Year 7 Maths – Spring Term

Intent

Wider Learning:	Prior learning:	Key vocabulary:	
Expressions and Equations allows students to create and solve problems of their own and recognise symbols in replacement of numbers.	Students may have seen very basic letter/symbol replacement during KS2 but this is likely to have minimal depth of understanding by the end of Year 6	1. Term 2. Expressions 3. Constant 4. Coefficient	5. Expand 6. Factorise 7. Brackets 8. Simplify
Plotting Coordinates will progress students understanding of map reading and grids which will help within subjects other than maths.	Students will have seen basic 1st quadrant coordinates during KS2 and will recognise coordinate terminology.	9. Quadrant 10. Coordinate 11. Horizontal 12. Vertical	13. Axis 14. Plot 15. Negative 16. Origin
Perimeter and Area allows students to grow their spatial understanding.	Students will have covered the difference between area and perimeter in rectangles and squares during KS2.	17. Perimeter 18. Area 19. Trapezium 20. Composite	21. Rectilinear 22. Squared 23. Base 24. Perpendicular Height

The big questions

1. What use does algebra have in the real world?
2. How can we be certain we have "fully simplified"?
3. What impact would transposing coordinates have when plotting a shape?
4. Does a larger area always mean a larger perimeter?
5. Can two DIFFERENT shapes have the shape are and the same perimeter?
6. Does halving a shape halve both the area and the perimeter?

Implement

Order of learning

1. Writing sentences as expressions.
2. Recognising: Coefficient, Term, Constant
3. Recognising: Equation, Expressions, Identity, Inequality
4. Adding & Subtracting Terms
5. Indice Laws
6. Multiplying & Dividing Terms
7. Expanding Single Brackets
8. Factorising Single Brackets
9. Plotting in the 1st quadrant
10. Plotting in all 4 quadrants
11. Plotting non-integer coordinates
12. Plotting horizontal and vertical lines
13. Plotting equations
14. Problem solving shapes in coordinates
15. Perimeter of shapes.
16. Perimeter of composite shapes.
17. Finding missing sides using perimeter.
18. Area of quadrilaterals and triangles.
19. Area of composite rectilinear shapes.
20. Area of trapezium.
21. Finding missing sides using area.

Differentiation

G&T:
Stretch questions for all topics as well as problem solving style questions.

Disadvantaged:
Equipment available in classroom for students arriving unprepared.

SEND: Manipulatives available for students in certain context including number lines and counters.

EAL:
Translations of keywords where required and minimal use of unnecessary words throughout,

Impact

Assessment and homework
40 mark assessment at the end of each topic covering all relevant areas and allowing students to check their understanding of the topic covered.

Homework
Weekly homework on Sparx Maths covering each of the sections taught during the previous week.

Feedback
Verbal feedback during assessment week as well as self-correction during feedback lesson.

Where will this be revisited?

Expressions & Equations will be revisited during Linear Equations in Year 8 and again in Expressions & Formulae during Year 9.

Plotting Coordinates will be revisited during Straight Line Graphs in Year 8 and in Graphical Representation during Year 9.

Perimeter and Area will be revisited during Perimeter, Area and Volume during Year 9.