CURRICULUM **S1 THINKING SKILLS AND METHODS** **S2 NUMBERS AND ARITHMETIC OPERATIONS** **S3 ALGEBRA** **S4 FUNCTIONS** **S5 GEOMETRY** **S6 DATA HANDLING, STATISTICS AND PROBABILITY**

NUMERACY	A1.1	A1.2	A2.1	A2.2
S1 Thinking, evaluation and application	Can arrange and compare quantities in the range of 1 to 9. Evaluation and application are limited.	Can add, subtract, arrange, and compare quantities. Evaluation of the reasonableness of a solution is still limited.	Can perform basic arithmetic operations with whole numbers and assess the reasonableness of solutions in frequently occurring practical calculations.	Can calculate and evaluate the reasonableness of a solution in common situations such as shopping, distances, and elapsed time.
S2 **Number System**	Recognises and can write numbers 1 to 9. Can arrange and complete quantities in the range of 1 to 9.	Can write natural numbers within the range of 0 to 20. Understands the concept of zero. Can complete ascending and descending number sequences in the range of 0 to 20.	Can use natural numbers in the range of 0 to 100 in addition and subtractions. Can compare magnitudes and place whole numbers on a number line in the range of 0 to 100.	Can use natural numbers in the range of 0 to 1000 in addition and subtractions. Understands the concept of negative numbers and can deduce patterns in different number sequences.
Basic Arithmetic Operations	Can add or subtract in the range of 1 to 9. Can combine equal-sized quantities.	Can perform addition and subtractions with numbers 0 to 20. Knows the symbols + and - as well as the concepts of sum and difference.	Can perform multiplication in the range of 1 to 5 and simple division when the division is exact.	Can perform multiplication within the range of 0 to 10 and simple division when the division is exact. Knows arithmetic symbols and the concepts of product and quotient.
Fractions			Can associate fractions (half, third, quarter, fifth) with corresponding images. Understands "how big is a part of a set?" and "a cent is a hundredth.	Can associate fractions and mixed numbers with corresponding images. Can add and subtract simple fractions with the same denominator.
Decimals			Can associate decimal numbers with a precision of tenths to corresponding images. Recognises that cents represent hundredths in currency calculations.	Understands the decimal system and can add and subtract tenths. Performs currency calculations with precision to hundredths.
Percentanges Calculation			Can visually associate 100% (full), 50% (half), 0% (empty), and 1% (a hundredth).	Can associate percentages to fractions (e.g., whole, 1/2, 1/4, 1/100) and decimal numbers in the range of 0.01 to 1.00.
S5 **Geometry**	Recognises and can name basic shapes such as squares, triangles, and circles in everyday environments.	Recognises and can name three-dimensional counterparts of basic shapes, such as cube, pyramid and sphere.	Recognises and can name geometric concepts such as the concept of line, segment and angle. Can identify and name parts of a circle such as the center, circumference, diameter and radius.	Can draw lines, line segments, angles, triangles, and quadrilaterals. Understands the concept of acute, right, obtuse and straight angles. Can draw a circle and namerelated concepts to it.
Time and Measurement	Recognises common time concepts such as the concepts of year, month, week, day and hour.	Can read full hours from the clock. Recognises common units of time, length and mass.	Can associate quantities with their respective units: meter, gram, and litre. Can calculate the elapsed time in full hours. Can use various measurement tools.	Can perform addition and subtractions with commonly used units (g, kg, cm, m, km). Cannot yet convert between units. Can calculate the elapsed time including half hours and quarter hours.
Perimeter, Area and Volume			Can measure length with measuring tools.	Can calculate the perimeter of quadrilaterals and triangles and determine the missing side length if the perimeter is known.
S6 Data Handling, Statistics and Probability			Can compare quantities or read values from clearly presented tables and charts, such as bar or line charts.	Can interpret and draw common tables and charts. Understands probability concepts such as the concepts of impossible, certain, and 50 % chance. Recognizes table elements such as rows, columns, and cells.

NUMERACY	B1.1 Functional Basic Skill	B1.2 Fluent Basic Skill	B2.1 Independent Skill	B2.2 Applied Skill
S1 Thinking, evaluation and application	Can calculate with natural numbers and decimals in everyday mathematics, assessing the reasonableness of the solution. Can pose mathematically reasonable questions.	Can utilize numeracy in everyday situations with common measurement units. Can make reasonable mathematical conclusions from a given data.	Can communicate and express oneself in common everyday mathematical situations. Handles unit conversions in measurements.	Proficient in mathematical methods and, selecting the most suitable strategies for each situation. Uses mathematical expressions fluently in communication and makes reasonable generalisations from a given data.
