REMOTE LEARNING MODULE
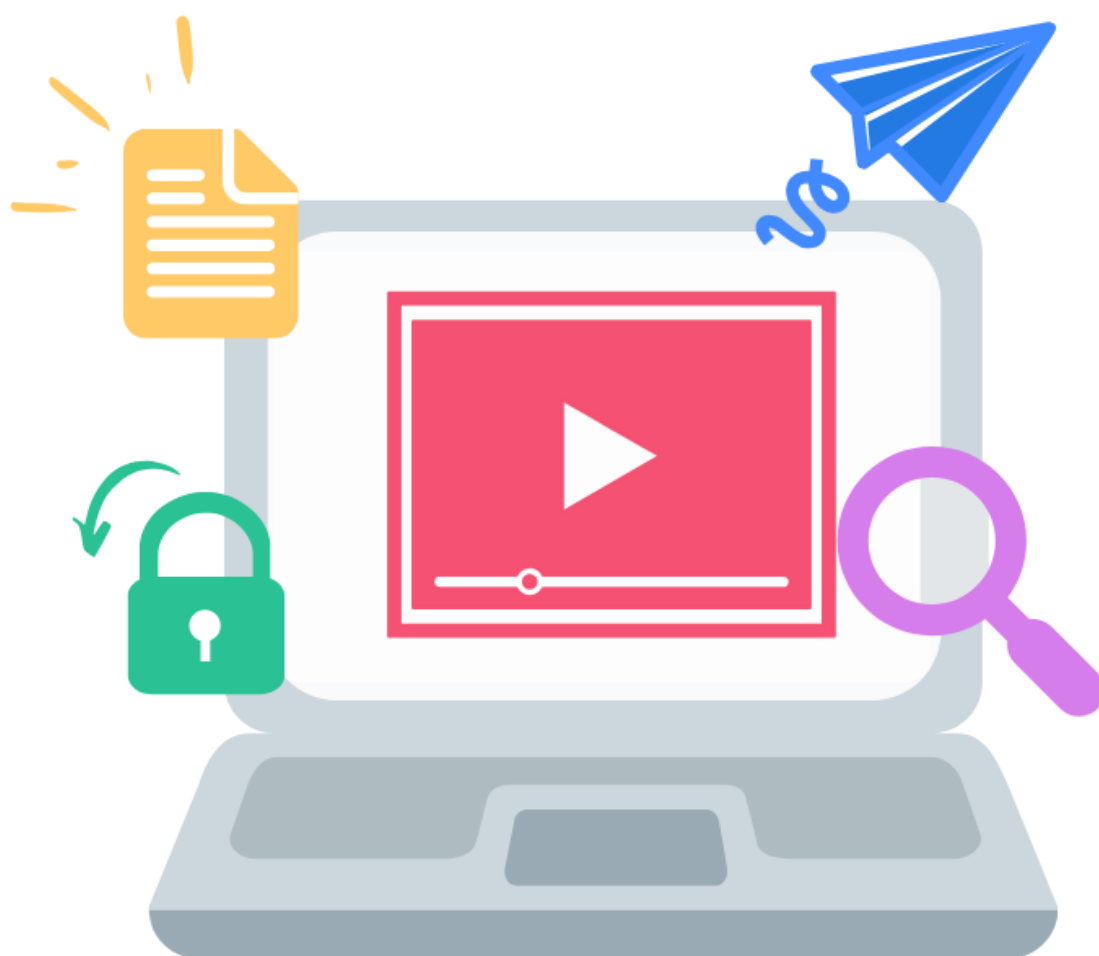
Subject: Mathematics
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Created: July 2020
Updated:

Subject:	Mathematics		Teacher (if applicable):		
Year:	10		Ability/Class (if applicable):	Middle (B sets)	
Module title:	Numbers and their properties				
Duration:	2 weeks ☒	4 weeks ☐	6 weeks ☐	8 weeks ☐	Other:

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 module?

This module is designed to be delivered remotely to allow students to continue to access a well-constructed and relevant curriculum to enable them to have appropriate maths skills to succeed in life. In particular, this module focuses on numbers and their properties, which are key to supporting students to be numerate and therefore be able to use maths skills and knowledge in a range of contexts in their daily lives. Additionally, these are skills that are high frequency in the exam and therefore can be key to achieving a higher GCSE grade. Supporting our students to achieve higher GCSE grades will enable them to access a range of other courses beyond school that can springboard them into society and careers.

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

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 module?

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?
Rounding Factors, multiples and primes Ordering lists of numbers Negative numbers	

Powerful Knowledge - what powerful knowledge is included in this module? 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

KEY CONCEPTS	
Key Concepts – what are the key concepts being taught?	**Progression** – how will studying these key concepts support progression to the next academic year, or key stage?
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

LEARNING	
Synchronous – what are the synchronous aspects of the module, including new material taught?	**Asynchronous** – what are the asynchronous aspects of the module, including deliberate practice?

