Functional Skills Level 2 Maths					
Weeks	**Unit**	**Resources**	**Learning Objectives (Stratified Overleaf) including key words**	**Marking and Assessment**	Classbooks marked weekly with tasks given to ensure active response to feedback. Assessments for progress also delivered on a half-termly basis. Formal assessments are delivered in accordance with Guidelines published by Pearson Edexcel.
40	Functional Skills Maths Level 2 (Pearson Edexcel)	Pens Pencils Classbooks (Squared) Calculator Geometry sets (1 per student) Rulers Graph Paper Laptops Conversion tables	Demonstrate mathematical skills and mathematical thinking effectively to solve problems successfully in the workplace and in other real-life situations. Reinforce and refine core mathematical knowledge of Shape, space, number, money and time- apply these to real life and cross-curricular situations. Encourage confidence in logical thinking in both Mathematics and other areas of the curriculum. Demonstrate a strong understanding of advanced topics such as formulae, algebra and probability. Show confidence and competence working with data- including collection and processing/analysing.	**Continuous learning**	Builds upon previous learning at Level 1 Functional Skills and correlates with the NC and age related expectations of Numeracy standards. Students also continue to develop and refine Numeracy skills relevant to next steps and adult life.
				IT	Students make use of Excel and other software in order to gather and process data in various forms. Students also have access to Complete Maths as an additional learning platform to consolidate knowledge learnt in lesson.
				Independent learning	Projects throughout SOW facilitate students taking ownership of their own learning with tutors acting as advisors while the learner dictates their own activities. Complete maths also acts as a platform where students can use their own time to work on their core knowledge.
				Transferable Skills	Resilience, Logical Thinking, Financial awareness, Understanding of process and method, General Numeracy skills (Measuress/Money/Time)
				Communication	**1-1 or small group sessions allow for effective role modelling of good communication and the opportunities for students to emulate these. Students are also given opportunities to communicate their own understanding and potential needs to their tutor through self and peer review sessions**

English Reading and writing tasks integrated into lessons through use of word problems and written response tasks. Maths specific vocabulary along with the language of the exams and how best to decipher and understand questions/instructions also taught and embedded though recall.		**Science** Reading exercises make use of scientific developments and texts to both engage and inspire curiosity in the students. The scientific ideas behind certain tasks as well as the neuroscientific basis for pedagogical choices is also explained to students to encourage metacognition and awareness of their learning journey.
IT Researching topics, making use of online information and use computer programs common to employment and adult life. Confidence in both using technology as well as the vocabulary of technology is built through discussion and exercises offering core IT skills practice.	**Geography** Cultural and geographical content in reading and writing exercises as well as group discussions. Students encouraged to reflect upon cultures of themselves, others and the wider world and learn the vocabulary and articulacy to engage with these topics sensitively.	**History** Historical stories and information utilized in reading and writing tasks as well as group discussions. Students urged to reflect upon both their own personal history as well as the larger narratives that have affected their lives and potentially might affect their lives in the future.
PSHE Mutual respect and tolerance of those with different beliefs and backgrounds is enforced during all lessons and group discussions are used as a demonstration of these ideals. Social issues are also prominent in various reading materials and writing exercises to widen students view of society and the issues/topics that affect them.	**Creative** **Creative tasks integrated into lessons consistently both as mandatory tasks and options for type differentiation. Writing for pleasure and as a form of expression is an idea returned to throughout the Scheme of work and given multiple opportunities and classroom time.**	**Assessment opportunities** Continuous and end of term/unit assessments completed. Reflection time and self-evaluations used to gather pupil's thoughts on their own performance and how they can improve next time.
Teaching methods used. Student-centered learning Blended learning Cooperative learning Active learning	**Careers development (Set by the Gatsby benchmark)** Responding positively to help and support and feedback. Recognise the value of challenging themselves and trying new tasks. Developing friendships and relationships and reflecting on their relationships Exploring trends in technology and science	**Core skills** Participate in group discussions in the appropriate way. Ask appropriate questions in an appropriate way. Attempt to solve tasks and use resilience to continue after failure. Be able to identify and suggest logical solutions to problems

