework for Lessons 1 to 10.</b>   |
| Lesson 11          | Comparing one fraction to another fraction in order to solve an equal fraction problem.                                |
| Lesson 12          | Practice comparing one fraction to another fraction in order to solve an equal fraction problem.                       |
| Worksheet 2        | Homework for Lessons 11 and 12.  |
| Lesson 13          | Making the numerator of fractions the same in order to compare the denominator for an equal fraction problem.          |
| Lesson 14          | Practice making the numerator of fractions the same in order to compare the denominator for an equal fraction problem. |
| <b>Quiz 1</b>      | <b>Recap of Lessons 9 to 14.</b>   |
| Lesson 15          | Subtracting fractions with different denominators in order to find out remainder.                                      |
| Lesson 16          | Practice subtracting fractions with different denominators in order to find out remainder.                             |
| Lesson 17          | Drawing the branching for remainder concept in a fraction word problem.  |
| Lesson 18          | Practice drawing the branching for remainder concept in a fraction word problem.                                       |
| Worksheet 3        | Homework for Lessons 15 to 18.   |
| Quiz 2             | Recap of Lessons 15 to 18.   |
| Lesson 19          | Finding the proportion of 3 subjects in relationship to one another.   |
| Lesson 20          | Finding the proportion of 3 subjects in relationship to one another.   |
| Worksheet 4        | Homework for Lessons 19 and 20.  |
| Quiz 3             | Recap of Lessons 19 and 20.  |

## Geometry

| Title       | Synopsis  |
|-------------|---|
| Lesson 1    | Learn how to find the area of a triangle.   |
| Lesson 2    | Practice finding the area of a triangle.  |
| Lesson 3    | Summary on finding the area of triangles, rectangles and squares.                                   |
| Worksheet 1 | Homework for Lessons 1 to 3.  |
| Quiz 1      | Recap of Lessons 1 to 3.  |
| Lesson 4    | Learn the different types of triangles.   |
| Worksheet 2 | Homework for Lesson 4.  |
| Quiz 2      | Recap of Lesson 4.  |
| Lesson 5    | Learn what is a rhombus and its properties.   |
| Lesson 6    | Learn what is a parallelogram and its properties.   |
| Lesson 7    | Drawing a triangle from given dimensions using ruler, protractor and set squares.                   |
| Lesson 8    | Drawing a triangle from given dimensions using ruler, protractor and set squares.                   |
| Lesson 9    | Recognizing and finding angles on a straight line, angles at a point and vertically opposite angles |

## Statistics

| Title    | Synopsis  |
|----------|---|
| Lesson 1 | Learn what is a parallelogram and its properties.               |
| Lesson 2 | Interpret average as "total amount divided by number of items". |
| Lesson 3 | Word problem involving average.                                 |

## Decimals

| Title    | Synopsis   |
|----------|--|
| Lesson 1 | Conversion of units when multiplying or dividing with 10, 100 or 1000. |

## Volume

| Title    | Synopsis  |
|----------|---|
| Lesson 1 | Units of Volume and Volume of cuboid  |
| Lesson 2 | Properties and Volume of cube and cuboid. Relationship between cubic centimetres and millilitres. |
| Lesson 3 | Properties and Volume of cube and cuboid. Relationship between cubic centimetres and millilitres. |
| Lesson 4 | Solving 3 step word problems involving volume of cuboid.  |
| Lesson 5 | Identify cube and cuboid and calculate volume of cube and cuboid.                                 |