3 live lessons, 2 Q&A clinics and DIRT lesson after cycle
  1. Place value, rounding, ordering
  2. Factors, multiples, LCM, HCF
  3. Calculating indices
	6 hours of deliberate practice (booklet)
	Exit ticket for end of topic assessment

ENGAGEMENT	
Accessibility – how are you going to ensure students without ICT can engage with this module?	**Disengagement** – how are you going to ensure students who are not engaging with this module are identified and supported?
Work pack will be printed and posted to students	MS Teams used to track and log submission of work, student, parental and tutor contact when not completed. CL informed of repeated disengagement.

FEEDBACK		
End of Module – what is the end of module assessment, which will be used to evaluate the knowledge and skills gained?	**Review Points** – what takes place at the review points, to monitor the progress of learners and provide feedback, or support?	
Exit ticket to check key success criteria: Ordering numbers, identifying place value, multiplying by powers of 10, calculating indices, finding HCF and LCM	**2 Weeks**	Exit ticket at end of 2-week module
	4 Weeks	X
	6 Weeks	X
	8 Weeks	X
	Other	"Clinic" to take place once a week via MS Teams

Delivery *(please note - a two week remote learning module may only take one lesson cycle)*

	1) Lesson Type (remote or blended)	2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
4	Remote (live on MS Teams and remote as study) ☒	Recall practice (MathsBot displayed on arrival) Last lesson, last week, last month grids for each asynchronous lesson ☐	What	How to round, how to read and write large/small numbers, ordering lists of numbers, multiply/divide by powers of 10
	Blended (live in classroom and remote as study)		Why	Develop fluency and understanding, support an understanding of numbers in everyday life (such as money)
			How	Change between words and digits, multiply/divide by powers of 10, order lists of numbers, round to decimal places or significant figures

1 — 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)
Place value (digits, words, identifying values, multiplying & dividing by 10, 100 and 1000) Ordering numbers Rounding (dp and sf)	Diagnostic questions used – answers in chat or held up on camera	Questions clearly modelled and scaffolded, students asked to copy down for reference	

7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	Asynchronous (remote)
Section 1 – place value Section 2 – Multiplying & dividing by powers of 10 Section 3 – Ordering numbers Section 4 – Rounding	Q&A clinic used to answer questions Solutions shared for students to self-assess, teacher will collate common errors through viewing submitted work and address in Q&A clinics	Quiz at the end of the cycle (MS Forms)	

2	3	1) Lesson Type (remote or blended)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
		Remote (live on MS Teams and remote as study)	☒	Recall practice (MathsBot displayed on arrival)	What	How to find factors, multiples, HCF and LCM, how to classify word problems
		Blended (live in classroom and remote as study)	☐	Last lesson, last week, last month grids for each asynchronous lesson	Why	Develop fluency and understanding, high frequency high mark exam qs
					How	Find factors, multiples, HCF, LCM and solve word 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)
	Finding factors & HCF Finding multiples & LCF Classifying word problems	Diagnostic questions used – answers in chat or held up on camera	Questions clearly modelled and scaffolded, students asked to copy down for reference	
	7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	Asynchronous (remote)
	Section 5 – Multiples & LCM Section 6 – Factors & HCF Section 7 – Word problems	Q&A clinic used to answer questions Solutions shared for students to self-assess, teacher will collate common errors through viewing submitted work and address in Q&A clinics	Quiz at the end of the cycle (MS Forms)	

3	2	9) Lesson Type (remote or blended)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)	
		Remote (live on MS Teams and remote as study)	☒		What	Using index notation, calculating powers, interpreting powers
		Blended (live in classroom and remote as study)	☐		Why	Develop fluency and understanding, high frequency exam questions
					How	Evaluate powers, simplify powers, use index notation

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)
	Using index notation Calculating numerical indices	Diagnostic questions used – answers in chat or held up on camera	Questions clearly modelled and scaffolded, students asked to copy down for reference	
	7) Deliberate Practice (guided/ independent)	8) Feedback (light/deep)	9) Review (daily/monthly)	Asynchronous (remote)
	Section 8 – Using index notation Section 9 – Calculating with indices	Q&A clinic used to answer questions Solutions shared for students to self-assess, teacher will collate common errors through viewing submitted work and address in Q&A clinics	Quiz at the end of the cycle (MS Forms)	

		1) Lesson Type (remote or blended)		2) DNA (Do Now Activity/Reading)	3) Learning Intentions (what, why & how)		
4	**1**	Remote (live on MS Teams and remote as study)	☒		What		
		Blended (live in classroom and remote as study)	☐		Why		
					How		
	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)**
		DIRT – whole class feedback from exit ticket, address misconceptions and provide feedforward information		Students to respond to common errors in chat feature	Model examples of any concepts that have significant errors		
		7) Deliberate Practice (guided/ independent)		8) Feedback (light/deep)	9) Review (daily/monthly)		**Asynchronous (remote)**
		Guided – rectify mistakes on exit ticket Independent – feed forward tasks to build on errors identified in exit ticket		(Based on feedback)	n/a		