



Maths

Group A and B

Term 1 – First Half

Numbers and place values 1

Pupils are expected to

- Count in up to 20, in multiples of 2, 3 and 5
- Read, write, order and compare numbers to 20
- Find one more or less than a given number.
- Identify and represent numbers using objects and diagrams such as the number line
- Use language of equal to, more than, less than, most, least

Addition and Subtraction

Pupils are expected to

- recall and use number bonds to 10
- Add numbers mentally using 1 digits
- Solve 1 step addition and subtraction problems using objects and diagrams, such as missing number problems like $7 = _ - 9$

Properties of shapes 1

Pupils are expected to

- name, describe and group basic 2D shapes using sides and corners
- Sort 2D shapes including common objects
- Group shapes including quadrilaterals and triangles, based on properties and sizes

Term 1 – Second Half

Measurements 1

Pupils are expected to

- Compare lengths using longer, shorter, double, half etc.
- Compare Mass using heavier, lighter etc
- Compare Capacities using full, empty, more than, less than, quarter etc
- Recognise and know the value of coins and notes
- Order events in time using language like before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.
- Use language relating to dates, including days, weeks, months and years
- Read the time to the hour and half past the hour and draw the hands on a clock face to show these times
- Use vocabulary such as am, pm, morning, noon, afternoon and midnight. Read, write and convert time between analogue and digital 12 and 24-hour clocks

Multiplication and division 1

Pupils are expected to

- Use multiplication and division facts for the 2, 5 and 10 times tables
- Recognise even and odd numbers

Group A and B

Term 2 – First Half

Statistics

Pupils are expected to

- Interpret and construct tally charts, block diagrams, simple tables and pictograms.
- Answer simple questions by counting the number of objects in each group and comparing categorical data

Fractions 1

Pupils are expected to

- Recognize, find and name a half as one of two equal parts of an objects, shape or quantity
- Recognize, find and name a quarter as one of four equal parts of an objects, shape or quantity

Term 2 – Second Half

Properties of shapes 2

Pupils are expected to

- Name, describe and group 3D shapes using edges, vertices and faces.
- Build 3-D shapes using nets
- Sort 3D shapes including common objects

Positions and directions

Pupils are expected to

- Describe position, directions and movements including half, quarter and three quarter turns

Group A and B

Term 3 – First Half

Numbers and Place values 2

Pupils are expected to

- Review Measurements 1
- Solve simple problems involving addition and subtraction of two 1 digit numbers

Measurements 2

Pupils are expected to

- Review Measurements 1
- Solve simple problems involving length, mass and capacities

Term 3 – Second Half

Fractions 2

Pupils are expected to

- Review sections of Fractions 1
- Solve simple problems involving fractions such as half and quarter

Multiplication and Division 2

Pupils are expected to

- Review sections of Multiplication and Division 1
- Solve simple problems by using multiplication and subtraction as repeated addition and subtraction

Group C

Term 1 – First Half

Numbers and place values 1

Pupils are expected to

- Count in both directions, multiples of 2, 3, 4, 5, 6, 7, 8, 9, 10, 25, 50 and 100 up to 1 000 000.
- Read, write, order and compare numbers to 1 000 and know the place values.
- Find one, 10 and 100 more or less than a given number.
- Identify, represent and estimate numbers using diagrams like the number line.

Addition and Subtraction

Pupils are expected to

- recall and use number bonds and related subtraction facts within 20
- Add and subtract numbers mentally 2 digits
- Add and subtract whole numbers with more than 3 digits using formal written methods of columnar addition and subtraction
- Use inverse operations to check answers
- Add and subtract numbers (mentally and written) using objects and diagrams, involving quantities and measure

Properties of shapes 1

- Pupils are expected to be able to name, describe and group basic 2D shapes using sides and corners
- They need to draw 2-D shapes given angles and size including their lines of symmetry and given a line of symmetry, complete a shape.
- They need to identify 2D shapes on the surface of 3D objects.
- Group shapes including quadrilaterals and triangles, based on properties and sizes
- Use knowledge of properties of Rectangles to find missing lengths and angles in a Rectangle
- Know the difference between regular and irregular polygons in relation to equal sides and angles.

