| SUBJECT: | Maths | Year:7 |
|----------|-------|--------|
|          |       |        |

|           | Number  | Algebra  | Geometry  | Data and probability   |
|-----------|---|--|---|--|
| Excelling | <ul> <li>Can order decimals<br/>of any size</li> <li>Can subtract, add,<br/>multiply and divide<br/>any decimal</li> <li>Round to any<br/>number of decimal<br/>places</li> <li>Find the perimeter<br/>and area of<br/>composite shapes,<br/>including ones with<br/>missing<br/>measurements</li> <li>Find the factors of<br/>any number up to<br/>100 and multiples of<br/>a number</li> <li>Can multiply and<br/>divide mixed<br/>numbers</li> <li>Can find the fraction<br/>of a quantity<br/>involving decimal<br/>answers</li> <li>Understands the<br/>equivalence of FDP<br/>and uses this to</li> </ul> | <ul> <li>Can simplify<br/>expressions<br/>involving powers<br/>and negatives</li> <li>Can form a simple<br/>algebraic expression<br/>from a word<br/>problem</li> <li>Can expand single<br/>brackets and<br/>simplify the result<br/>when more than 1 is<br/>involved in the<br/>question</li> <li>Can factorise a<br/>linear expression by<br/>taking out whole<br/>numbers</li> <li>Can work out a term<br/>to term rule in a<br/>sequence involving<br/>decimals and<br/>negatives, can find<br/>missing terms of a<br/>sequence</li> </ul> | <ul> <li>Find the perimeter<br/>and area of<br/>composite shapes<br/>involving triangles,<br/>rectangles and<br/>parallelograms<br/>including ones with<br/>missing<br/>measurements</li> <li>Can measure and<br/>draw acute, obtuse<br/>and reflex angles</li> <li>Can reflect a shape<br/>in a diagonal line</li> </ul> | <ul> <li>Can calculate the mean and understand when it would be appropriate to use it</li> <li>Can draw and interpret a pie chart</li> </ul> |

| Securing   | <ul> <li>calculate a range of percentages</li> <li>Understands place value and can order numbers to 2 decimal places</li> <li>Add and subtract decimals to 2dp and in the context of money</li> <li>Can round to 1 decimal place</li> <li>Find factors and multiples of numbers less than 20</li> <li>Can convert between improper fractions and mixed numbers</li> <li>Can find a fraction of a quantity</li> </ul> | <ul> <li>Can simplify<br/>expression involving<br/>2 variables</li> <li>Can expand a single<br/>bracket</li> <li>Can write a term to<br/>term rule for simple<br/>linear sequences</li> </ul> | <ul> <li>Find the area and perimeter of rectangles and composite shapes with given measurements</li> <li>Find the area of a triangle and parallelogram</li> <li>Can measure and draw acute and obtuse angles</li> <li>Can reflect in a vertical and horizontal line</li> </ul> | <ul> <li>Calculate the mean<br/>of a data set and<br/>understand what it<br/>tells us</li> <li>Can draw a bar chart<br/>and interpret a pie<br/>chart</li> </ul> |
|------------|--|---|--|--|
|            | of a quantity <ul> <li>Can find % with and</li> <li>without a calculator</li> </ul>  |   |  |  |
| Developing | <ul> <li>Can order number<br/>up 1000</li> <li>Can add and<br/>subtract any 2 or 3<br/>digit number</li> </ul>   | <ul> <li>Can simplify an expression involving 1 variable</li> <li>Can write the nest term in a linear</li> </ul>  | <ul> <li>Find the area and<br/>perimeter of a<br/>rectangle</li> </ul>   | <ul> <li>Calculate the mean<br/>of 6 numbers and<br/>less</li> <li>Can interpret<br/>information from a</li> </ul>   |

