

## Year 9 Road Map

### LG3: Skills

| S/N                               | Level | Learning Goals/Outcomes/Content                                                                                                                                                                            | Dr Frost Videos      |  R |  A |  G |
|-----------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>7a) Perimeter and Area</b>     |       |                                                                                                                                                                                                            |                      |                                                                                       |                                                                                       |                                                                                       |
| 1                                 | S     | Convert between units of measure within one system, including time;                                                                                                                                        | 107                  |                                                                                       |                                                                                       |                                                                                       |
| 2                                 | S     | Convert imperial units to metric units;                                                                                                                                                                    | 108c                 |                                                                                       |                                                                                       |                                                                                       |
| 3                                 | S     | Make sensible estimates of a range of measures in everyday settings;                                                                                                                                       | 107i                 |                                                                                       |                                                                                       |                                                                                       |
| 4                                 | S     | Measure shapes to find perimeters and areas using a range of scales;                                                                                                                                       | 64a<br>79a           |                                                                                       |                                                                                       |                                                                                       |
| 5                                 | S     | Find the perimeter of rectangles and triangles;                                                                                                                                                            | 79c<br>79d           |                                                                                       |                                                                                       |                                                                                       |
| 6                                 | S     | Find the perimeter of parallelograms and trapezia;                                                                                                                                                         | 185e                 |                                                                                       |                                                                                       |                                                                                       |
| 7                                 | SC    | Find the perimeter of compound shapes;                                                                                                                                                                     | 184e                 |                                                                                       |                                                                                       |                                                                                       |
| 8                                 | S     | Recall and use the formulae for the area of a triangle and rectangle;                                                                                                                                      | 140a<br>138a         |                                                                                       |                                                                                       |                                                                                       |
| 9                                 | SC    | Find the area of a trapezium and recall the formula;                                                                                                                                                       | 184a                 |                                                                                       |                                                                                       |                                                                                       |
| 10                                | SC    | Find the area of a parallelogram;                                                                                                                                                                          | 139a                 |                                                                                       |                                                                                       |                                                                                       |
| 11                                | SCE   | Calculate the area of compound shapes made from triangles, rectangles, trapezia and parallelograms using a variety of metric measures;                                                                     | 184d                 |                                                                                       |                                                                                       |                                                                                       |
| 12                                | SCE   | Find the surface area of a prism;                                                                                                                                                                          | 232a<br>232h         |                                                                                       |                                                                                       |                                                                                       |
| 13                                | SCE   | Convert between metric area measures.                                                                                                                                                                      | 107i                 |                                                                                       |                                                                                       |                                                                                       |
| 14                                | SC    | Estimate area and perimeter by rounding measurements to 1 significant figure to check reasonableness of answers.                                                                                           | 188c<br>188d         |                                                                                       |                                                                                       |                                                                                       |
| 15                                | SCE   | Recall the definition of a circle and name and draw parts of a circle;                                                                                                                                     | 141a                 |                                                                                       |                                                                                       |                                                                                       |
| 16                                | SCE   | Recall and use formulae for the circumference of a circle and the area enclosed by a circle (using circumference = $2\pi r = \pi d$ and area of a circle = $\pi r^2$ ) using a variety of metric measures; | 209a<br>210a         |                                                                                       |                                                                                       |                                                                                       |
| 17                                | SCE   | Use $\pi \approx 3.142$ or use the $\pi$ button on a calculator;                                                                                                                                           |                      |                                                                                       |                                                                                       |                                                                                       |
| 18                                | CE    | Calculate perimeters and areas of composite shapes made from circles and parts of circles (including semicircles, quarter-circles, combinations of these and also incorporating other polygons);           | 182g<br>180a<br>212b |                                                                                       |                                                                                       |                                                                                       |
| 19                                | CE    | Calculate arc lengths, angles and areas of sectors of circles;                                                                                                                                             | 318a                 |                                                                                       |                                                                                       |                                                                                       |
| 20                                | CE    | Find radius or diameter, given area or circumference of circles in a variety of metric measures;                                                                                                           | 209d<br>210d         |                                                                                       |                                                                                       |                                                                                       |
| 21                                | CE    | Give answers in terms of $\pi$ ;                                                                                                                                                                           | 209c<br>210c         |                                                                                       |                                                                                       |                                                                                       |
| 22                                | CE    | Form equations involving more complex shapes and solve these equations                                                                                                                                     | 318c<br>319a         |                                                                                       |                                                                                       |                                                                                       |
| Student's comments and questions: |       |                                                                                                                                                                                                            |                      |                                                                                       |                                                                                       |                                                                                       |