

ACP Learning Outline - Mathematics

Unit 6 – Measures		
<u>Learning Aim (WALT)</u>	<u>Activities</u>	<u>Learning Outcome (WILF)</u>
Identify and compare units for measuring	<ul style="list-style-type: none"> - Set of objects for students to sort using the key words <i>long, longer, longest, short, shorter, shortest, tall, taller, tallest, heavy, heavier, heaviest, light, lighter, lightest, more, less, most, least</i> - Decide which units to use for measuring different items <i>mm, cm, m, km, mg, g, kg, ml, cl, l</i> - 10Ticks L3-6 pages 21,22, 24, 26, - 10Ticks L4-3 pages 27-32 - 10Ticks L5-6 p15-18 	<ul style="list-style-type: none"> • Compare lengths using key words (E1) • Choose appropriate standard units of length, capacity and weight (E2) • Compare and orders lengths, capacities and weights given in the same units (E2) • Read whole values from scales (E2) • Choose appropriate measuring instruments for measuring (E3) • Convert between measures (E3) • Accurately read values from scales (E3)
Demonstrate drawing and measuring lines of specific lengths	<ul style="list-style-type: none"> - Draw and measure lines in turn of different lengths - 10Ticks L3-6 p 19-20 -10Ticks L5-3 p9-11 -10Ticks L6-8 p27-32 -MyMaths (Shape) – Scale & Similarity (scale drawing, map scales, scale finding heights) -MyMaths Loci 	<ul style="list-style-type: none"> • Draw and measure lines in whole cm between 1 and 20cm (E1) • Measure and draw lengths to mm accuracy (E2) • Demonstrate drawing accurately using scale (L1) • Demonstrate accurate constructions (L1)
Describe capacity, mass and density of objects	<ul style="list-style-type: none"> - Compare pictures or containers with liquids using the key words <i>empty, quarter full, half full, three quarters full, full</i> - 10Ticks L3-6 p 23, 25, 30, -10Ticks L7/8-6 p27-28 	<ul style="list-style-type: none"> • Describe capacity in fractions using key words (E1) • Describe weight using whole values on a scale (E2) • Read values from an appropriate scale (E3) • Calculate density (L1)

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Calculate values given in measures	<ul style="list-style-type: none"> - Measure lengths of shapes or objects in the room and add together to find perimeter. - 10Ticks L4-3 p33-40 - 10Ticks L4-8 p15-19 - 	<ul style="list-style-type: none"> • Calculate perimeter using cm squares to count the length (E1) • Calculate perimeter in whole units by measuring lengths and adding them together (E2) • Add lengths, capacities and weights given in the same units (E2) • Convert between measures (E2) • Add measures given in different standard units (E3) • Calculate perimeter of shapes when given values (E3) • Calculate perimeter of compound shapes (L1)
Conversion Graphs	<ul style="list-style-type: none"> - 10Ticks L5-6 p29 	<ul style="list-style-type: none"> • Read values accurately from simple scales (E2) • Accurately read values including negative and decimal from scales (E3) • Demonstrate reading values from conversion graphs (L1) <p>Solve problems using information from conversion graphs (L1)</p>
Area (polygons)	<ul style="list-style-type: none"> - MyMaths (Shape) – Area&Perimeter (introducing area, rectangles, parallelogram, triangle, trapezium) - 10Ticks L4-8 p15-20, 30, 31 - 10Ticks L5-4 p36-40 - 10Ticks L6-5 p21-22 - 10Ticks L7-6 p3-14 	<ul style="list-style-type: none"> • Identify area by counting squares (E3) • Calculate area of rectangles and simple triangles (L1) • Calculate area for quadrilaterals and simple compound shapes (L1) • Apply area formulas to solve problems involving area (L1) <p>Calculate surface area (L1)</p>
Constructions	<ul style="list-style-type: none"> - MyMaths (Shapes) – constructions - 10Ticks L5-3 p7-8 - 10Ticks L6-4 p31-40 - 10Ticks L6-8 p15-16, 27-32 - L7-5 p3-10 	<ul style="list-style-type: none"> • Construct triangles using ruler and protractor (E3) • Construct shapes using compasses and ruler (L1) <p>Draw loci (L1)</p>

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Circles	<ul style="list-style-type: none">• MyMaths(Shape) – Area & Perimeter (circumference of circles, area of circle, arcs & sectors)• 10Ticks L6-5 p31-18 [31-38 printed - Ron]• 10Tikcs L7-5 p15-22	<ul style="list-style-type: none">• Accurately draw circles (E2)• Identify words relating to circles (E3)• Calculate circumference of circle (L1)• Calculate area of circle (L1) <p>Apply area and circumference skills to finding values for arcs and sectors (L2)</p>										
Volume	<ul style="list-style-type: none">• MyMaths (Shape) – volume• 10Ticks L4-8 p30• 10Ticks L5-4 p41,42• 10Ticks L5-6 p35-38• 10Ticks L6-5 p23-26• 10Ticks L7-8 p15-22 [no Pack 8 L7_8 left for now – Ron]	<ul style="list-style-type: none">• Calculate volume by counting cubes (E2)• Use formulae to calculate volume of regular 3D shapes (E2)• Evaluate volume of cuboids (E3)• Use formulae to calculate volume of cylinders and compound cuboids (L1)										
Apply measures to real life applications	<ul style="list-style-type: none">- Home Learning booklet measures year 1 (pages 4-5,6,9,10,11,12,13)- Home learning booklet Measures year 2 (pages 3-10)- Home learning booklet Measures year 4 whole booklet- Home learning booklet Measures year 5 (pages 2,4,7,9)- Using a selection of objects, order them according to size and match their measures to them.- 10 Ticks L4-3 p11-13	<ul style="list-style-type: none">• Describe weight using whole values on a scale – such as weight, length, temperature (E2)• Select possible lengths, capacities and weights for common objects (E2)• Use estimation to order the size of objects (E2)• Read values from an appropriate positive scale – such as weight, length, temperature (E3)• Read and compare temperatures including negative values (E3)										
Progress Check	<p><i>Reviewing progress activities – complete the appropriate tasks below - mark and record score – gap analysis for topics (RAG) ready for when we return and review the learning area in subsequent years.</i></p> <ol style="list-style-type: none">1. GCSE 1-2 & Entry Level – Measures – complete assignment paper A -2. GCSE 3-5 & Functional Skills<table><tr><td>a) Measures</td><td>f) volume</td></tr><tr><td>b) Reading scales</td><td>g) conversion graphs</td></tr><tr><td>c) Perimeter and area</td><td>h) construction and loci – grade 5</td></tr><tr><td>d) Circumference and area – grade 4</td><td>i) scale drawings and bearings – grade 5</td></tr><tr><td>e) Area of compound shapes</td><td>j) vectors – grade 5+</td></tr></table>		a) Measures	f) volume	b) Reading scales	g) conversion graphs	c) Perimeter and area	h) construction and loci – grade 5	d) Circumference and area – grade 4	i) scale drawings and bearings – grade 5	e) Area of compound shapes	j) vectors – grade 5+
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