|          | <ul> <li>Can round to the nearest 10,100 and whole number</li> <li>Knows multiples of 2,3,4,5 and 10</li> <li>Can identify some equivalent fractions</li> <li>Has methods for finding half or a quarter of a number</li> <li>Can find 25, 50 and 75% of a number</li> </ul>                  | sequence by adding<br>or subtracting                                    | <ul> <li>Can identify acute,<br/>obtuse and reflex<br/>angles</li> <li>Recognises some 2D<br/>and 3D shapes</li> <li>Can identify lines of<br/>symmetry</li> </ul> | bar chart or<br>pictogram                            |
|----------|--|---|--|--|
| Emerging | <ul> <li>Can order number<br/>to 20</li> <li>Knows number<br/>bonds for 10</li> <li>Knows multiples of<br/>2, 5 and 10</li> <li>Understand that a<br/>fraction is a part of a<br/>whole</li> <li>Can half even<br/>numbers up to 20</li> <li>Can find 50% of<br/>numbers under 20</li> </ul> | Can write the nest<br>odd or even number<br>in a sequence of<br>numbers | <ul> <li>Find the area of a shape by counting squares</li> <li>Can identify a right angle</li> <li>Recognises some 2D shapes</li> </ul>                            | <ul> <li>Can read from a simple bar chart</li> </ul> |

|           | Number   | Algebra   | Geometry  | Data  |
|-----------|--|---|---|---|
| Excelling | <ul> <li>Can find the HCF<br/>and LCM of more<br/>than two numbers</li> <li>Add, subtract, divide<br/>and multiply mixed<br/>numbers</li> <li>Convert units<br/>involved in area<br/>calculations</li> <li>Can use multipliers<br/>for % increase,<br/>decrease and<br/>reverse % questions</li> <li>Can use ratio in<br/>problem solving</li> <li>Use significant<br/>figures to estimate a<br/>sum</li> <li>Can use index rules<br/>involving several<br/>letters and numbers</li> </ul> | <ul> <li>Can solve a range of<br/>equations involving<br/>brackets and<br/>unknowns on both<br/>sides</li> <li>Simplify expressions<br/>that involve<br/>multiplication and<br/>division</li> <li>Find the nth term of<br/>an increasing or<br/>decreasing linear<br/>sequence</li> </ul> | <ul> <li>Construct triangles<br/>and quadrilaterals<br/>using compass and<br/>protractors</li> <li>Can bisect a line and<br/>an angle</li> <li>Can calculate angles<br/>on parallel lines</li> <li>Can find the area of<br/>composite shapes<br/>involving circles,<br/>trapezium,<br/>parallelogram and<br/>triangles</li> <li>Can find the volume<br/>and surface area of<br/>prisms</li> </ul> | <ul> <li>Find the mean ,<br/>mode, median and<br/>range and be aware<br/>of when to use each<br/>average</li> <li>Draw a scattergraph<br/>and identify outliers</li> <li>Understand<br/>correlation and use<br/>a line of best fit to<br/>make predictions</li> </ul> |
| Securing  | <ul> <li>Can prime factorise<br/>a number</li> <li>Can use a venn<br/>diagram to find the<br/>HCF and LCM of two<br/>numbers</li> </ul>  | <ul> <li>Can solve linear<br/>equations that<br/>involve a simple<br/>bracket</li> <li>Simplify expressions<br/>that involve<br/>multiplication</li> </ul>  | <ul> <li>Can construct<br/>triangles using<br/>compass and<br/>protractor</li> <li>Can calculate<br/>missing angles in<br/>parallel lines</li> </ul>  | <ul> <li>Find the mean,<br/>mode and median<br/>from a data set</li> <li>Read a range of<br/>statistical diagrams<br/>to get information</li> <li>Draw a pie chart</li> </ul>   |

