General Skills

Cognitive skills
● Non-routine problem solving – expert thinking, metacognition, creativity.
● Systems thinking – decision making and reasoning.
● Critical thinking – definitions of critical thinking are broad and usually involve general cognitive skills such as analysing, synthesising and reasoning skills.
● ICT literacy - access, manage, integrate, evaluate, construct and communicate.

Interpersonal skills
● Communication – active listening, oral communication, written communication, assertive communication and non-verbal communication.
● Relationship-building skills – teamwork, trust, intercultural sensitivity, service orientation, self-presentation, social influence, conflict resolution and negotiation.
● Collaborative problem solving – establishing and maintaining shared understanding, taking appropriate action, establishing and maintaining team organisation

Intrapersonal skills
● Adaptability – ability and willingness to cope with the uncertain, handling work stress, adapting to different personalities, communication styles and cultures, and physical adaptability to various indoor and outdoor work environments.
● Self-management and self-development – ability to work remotely in virtual teams, work autonomously, be self-motivating and self-monitoring, willing and able to acquire new information and skills related to work.

Knowledge

Place value and ordering
- Recognise and use integer place value up to one billion
- Recognise and use decimal place value to at least hundredths
- Work out intervals and use number lines
- Compare and order numbers
- Use ordered lists to find range and the median of a set of numbers
- Round numbers to positive powers of ten
- Round numbers to one significant figure

Divisibility Tests
- Understand factors and multiples
- Understand tests for divisibility for 2, 3, 4, 5, 6, 8, 9, 10
- Calculate Lowest Common Multiple and Highest Common Factor of 2 numbers
- Multiply by 10, 100, and 1000, 0.1 and 0.01 and convert to metric units
- Use mental and formal written methods of multiplication and division
- Find the HCF and LCM of small numbers
- Recognise prime, square and triangle numbers
- Express a number as a product of prime factors

Addition and Subtraction, Multiplication and Division
- Use mental and formal written methods of addition with integers and decimals, including choosing the most appropriate method
- Use mental and formal written methods of multiplying and dividing integers and decimals

Checking, Approximating and Estimating
- Use known calculation facts to determine other calculations
- Understand and use order of operations
- Checking answers by estimating
- Rounding to 1, 10, 100, 1000
- Rounding up to 4 decimal places
- Rounding to 1 significant figure
- Use appropriate rounding for estimating calculations

Time, Money and Charts
- Calculate with units of time
- Perform calculations involving money
- Read and interpret time tables (bus, train etc.)
- Read and interpret car charts, pictograms, line graphs

Understanding and using algebraic notation
- Use single function machines and series of two function machines with numbers, bar models and

[Type here]

letters
- Use and interpret algebraic notation
- Understand and use inverse operations
- Form and substitute into expressions, including generating sequences
- Represent functions graphically

Equality and equivalence
- Understand equality
- Use fact families
- Form and solve one-step equations
- Understand equivalence of algebraic expressions
- Collect like terms

Exploring Sequences
- Describe and continue sequences in diagrams and number forms, both linear and non-linear
- Compare numerical and graphical forms

Fraction, decimal and percentage equivalence
- Represent tenths and hundredths on diagrams and number lines
- Interchange between fractions, decimals, percentages for multiples of one tenths and one quarter
- Interpret pie charts
- Equivalent fractions
- Convert between other fractions, decimals and percentages

Fractions and percentages of amounts
- Work out simple fractions and percentages of amounts, with and without a calculator

Adding and subtracting fractions
- Represent tenths and hundredths on diagrams and number lines
- Convert mixed numbers and improper fractions
- Add and subtract fractions with same and different denominators.
- Add and subtract decimals and fractions. Eg. ¾ + 0.2

2D and 3D shapes
- Know common 2D shapes and their properties.
- Know the different types of triangles and quadrilaterals.
- Know common 3D shapes and their properties.
- Understand terminology of faces, edges, vertices

Perimeter, Area, Volume
- Determine area and perimeter of squares, rectangles, parallelograms, triangles.
- Calculate volume of cubes and cuboids

Lines and Angles
- Understand and use lettering labelling notation for lines and angles.
- Draw and measure lines and angles accurately
- Classify angles
- Identify and draw parallel and perpendicular lines
- Draw and interpret pie charts
- Calculate and use angles at a point, angles on a straight line and vertically opposite angles
- Calculate missing angles in triangles and quadrilaterals

One and two step equations
- Solve one and two step equations
- Link equations with the concepts of area, perimeter, angles
- Form and solve equations
- Understand inverse operations

Introduction to Ratio
- Understand ratio notation
- Simplify ratio
- Share an amount in a ratio

Introduction to Probability
- Understand language of probability
- Understand probability scale
- Calculate probability of single events

[Type here]