ERNULF ACADEMY
Astrea Academy Trust
INSPIRING BEYOND MEASURE

Year 7 Mathematics	Subject Intent	Our aim is to deliver an appropriately ambitious curriculum that secures subject knowledge through depth, breadth and ambition for all pupils. Our carefully chosen curriculum provides atomisation, careful sequencing, alignment of content, instruction, and assessment. Pupils learn to become fluent in the fundamentals of mathematics to access complex problems and develop conceptual understanding. Pupils apply their understanding to routine and non-routine problems with increasing sophistication. We fundamentally believe in mastering and building a foundation of Mathematics to allow more complex mathematics to be taught and learnt with fidelity, accuracy, and pace.
	KS3 Subject Narrative	Our KS3 curriculum is a sequence of interconnected mathematics concepts to allow pupils to develop connected mathematical ideas. Pupils are continuously assessed on prior knowledge when being taught new knowledge – which are vitally important for more complex mathematics. We sequence the curriculum by identifying high leverage topics which more complex mathematics is taught on e.g., place value, four operations, number theory.
	KS4 Subject Narrative	KS3 topics and knowledge are revisited in greater complexity in years 10 and 11. The Year 9 curriculum is an opportunity to revise and build more complex mathematical concepts committed to long term memory in Year 7 and 8. E,g., Place value & Number properties allows pupils to identify the procedural impact of ×/÷ numbers by Powers of 10 and the impact of size on a number's place value. The Year 10 and 11 curriculum includes topics which are mixed concepts e.g., Linear graphs is the application of algebraic notation and linear equations in the context of coordinate geometry
	Routine Assessment Strategies	Year 7's use knowledge retrieval and procedural starters and have a fortnightly low stakes cumulative quiz which the later is marked by teachers and stored on a central spreadsheet to measure progress. Each fortnightly quiz is a SAR (Strength Action Response) task where pupils are given feedback before and after their low stake cumulative quiz.

Year 7 Mathematics	**WHY THIS, WHY NOW?**	Autumn Term – Introduction to Place Value & Addition	Spring Term – Introduction to Multiplication & Number Theory	Summer Term – Introduction to Fractions conceptually & procedurally
	Key Subject Knowledge	• Place Value • Working in Base 10 – Including Standard Form • Rounding & Estimation • Addition, Subtraction and their Relationship	• Multiplication, Division, and their Relationship • Maintaining Equivalence • Directed Numbers • Factors, Multiples & Primes • Area: Triangles, Parallelograms, Trapeziums • Powers & Roots	• Standard Form – Procedurally • Fractions A (Concepts) • Fractions B (Addition & Subtraction) • Fractions C (Multiplication & Division) • Fraction-Decimal Conversion • Proportion
	Subject Competencies	• Essential understanding of place value until billions • ×/÷ by Powers of 10 and identifying the power of 10. Applying this knowledge using standard form. • Addition & Subtraction in complex applications	• Multiplication & Division in complex applications • Using the four operations with directed numbers including large values • Method selection to identify when to find or apply knowledge of factors, multiples or primes • Application of ×/÷ in the context of area • Complex application of Powers & Roots	• Using the four operations with numerals presented in standard form • Conceptually understanding fractions as numerals between 0 and 1 and greater than 1 • Using the four operations with numerals presented as fractions and mixed numbers. • Factual recall of common fractions and decimal equivalents
	Summative Assessments (high stakes assessments which test cumulative knowledge)	• Corrective Mathematics Placement Testing (Addition & Subtraction modules)	• Mid-year test covering Y7 content to date – the test covers Autumn term and KS2 concepts	• End of year test covering Y7 content to date – Autumn term, Spring term and a portion of summer term
	How does this pave the way for future study?	• Pupils learn more complex applications of rounding in Year 8, and the procedures of the four operations is applied consistently across Year 7 and Year 8 with different mediums of number (fractions and decimals)	• Pupils learn Directed numbers initially, which is then revised in Year 8 prior to access linear equations in the following academic year	• Pupils learn the four operations using fractions which lays the foundation for algebraic fractions in KS4 • Pupils are introduced to early proportion which will be developed further when prior knowledge is developed in Year 8. E.g., solving linear equations helps to solve direct proportion problems