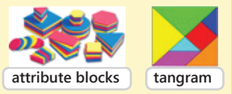
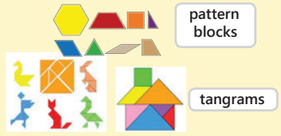
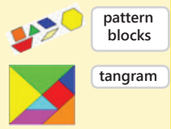
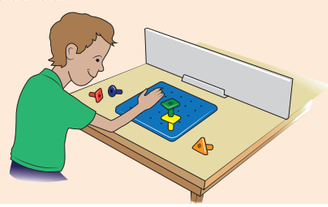
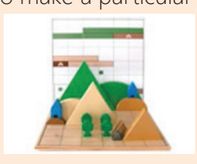
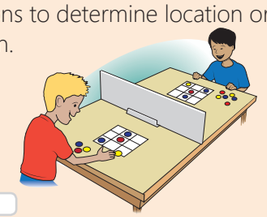
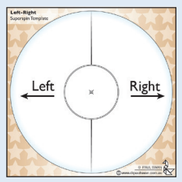
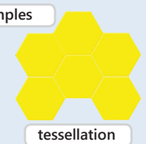
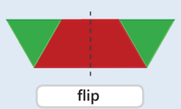
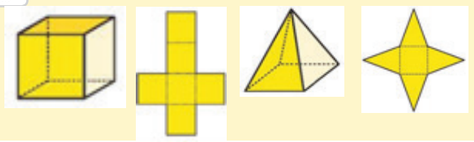
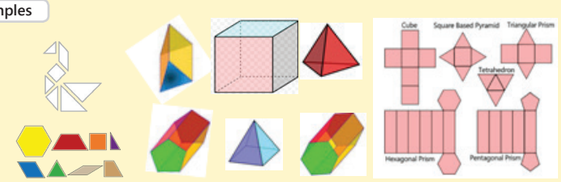
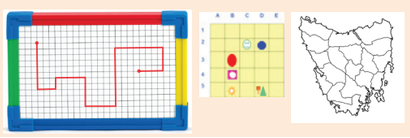
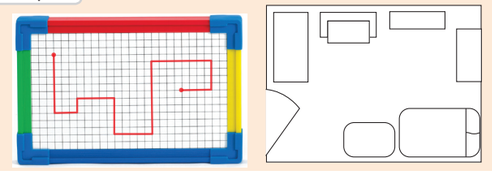
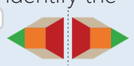
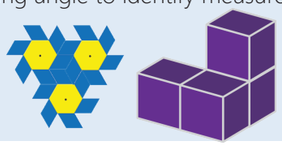
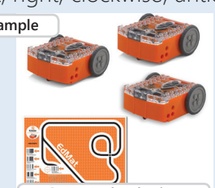
Geometry - Development Map

Visualise, draw and model shapes, locations and arrangements and predict and show the effects of transformations.

