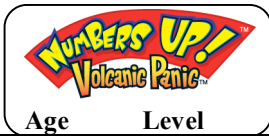
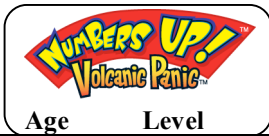


NSW Mathematics K-9 Curriculum Objectives Addressed Within Numbers Up! Volcanic Panic



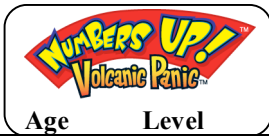
Age	Level	NSW Level	Numeration	Addition	Subtraction
4-6	1-5	1	Classify objects and sort them into groups	Demonstrate the meaning of addition by joining two groups	Demonstrate the meaning of subtraction by taking an object or objects from a group of objects
		2	Match objects by one-to-one correspondence Compare groups of objects by one-to-one correspondence Use the language of comparison to describe objects	Use symbols for the operation of addition	Use and read symbols for the operation of subtraction
		3	Order groups according to the number of objects in each group	Represent the joining action using pictures Recognise the patterns created for individual numbers	Describe the difference between two groups of objects using the language of comparison
6-7	1-6	4	Recognise and copy simple patterns Continue a pattern or supply a missing element	Explore addition facts to 20	Use the symbol of subtraction, addition and equality to represent the comparison of 2 groups Demonstrate an understanding of the complementary relationship between addition and subtraction

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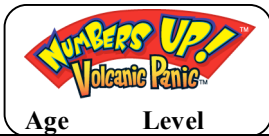
Age	Level	NSW Level	Numeration	Addition	Subtraction
4 – 6+	1,2,3	5	<p>Read and write the numerals 1 to 9</p> <p>Count and order groups of up to 9 objects</p> <p>Use the ordinal names <i>first</i> to <i>ninth</i></p>	Recall basic addition facts to 20	Use both vertical and horizontal representations of subtraction facts
5+	3+	6	<p>Use the language of <i>zero, nought, nothing</i> and <i>none</i>.</p> <p>Recognise the zero symbol</p> <p>Count forwards and backwards using zero</p>	Add combinations of 1-digit and 2-digit numbers up to 99	<p>Recall basic subtraction facts to 20</p> <p>Demonstrate understanding of the relationship between addition and subtraction</p>
5+	4+	7	<p>Make groups of 10 objects</p> <p>Read & write the numeral 10</p>	Use mental strategies to solve addition problems	

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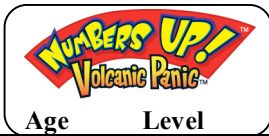
Age	Level	NSW Level	Numeration	Addition	Subtraction
7+	7+	8	<p>Make groups of 11 to 19 objects</p> <p>Read and write the numeral 10</p> <p>Count to 19 and backwards from 19</p>	<p>Add numbers with and without trading to 999</p>	
8+	9+	9	<p>Count to 90 by tens and backwards from 90 by tens</p>	<p>Add two or more numbers of up to 4 digits with and without trading</p>	<p>Recognise patterns and relationships when single digit numbers are added to or subtracted from 2-digit numbers</p>
		10	<p>Read and write the numerals 20 to 99</p>		<p>Subtract 2-digit numbers from 2-digit numbers without trading</p>

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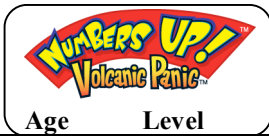
Age	Level	NSW Level	Numeration	Addition	Subtraction
8+	10+	11	<p>Read and write 100</p> <p>Count to 100 by ones, twos, fives, and tens</p> <p>Count backwards from 100 by ones, twos, fives, and tens</p>		<p>Subtract from a 2-digit number with trading</p>
9+	11+	12	<p>Identify the place value in a 3-digit number</p> <p>Read, write and order numbers to 999</p>		<p>Subtract numbers of up to 3 digits by using <i>counting on</i> and comparison methods</p> <p>Subtract from 3-digit numbers without exchanging</p>
9+	13+	13	<p>Read and write numbers up to 9 999 in numerals and words</p> <p>Order numbers up to 9 999</p> <p>State the place value of any digit in a 4-digit numeral</p>		<p>Subtract from 3-digit numbers with trading</p>

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Age	Level	NSW Level	Numeration	Addition	Subtraction
10+	16+	14	<p>Read and write 5-digit numerals</p> <p>Read and write 5-digit numbers in words</p> <p>State the place value of any digit in a 5-digit number</p> <p>Order a set of numbers of up to 5 digits</p>		<p>Subtract from 4digit numbers with trading</p>
11+	18+	15	<p>Read and write numerals up to 100 000 000</p> <p>Write numbers in words up to 100 000 000</p> <p>State the place value of any digit in numeral with up to nine digits</p> <p>Place a set of 9-digit numbers in ascending or descending order</p>		<p>Subtract 4digit numbers and beyond with or without trading</p>

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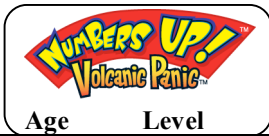
Age	Level	NSW Level	Numeration	Addition	Subtraction
					<p>NS2.2</p> <p>Uses mental and written strategies for addition and subtraction involving 2, 3 and 4-digit numbers</p>
					<p>NS2.4</p> <p>Can add and subtract decimals with the same number of decimal places (up to 2 decimal places)</p>
	21+	NS3.1	<p>Orders, reads and writes numbers of any size</p> <p>Records large numbers using expanded notation</p> <p>Rounds numbers when estimating</p> <p>Recognises the location of negative numbers in relation</p>		<p>Can select and apply strategies for addition and subtraction with counting numbers of any size</p> <p>Can use estimation to check solutions</p> <p>Can add numbers with different numbers of digits</p>

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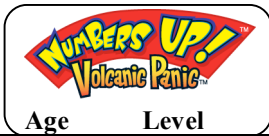
Age	Level	NSW Level	Numeration	Addition	Subtraction
			<p>to zero and can locate them on a number line</p> <p>Can recognise, read and convert Roman numerals in everyday contexts</p>		
12+	22+	NS4. 1	<p>Can apply tests of divisibility</p> <p>Can use index notation to express powers of numbers (+ve indices only)</p> <p>Can express a number as a product of its prime factors</p> <p>Can find squares and square roots, cubes and cube roots.</p>		

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Age	Level	NSW Level	Numeration	Addition	Subtraction
	23+	NS4. 2	<p>Can recognise the direction and magnitude of an integer</p> <p>Can place directed numbers on a number line</p> <p>Can order directed numbers</p> <p>Can interpret the use of directed numbers in real world contexts e.g. the rise and fall of temperature</p>		<p>Can add & subtract directed numbers</p> <p>Can group symbols and apply order of operations to simplify expressions</p>
	21+	NS5. 1	<p>Can use zero index and negative integral indices</p> <p>Can use index laws</p> <p>Can express numbers in scientific notation</p>		

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Age	Level	NSW Level	Numeration	Addition	Subtraction
	25+	NS5. 2	Can round numbers to a specified number of significant figures		