Mathematics EYFS to Y11

THE BEMROSE SCHOOL

KS4

Y10.G1 Geometry
Exponential and reciprocal graphs
Area under the curve
Iteration
Turning points
Circle equations
Equation of tangent
Draw inequalities on graph

Y10.N1 Algebra
Inequalities on both sides and representing answers on number line.
Solving and factorising Quadratics (a=1)
Linear simultaneous equations (fractions/decimals)
Simultaneous equations resulting in quadratics
Solving and factorising Quadratics (a>1)
Nth term for quadratic sequence

Y10.N1 Number
Finding rates of change from DT graph and distance
Converting compound units
Evaluate fractional indices
Convert terminating decimals to fractions
Understand the efficient method to calculate compound interest.

Y11. All strands
Bespoke SoW created from individual classes based on the outcomes from the trial exams

Go to Sixth Form / College

Y11 PPE

Y10 PPE

Y10.R1 Ratio
Ratio with vectors, angles, perimeters, area, volume
Inverse proportion with graphs

Y10.S1 Statistics
Box plot from cumulative frequency curve
Histograms
Conditional probability
Probability trees

Y9.N1 Number
Standard form
HCF and LCM
Rational and real numbers
Prime factorisation
Reverse percentages
Financial maths
Repeated percentage change

Y9.S1 Statistics
Experimental and theoretical probability
Frequency trees to find probabilities
Simple tree diagrams

Y9.G1 Geometry
Surface area of cuboids and cylinders
Volume of cuboids, cylinders and other prisms
Surface area of prisms
Constructions
Loci
Transformtions
Properties of 2D and 3D shapes
Pythagoras theorem
Congruency

Y9.A1 Algebra
Change subject of a formula
Testing algebraic conjectures
Expand a pair of binomials
Form and solve equations and inequalities
Use and interpret y=mx+c
Solve simultaneous equations
Interpret graphs in various forms

Y8.G1 Geometry
Area of trapezium
Area & circumference of circles
Area of compound shapes
Find sum of interior and exterior angles of any polygon

Y8.A1 Algebra
Expand and factorise single brackets
Solve equations/inequalities with brackets
Solve with unknowns on both sides
Find nth term of a linear integer, fraction sequence

Y8.S1 Statistics
Mean of group data
Modal class
List probability using sample space for one and two events

Y7.G1 Geometry
Use correct angle notation
Construct triangles given SSS,SAS,ASA
Draw and interpret pie charts
Calc missing angles in triangles and quadrilaterals.
multiples
Perimeter of simple polygons

Y7.N1 Number
Round to 1 sig fig and powers of 10.
HCF/LCM of numbers less than 100 (less than 500)
Prime factors
Indices
Add / Subtract fractions and decimals (3/4 + 0.2)
convert between FDP for multiples of 1/10s and ¼
Terminating decimals
Find 10% and 5% and their multiples
Increase and decrease by 10% and 5% and their multiples

Y9.R1 Ratio
Direct proportion
Best buys
Inverse proportion
Speed, distance, time
Density
Compound units
Converting compound measures

KS3

Y8.N1 Number
Std. form
Round to 1,2,3,4 sig fig and any powers of 10.
Multiple and divide indices using add/subtract rules
Proper, improper and mixed numbers, all both positive and negative
Find any % of
Increase and decrease by any percentage using multipliers

Y7.S1 Statistics
Language of probability, List outcomes
Single event probability
Scatter graphs
Bar charts (dual and cumulative)
2 way tables

Y7.A1 Algebra
Form and solve one step equations and two step
Collect like terms
Plot linear graphs find mid point, gradient. Non linear graphs

Y6.F1 FDP
Mixed fractions with whole numbers –
All 4 operations.
Different denominators.
Improper fractions.
Consolidation of conversion and use of fractions, decimals and percentages in different contexts.
X & ÷ proper fractions by whole numbers.
Rounding of decimal numbers with 3 digits after dp. to nearest whole number.

Y6.S1 Statistics
pie charts
line graphs

Y5.G1 Geometry
Revise 2-D and develop 3-D shapes – representations from 2-D shapes.
Drawing angles.
Angles within shapes.
Irregular and irregular polygon names and properties.

Y5.S1 Statistics
Line Graphs
Continuous data

Y6.N1 Addition & Subtraction
Solve number and practical problems that involve fluency, reasoning and problem solving.