|            | <ul> <li>Can add, subtract,<br/>divide and multiply<br/>fractions</li> <li>Can use all 4<br/>operations with<br/>negative numbers</li> <li>Can convert<br/>standard measures</li> <li>Can use a multiplier<br/>for % increase and<br/>decrease</li> <li>Can round to a given<br/>number of<br/>significant figures</li> </ul> | <ul> <li>Find the nth term of<br/>a linear sequence</li> </ul>  | <ul> <li>Can find the area of<br/>a trapezium,<br/>parallelogram and<br/>triangle</li> <li>Find the volume and<br/>surface area of a<br/>cuboid</li> <li>Find the perimeter<br/>and area of a<br/>composite shape<br/>made of rectangles</li> </ul>   | <ul> <li>Organise data into<br/>groups and<br/>understand the<br/>difference between<br/>discrete and<br/>continuous data</li> </ul>   |
|------------|---|---|---|--|
| Developing | <ul> <li>Can prime factorise<br/>a number under 100</li> <li>Can list prime<br/>numbers below 20</li> <li>Understand index<br/>notation</li> <li>Can find equivalent<br/>fractions and starts<br/>to add and subtract</li> <li>Can find any %<br/>which is a multiple<br/>of 5 without a<br/>calculator</li> </ul>            | <ul> <li>Can solve two stage equations</li> <li>Simplify expressions that involve addition and subtraction</li> <li>Can describe a term to term rule for a linear sequence</li> </ul> | <ul> <li>Can draw and<br/>measure angles<br/>accurately</li> <li>Can find angles<br/>around a point, in a<br/>triangle,<br/>quadrilateral and a<br/>straight line</li> <li>Can find the area of<br/>a triangle, rectangle<br/>and parallelogram</li> <li>Can find the<br/>perimeter of a range<br/>of shapes</li> </ul> | <ul> <li>Find the mean,<br/>mode and median<br/>from a simple data<br/>set</li> <li>Read a pie chart to<br/>obtain information</li> <li>Draw a bar chart</li> <li>Organise data into<br/>categories using a<br/>tally chart</li> </ul> |

|          | <ul> <li>Can simplify a<br/>simple ratio</li> </ul>  |   | • Find the volume of a cube or cuboid  |  |
|----------|--|---|--|--|
| Emerging | <ul> <li>Can find 10%, 25%<br/>and 50% of a<br/>number up to 100</li> <li>Can identify 2<br/>fractions that are<br/>equivalent</li> <li>Can identify some<br/>square numbers</li> <li>Can round to the<br/>nearest 10</li> </ul> | <ul> <li>Can find missing<br/>numbers in a simple<br/>addition or<br/>subtraction sum</li> <li>Can predict the next<br/>term in a simple<br/>linear sequence</li> </ul> | <ul> <li>Can find the area by counting squares of an irregular shape</li> <li>Find the area and perimeter of a rectangle</li> <li>Find missing angles on a line and in a triangle</li> <li>Identify a range of 2D and 3D shapes</li> </ul> | <ul> <li>Find the mode of a set of data</li> <li>Read information from a variety of charts including a bar chart and a line graph</li> <li>Tally discrete information</li> </ul> |

## SUBJECT-Maths YEAR- 9

|           | Number  | Algebra   | Geometry   | Data and probability  |
|-----------|---|---|--|---|
| Excelling | <ul> <li>Solve range of<br/>mathematical problems<br/>involving negative<br/>numbers</li> <li>Understand index rules<br/>and work with a<br/>combination of several<br/>rules</li> <li>Can apply fraction work<br/>to problem solving</li> <li>Can use multipliers for<br/>reverse % and repeated<br/>% change</li> <li>Can convert a recurring<br/>decimal into a fraction</li> <li>Do calculations with<br/>numbers in standard<br/>form</li> </ul> | <ul> <li>Plot a range of<br/>graphs in the form<br/>y=mx+ c and<br/>understand about<br/>gradient and y<br/>intercept. Plot and<br/>recognise quadratic<br/>graphs</li> <li>Find an nth term for<br/>a linear sequence<br/>and quadratic<br/>sequence</li> <li>Can expand up to 3<br/>brackets</li> <li>Form and solve a<br/>range of linear<br/>equations</li> <li>Solve equations<br/>involving brackets<br/>and unknowns on<br/>both sides</li> <li>Solve a range of<br/>inequalities and<br/>show a region on a<br/>graph that satisfies<br/>two or more<br/>inequalities</li> <li>Form and solve a<br/>pair of simultaneous</li> </ul> | <ul> <li>Solve problems<br/>involving angles on<br/>parallel lines</li> <li>Find the volume<br/>and surface area of<br/>a range of prisms</li> <li>Rotate, reflect,<br/>enlarge, and<br/>translate a shape<br/>and use a<br/>combination of<br/>transformations</li> <li>Use trigonometry<br/>and Pythagoras to<br/>find missing sides<br/>and angles</li> <li>Use a range of<br/>constructions to<br/>find regions</li> </ul> | <ul> <li>Find the mean,<br/>mode, median of<br/>grouped data<br/>(continuous and<br/>discrete)</li> <li>Draw a cumulative<br/>frequency curve and<br/>scatter graph</li> <li>Find the arc length<br/>and area of a sector.<br/>Find missing<br/>dimensions if given<br/>the answer</li> </ul> |