Term 1 – Second Half

Measurements 1

Pupils are expected to

- Use standard units to compare, estimate (nearest unit), measure (using appropriate equipment) and order, add and subtract lengths, Mass and Capacity.
- Convert between different units of metric measure.
- Add and subtract amounts of money to give change, using both pounds and pence in practical contexts
- Order events in time using language like before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.
- Compare and sequence intervals of time, durations of events, for example to calculate the time taken by particular events or tasks and solve conversion problems involving hr to min, min to sec, yr to months, weeks to days.
- Read and write the time involving 12 and 24-hour clocks and estimate and read them to the nearest minute.
- Use vocabulary such as am, pm, morning, noon, afternoon and midnight. Read, write and convert time between analogue and digital 12 and 24-hour clocks

Multiplication and division 1

Pupils are expected to

- Use multiplication and division facts for the 2, 3, 4, 5, 8 and 10 times table
- Identify multiples of whole numbers.
- Multiply and divide whole numbers * by 10, 100 and 1000 (* which leaves integer answers)

Group C

Term 2 – First Half

Statistics

Pupils are expected to

- Interpret and construct tally charts, block diagrams, tables, bar charts, pictograms and line graphs.
- Interpret Pie charts
- Solve comparison, sum and difference problems including 2 step questions such as 'How many more?' and 'How many fewer?'

Fractions 1

Pupils are expected to

- Recognize and calculate basic fractions such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$.
- Show using diagrams, equivalent fractions with small denominators

Term 2 – Second Half

Properties of shapes 2

Pupils are expected to

- Name, describe and group 3D shapes using edges, vertices and faces.
- Recognise 3-D shapes including cubes and cuboids from 2-D views.
- Build 3-D shapes using nets
- Explain, estimate, compare, draw and measure acute, obtuse and reflex angles
- know angles on multiple 90 degree angles

Positions and directions

Pupils are expected to

- Describe rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).
- Identify whether angles are greater than or less than a right angle.
- Describe movements between positions as translations of a given unit to the left/right and up/down.
- Describe positions as coordinates in first quadrant

Group C

Term 3 – First Half

Numbers and Place values 2

Pupils are expected to

- Round any number to the nearest 10, 100 and 1000
- Count backwards through zero to include negative numbers.
- Read Roman numerals to 100. They need to be aware that the numeral system changed to include the number 0 and place values.

Measurements 2

Pupils are expected to

- Measure and calculate perimeters of rectilinear shapes in cm, m.
- Find the area of rectilinear shapes by counting squares, compare area of squares and rectangles using cm^2 and m^2 and estimate area of irregular shapes.
- Estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water)

Term 3 – Second Half

Fractions 2

Pupils are expected to

- Add and subtract fractions with the same denominator
- Recall and use equivalences between simple fractions, decimals and percentages in different contexts

Multiplication and Division 2

Pupils are expected to

- Solve multiplication and division problems using objects, diagrams, tables repeated addition, mental methods, and relevant multiplication and division facts

Group D

Term 1 – First Half

Numbers and place values 1

Pupils are expected to

- Count in both directions, multiples of 2, 3, 4, 5, 6, 7, 8, 9, 10, 25, 50 and 100 up to 1 000 000.
- Read, write, order and compare numbers to 1 000 and know the place values.
- Find one, 10 and 100 more or less than a given number.
- Identify, represent and estimate numbers using diagrams like the number line.

Addition and Subtraction

Pupils are expected to

- recall and use number bonds and related subtraction facts within 20
- Add and subtract numbers mentally 2 digits
- Add and subtract whole numbers with more than 3 digits using formal written methods of columnar addition and subtraction
- Use inverse operations to check answers
- Add and subtract numbers (mentally and written) using objects and diagrams, involving quantities and measure

Properties of shapes 1

- Pupils are expected to be able to name, describe and group basic 2D shapes using sides and corners
- They need to draw 2-D shapes given angles and size including their lines of symmetry and given a line of symmetry, complete a shape.
- They need to identify 2D shapes on the surface of 3D objects.
- Group shapes including quadrilaterals and triangles, based on properties and sizes
- Use knowledge of properties of Rectangles to find missing lengths and angles in a Rectangle
- Know the difference between regular and irregular polygons in relation to equal sides and angles.

Term 1 – Second Half

Measurements 1

Pupils are expected to

- Use standard units to compare, estimate (nearest unit), measure (using appropriate equipment) and order, add and subtract lengths, Mass and Capacity.
- Convert between different units of metric measure.
- Add and subtract amounts of money to give change, using both pounds and pence in practical contexts
- Order events in time using language like before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.
- Compare and sequence intervals of time, durations of events, for example to calculate the time taken by particular events or tasks and solve conversion problems involving hr to min, min to sec, yr to months, weeks to days.
- Read and write the time involving 12 and 24-hour clocks and estimate and read them to the nearest minute.
- Use vocabulary such as am, pm, morning, noon, afternoon and midnight. Read, write and convert time between analogue and digital 12 and 24-hour clocks

Multiplication and division 1

Pupils are expected to

- Use multiplication and division facts for the 2, 3, 4, 5, 8 and 10 times table
- Identify multiples of whole numbers.
- Multiply and divide whole numbers * by 10, 100 and 1000 (* which leaves integer answers)

Group C

Term 2 – First Half

Statistics

Pupils are expected to

- Interpret and construct tally charts, block diagrams, tables, bar charts, pictograms and line graphs.
- Interpret Pie charts
- Solve comparison, sum and difference problems including 2 step questions such as 'How many more?' and 'How many fewer?'

