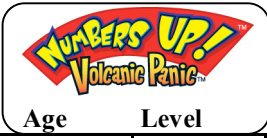


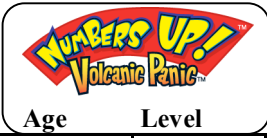
NSW Mathematics K-9 Curriculum Objectives Addressed Within Numbers Up! Volcanic Panic



NSW
Level Fractions, Decimals &
Percentages

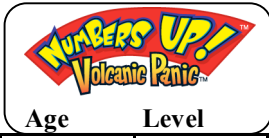
Age	Level	NSW Level	Fractions, Decimals & Percentages		
			<i>Outcomes listed in bold italics are more substantially addressed in alternative Categories and levels of the Numbers Up! programme</i>		
8	8	1	Discuss and describe equal parts Identify division of an object or group of objects into equal parts		
	9	2	Relate one part or parts of a group to the whole		
	9+	3	Name a part of a group and the parts remaining		

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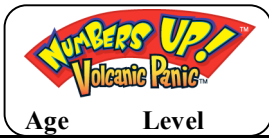
Age	Level	NSW Level	Fractions, Decimals & Percentages		
	17+	4	Name parts of a group using 100 objects Name part of a group using the term <i>hundredths</i>		
	17+	5	Name part of a group using the term <i>hundredths</i>		
	Category 1 Level 19+	6	Compare and order hundredths Count in hundredths, forwards and backwards <i>This portion of the syllabus is covered in the Numeration substrand of the Numbers Up! Programme, Category 1 Level 19 and following</i>		

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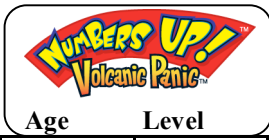
Age	Level	NSW Level	Fractions, Decimals & Percentages		
	17+	7	Record hundredths using the decimal form Record decimal fractions as hundredths		
11+	17+	8	Express fractions in tenths as hundredths and vice versa		
		9	Demonstrate equivalence using hundredths and tenths Compare and order tenths		

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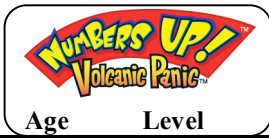
Age	Level	NSW Level	Fractions, Decimals & Percentages		
		10	Record tenths using the decimal form Model whole numbers, tenths and hundredths		
11+	16+	11	Write fractions in the form $\frac{a}{b}$ Write numbers as percentages		
	Category 1 Level 19+	12	Compare, order and count tenths and hundredths Distinguish significant and non-significant zeros <i>(This portion of the syllabus is covered in the Numeration substrand of the Numbers Up! Programme, Category 1 Level 19 and following)</i>		

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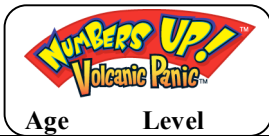
Age	Level	NSW Level	Fractions, Decimals & Percentages		
	<p>Cate gories 2 & 3, Level 19+</p>	13	<p>Add tenths and hundredths in the decimal form Subtract tenths and hundredths in the decimal form <i>(This portion of the syllabus is covered in the Addition and Subtraction substrands of the Numbers Up! Programme, Categories 2 & 3 Level 19 and following)</i></p>		
		14	<p>Multiply tenths and hundredths by whole numbers up to 10 Divide tenths and hundredths by whole numbers up to 10</p>		
	<p>Cate gories 1, 2 & 3, Level 19+ Fractions Levels 15 - 26</p>	NS2.4	<p>Name fractions with denominators of 2, 4 and 8 up to one whole Compare and order fractions with the same denominator Interpret the denominator as the number of parts into which a whole has been divided Interpret the numerator as the</p>		

