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| **Title of unit:** | Simplifying and Substituting |
| **Overview of unit:** | Simplifying ExpressionsFactorising ExpressionsQuadratic Expansion Composite and Inverse FunctionsSubstitution |
| **Cross-curricular/ extra-curricular links:** | Science – use of formulae  |
| **Literacy/numeracy links:** | Worded problems/exam questionsKeywords displayed on PPPs - simplify, substitute, expand, factorise, brackets, formula(e), fractionsWritten plenaries |

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| **Grade:** | **Learning objective:** | **Resources:** |
| **1** |  |  |
| **2** | Simplify expressionsSubstitute numbers into a simple formula. | [Collecting Like Terms](https://www.piximaths.co.uk/simplifying-collecting-like-terms)[Substitution](https://www.piximaths.co.uk/substitution)  |
| **3** | Expand single brackets.Substitute numbers into a more complicated formula. | [Expanding Single Brackets](https://www.piximaths.co.uk/expanding-brackets)[Substitution](https://www.piximaths.co.uk/substitution) |
| **4** | Factorise single brackets.Expand quadratics.Know the difference between an equation and an identity. | [Factorising Single Brackets](https://www.piximaths.co.uk/factorising)[Expanding Quadratics](https://www.piximaths.co.uk/expanding-brackets)[Solving one and two step equations](https://www.piximaths.co.uk/solving-linear-equations) |
| **5** | Factorise quadratics in the form ax² + bx + c = 0 where a = 1.Recognise and factorise the difference of two squares. | [Factorising Quadratics](https://www.piximaths.co.uk/factorising)[Factorising Quadratics](https://www.piximaths.co.uk/factorising) |
| **6** | Factorise quadratics in the form ax² + bx + c = 0 where a > 1. | [Factorising Quadratics](https://www.piximaths.co.uk/factorising) |
| **7** | Simplify algebraic fractions that involve factorising. | [Simplifying Algebraic Fractions](https://www.piximaths.co.uk/simplifying-algebraic-fractions) |
| **8** | Expand products of more than two binomials. | [Expanding Two or more Binomials](https://www.piximaths.co.uk/expanding-brackets) |
| **9** | Interpret the reverse process as the ‘inverse function’.Interpret the succession of two functions as a ‘composite function’. | [Inverse Functions](https://www.piximaths.co.uk/functions)[Composite Functions](https://www.piximaths.co.uk/functions) |