Y6.N1 Multiplication & Division
Cubed numbers.
Prime numbers.
X 2 by 4 digit numbers.
÷ 4 digit numbers by 2 digits.
Long ÷ column method.
Common factors and multiples.
BIDMAS/BODMAS

Y6 SATs

Y5.F1 FDP
Multiplication of fractions.
Ordering fractions with same denominator.
Mixed numbers and improper fractions, incl. conversion.
Decimals to fractions (Hundredths)
Decimals to 3 places.
Ordering, adding & subtracting decimals.
Percentages – symbols;
units/number line; write as a fraction and decimal.

Y5.M1 Measures
Area of compound shapes (using X's skills) – introduce mm/cm/m/km2
Develop perimeter using larger measures.

Y5.N1 Multiplication & Division
Multiples of factors.
Prime numbers.
Column method – long multiplication.
Rapid recall development of times tables and division facts.
Dividing with remainders of short division.
Square numbers.

Y6.N1 Number
Revision of mental maths skills

Y6.M1 Measures
Calculate areas of parallelograms and triangles.
Volume of shapes and cubed measures.

Y6.G1 Geometry
Parts of circles, including radius, diameter and circumference.
Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
coordinate grid (all four quadrants)
Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Y4.S1 Statistics
Pictograms – collect data, record, draw and question incl. value of symbols etc
Continuous data – collecting, presenting, reading (comparing and analysing).

Y4.M1 Measures
Temperature - scales & negative numbers.
Time – 24/12hr clock and conversion; time problems involving the passing of time.
Perimeter (mm/cm)
Area (counting of squares in a regular shape).
Conversion of measurements.

Y4.F1 FDP
Hundredths
Decimals – X/÷ 10/100.
Ordering decimals
Equivalent fractions.
Decimal equivalent to fractions
Fraction/Decimals & Money

Y4.N1 Number
Count on and back in 10, 100, 100s.
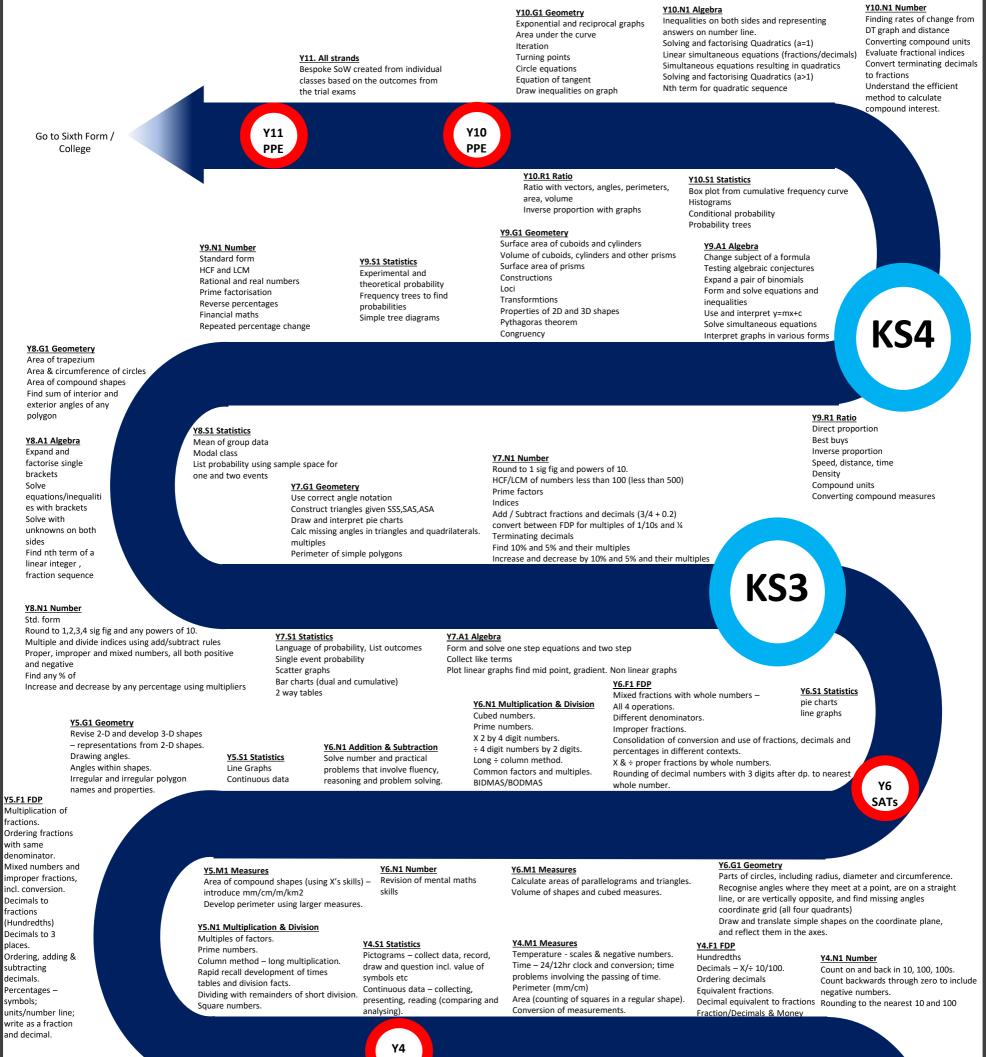Count backwards through zero to include negative numbers.
Rounding to the nearest 10 and 100

