

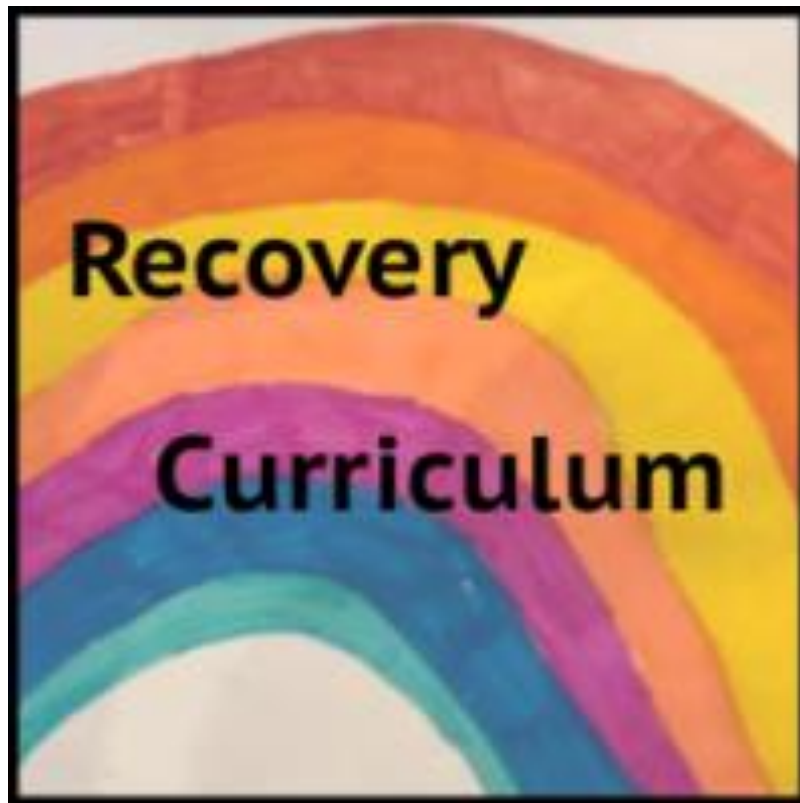
RECOVERY CURRICULUM

Subject: Mathematics

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Subject:	Mathematics	Teacher:	CLA
Year:	9	Class:	9 Higher
Unit title:	Ratio & Proportion		
Duration:	2 weeks (8 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?			
<ul style="list-style-type: none">• Work with ratio notation• Simplify ratios• Share into ratios• Solve a range of problems involving ratios• Understand the concept of proportion• Use proportion to solve problems involving scaling• Compare costs to decide value for money			
Academy values – at Landau Forte Amington, we want students to be ambitious, brave and kind. How are these values promoted in this PoS?			
<ul style="list-style-type: none">• Ambitious – aims to quickly and effectively fill gaps then progress to existing SOL• Brave – encourage students to persevere and show resilience through problem solving tasks• 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?	
Covers a range of skills and content overlapping the Year 8 and Year 9 SOLs 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?			
<ul style="list-style-type: none">• Value for money• Scaling recipes		<ul style="list-style-type: none">• Conversions• Money problems	

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?
Ratio notation, using ratios, proportionality	Bridges gaps between Yr8 and Yr9 SOLs, builds using spiral curriculum already planned
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 (cooking at home)	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)	
		Classroom (whole sequence completed)	Recall questions based on number (MathsBot)	What	Ratio Notation & Simplifying Ratios
1	1	Blended (live and remote as independent study)		Why	Fill in gaps, develop fluency and understanding
				How	Write ratios, simplify ratios and use ratios
	Number of lessons in cycle:	4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
		1. Writing ratio to describe situations 2. Simplifying ratios by removing HCF	MWBs https://www.mathspad.co.uk/interactives/ratioEquivalence/ratioEquivalence.php	Modelled example in word problem	
2	Number of lessons in cycle:	7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
		https://www.mathspad.co.uk/teach/worksheets/ratio/ratioNotation.php (builds to simplifying)	Share answers, self-assess	MWBs – spot the mistake	
		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)	Countdown numbers round	What	Sharing in a ratio
2	1	Blended (live and remote as independent study)		Why	Fill in gaps, develop fluency and understanding
				How	Able to share in a ratio
	Number of lessons in cycle:	4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)	
		Sharing in a ratio (2 parts) Sharing in a ratio (3 or more parts)	MWBs diagnostic questions	Bar model example / ADAM method example, include step by step guide	
	Number of lessons in cycle:	7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	
		Ratio Robberies	Share answers, self-assess	Word problem combining previous 2 lessons of work	

