SOUTH DERBYSHIRE SUPPORT CENTRE

emat esteem Multi Academy Trust

KEY STAGE 2 SEQUENCING - MATHEMATICS

2 2023 - 2024

ACADEMIC

ENGAGEMENT

AUTUMN 1
Time

months and years ● hours in a day ● telling the time to 5 minutes ● telling the time to the minute ● using am and pm ● 24-hour clock ● finding the duration ● comparing durations ● start and end times ● measuring time in seconds

AUTUMN 2
Geometry & properties of shape

turns and angles, right angles in shapes, compare angles, draw accurately, horizontal and vertical, parallel and perpendicular, describe 2D/3D shapes

Engagement = Maths games and EYFS practical play opportunities

SPRING 1
Measurement: Mass and Capacity

measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml

SPRING 2
Money

Pounds and pence
Ordering money
Estimating money
Convert pounds and pence Add money
Subtract money Find change Four operations

Engagement = Maths games and EYFS practical play opportunities

SUMMER 1
Number: Decimals

Recognise tenths and hundredths Tenths as decimals Tenths on a place value grid Tenths on a number line Divide 1-digit by 10 Divide 2-digits by 10 Hundredths; Hundredths as decimals Hundredths on a place value grid Divide 1 or 2-digits by 100

SUMMER 2
Positions and Direction

Describe position Draw on a grid Move on a grid Describe movement on a grid

Engagement = Maths games and EYFS practical play opportunities

1 2022 - 2023

ACADEMIC

ENGAGEMENT

AUTUMN 1
Place value

count from 0 in multiples of 4, 8, 50 and 100; ● recognise the place value of each digit in a three-digit number ● compare and order numbers up to 1000 ● read and write numbers up to 1000 in numerals and in words

AUTUMN 2
Addition & Subtraction

add and subtract numbers mentally, columnar addition and subtraction ● estimate the answer to a calculation and use inverse operations to check answers

SPRING 1
Multiplication & Division

Recall and use multiplication and division
Write and calculate mathematical statements ● solve problems, including missing number problems

SPRING 2
Statistics

Bar charts, pictograms, tables
Solve one step and two step questions

SUMMER 1
Length and Measurement

measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) ● measure the perimeter of simple 2-D shapes of simple 2-D shapes

SUMMER 2
Number Fractions

count up and down in tenths;, find and write fractions of a discrete set of objects:

SEQUENCING: The principal focus of mathematics teaching in key stage 2 is based on the White Rose work and the EYFS curriculum to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. **Engagement** = 1:1 work using Century as a baseline to find gaps in learning. Simple work using and embedding the 4 operations will be used initially, also multiplication tables – learning using You Tube, visual practise etc Suggested engagement activities include using the 4 operations through play with 'shops', cooking, a favourite subject like boats. Evidenced by using video and photographs. Shapes work can be accessed via indoor or outdoor work. The main work is based generally on Yr 3 with options to extend for older pupils, but many have missed these basics.

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KEY STAGE 3 SEQUENCING – MATHEMATICS

2 2023 - 2024 ACADEMIC

AUTUMN 1
Number properties
Representing Data
2D shapes

AUTUMN 2
Negative numbers
Algebraic expressions
3D shapes

SPRING 1
Units
Averages

SPRING 2
Fractions
Perimeter and area

SUMMER 1
Probabilty
Decimal numbers

SUMMER 2
Geometric reasoning

2 ENGAGEMENT

AUTUMN 1/2
See Engagement 1

AUTUMN 2
Use of Multiplying games, cards, dice,
Algebra – use of food to create the equations

SPRING 1
See Engagement 1

SPRING 2
See Engagement 1

SUMMER 1
See Engagement 1

SUMMER 2
See Engagement 1

1 2022 - 2023 ACADEMIC

AUTUMN 1
Indices and estimations
Polygons and parallel lines

AUTUMN 2
Mulitplying and dividing with fractions
Interpreting data
Area of shapes

