

Y6 Place Value and Number

Place Value			
Expected Outcomes • Learners will read, write, compare, and order numbers up to 10 million. • Learners will round whole numbers and decimals to specified degrees of accuracy. • Learners will understand and use negative numbers in context. • Learners will interpret Roman numerals and historical number systems.			
Developmental Focus Opportunities • Strengthening number sense through hands-on and visual learning. • Building resilience by celebrating small steps and consistent effort. • Encouraging mathematical talk to develop confidence and communication. • Embedding routines that support emotional safety and reduce cognitive overload.			
Key Learning Points		Powerful Knowledge	
• Place value in large whole numbers and decimals. • Reading and writing numbers in digits and words. • Comparing and ordering numbers including negative values. • Rounding numbers to the nearest 10, 100, 1000, and decimal place. • Using number lines and Roman numerals.		• Mastery of place value underpins all number operations and problem solving. • Understanding number systems supports reasoning and fluency. • Applying number knowledge to real-world contexts builds confidence and relevance. • Awareness of historical number systems enhances cultural and mathematical understanding.	
Subject-Specific Vocabulary		Reading Opportunities	
• Place value • Digit • Decimal • Negative • Roman numeral • Estimate • Compare • Order		Reading in mathematics is far more integral than it might first appear—it's not just about decoding word problems. It's about navigating a unique linguistic landscape that blends technical vocabulary, symbolic representations, and logical reasoning. Why Reading Matters in Maths • Mathematics has its own language: Terms like “difference,” “volume,” or “factor” have specific meanings in maths that differ from everyday usage. • Word problems require comprehension: Pupils often perform 10–30% worse on word problems compared to numeric ones, highlighting the need for strong reading strategies. • Multi-modal representation: Maths texts often combine symbols, diagrams, and written explanations, requiring students to interpret across formats.	
Possible Misconceptions		Cross-Curricular Links	
• Confusing digit value with place value. • Misunderstanding rounding rules or direction. • Believing more digits always mean a larger number.		• History: Roman numerals and ancient number systems. • Geography: Using population data and coordinates. • Science: Temperature and measurement in experiments.	

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- Misinterpreting negative numbers on number lines or in context.

- PSHE: Budgeting and understanding money.