RECOVERY CURRICULUM
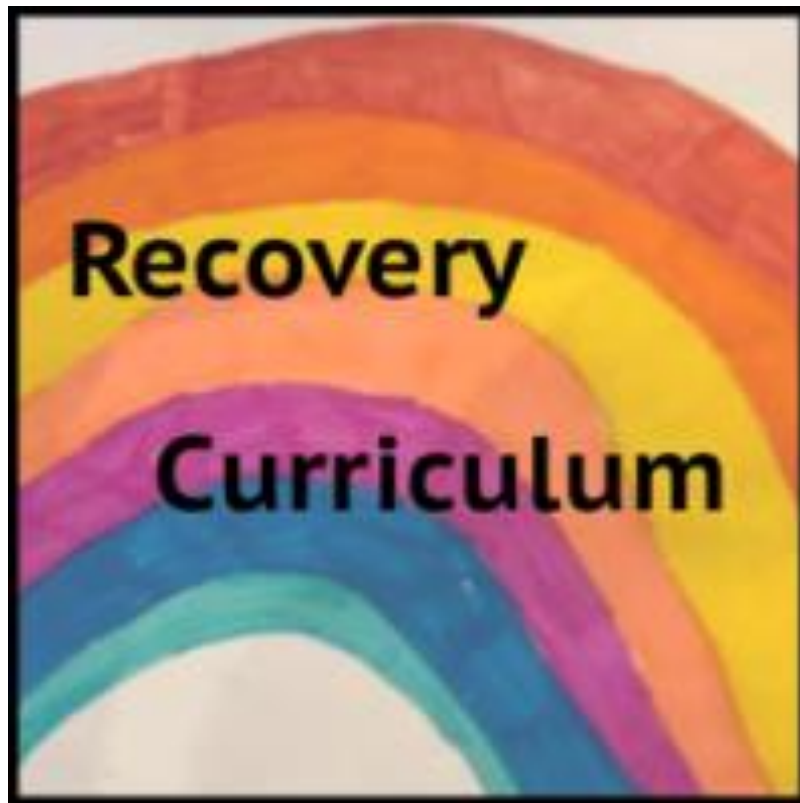
Subject: Mathematics
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Subject:	Mathematics		Teacher:	CLA
Year:	11		Class:	11B1 and 11B2
Unit title:	Number Properties			
Duration:	2 weeks (9 lessons)			

Intent

Intent Statement - at Landau Forte Amington, we believe learning powerful knowledge helps students achieve and creates a fairer society. How are you trying to accomplish this, with this unit/topic?

This topic will focus on student recovery following the pandemic, which has resulted in students experiencing the following possible losses: routine, structure, friendship, opportunity and freedom. It will support students academically, socially and emotionally, in order to transition students back to Academy life and support with the issues resulting from loss.

Aims - what do you want pupils to be able to know and do by the time they finish this unit/topic?

Understand and use a range of facts about number properties to solve problems
Find factors, multiples, HCF and LCM of numbers
Round numbers accurately
Order lists of numbers (integers, decimals, negatives)

Academy values – at Landau Forte Amington, we want students to be ambitious, brave and kind. How are these values promoted in this PoS?

- Ambitious – aims to quickly and effectively fill gaps then progress to existing SOL
- Brave – encourage students to persevere and show resilience through problem solving task
- Kind – Culture of error fostered, classroom rules clearly established to support learning without ridicule

Content – what is being covered, ensuring breadth & depth?	National Curriculum/Exam Specification - how does the content link to the NC or Exam Spec?
A range of number skills, cumulative from previous 5 years of learning, high frequency topics in exams Covers a range of skills and content to "recover" lost learning and further develop student learning	

Powerful Knowledge - what powerful knowledge is included in this SoW? Consider what knowledge is it important for our students to know, so that when they leave school they can engage in and lead discussions, with people from the most advantaged backgrounds?