Fractions 1

Pupils are expected to

- Recognize and calculate basic fractions such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$.
- Show using diagrams, equivalent fractions with small denominators

Term 2 – Second Half

Properties of shapes 2

Pupils are expected to

- Name, describe and group 3D shapes using edges, vertices and faces.
- Recognise 3-D shapes including cubes and cuboids from 2-D views.
- Build 3-D shapes using nets
- Explain, estimate, compare, draw and measure acute, obtuse and reflex angles
- know angles on multiple 90 degree angles

Positions and directions

Pupils are expected to

- Describe rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).
- Identify whether angles are greater than or less than a right angle.
- Describe movements between positions as translations of a given unit to the left/right and up/down.
- Describe positions as coordinates in first quadrant

Group D

Term 3 – First Half

Numbers and Place values 2

Pupils are expected to

- Round any number to the nearest 10, 100 and 1000
- Count backwards through zero to include negative numbers.
- Read Roman numerals to 100. They need to be aware that the numeral system changed to include the number 0 and place values.

Measurements 2

Pupils are expected to

- Measure and calculate perimeters of rectilinear shapes in cm, m.
- Find the area of rectilinear shapes by counting squares, compare area of squares and rectangles using cm^2 and m^2 and estimate area of irregular shapes.
- Estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water)

Term 3 – Second Half

Fractions 2

Pupils are expected to

- Add and subtract fractions with the same denominator
- Recall and use equivalences between simple fractions, decimals and percentages in different contexts

Multiplication and Division 2

Pupils are expected to

- Solve multiplication and division problems using objects, diagrams, tables repeated addition, mental methods, and relevant multiplication and division facts

Group E

Term 1 – First Half

Numbers and place values 1

Pupils are expected to

- Count in up to 20, in multiples of 2, 3 and 5
- Read, write, order and compare numbers to 20
- Find one more or less than a given number.
- Identify and represent numbers using objects and diagrams such as the number line
- Use language of equal to, more than, less than, most, least

Addition and Subtraction

Pupils are expected to

- recall and use number bonds to 10
- Add numbers mentally using 1 digits
- Solve 1 step addition and subtraction problems using objects and diagrams, such as missing number problems like $7 = _ - 9$

Properties of shapes 1

Pupils are expected to

- name, describe and group basic 2D shapes using sides and corners
- Sort 2D shapes including common objects
- Group shapes including quadrilaterals and triangles, based on properties and sizes

Term 1 – Second Half

Measurements 1

Pupils are expected to

- Compare lengths using longer, shorter, double, half etc.
- Compare Mass using heavier, lighter etc
- Compare Capacities using full, empty, more than, less than, quarter etc
- Recognise and know the value of coins and notes
- Order events in time using language like before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.
- Use language relating to dates, including days, weeks, months and years
- Read the time to the hour and half past the hour and draw the hands on a clock face to show these times
- Use vocabulary such as am, pm, morning, noon, afternoon and midnight. Read, write and convert time between analogue and digital 12 and 24-hour clocks

Multiplication and division 1

Pupils are expected to

- Use multiplication and division facts for the 2, 5 and 10 times tables
- Recognise even and odd numbers

Group E

Term 2 – First Half

Statistics

Pupils are expected to

- Interpret and construct tally charts, block diagrams, simple tables and pictograms.
- Answer simple questions by counting the number of objects in each group and comparing categorical data

Fractions 1

Pupils are expected to

- Recognize, find and name a half as one of two equal parts of an objects, shape or quantity
- Recognize, find and name a quarter as one of four equal parts of an objects, shape or quantity

Term 2 – Second Half

Properties of shapes 2

Pupils are expected to

- Name, describe and group 3D shapes using edges, vertices and faces.
- Build 3-D shapes using nets
- Sort 3D shapes including common objects

Positions and directions

Pupils are expected to

- Describe position, directions and movements including half, quarter and three quarter turns

Group E

Term 3 – First Half

Numbers and Place values 2

Pupils are expected to

- Review Measurements 1
- Solve simple problems involving addition and subtraction of two 1 digit numbers

Measurements 2

Pupils are expected to

- Review Measurements 1
- Solve simple problems involving length, mass and capacities

Term 3 – Second Half

Fractions 2

Pupils are expected to

- Review sections of Fractions 1
- Solve simple problems involving fractions such as half and quarter

Multiplication and Division 2

Pupils are expected to

- Review sections of Multiplication and Division 1
- Solve simple problems by using multiplication and subtraction as repeated addition and subtraction

Please note

Group E will also be following the Functional Skills Entry 2 specification

Groups E to Pre Voc AB

The following groups have wide ability range within them. Each student will have a specific target Level. Please see class teacher for more details.