	PP (F)	Year 1	Year 2
First Steps (Phases)	• An emerging awareness of shape, position and movement.	• Able to recognise familiar shapes and objects and construct visual images of shapes and arrangements in space.	• Able to describe the features of shapes and objects and understand they can also be component parts of the whole.
Achievement Standard (Au. Curriculum)	Students sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment as well as describe position and movement.	Students recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features and give and follow directions to familiar locations.	Students describe and draw two-dimensional shapes, with or without digital technologies, describe the features of three-dimensional objects, identify key features on a simple map and investigate the effect of flips, slides and turns.
SHAPE What is it? When we copy and make figures and objects, we need to think about how the whole thing looks and how the parts relate to each other and the whole.	Become Familiar with particular shapes and objects such as: squares, rectangles, circles, spheres and cubes.  pattern blocks · attribute blocks · 3D Objects Students sort shapes and objects into groups and detail reasons for the sort or grouping.  example · attribute blocks	Provided opportunities for classifying shapes and objects according to their corners, sides, faces.  attribute blocks · tangram  3D Objects Able to name and draw familiar shapes according to the number of corners and sides and create patterns using simple familiar shapes.  pattern blocks · tangrams	Can make and draw reasonably accurate squares, triangles, rhombuses, circles and kites and can identify shapes within an arrangement an in the environment.  pattern blocks · tangram Are familiar with objects such as spheres, cubes, prisms, pyramids, cylinders and cones and can recognises 2D shapes within these. example 
LOCATION Where is it? We can describe where things are in relation to other things. There are special words, phrases and symbols that help with this.	The focus at this level is on the everyday language of location and direction such as: between, near, next to, over, under, beside, above, below, in front of, behind. examples   barrier	Able to connect where things are in relation to something else. Make comparisons with where other students are, or to where another object is located. examples  	Able to use a simple grid reference for determining the position of an item on a grid. Able to give and receive directions to determine location or to make a particular construction.   examples
TRANSFORMATION How does it move or change? We can imagine how a thing will look after we move all or part of it or change our view of it.	The movement of an object or person is described in simple terms. Students follow and give simple directions. Language: forwards, backwards, turn left, turn right. examples    	Students begin to understand about turns, distances and directions using terms such as: steps, forward, backwards, left, right, clockwise, anticlockwise. examples   	Able to slide or flip real shapes and objects using a one-step move, before use of digital technologies. Create tessellating patterns of shapes using slide transformations without gaps or overlaps. examples  tessellation  flip

Geometry - Development Map

Visualise, draw and model shapes, locations and arrangements and predict and show the effects of transformations.

	Year 3	Year 4	Year 5
First Steps (Phases)	• Able to describe and analyse configurations of shapes and objects noting features in common even when represented in different forms.	• Able to give a detailed list of properties in description of shapes and objects using edges, faces and corners and match information in drawings and plans.	• Able to visualise the result of systematically moving objects or folding figures to represent transformations and recognise relationships between configurations and component parts.
Achievement Standard (Au. Curriculum)	Students make models of three-dimensional objects and describe key features, identify symmetry in the environment, create and interpret simple grid maps to show position and pathways and identify angles as measures of turn.	Students compare and describe two-dimensional shapes that result from combining and splitting common shapes, use simple scales and legends to interpret maps, compare angles in relation to a right angle and create symmetrical patterns both with and without technologies.	Students connect three-dimensional objects with their nets, describe routes and location using a grid reference system, identify line and rotational symmetry and use the terms translation, rotation, reflection and scale when relating to transformations.
SHAPE What is it? The net of an object has to have the same component parts and the parts have to be in the right relationship to each other.	Can attend to the shape and placement of parts as they match, make and draw things, including matching 3D models that they can see and handle with conventional drawings of them and their nets. examples 	Able to match, make and draw things attending to size, shape and placement of parts, including making nets of models and using some basic conventions for drawing them. examples 	Able to investigate and explore different ways to make nets for the same shape as well as being able to virtualise solids from different orientations. examples 
LOCATION Where is it? Students understand a map or plan as a 'birds eye view' and use order, proximity and directional language associated with location and pathways.	Able to show a sense of the proximity of things in locating key features on a map. Able to give and receive directions associated with quarter and half turns (north, east, west, south) to describe a pathway. examples 	Able to use a grid reference system to locate information on a basic map and use scale, legends and direction to interpret the information contained within the map. examples 	Able to investigate the layout of floorplans for groups of objects and why certain features are placed in common positions as well as plan and draw routes for others to follow. examples 
TRANSFORMATION How does it move or change? We can move things around in space by reflecting, translating and rotating without changing the size or shape.	Able to fold or cut simple regular 2D shapes to identify the symmetry or reflection around a line. example  Able to flip, slide or rotate shapes and objects to create a more complex tessellation using angle to identify measures of turn. examples 	Students begin to understand about turns, distances and directions using terms such as: steps, forward, backwards, left, right, clockwise, anticlockwise. example  STEM technologies	Can apply the enlargement transformation to show scale and similarity without altering any of the key properties. example  Can identify line and rotational symmetries in relation to angle between 0 and 360 degrees. examples