Place value (appreciation for size of numbers)
Appreciation for negative numbers in context
Ordering / sorting skills

Implementation

GAPS	
Identification – how are you going to identify the gaps in knowledge/skills?	**Triage** – how are you going to rank order these gaps in knowledge/skills and 'fill' them, in order of importance?
MWB activities to assess existing knowledge Use of DNA to probe existing understanding Cold call questioning in lessons to gain insight into knowledge	Rank in order of severity (numbers affected) in order of progression (indicated by the order of aims listed above)

KEY CONCEPTS	
Key Concepts – what are the key concepts being taught?	**Progression** – how will studying these key concepts support progression to the traditional curriculum that has been planned?
Place value, factors, multiples, primes, squares, cubes, roots, rounding	Bridges gaps from previous years, recap of high frequency topics to be assessed in exams, underpinning skills for many later units of work

WELLBEING	
Lockdown – how will students share their experiences of lockdown?	**Social and Emotional** – how will student social and emotional health be supported?
Encourage to look at how this might link to experiences in lockdown	Positive classroom atmosphere, opportunities to work as a team / group, whole class discussions

RE-ESTABLISH	
Learning Skills – how are you going to re-establish the skills for learning?	**Relationships** – how are you going to re-establish classroom relationships?
Model how to solve problems, explicit direction on strategies and skills, "thinking out loud"	Standards lesson first lesson back, learn names of students quickly (seating plans)

OPPORTUNITIES	
Discussion – what are the discussion based opportunities?	**Group** – what are the group work based opportunities (while still ensuring social distancing)?
Maths team games or more complex problem/reasoning resources provided for each lesson to be discussed whole class in plenary / in groups during deliberate practice	Maths team games or more complex problem/reasoning resources provided for each lesson to be discussed in groups/pairs during deliberate practice

Delivery

		1) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)		
1	1	Classroom (whole sequence completed)	☑	Recall questions based on number (MathsBot)	What	Understand place value / multiply divide by 10, 100, 1000	
		Blended (live and remote as independent study)	☐		Why	Fill in gaps, develop fluency and understanding	
					How	Read and write numbers in words, identify value of digits in numbers, multiply/divide by 10, 100, 1000	

		4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
	Number of lessons in cycle:	- Read numbers aloud - Change between words and digits - Identify value of given digit - Multiply/divide by powers of 10	MWB questions https://www.mathspad.co.uk/i2/teach.php?id=writingNumbers1&p=5	Model using place value columns Provide place value grids for reference (scaffold)	Synchronous (live)
		7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	Asynchronous (remote)
		Practice writing numbers in words & digits and identifying underlined values Worksheet to multiply/divide 10, 100, 1000	Answers shared, self-assess	MC quiz	

Lesson 2

6) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑	Countdown numbers round	What	How to order lists of numbers
Blended (live and remote as independent study)	☐		Why	Fill in gaps, develop fluency and understanding
			How	Order lists of integers, negative numbers or decimal numbers

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
• Ordering lists of large numbers • Ordering decimals • Ordering negatives • Ordering fractions	MWBs	Decimals have same digits (using 0s) Number line used for negatives Refer to place value columns for large numbers	**Synchronous (live)**
7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	**Asynchronous (remote)**
Worksheet practice (followed by) We can work it out – Football Matches	Answers shared, self-assess Discussions and hints during "Football Matches" activity	Spot the mistake	

Number of lessons in cycle: 2

Lesson 3

1) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑	Missing number riddles (Access Maths) https://www.accessmaths.co.uk/uploads/4/4/2/3/44232537/_missing_number_riddles_with_answers.pdf	What	Round accurately to nearest 10, 100, 1000 or up to 2dp / 3sf
Blended (live and remote as independent study)	☐		Why	Fill in gaps, develop fluency and understanding
			How	Round accurately to nearest 10, 100, 1000 or up to 2dp / 3sf

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
• Reminder of rounding rules • Significant figures	Multiple choice quiz	Modelled answers with annotations	**Synchronous (live)**
7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	**Asynchronous (remote)**
https://www.mathspad.co.uk/teach/worksheets/rounding/roundingNearest10.php https://www.mathspad.co.uk/teach/worksheets/rounding/significantFiguresTrueFalse.php	https://www.mathspad.co.uk/teach/worksheets/rounding/significantFiguresGridPuzzle.php	Guess my number https://www.mathspad.co.uk/teach/worksheets/rounding/guessMyNumber.pdf	