Week/ Session	Content	Learning Objectives: students will be able to	Assessment of Learning	Teaching and Learning Activities
1	Induction Initial assessment	1. Tell the KS/BS/FS requirements 2. Answer questions on the profiler assessment	1. Q&A 2. Profiler Assessment	• Introduce the Key/Basic/Functional skills – discuss assessment and portfolio requirements etc. • Paper or computer-based diagnostic assessments
2	Initial assessment 1:1 feedback	1. Complete the profiler assessment 2. Complete autumn term progress sheets	1. Profiler assessment	• Continue paper/computer based diagnostic assessments
3	Language of Maths Place value	1. Read, write order and compare large numbers 2. Discuss negative numbers in practical contexts 3. Read temperatures on a thermometer 4. Use negative numbers in practical context e.g. temperature below zero, loos in trading	1. Observation of ordering activity 2. Q&A 3. Peer checking: Correctly read and record temperature – feedback to learners 4. Discussion on government spending figures on public services	• Activity – Order a set of monthly trading figures for a year including losses. • Worksheet – write the value of a digit in a number. • Cards activity – Order a set of +ve and -ve numbers. • Paired activity – Describe a set of numbers (more than, less than, equal to) • Paired activity – measure and record body temperature.

4	Multiples, factors and prime numbers	1. Use mental and written methods of calculation to generate results when solving problems using whole numbers of any size. 2. Complete calculations using the words multiple, prime number and factor and relate them to multiplication and division facts	1. Successful completion of problem solving worksheet and mental maths game. 2. Observation of activity	• Discuss different methods that can be used for mental and written calculations and share short cuts and 'tricks' with explanations, factors • Use a number square and cross off multiples of numbers in turn to find prime numbers into prime factors.
5	Ratio and Proportion	1. Solve problems involving the number of parts in a given ratio and the value of one part.	1. Checking/Marking of progress/completion of problem solving worksheet. 2. Peer checking: Scale quantities up (or down) using direct proportion, e.g. in cooking recipies , cement mixes etc – Feedback to learners 3. Observation of calculating actual measurements from a scale drawing.	• Discussion – ratio in everyday situation • Worksheets – problem solving • Group activity - actual measurement from a scale drawing
6	Simple Algebra	1. Make distinction that words and symbols in expressions and formulae rule represent variable quantities (numbers) not things.	1. Observation of whiteboard activity - Matching expressions	• Discussion - examples of practical applications of algebra .

				• Board work – match expressions n words and symbols • Convert expressions from words and symbols and vice versa • Worksheets – evaluate simple formulae using brackets, e.g. perimeter =2 (l+w) • Paired activity – changing temperature from Fahrenheit to Celsius, changing between metric and imperial unit.
7	Recap of first half term topics and completion of mini project. Formative Assessment	1. Complete mini project 2. Q&A session	1. Direct questioning 2. Mark the assessment and give feedback	• Learners to complete mini project and answer verbal questions (e.g. household or small business budgeting) • Set homework
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9	Evaluation of a number as	1. Identify and recognize equivalent fractions know hot to reduce a	1. Checking/Marking of progress/completion of worksheet	• Starter activity - equivalent fractions • Board of work – represent the

	fraction od another	fraction to its simplest form		outcome of observations as a fraction • Discuss – strategies for estimating one number as a fraction of another. • Worksheet – Evaluate quantities as fractions
10	Equivalent fractions	1. Match equivalent fractions	1. Observation of matching cards game	• Discussion – examples of fractions and its equivalencies in everyday life (use leaflets, adverts and headlines). Understand that fractions add up to one whole. • Activity – Write fractions of an hour as decimals on a time sheet • Card activity - matching equivalent fractions, decimal and percentages
11	Decimals	1. Write down the value of figures in numbers of up to three decimal places.	1. Successful completion of task 2. Checking/marking of progress/completion or worksheet	• Discussion – rounding answers on a calculator and the degree of accuracy that might be

		2. Add subtract, multiply and divide decimals up to three places		appropriate, (e.g. calculations with money, precise measurements) • Activity – Compare times from sprint races that are recorded in seconds to three decimal places. • Search for goods on European online shopping sites and convert prices from € to £ sterling.
12	Percentage of quantities	1. Order and compare percentages and demonstrate understanding of percentage increase and decrease 2. Calculate VAT given amounts	1. Checking/Marking the progress/completed task 2. Peer-checking	• Discuss quick ways of finding VAT • Use interest rates to compare the cost of a loan with credit facilities • Paired activity – Practice examples in context, e.g. percentage pay rises, increased or decreased mortgage payments when there is a change in interest rates, the effect of a percentage increase in the cost of fuel,