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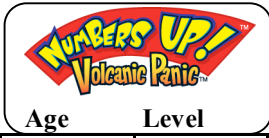
Age	Level	NSW Level	Fractions, Decimals & Percentages		
			<p>number of equal fractional parts</p> <p>Compare unit fractions by comparing the denominator</p> <p>Rename $\frac{2}{2}$, $\frac{3}{3}$, $\frac{4}{4}$, etc as 1</p> <p>Compare fractions with denominators 5, 10 and 100</p> <p>Apply and understanding of place value to express whole numbers, tenths and hundredths as decimals</p> <p>Interpret decimal notation for tenths and hundredths i.e. $0.1 = \frac{1}{10}$</p> <p>Add and subtract decimals with the same number of decimal places</p> <p><i>(This portion of the syllabus is covered in the Addition and Subtraction substrands of the Numbers Up! Programme, Categories 2 & 3 Level 19 and following)</i></p> <p>Interpret the everyday use of fractions and decimals e.g. in advertisements</p> <p>Apply decimal knowledge to</p>		

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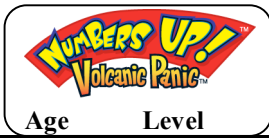
Age	Level	NSW Level	Fractions, Decimals & Percentages		
12	Cate gorie s 1, 2 & 3, Level 19+ Fracti ons 15 - 26	NS3. 4	measurements and money Explain the relationship between fractions and decimals Find equivalence between halves, quarters and eighths Model mixed numerals Order decimal numbers up to 2 decimal places Recognise that the symbol % means <i>percent</i> Relate equivalent common percentages, fractions and decimals Recognise the patterns formed when decimal numbers are multiplied or divided by 10 or 100		
			Express mixed numerals as improper fractions and vice versa Compare and order decimal numbers to three decimal places Add and subtract decimal numbers with a different number of decimal places		

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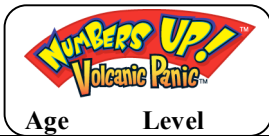
Age	Level	NSW Level	Fractions, Decimals & Percentages		
			<p>Multiply and divide decimal numbers by single digit numbers and by 10, 100 and 1000</p> <p>Interpret and explain the use of fractions, decimals and percentages in everyday contexts</p> <p>Solve problems involving simple proportions</p> <p>Develop mental strategies for finding equivalent fractions</p> <p>Reduce a fraction to its lowest equivalent form</p> <p>Compare and order fractions greater than one</p> <p>Calculate unit fractions of a collection</p> <p>Represent simple fractions as a decimal and a percentage</p> <p>Calculate simple percentages</p> <p>Calculate prices following percentage discounts</p> <p>Convert between fractions and percentages to estimate comparative amounts</p>		

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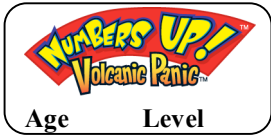
Age	Level	NSW Level	Fractions, Decimals & Percentages		
	Fractions 15-26	NS4. 3	<p>Find highest common factors and lowest common multiples Find equivalent fractions Reduce a fraction to its lowest equivalent form Add, subtract, multiply and divide fractions Add, subtract, multiply and divide decimals Round decimals to a given number of places Convert fractions to decimals and percentages Convert percentages to fractions and decimals Calculate fractions, decimals and percentages of quantities Increase or decrease a quantity by a given percentage Interpret and calculate percentages greater than 100% Express profit or loss as a percentage of cost price and/or selling price Order fractions,</p>		

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



Age	Level	NSW Level	Fractions, Decimals & Percentages		
	Ratio & Proportion Category 7 Levels 15 - 26	NS4.3	<p>decimals and percentages</p> <p>Express one quantity as a fraction or percentage of another</p> <p>Ratio & Rates</p> <p>Use ratio to compare quantities of the same type</p> <p>Write ratios in various forms</p> <p>Simplify ratios</p> <p>Apply the unitary method to ratio problems</p> <p>Divide a quantity in a given ratio</p> <p>Interpret and calculate ratios that involve more than two numbers</p> <p>Calculate rates from given information</p> <p>Solve a variety of real-life problems involving ratios e.g. scales on maps, fuel mixes</p> <p>Solve a variety of real-life problems involving rates e.g. batting rates, speed, fuel consumption</p>		

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NSW
Level

Fractions, Decimals &
Percentages