Group E	-	Functional Skills Entry 1/2
Group F	-	Functional Skills Entry 3, Level 1
Group G	-	Functional Skills Entry 2/3
Group H	-	Functional Skills Level 1
TWI 1	-	Functional Skills Entry 1
TWI 2	-	Functional Skills Entry 1/2/3
Pre Voc A/B	(Mr Lee)	Functional Skills Level 1
	(Mr Boylan)	Functional Skills Entry 3

Entry Level 1 Students

Topics

Numbers and place values 1

Pupils are expected to

- Read, write, order and compare numbers to 10

Addition and Subtraction

Pupils are expected to

- Add and subtraction 1 digit numbers using + and – signs
- Use a calculator to check answers

Money

Pupils are expected to

- Recognize and compare coins and notes
- Select appropriate coins in situations
- Compare the size of coins

Measures and Positions

Pupils are expected to

- Describe and compare sizes of measures
- Describe and compare length, width and heights
- Describe and compare weights
- Describe and compare capacities
- Understand position vocabulary

Time

Pupils are expected to

- Understand vocabulary relating to time of the day
- Know the days of the week and the order
- Know the seasons of the year and their order

Shapes

Pupils are expected to

- Recognize and name common 2D and 3D shapes

Statistics

Pupils are expected to

- Extract simple information from lists
- Sort and classify objects using a single criterion
- Construct simple representations and diagrams

Entry Level 2 Students

Topics (assumed knowledge of previous levels)

Numbers and place values 1

Pupils are expected to

- Read, write, order and compare numbers to 100

Addition and Subtraction

Pupils are expected to

- Add and subtraction 2 digit numbers using + and – signs
- Remember number facts to 10

Multiplication

Pupils are expected to

- Multiply with 1-digit numbers
- Use the symbols x and =

Money

Pupils are expected to

- Use appropriate coins in situations
- Pay and get the right change

Algebra and Sequences

Pupils are expected to

- Use odd and even numbers

Fractions, ratios and proportions

Pupils are expected to

- Double by adding two numbers together
- Divide into halves and quarters

Measures and Positions

Pupils are expected to

- Read from scales
- Use centimeters and meters to measure lengths
- Use kilograms to measure weights
- Use litres to measure volume
- Use degrees Celsius to measure temperature

Time

Pupils are expected to

- Read the time in hours, half hours and quarter hours on digital and analogue clocks
- Read and write the date using days, months and years in different ways
- Read times from lists and timetables
- Read dates from lists and calendars
- Make lists and draw up tables and diagrams

Shapes, areas and volumes

Pupils are expected to

- Identify the corners and sides of a 2-D shape
- Identify the faces, corners and edges of a 3D shape

Rounding

Pupils are expected to

- Approximate and round numbers to the nearest ten

Statistics

Pupils are expected to

- Extract information from timetables and diagrams
- Sorting things into two categories
- Collect information with numbers
- Collect information with block graphs
- Draw up lists, timetables and diagrams that makes sense

Entry Level 3 Students

Topics (assumed knowledge of previous levels)

Numbers and place values 1

Pupils are expected to

- Read, write, order and compare numbers to 1000

Addition and Subtraction

Pupils are expected to

- Add and subtraction 3 digit numbers
- Check their answers by rounding

Multiplication

Pupils are expected to

- Multiply 2-digit numbers with 1-digit numbers and work out approximate answers
- Divide 2-digit numbers by 1-digit numbers

Money

Pupils are expected to

- Work out gross and net pay
- Round to the nearest pound
- Work out money problems
- Understand shopping bills and round to the nearest 10p
- Buy items with a limited budget

Algebra and Sequences

Pupils are expected to

- Describe number patterns

Fractions, ratios and proportions

Pupils are expected to

- Understand common fractions
- Understand equivalent fractions

Decimals and Percentages

Pupils are expected to

- Turn decimal numbers for example money into 2 decimal places (including calculator from) into written form

