Primary Mathematics Curriculum

Place value and base ten

	Stage 1 (Junior & Senior Infants)	Stage 2 (1st & 2nd Class)	Stage 3 (3rd & 4th Class)	Stage 4 (5th & 6th Class)
	Through appropriately playful and engaging learning experiences, children should be able to			
Learning Outcomes	develop a sense of ten as the foundation for place value and counting.	understand that digits have different values depending on their place or position in a number. use estimation to quickly determine number values and number calculations.	explore equivalent numerical expressions of numbers using the base ten system.	investigate how decimals and percentages (and fractions) can be compared, ordered and expressed in related terms.
Mathematical concepts	Numbers can be distinguished according to their quantitative value.	The value of a digit in a number depends on its place. The position of a digit denotes a value ten times that of the digit to its right.	The value of each digit in an integer or decimal number is a multiple of the value of its place.	Fractions, decimals and percentages are three ways of expressing part-whole relationships.
	The base of our number system is ten.	When ten place value units (e.g., ones, tens) are grouped, a new place value unit (e.g., ten, hundred) is formed.	The value of an integer or decimal number is represented by the value of the sum of each of its constituent digits.	A rational number is any number that can be written as a fraction, where both the numerator and the denominator are integers, and the denominator is not equal to zero.
	The base-ten number system consists of 10 digits and is based on groups of ten.	The relationship between one quantity and another quantity can be an equality or inequality relation.	The principle of base ten holds for integers and decimals.	Multiples of 10 are a useful tool for converting between fractions, decimals and percentages.
	In a 2-digit number, the digit to the left denotes the greater value.	0 can be used as a placeholder, allowing us to record a number accurately.	Notwithstanding the conventional notation, numbers can be represented in different, equivalent ways using concrete materials (e.g., 46 = 4 tens and 6 units or 3 tens and 16 units).	A percentage is a way of expressing a fraction of one hundred or another way of writing hundredth. Per 'cent' means out of a hundred and uses the % notation.
		Numbers can be rounded or approximated to provide estimations of value.	A decimal point is a convention that separates the integer part of the number (left) from the fraction part of the number (right).	
			The base ten place value system extends indefinitely in two directions multiplying (to the left) or dividing (to the right) by multiples of ten.	