				etc. (household bills), adding VAT to a car service or mail order item(e.g. computer), adding 30% to prices as a profit margin in a shop. Use any methods.
13	Evaluation of one number as a percentage of another	1. Calculate one number as a percentage of another 2. Know and use strategies to check answers obtained with a calculator	1. Direct questioning 2. Peer checking – feedback to learners	• Discussion – percentages using attributes of the group, e.g. what percentage of the group is male • Activity – match calculations to answers • Activity – use a calculator to check the answers to calculations done by other methods (manual or by another person)
14	Equivalent fractions, decimals and percentages	1. Complete a table of equivalent fractions, decimals and percentages	1. Observation of activity 2. Q&A	• Boardwork – show learners how to convert between fractions, decimals and percentages • Paired activity – complete a table of equivalencies

				• Matching game
15	Completion of project involving fraction, decimal and percentages - Formative assessment	1. Complete problem solving paper/mini project covering work completed during second half of term	Formative assessment of students work Directed questioning	• Learners to complete mini project (e.g. finding the most competitive prices to re-decorate a spare room into an office) • Set homework according to test results
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18	Recap of fractions, decimals and percentages Feedback of first term's topics	1. Apply fraction, decimal and percentages in problem solving situations 2. Review autumn term progress sheet and complete targets for spring term	Checking/marking of worksheet Directed questioning	• Worksheets – problem solving with fractions, decimals and percentages • Feedback with tutor - evaluate students progress with regard to their learning and their personal development
19	Metric and Imperial measurement	1. Categorise metric and imperial units of length, distance, weight, capacity 2. Read scales to different levels of accuracy, including reading	1. Observation of activity 2. Observation of measuring tasks to varying degree of accuracy with the appropriate instrument	• Discuss the appropriate units for length, distance, weight capacity and the use of matric and imperial units.

		between marked divisions		• Activity – estimate, measure and record length and weights and capacities of items • Paired activity – read both metric and imperial amounts for lengths, weights and capacities.
20	Conversion of metric and imperial units	1. Calculate with units of measure within the same system 2. Use a measuring instrument accurately 3. Convert metric units to imperial units and vice versa	1. Observation of activity Q&A 2. Observation of measuring activity 3. Checking/marking the progress/completed worksheet	• Discussion – metric and imperial units. Work out the best value of products of different weights or capacities • Board work – how to convert between different units (review x & / by 10, 100, and 1000) • Worksheets – converting between different units • Activity – match metric and imperial amounts with different units
21	Area and perimeter of composite shapes	1. Use given formulae to find areas of composite shapes (e.g. non-rectangular rooms or plots of land)	1. Observation activity. Q&A 2. Checking/marking the progress/completed worksheet	• Discussion- finding the perimeter of composite shapes such as rooms, which are not drawn

		2. Break down a composite shape into regular shapes		to scale and do not have ll the measurements included, and devise ways of finding the lengths of all the edges. • Activity – Calculate the wall area for painting, excluding doors and windows. Use plans drawn on plain paper to find areas of composite shapes. Calculate any missing dimensions and use a formula to find the area of each component.
22	Scale drawing	1. Draw an accurate scale plan of a room using a scale expressed as a ratio 2. Accurately work out distances from the scale on a map.	1. Observation of activity 2. Successful completion of task Q&A	• Discuss scales and how they are used. Work from several examples such as *If they scale is 1:100 on a plan, what would a centimeter represent?* • Activity – Produce simple plans and scale drawings, with different scales and work out actual

				measurements e.g. house plans room plans, room plans, templates from making something etc. Use different scales, e.g. 1:20, 1:10 and 1:50
23	Formative assessment – measurements and scales drawings.	1. Measure a room and present the dimensions in form of scale drawing. Calculate the area and perimeter of the room.	1. Observation of set task. 2. Check marked work	• Learners to the mini project on scale drawing. • Set homework
24	Conversion using formulae and conversion tables	1. Read a thermometer accurately 2. Use conversion chart to convert between amounts to different units.	1. Observation of activity. Q&A 2. Peer checking – feedback to learners	• Discussion – use of tables and formulae • Match rough equivalences between metric and imperial units. • Paired activity – Convert litres to gallons to check the petrol consumption on an old vehicle or to compare it to a new vehicle • Activity – Construct a conversion chart or line graph to convert miles to kilometres, and use it to convert