S2 ja S3 **Number System**	Can use natural numbers in the range of 0 to 10 000. Can calculate with negative numbers, for example temperature differences.	Can use natural numbers without range limitations. Understands the concept of parentheses, negative numbers, exponents, and integer factorisation.	Is proficient in power of two calculations and understands their connection to multiplication. Understands the difference between approximation and exact value.	Proficient in power of two and three calculations. Understands the concept of square root and its practical applications. Can develop arithmetic sequences and solve functions.
Basic Arithmetic Operations	Can perform basic arithmetic operations in a limited range of 0 to 100.	Can perform arithmetic operations in the range of 0 to 100. Can add and subtract large numbers.	Can solve problems using a given formula and determine solutions through reasoning.	Can compare and experiment with different calculation strategies and solve problems by combining formulas. Can form equations from word problems and solve them mathematically.
Fractions	Can compare simple fractions with different denominators, such as 1/2, 1/3, 1/4, and 1/5.	Understands the relationship between simple fractions (1/100, 1/10, 1/20, and 1/25) and percentages.	Can apply the connection between fractions and percentages in probability, tables and charts.	Can fluently compare fractions with different denominators.
Decimals	Can calculate decimal numbers to hundredths and round hundredths to tenths or whole numbers.	Can use the decimal system and understand the connection between decimals and percentages.	Can apply the relationship between decimals and percentages in everyday calculations, such as in discounts and interest rates.	Can use decimals to solve ratios, percentage calculations, and other mathematical operations in daily problem-solving.
Percentanges Calculation	Can convert fractions like 1/2, 1/4, and 1/5 into percentages. Can calculate percentage values and convert percentages into decimals and fractions, and vice versa.	Can calculate percentage changes in everyday situations, such as in price changes. Can solve word problems using the concept of percentage.	Can fluently calculate comparative percentages in everyday situations and understand the practical concept of percentage points.	Can fluently calculate percentages and interest rates. Can compare annual energy consumption and assess as well as calculate the impact of VAT on prices.
S5, S3, S4 **Geometry**	Can coordinate in simple tables with columns and rows, horizontally and vertically such as a chessboard or game score table.	Can use a positive coordinate plane in games, for example. Can draw cubes and rectangular prisms three-dimensionally. Can classify geometric shapes based on their properties.	Can plot points on a coordinate plane and read values from statistical graphs. Recognises identical, similar, and symmetrical shapes in everyday contexts.	Understands the connection between coordinate planes and linear equations and can use a given linear equation to calculate new points with whole numbers. Can solve equations graphically. Recognises functions.
Time and Measurement	Can convert length and weight units with units in everyday usage. Recognises and understands basic concepts of time but has limited application skills in calculations.	Can measure and convert volume units (ml, cl, dl, and l). Can fluently convert commonly used length and weight units.	Can efficiently use various schedules to the nearest minute and convert time units. Can calculate average speeds based on distance and time.	Can choose the best option from schedules and routes. Can apply measurement concepts comprehensively in everyday situations, and utilise less common measurement units when needed.
Perimeter, Area and Volume	Can calculate perimeters of polygons. Can calculate the area of squares and rectangles.	Can calculate the area of triangles, parallelograms, and circles. Can determine the circumference of a circle using a formula and understands the concept of pi.	Can calculate perimeters and areas using whole numbers, estimate object sizes, and calculate volumes of simple objects.	Can calculate the volume of cubes and rectangular prisms. Can calculate the surface area of cylinders and circles.
S6 Data Handling, Statistics and Probability	Can assess whether an event is likely, possible, impossible, or certain. Understands the relationship between tables and graphical representations.	Recognises the concepts of frequency, mean, median, and mode from given data. Understands direct and inverse proportionality in braking distances, for example.	Can use a spreadsheet software to create appropriate bar, pie, or line graphs from a given table.	Can collect data for classification and use a spreadsheet software to create graphical representations. Can interpret everyday life tables, such as income tax brackets. Can evaluate the accuracy of presented statistics.