

WA Mathematics K -10 Curriculum Objectives Addressed Within Numbers Up! 2 Baggin' the Dragon



Age	Level	WA Level	Space	Measurement
4-6	1-2	Level 1	<p>S1.1 The student talks about likenesses and differences between things that can be seen or handled and begins to connect shape, movement and function.</p>	<p>M1.2 The student directly compares and orders 'straight' lengths and events in time and counts informal units of length, capacity, mass and time to decide 'how many fit or match'.</p> <p>M1.3 The student makes non-numerical estimates of size involving everyday movements and actions.</p>
6-7	2-3	Level 2	<p>S2.1 The student sorts things according to everyday spatial criteria and uses spatial language to describe the shape of things.</p>	<p>M2.2 The student directly orders and compares things by length, area, capacity, mass and time; indirectly compares lengths and capacities.</p> <p>M2.3 The student estimates the order of things by length, area, mass and capacity and makes numerical estimates of length using a unit that can be seen or handled.</p>
7-9	3-4	Level 3	<p>S3.1 The student understands a map or a plans as a 'bird's eye view' and uses order, proximity and directional language associated with quarter and half turns on maps and in descriptions of locations and paths.</p> <p>S3.2 The student attends to the shape and placement of parts when matching things, including matching 3D objects with their drawings or with their nets.</p>	<p>M3.1 The student realises that using a uniform unit repeatedly to match an object gives a measure of the size of the object, and uses a common unit to compare two things.</p> <p>M3.2 The student directly and indirectly compares and orders things by length, area, capacity, mass, time and angle, and measures them by counting uniform units and uses standard scales to</p>

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			<p>S3.3 The student recognises repetitions of the same shape within arrangements and patterns and uses repetitions of figures and objects systematically to produces arrangements and patterns.</p> <p>S3.4 The student interprets common spatial language and uses it to describe and compare features of things.</p>	<p>measure length and time.</p> <p>M3.3 The student makes sensible numerical estimates.</p> <p>M3.4a The student understands and measures perimeter directly and uses straightforward arithmetic to determine perimeters, elapsed time and other measurements which cannot be obtained directly.</p>
10	6	Level 4	<p>S4.1 The student uses distance, direction and grids on maps and plans and in descriptions of locations and paths.</p> <p>S4.2 The student attends to the shape and placement of parts when matching things, including matching 3D objects with their drawings or with their nets.</p> <p>S4.3 The student recognises rotations, reflections and translations in arrangements and patterns and translates, rotates and reflects systematically to produce arrangements and patterns.</p> <p>S4.4 The student selects, describes and compares figures and objects on the basis of spatial features, using conventional</p>	<p>M4.1 The student selects appropriate attributes, distinguishes perimeter from area and time from elapsed time, and chooses units of sensible size for descriptions and comparisons to be made.</p> <p>M4.2 The student measures area by counting uniform units including where part-units are required, and measures length, mass, capacity, time and angle, reading whole number scales.</p> <p>M4.3 The student uses the known size of familiar things to make estimates, including centimetres, metres, kilograms, litres and minutes.</p> <p>M4.4a The student understands relationships involving the perimeter of polygons, the area of regions based on squares and the volume of</p>

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			geometric criteria.	prisms based on cubes, and uses these for practical purposes.
11-12	7	Level 5	<p>S5.1 The student uses co-ordinates, bearings and scale on maps and plans and in descriptions of locations and paths.</p> <p>S5.2 The student interprets drawings of 3D shapes.</p> <p>S5.3 The student visualises the effect of straightforward translations, reflections, rotations and enlargements of figures and objects using suitable grids.</p> <p>S5.4 The student analyses, describes and applies distinguishing features of common classes of mathematical figures and objects, including using the concepts of parallel and perpendicular.</p>	<p>M5.2 The student uses a range of whole number and decimal scales for measuring, including making measurements that are more accurate than is marked on the scales.</p> <p>M5.3 The student makes sensible estimates of length, area, mass, capacity and time in standard units and identifies unreasonable estimates of things.</p> <p>M5.4a The student understands and applies directly length, area and volume relationships for shapes based on rectangles and rectangular prisms.</p>

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11-12	7-8	Level 6	<p>S6.1 The student identifies the essential features of a location and its representation on a diagram.</p> <p>S6.1a The student visualises and describes paths and regions which satisfy provided conditions.</p> <p>S6.2 The student interprets and meets specifications requiring the accurate construction and placement of figures and objects including manipulating shapes and arrangements mentally.</p> <p>S6.3 The student visualises, produces and accurately describes specific translations, reflections and rotations.</p> <p>S6.4 The student analyses, describes and applies properties of, and relationships between, the classes of figures that can be reasoned about in terms of properties of triangles and parallel and intersecting lines.</p>	<p>M6.1 The student decides what measurements are needed in order to complete a practical task and ensures that units used are consistent with each other and any formula used.</p> <p>M6.2 The student integrates measurement information from several sources in order to complete a practical task.</p> <p>M6.3 The student judges whether estimates and measurements are reasonable.</p> <p>M6.4 The student understands and applies directly length, area and volume relationships for polygons, circles, prisms and pyramids.</p> <p>M6.4b The student understands and uses similarity and Pythagoras's theorem to solve problems involving triangles and scale drawing.</p>

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13-14	8-9	Level 7	<p>S7.2 The student draws on properties of shapes and transformations to plan how to meet specifications requiring the accurate construction or placement of figures and objects.</p> <p>S7.3 The student identifies the transformation needed to produce a given image from an original and applies transformations to problems.</p> <p>S7.4 The student analyses, describes and applies properties of, and relationships between, classes of figures, including quadrilaterals and circles.</p>	<p>M7.1 The student takes dimensions and associated units into account in making decisions involving measurement relationships and formulas.</p> <p>M7.3 The student estimates the extent of uncertainty in direct and indirect measures.</p> <p>M7.4a The student directly and indirectly applies measurement formulas for length, area and volume of figures and objects, selecting, interpreting and sequencing formulas needed.</p>
14+	10-11	Level 8	<p>S8.1 The student draws flexibly upon, and sees connections between, results about shapes, transformations and locations in solving analytical and practical problems.</p>	<p>M8.1 The student selects and integrates mathematical ideas, relationships and information, in order to solve practical and analytical measurement problems.</p>