				between the two, using distances between towns etc.
25	2D and 3D shapes	1. Use common 2D representations of 3D objects 2. Solve problems involving 2D shapes and parallel lines	1. Feedback to learner 2. Observation of activity 3. Checking/marking the progress/completed worksheets	• Investigate and describe different representations of 3D objects in 2D e.g. nets of solids, plans, elevations • Discuss practical examples of using parallel lines e.g. hanging wallpaper, laying tiles or paving stones. • Activity – Use the properties of parallel lines to solve everyday problems e.g. finding the amount of coving needed to go around a ceiling by using corresponding floor measurements.
26	Extracting data	1. Extract and interpret information from lists, tables, charts and graphs	1. Observation of activity Q&A	• Discuss the difference between continuous and discrete data. A useful example is that the size of shoe someone wears is discrete, but the

				length of their foot is continuous. • Board work – Look at the use of different scales and their effect on the graph. Comment on trends from the slope of the graph. • Activity – Online game, extract information from tables in catalogues, brochures, web sites.
27	Organising and representing data	1. Measure the height of everyone in the class and present information as a chart/graph 2. Collect and record data from exchange rates or a particular share issues over a period of time. Display the data on a chart or graph.	1. Check correct information included on chart. 2. Observation of activity and correct completion of chart or graph	• Discussion – use given sets of date and discuss the most suitable form of representation. • Activity – Measure and record classmates' height; present the data in a suitable form. • Worksheets – Plot a graph showing exchange rates over a period.
28	Probability	1. Accurately record the range of possible outcomes of combined	1. Checking/marking the progress/completed worksheet	• Discuss the possible outcomes of an event such as tossing a coin,

		events in tree diagrams or in tables		picking a single playing card from a pack, throwing a die, the possible gender of a baby, the outcome of a football match for one team. • Activity – identify the possible outcomes of the gender of twins.
29	Formative assessment – collecting and presenting data	1. Carry out an investigation and present the outcome in a suitable form	1. Check answers on assessment paper Directed questioning	• Activity – collecting and presenting data – e.g. investigate the most popular music genre in the college to prepare for the end of year performance.
30				
31	Recap of data handling Feedback to students	1. Complete revision questions on the last terms topics 2. Review spring term progress sheet and complete targets for summer term.	1. Checking/marking of worksheet	• Worksheets – Problem solving with data handling • Feedback with tutor – evaluate students progress with regard to their learning and their personal development

32	Averages & range	1. Calculate mean, median and mode 2. Discuss the distinctions that each average is useful for different purposes 3. Find the range and use it to describe the spread within sets of data	1. Observation of activity 2. Listen to discussion points 3. Peer checking – feedback to learners	• Discuss the use of mean, mode and median • Discussion – the use of range in everyday language, e.g. price range, age range • Q&A – extracting information from different sources • Activity – compare the distribution of pay scales in two organisations • Paired activity – collect date of interest and compare the range e.g. local house prices with those in another area
33	Practice test	Complete practice FS and BS assessments Start on Application of Number portfolio	Check answers on practice test	• Completing the questions and activities on FS assessment and AoN assignment brief
34	Summative assessment	Start functional skills assessments Start on Application of Number portfolio	Mark work completed	• Completing the questions and activities on FS assessment and AoN assignment brief

35	Summative assessment	Continue/complete functional skills assessment Continue on Application of Number portfolio	Mark work completed	Completed the questions and activities on FS assessment and AoN assignment brief
36	Summative assessment	Continue/complete functional skills assignment Continue on Application of Number portfolio	Mark work completed	Completing the questions and activities on FS assessment and AoN assignment brief
37	Introduce Project 1 – Planning a holiday	1. Discuss the appropriate research method and resources required to complete the task	1. Work as a group to determine the things that should be considered with going on holiday	• Gather as much information as possible from internet. Brochures and flyers
38	Presentation of research findings and group feedback	1. Present findings of their research using appropriate charts and diagrams	1. Q&A 2. Observation of task	• Present their research findings to the whole class • Explain the rationale behind their choice of holiday destination • Discuss issues encountered and receive feedback from peers.
39	Introduce Project 2 – Financial management	1. Present personal monthly budget plan to the group	1. Observation of presentation 2. Q&A	• Discuss ways of managing spending • Calculate monthly budget

				• Present their research findings to the whole class • Explain the rationale behind their spending • Discuss problem encountered and receive feedback from peers
40	Whole class evaluation and review progress	1. Review individual students progress sheets	1. Q&A	• Whole class evaluation or tasks • Discuss progression for next school year.