Measures and Positions

Pupils are expected to

- Read and use scales
- Estimate, measure and compare lengths, capacities, weight and temperature
- Use metric units in everyday situations
- Convert units of measure within the same system
- Have awareness of imperial measures

Time

Pupils are expected to

- Read time
- Record time
- Use a calendar
- Know how to read the minute hand
- Suggest past the hour or before the hour

Shapes, areas and volumes

Pupils are expected to

- Use mathematical shapes
- Draw in lines of symmetry and reflect a shape on a symmetry line
- Know that an angle is big or small
- Identify right angles

Rounding

Pupils are expected to

- Approximate and round numbers to the nearest ten or hundred

Statistics

Pupils are expected to

- Get information from plans, lists, tables and charts
- Use bar charts and pictograms to compare numbers
- Record information in tally tables
- Display information in a pictogram and bar chart

Level 1 Students

Topics (assumed knowledge of previous levels)

Numbers and place values 1

Pupils are expected to

- Read, write, order and compare numbers large numbers
- Recognise and use negative numbers
- Interpret scales using negative numbers

Multiplication

Pupils are expected to

- Multiply and divide whole numbers by 10 and 100

Money

Pupils are expected to

- Change pence to pounds and back
- Know how to work with money

Algebra and Sequences

Pupils are expected to

- Understand and use BODMAS
- Use formula expressed in words for 1-step or 2-step equations

Fractions, ratios and proportions

Pupils are expected to

- Work out ratios and proportions
- Use and simplify ratios
- Work out parts of quantities
- Use ratios to scale quantities up or down using a whole number constant
- Work out recipes for different number of people
- Understand the connection between fractions, decimals and percentages

Decimals and Percentages

Pupils are expected to

- Work with decimals
- Understand and work with percentages
- Work with percentage rise and falls

Measures and Positions

Pupils are expected to

- Work with weight, capacity and temperature
- Measure and adding measurements together
- Use measurements to find out what you need

Time

Pupils are expected to

- Read, measure and record time in common date formats
- Use the 12 and 24 hour clock
- Know the relationship between units of time
- Adding and subtracting time in hours and minutes
- Find information from timetables

Shapes, areas and volumes

Pupils are expected to

- Find the perimeter of shapes
- Find the area of rectangles
- Find a side given an area
- Find the volume of cuboids
- Relate volume and capacity
- Make plans and fitting regular shapes together in different ways
- Use regular shapes, fitting together to cover an area

Rounding

Pupils are expected to

- Round numbers to get approximate answers to questions

Statistics

Pupils are expected to

- Understand and obtain information from graphs and charts
- Represent data in a line graph
- Find the mean and average of a set of data
- Know that the mean is effected by very low values
- Design a questionnaire for a survey to collect information

Probability

Pupils are expected to

- Tell the difference between impossible, unlikely, and likely events
- List a possible outcomes
- Know when an event is equally likely
- Use real data to decide on the likelihood of an event

Level 2 Students

Topics (assumed knowledge of previous levels)

Numbers and place values 1

Pupils are expected to

- Read, write, order and compare negative numbers
- Use Prime numbers

Algebra and Sequences

Pupils are expected to

- Use many step equations involving substituting decimal numbers

Fractions, ratios and proportions

Pupils are expected to

- Work out a number as a fraction of another
- Calculate ratios and amounts in direct proportion
- Calculate money and converting between currencies
- Use ratios to scale quantities up and down with any constant
- Divide quantities in a given ratio

Decimals and Percentages

Pupils are expected to

- Use decimals to compare prices
- Use percentages to compare costs and workout commission
- Work with percentages and percentage increase and decrease
- Find percentage parts of quantities and measurements
- Work out a number as a percentage of another

Measures and Positions

Pupils are expected to

- Work with compound measures such as speed
- Calculate with units of measures across systems using correct conversion factors

Time

Pupils are expected to

- Use different units of time
- Make a plan of a schedule for a situation

Shapes, areas and volumes

Pupils are expected to

- Use the formula for the circumference of a circle
- Use formula for area of a circle
- Calculate the volume of a prism
- Solve problems involving 2D shapes and parallel lines
- Apply 2D representations of 3D shapes in practical situations

Statistics

Pupils are expected to

- Represent information in dual bar charts
- Represent information in a scatter diagram
- Extract information from pie charts and scatter diagrams
- Find the median and mode
- Understand that each average is useful for a different purpose
- Use averages and range to compare sets of data

Probability

Pupils are expected to

- Understand that the probability of certain is 1 and 0
- Represent probabilities as fractions, decimals and percentages
- Calculate the probability of an event
- Calculate the probability of an even not happening
- Know that the sum of all possible outcomes equals 1 or 100%