Y4 MTC

Y5.N1 Addition & Subtraction
(4 digit)
Column methods.
Using rounding to check and determine answers.
Multi-step problems.

Y5.N1 Number
Count forward/backwards in a variety of steps with numbers up to 1,000,000.
Read, write and order numbers to 1,000,000.
Rounding to the nearest 10/100/1000/10,000 (no prior coverage)
Continue negative numbers.

Y4.G1 Geometry
Classify geometric shapes – quadrilaterals and triangles; Type angles within triangles.
Perpendicular lines.
Position – introduce co-ordinates, plotting points on the 1st quadrant; plot points to make polygons.

Y3.N1 Multiplication & Division
Know 7, 9, 11 & 12 times tables and division
Factors & multiples of numbers.
Commutativity problems.
Distributive law
Integer scaling problems and harder correspondence problems such as n objects are connected to m objects

Y4.N1 Addition & Subtraction
Add and subtract mentally and formally 4-digit numbers using column methods.

Y3.N1 Addition & Subtraction
Formal column methods using up to 3 digits.
Inverse operations.
Missing numbers.

Y3.N1 Multiplication & Division
Know 3, 4, 6 & 8 times tables and division facts with rapid recall.
Formal column methods.
X & ÷ 10/100

Y3.G1 Geometry
2-D Shape – drawing shapes.
3-D – making representations.
Symmetry of shapes.
Angles – right angles.
Direction – turns 90*, 180* & 360*
Lines – horizontal, vertical and parallel.

Y2.G1 Geometry
2D/3D shapes
Names and properties
Symmetry

Y2.S1 Statistics
Tally chart
Pictograms
Block diagrans

KS2

Y2.F1 Fractions
Halves & quarters
Unit/ non unit
Equal parts = 1 whole

Y2 SATs

Y2.M1 Measures
Money – equivalent coins
Time – nearest 15 mins

Y3.N1 Number
PV to 1000.
Compare and order numbers to 1000
Read and say numerals to 1000
Count on and back in 1, 10s and 100s

Y3.F1 FDP
Tenths
Non-unit fractions
+ & - fractions within the same denomination.
Compare and order fractions
Pictorial equivalent fractions.
Simple fraction problems.

Y3.M1 Measures
Time – Nearest minute, am/pm; writing analogue time; time facts e.g. seconds – minutes- hours-day- week- year etc.
Capacity - application of 4 operations across areas in simple word problems.

Y2.N1 Multiplication & Division
x2 x5 x10
Efficient methods
Commutative

Y2.N1 Addition & Subtraction
Number bonds to 20
2 step problems
Associative
Efficient methods

Y2.N1 Number
Place Value
Problem solving with place value

Y1.N1 Number
Place Value
Problem solving with place value

Shape and Space
2D/3D shapes
Directions (turns)
Length / height / Weight / capacity
Position/distance
Money / Time

Y1.M1 Measures
Money
Time
Mass & Capacity
Length & Height

KS1

EYFS

Y1.G1 Geometry
2D/3D shapes
Directions (turns)

Y1.N1 Multiplication & Division
x2 x10

Y1.N1 Addition & Subtraction
Number bonds to 20

Number
Baseline
Number bonds
Numbers to 20 / 1 more/less to 10
Addition to 20 / Subtraction to 20
Doubling, Halving & sharing / odds & evens – number stories
Counting in 2s, 5s, 10s.

welcome