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

Age	Level	Ratio
10	15-16	Solves simple problems involving ratio and proportion – *in every…* *Out of every* *For every* Recognises which inference is true, given a ratio or proportional relationship *If…… then….*
10-11	17-18	Solves simple problems involving ratio and proportion – *in every…* *Out of every* *For every* Recognises which inference is true, given a ratio or proportional relationship *If…… then….* Calculates quantities and numbers in real life situations given a ratio or proportional relationship Understands that the expression *2 to every 3* compares part to part and that *2 in every 5* or *2 out of 5* is the equivalent part-to-whole comparison
11	19-20	Recognises which inference is true, given a ratio or proportional relationship *If…… then….* Understands that the expression *2 to every 3* compares part to part and that *2 in every 5* or *2 out of 5* is the equivalent part-to-whole comparison Begins to use the form ***A:B*** to compare part to part Begins to divide a quantity into two parts in a given ratio Recognises how to simplify a two-part ratio to an equivalent by cancelling Compare and order ratios Recognises the equivalence between proportions, fractions and percentages Begins to compare parts of a whole expressed as ratios, proportions, fractions and percentages Uses the principles of direct proportion to solve real life problems

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Age	Level	Ratio
	21	Recognises which inference is true, given a ratio or proportional relationship *If…… then….* Understands that the expression *2 to every 3* compares part to part and that *2 in every 5* or *2 out of 5* is the equivalent part-to-whole comparison Begins to use the form ***A:B*** to compare part to part Begins to divide a quantity into two parts in a given ratio Recognises how to simplify a two-part ratio to an equivalent by cancelling Compare and order ratios Recognises the equivalence between proportions, fractions and percentages Begins to compare parts of a whole expressed as ratios, proportions, fractions and percentages Uses the principles of direct proportion to solve real life problems Simplify three-part ratios to an equivalent form Simplify ratios expressed in different units Consolidates understandings of the relationship between ratio and proportion
12	22-23	Recognises which inference is true, given a ratio or proportional relationship *If…… then….* Understands that the expression *2 to every 3* compares part to part and that *2 in every 5* or *2 out of 5* is the equivalent part-to-whole comparison Begins to use the form ***A:B*** to compare part to part Begins to divide a quantity into two parts in a given ratio Recognises how to simplify a two-part ratio to an equivalent by cancelling Compare and order ratios Recognises the equivalence between proportions, fractions and percentages Begins to compare parts of a whole expressed as ratios, proportions, fractions and percentages Uses the principles of direct proportion to solve real life problems Simplify three-part ratios to an equivalent form Simplify ratios expressed in different units Consolidates understandings of the relationship between ratio and proportion Link ratio and proportion to scale on maps or models Solve problems using proportional reasoning e.g. increasing or decreasing quantities in recipes

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Age	Level	Ratio
13-15	24-26	Recognises which inference is true, given a ratio or proportional relationship *If…… then….* Understands that the expression *2 to every 3* compares part to part and that *2 in every 5* or *2 out of 5* is the equivalent part-to-whole comparison Begins to use the form ***A:B*** to compare part to part Begins to divide a quantity into two parts in a given ratio Recognises how to simplify a two-part ratio to an equivalent by cancelling Compare and order ratios Recognises the equivalence between proportions, fractions and percentages Begins to compare parts of a whole expressed as ratios, proportions, fractions and percentages Uses the principles of direct proportion to solve real life problems Simplify three-part ratios to an equivalent form Simplify ratios expressed in different units Consolidates understandings of the relationship between ratio and proportion Link ratio and proportion to scale on maps or models Solve problems using proportional reasoning e.g. increasing or decreasing quantities in recipes Convert between different rates in order to compare and order ratios e.g. metres/sec compared with km/hour