Number of lessons in cycle: 3

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Number of lessons in cycle: 1

1) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑	Wacky Races (Access Maths) https://www.accessmaths.co.uk/uploads/4/4/2/3/44232537/_wacky_races_magic_number_race.pdf	What	List factors of numbers / Solve problems involving factors
Blended (live and remote as independent study)	☐		Why	Fill in gaps, develop fluency and understanding
			How	Identify factors via factor bug, identify HCF

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
• Factor definition • Factor finding • HCF	https://www.mathspad.co.uk/teach/linkedDocuments/factors/trueOrFalse.php	Model factor bug or paired listing Emphasis on working systematically	Synchronous (live)

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
Worksheet practice	Answers shared, self-asses	Spot the mistake	Asynchronous

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Number of lessons in cycle: 1

1) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑	Recall questions based on number (MathsBot)	What	Exam practice/technique
Blended (live and remote as independent study)	☐		Why	Improve exam technique, revision of key topics, preparation for Nov mocks
			How	Improved score in practice papers

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
Review of a range of skills covered in past week / past year			Synchronous (live)

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
First 40 marks – non calculator paper (in pairs)	Whole class marking, share the mark scheme, complete tracking sheets – www, ebi	Self-marked at end, scores tracked by teacher, record most common errors for focus in DNAs next week	Asynchronous (remote)

Cycle 6 (Number of lessons in cycle: 1)

1) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑	Targeted DNA (last week + problem topics from exam practice)	What	List multiples of numbers / Solve problems involving multiples
Blended (live and remote as independent study)	☐		Why	Fill in gaps, develop fluency and understanding
			How	Identify multiples / identify LCM problems

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
Definition Finding multiples & LCM Spotting an LCM question	MWB / MC Quiz	Discrimination – factors vs multiples Model game play	Synchronous (live)

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
Last One Standing - https://www.accessmaths.co.uk/uploads/4/4/2/3/44232537/_last_one_standing_multiples_and_factors_game.pdf https://www.accessmaths.co.uk/uploads/4/4/2/3/44232537/factors_and_multiples_game_cards.pdf	Answers shared, self-assess	Word question (exam Q)	Asynchronous (remote)

Cycle 7 (Number of lessons in cycle: 1)

1) Lesson Type (classroom or blended for remote homework)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑	Targeted DNA (last week + problem topics from exam practice)	What	Prime factorisation
Blended (live and remote as independent study)	☐		Why	Fill in gaps, develop fluency and understanding
			How	Write a number as the product of its primes

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
Prime factor trees (LCM / HCF Venn diagrams)	Spot the mistake/fill in the blanks	Model – focus on circling prime numbers Cover product or index notation	Synchronous (live)

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
Worksheet finding prime factorisation Extend with LCM/HCF from Venn	Share answers, self-assess	https://www.mathspad.co.uk/teach/worksheets/primeNumbers/usingPrimeNumbers.php	Asynchronous (remote)

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Number of lessons in cycle: 1

1) Lesson Type (classroom or blended for remote homework)			2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑		Targeted DNA (last week + problem topics from exam practice)	What	How to calculate indices
Blended (live and remote as independent study)	☐			Why	Fill in gaps, develop fluency and understanding
				How	Work out numerical indices

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
Calculating indices Index notation	MWB questions	Modelled example Comparisons examples	**Synchronous (live)**

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
https://www.mathspad.co.uk/teach/worksheets/indices/indexNotationPositiveIndices.php	Share answers, self-assess	Exam Q for comparing indices	**Asynchronous (remote)**

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Number of lessons in cycle: 1

1) Lesson Type (classroom or blended for remote homework)			2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
Classroom (whole sequence completed)	☑			What	Exam practice / technique
Blended (live and remote as independent study)	☐			Why	Improve exam technique, revision of key topics, preparation for Nov mocks
				How	Improved score on practice paper

4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
Review of a range of skills covered in past week / past year			**Synchronous (live)**

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
First 40 marks – non calculator paper (individual)	Whole class marking, share the mark scheme, complete tracking sheets – www, ebi	Self-marked at end, scores tracked by teacher, record most common errors for focus in DNAs next week	**Asynchronous (remote)**