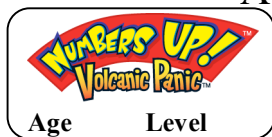


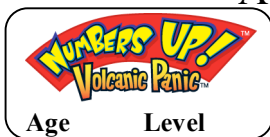
Content Design – Structure, Scope & Sequence of Mathematics Content
Addressed Within Numbers Up! Volcanic Panic



Fractions, Decimals & Percentage

Age	Level	
7-8	8-9	Identifies <i>half</i> and a <i>quarter</i> of sets of objects Identifies a half, a quarter and a third of whole shapes
8-9	10	Recognises and uses common unit fractions to determine a portion of a given number collection – one-half, one-third, one-quarter, one-fifth Recognises and uses common unit fractions to find fractions of a given whole – e.g. what is one-half, one-third, one-quarter, one-fifth of a given length or mass Recognises and identifies common unit fractions of a whole shape and that a fraction represents e.g. <i>one part out of three</i> or <i>one-third</i> Estimates what fraction of a regular or irregular shape has been shaded
9	11-12	Recognises and uses common unit fractions to determine a portion of a given number collection – one-half, one-third, one-quarter, one-fifth Recognises and uses common unit fractions to find fractions of a given whole – e.g. what is one-half, one-third, one-quarter, one-fifth of a given length or mass Recognises and identifies common unit fractions of a whole shape and that a fraction represents e.g. <i>one part out of three</i> or <i>one-third</i> Estimates what fraction of a regular or irregular shape has been shaded Begins to recognise and write common equivalent fractions Begins to use common fraction notation, understanding that the vinculum means <i>to divide</i> and also stands for <i>part out of</i> e.g. $\frac{1}{3}$ means <i>one part out of 3</i> Begins to recognise that <i>the whole is the same as all the parts</i> i.e. there are <i>3 thirds, 2 halves, 4 quarters</i> etc in one whole Begins to understand the relative size of fractions and their relative positions on a number line i.e. one-half is larger than one-third but smaller than three-quarters

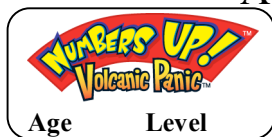
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Fractions, Decimals & Percentage

Age	Level	
9-10	13-14	<p>Consolidation of understandings of:- Relative size of common unit fractions Deriving equivalent fractions Using unit fractions as division operators Estimating fractions of shapes</p> <p>Begins to understand and use the concept of one whole expressed as a fraction of another whole</p>
10	15-16	<p>Consolidation of understandings of:- Relative size of common unit fractions Deriving equivalent fractions Using unit fractions as division operators Estimating fractions of shapes</p> <p>Begins to understand and use the concept of one whole expressed as a fraction of another whole</p>
10-11	17-18	<p>Orders and compares common fractions Writes common fractions and mixed numbers Begins to recognise and write fractions of one hundred Begins to recognise and write percentages Orders, compares and begins to recognise equivalences between common fractions and percentages Relates fractions to division</p>

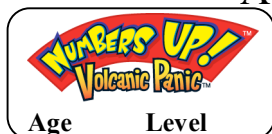
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Fractions, Decimals & Percentage

Age	Level	Fractions, Decimals & Percentage
11	19-20	<p>Orders and compares common fractions Writes common fractions and mixed numbers Converts mixed numbers to improper fractions Begins to recognise and write fractions of one hundred Equates percentages with <i>parts out of every hundred</i> Begins to recognise and write percentages and decimal fractions Orders, compares and recognises equivalences between common fractions, decimals and percentages Relates fractions to division Calculates common fractions of numbers and quantities including money and measurement in real life contexts</p>
11-12	21	<p>Orders and compares common fractions Writes common fractions and mixed numbers Converts mixed numbers to improper fractions Converts common fractions to decimal fractions and/or percentages Orders and compares common fractions, decimals and percentages Uses equivalences between common fractions, decimals and percentages Writes equivalent common fractions Writes common fractions in their simplest form and recognises the division process by which this form is obtained Relates fractions to division Calculates common fractions, decimals and percentages of numbers and quantities including money and measurement in real life contexts</p>
12-13	22-23	<p>Orders and compares common fractions Writes common fractions and mixed numbers Converts mixed numbers to improper fractions Converts improper fractions to mixed numbers with the fractional part of the answer given in its lowest terms Converts common fractions to decimal fractions and/or percentages Orders and compares common fractions, decimals and percentages Uses equivalences between common fractions, decimals and percentages Writes equivalent common fractions Adds fractions with the same denominator Writes common fractions in their simplest form and recognises the division process by which this form is obtained Relates fractions to division Calculates common fractions, decimals and percentages of numbers and quantities including money and measurement in real life contexts</p>

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Age	Level	Fractions, Decimals & Percentage
13-15	24-26	<p>Orders and compares common fractions</p> <p>Writes common fractions and mixed numbers</p> <p>Converts mixed numbers to improper fractions</p> <p>Converts improper fractions to mixed numbers with the fractional part of the answer given in its lowest terms</p> <p>Converts common fractions to decimal fractions and/or percentages (including numbers greater than 1 or 100%)</p> <p>Orders and compares common fractions, decimals and percentages</p> <p>Uses equivalences between common fractions, decimals and percentages</p> <p>Writes equivalent common fractions</p> <p>Adds fractions with the same denominator</p> <p>Multiplies and divides simple common fractions</p> <p>Writes common fractions in their simplest form and recognises the division process by which this form is obtained</p> <p>Relates fractions to division</p> <p>Calculates common fractions, decimals and percentages of numbers and quantities including money and measurement in real life contexts – discounts, commissions, profits, etc.</p> <p style="padding-left: 20px;">E.g. Calculates the original price of an item given the discounted price</p> <p style="padding-left: 20px;">Calculates the selling price of an item given the profit or commission</p>