		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)	<input checked="" type="checkbox"/>	What	Solving problems involving ratio	
3	1	Blended (live and remote as independent study)	<input type="checkbox"/>	Why	Fill in gaps, develop fluency and understanding	
				How	Find values given 1 value in a shared ratio	
	Number of lessons in cycle:	4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)		Synchronous (live)
		Ratio given 1 value (box method)	Multiple choice quiz	Model with boxes, include step by step guide		
		7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)		Asynchronous
		https://www.mathspad.co.uk/i2/teach.php?id=ratioFoundationBooklet&p=19	Share answers, self-assess	GCSE style question		
		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)	<input checked="" type="checkbox"/>	What	Solving problems involving ratio	
4	1	Blended (live and remote as independent study)	<input type="checkbox"/>	Why	Fill in gaps, develop fluency and understanding	
				How	Find values given a difference for ratios	
	Number of lessons in cycle:	4) New Material (previous learning/ new material)	5) Check for Understanding (questioning/checking)	6) Prepare for Practice (model/ scaffold)		Synchronous (live)
		Ratio given difference (box method)	Diagnostic questions https://diagnosticquestions.com/Questions/Go#/106571 Peppered questions to build solution	Model with boxes, include step by step guide (emphasise difference to lesson 3 content)		
		7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)		Asynchronous (remote)
		https://corbettmaths.com/wp-content/uploads/2019/03/Ratio-Difference-pdf.pdf	Share answers, self-assess	Goal Free problem on ratio		

	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)	<input checked="" type="checkbox"/>		What	Solving problems using proportion
5	Number of lessons in cycle:	Blended (live and remote as independent study)	<input type="checkbox"/>	Low stakes quiz on ratio skills	Why	Useful in cooking, baking, chemistry...
					How	Scale a recipe up or down
		4) New Material (previous learning/ new material)			6) Prepare for Practice (model/ scaffold)	
		Scaling in context Identify a scale factor to scale a recipe (Unitary method may be applicable)			Use of table to model scaling (explore scaling up in multiples, up in non-multiples, and scaling down (unitary))	
		7) Deliberate Practice (guided/ independent)		8) Feedback (light/deep)	9) Review (daily/monthly)	
		Pythagoras' Menu (Pixi Maths) https://www.piximaths.co.uk/applied-ratio		Share answers, self-assess	Spot the mistake	
					Asynchronous (remote)	
	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)	<input checked="" type="checkbox"/>		What	Solve inverse proportion problems
6	Number of lessons in cycle:	Blended (live and remote as independent study)	<input type="checkbox"/>	MathsBot recall questions (algebra, number, ratio)	Why	Recognise how proportion works in real life
					How	Solve problems involving rates of work
		4) New Material (previous learning/ new material)			6) Prepare for Practice (model/ scaffold)	
		Inverse proportion Change of rate problems (increase/decreased people involved)			At least 2 examples (possibly one with purposeful error) Explicitly explain link being inverse (more people less time)	
		7) Deliberate Practice (guided/ independent)		8) Feedback (light/deep)	9) Review (daily/monthly)	
		Inverse proportion questions (TES)		Share answers, self-assess, discuss misconceptions/common errors	Prepare a model solution with mark scheme	
					Asynchronous (remote)	

7	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)	<input checked="" type="checkbox"/>	Recall grid (ratio, number, algebra)	What	Solve value for money problems		
		Blended (live and remote as independent study)	<input type="checkbox"/>		Why	Get the best deal when shopping		
	Number of lessons in cycle:	4) New Material (previous learning/ new material)		5) Check for Understanding (questioning/checking)		6) Prepare for Practice (model/ scaffold)		Synchronous (live)
		Finding the best value for money		Diagnostic Questions MWB responses		Model with step-by-step guide Emphasis on price per unit (may scale up)		
		7) Deliberate Practice (guided/ independent)		8) Feedback (light/deep)		9) Review (daily/monthly)		Asynchronous (remote)
		Deal or No Deal activity (in teams)		Share answers, self-assess, discuss misconceptions/common errors		Share the mark scheme, award marks to prepared answers		
8	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)	<input checked="" type="checkbox"/>	Multiple choice quiz on proportion skills	What	Review all skills		
		Blended (live and remote as independent study)	<input type="checkbox"/>		Why	Learn to identify types of problems		
	Number of lessons in cycle:	4) New Material (previous learning/ new material)		5) Check for Understanding (questioning/checking)		6) Prepare for Practice (model/ scaffold)		Synchronous (live)
		Discrimination teaching – ratio problems Discrimination teaching – proportion problems Spotting the differences		MWBs – identify the topic, draw a picture, name the steps		Flexible based on needs of class At least 1 example of each that students struggled to name the steps		
		7) Deliberate Practice (guided/ independent)		8) Feedback (light/deep)		9) Review (daily/monthly)		Asynchronous (remote)
		Interleaved ratio / proportion problems (exam style practice)		Share answers, self-assess		10-mark exit quiz (mixed)		