SPRING 1
Ratio, proportion, rates of change
Functions, Graphs Equations

SPRING 2
Expressions and expression formulae
Circles and circular shapes

SUMMER 1
Constructions
Percentages of an amount

SUMMER 2
Pythagoras theorem
Probability, outcomes and Venn diagrams

1 ENGAGEMENT

AUTUMN 1
Practical maths – using games, bingo, cards etc
Properties of shapes – taking photos of shapes in the school, using everyday items to find shapes, using cooking and food- too

SPRING 1
Decimals using large cards, negative numbers – number lines. Perimeter, area and volume – using string and metre rules
SPRING 2 Fractions using food, patterns/sequences

SUMMER 1
Creating card games to improve multiplication.
Food Algebra **SUMMER 2**
Solving equations using food/sport equiment
Transforming shapes using string/straws and plasticine

SEQUENCING

This sequencing follows schemes of work for Year 7, 8 and 9. The Year 7 SoW is utilized as an engagmment timetable, along with use of Century, My Maths and individual teaching of areas. The aim is to give the pupils an experience of success in Mathematics which they may never have experienced, in order to build their confidence in the subject. The curriculum is based upon the White Rose units of work that have a variety of different resources alongside the option to use ready made assessments and marking schemes to support data. Century is another supporting tool to assess any areas of support needed from assessments online. These are undertaken as baseline assessments and work can be differentiated as needed.

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KEY STAGE 4 SEQUENCING - MATHEMATICS

2 ACADEMIC 2023 - 2024

YEAR 11 PLANNING

AUTUMN 1
Transformations
Ratio
Proportion

AUTUMN 2
Right angled triangles
Pythathagoras
Probablity
Muplicative reasoning

SPRING 1
Plans and elevations
Constructions, loci and bearings

SPRING 2
Quadratic equations – expanding and factorizing
Quadratic equations – graphs
Circles, cylinders, cones and spheres

SUMMER 1
Fractions and reciprocals
Indices and standard form
Similarity and congruence in 2D

SUMMER 2
Rearranging equations
Graphs of cubic and reciprocal funnctions and simultaneous equations
REVISION

2 ENGAGEMENT

AUTUMN 1

AUTUMN 2

See Engagement 1

SPRING 1

SPRING 2

See Engagement 1

SUMMER 1

SUMMER 2

See Engagement 1

1 ACADEMIC 2022 - 2023

AUTUMN 1
Integers and place value
Decimals
Indices, powers and roots
Factors, multiples and primes

AUTUMN 2
Algebra: the basics
Expressions and substitution into formula

SPRING 1
Tables, Charts and graphs
Pie Charts
Scatter Graphs

SPRING 2
Fractions, Decimals and percentages
Percentages,
Equations & inequalities
Sequences

SUMMER 1
Properties of shapes, parallel lines & angles
Interior and exterior angles of polygons
Statistics, sampling and the averages
Perimeter, area and volume

SUMMER 2
Real-life graphs
Straight line graphs

1 ENGAGEMENT

AUTUMN 1 &2
Baselining on Century to find gaps in knowledge
Using 1:1s, My Maths, small group work groups – set up an individualized Programme including practical maths and games

SPRING 1 & 2

Set up groups for Entry Level Certificate exam work

SUMMER 1
Provide coursework for entry to ELC Maths

SUMMER 2
Work with Yr 11 on building skills and post 16 education oppotunities

SEQUENCING

Sequencing for Year 10 and Year 11 pupils follows the Edexcel Exam Board two-year GCSE scheme of work. Year 10 and 11s will be taught the scheme of work for their year group. This gives pupils an equal opportunity to work for and gain GCSEs – allow them to access post 16 education places with greater ease.

This will help to prepare them for GCSE Mathematics. There is the option of Foundation or Higher depending levels of ability shown in baseline tests, on-going work in lessons and engagement.

Those on the Engagement programme with receive individual support using Century, BKSB and My Maths to help them find success in Mathematics. Depending on their levels, ability and confidence, they may join the main timetable for GCSEs or work with staff to undertake Entry Level Certification 1, 2 and 3; which can be used to prove their levels of Maths skill for College etc.