| Securing   | <ul> <li>Add, subtract, multiply<br/>and divide negative<br/>numbers</li> <li>Know the 3 rules for<br/>indices</li> <li>Add, subtract, multiply<br/>and divide mixed<br/>numbers</li> <li>Use a multiplier for %<br/>increase and decrease</li> <li>Can convert a fraction<br/>into a decimal by division</li> <li>Convert a small or large<br/>number into standard</li> </ul> | <ul> <li>equations<br/>algebraically</li> <li>Plot graphs in the<br/>form of y=mx+c</li> <li>Find an nth term for<br/>a linear sequence<br/>and can produce a<br/>simple quadratic<br/>sequence given its<br/>nth term</li> <li>Can expand single<br/>and double brackets</li> <li>Solve a range of<br/>inequalities and<br/>show the region on<br/>a graph that satisfies<br/>a single inequality</li> <li>Solve 2<br/>simultaneous<br/>equations by<br/>drawing graphs</li> </ul> | <ul> <li>Identify<br/>corresponding,<br/>alternate. Opposite<br/>and interior angles</li> <li>Find the volume<br/>and surface area of<br/>cuboids</li> <li>Find the volume of<br/>prisms</li> <li>Rotate, reflect,<br/>enlarge, and<br/>translate a shape</li> <li>Use Pythagoras to<br/>find a missing side</li> <li>Bisect a line and an<br/>angle and construct<br/>triangles</li> </ul> | <ul> <li>Find the mean of grouped discrete data</li> <li>Draw a scatter graph and pie chart</li> <li>Find the area and circumference of a circle</li> </ul>                                  |
|------------|---|---|---|--|
| Developing | <ul> <li>Can work with negative<br/>number below 20</li> <li>Know a range of square<br/>number, cube numbers<br/>and their roots</li> <li>Add and subtract mixed<br/>numbers.</li> </ul>  | <ul> <li>Plot co-ordinates in all 4 quadrants, plot graphs in the form x=a and y=b</li> <li>Can expand a single bracket involving a letter or a number</li> </ul>   | <ul> <li>Understand the notation used for parallel lines</li> <li>Find the area of rectangles, triangles, parallelograms, and trapezium</li> </ul>  | <ul> <li>Find the mean,<br/>mode, median and<br/>range of a data set</li> <li>Can draw a bar chart<br/>and read from a pie<br/>chart</li> <li>Can label the parts<br/>of a circle</li> </ul> |

|          | <ul> <li>Find the % of a number<br/>with and without a<br/>calculator</li> <li>Convert between fraction<br/>, decimal and %</li> <li>Write a large number in<br/>standard form</li> </ul>   | <ul> <li>Can describe term<br/>to term rules for a<br/>range of sequences</li> <li>Solve a simple two<br/>stage equation</li> <li>Solve a range of<br/>inequalities</li> </ul>   | <ul> <li>Reflect, rotate, and<br/>translate a shape</li> <li>Draw and measure<br/>angles accurately</li> </ul>  |   |
|----------|---|--|---|---|
| Emerging | <ul> <li>Can recognise negative<br/>numbers in context such<br/>as temperature</li> <li>Can list some square and<br/>cube numbers</li> <li>Can convert between<br/>improper fractions and<br/>mixed numbers</li> <li>Understand the<br/>equivalence of %, fraction<br/>and decimal for 25%, 50%<br/>and 75%</li> <li>Understand place value<br/>for up to 2 decimal places</li> <li>Multiply a number by<br/>10,100,1000</li> </ul> | <ul> <li>Read and write<br/>co-ordinates</li> <li>Can predict the next<br/>term of a simple<br/>linear<br/>sequence, identify<br/>simple sequences<br/>such as odd and<br/>even numbers</li> <li>Expand a simple<br/>bracket with a<br/>number outside</li> <li>Solve a one stage<br/>equation</li> <li>Understand<br/>inequality signs</li> </ul> | <ul> <li>Find the area and perimeter of a rectangle</li> <li>Understand line symmetry and rotational symmetry</li> <li>Recognise acute, obtuse and reflex angles</li> </ul> | <ul> <li>Find the mode and<br/>range of data</li> <li>Can draw and read<br/>from a pictogram<br/>and a bar chart</li> </ul> |