

Shape and Space Manual Assessment Pack

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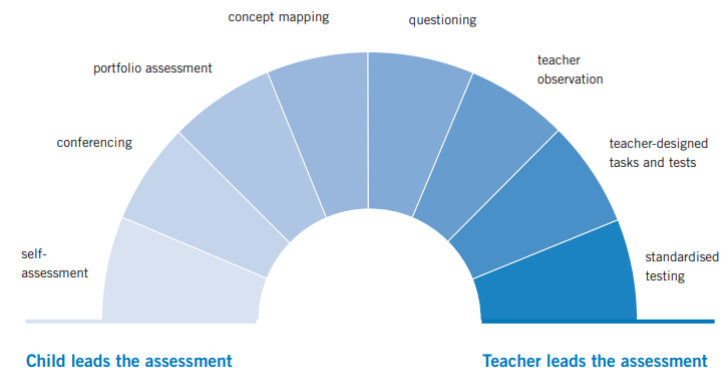
Assessment

There are many forms of assessment that can be used effectively in mathematics lessons. The samples provided here are just a few. Please see the Assessment in the Primary School Curriculum: Guidelines for Schools (NCCA, 2007) for more information and guidance in relation to assessment – click the image to access these guidelines.



Two assessment checklists for Shape and Space are provided in this assessment pack – one for whole class assessment and one for individual pupil assessment. The individual pupil assessment checklist can be used to ‘track’ a number of pupils in the class over the course of a year. Similarly, it can be used to ‘track’ pupils from infants to 6th class in Shape and Space. It enables a dual-approach to assessment – assessment of the concepts of Shape and Space in addition to assessment of the developmental mathematical experiences (concrete, pictorial, abstract). Finally, many assessment opportunities are inherent in the teaching and learning experiences throughout the Shape and Space manual, for example:

- Self-assessment (learning logs)
- Conferencing
- Portfolio Assessment (learning logs)
- Concept Mapping
- Questioning
- Teacher Observation
- Teacher-designed tasks and tests



The Assessment Chapter (pages 112-121) of the Primary Maths Curriculum also provides further guidance on assessment

Throughout this manual, the blue rainbow symbol is used to highlight opportunities for assessment.











Individual Pupil Assessment

INDIVIDUAL PUPIL ASSESSMENT: SHAPE and SPACE LEARNING TRAJECTORY LEVEL A





Individual Pupil Name	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level A.1 Explore, discuss, develop and use the vocabulary of spatial relations (positional and directional)			
Level A.2 Sort, describe and name 3-D shapes including cube, cuboid, sphere and cylinder.			
Level A.3 Sort, describe and name 2-D shapes including square, circle, triangle and rectangle.			
Level A.4 Combine and divide 3-D and 2-D shapes to make larger or smaller shapes.			
Level A.5 Use suitable 3-D and 2-D structured materials to create pictures			





INDIVIDUAL PUPIL ASSESSMENT: SHAPE and SPACE LEARNING TRAJECTORY LEVEL B

Individual Pupil Name	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level B.1 Explore, discuss, develop and use the vocabulary of spatial relations (positional and directional).			
Level B.2 Describe, compare and name 3-D shapes including cone.			
Level B.3 Sort, describe, compare and name 2-D shapes including square, rectangle, triangle, circle, semicircle, oval.			
Level B.4 Construct, draw, combine and partition 2-D shapes.			
Level B.5 Identify halves and quarters of 2-D shapes.			

Individual Pupil Name	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level B.6 Identify line symmetry in shape and in the environment.			
Level B.7 Explore and recognise angles in the environment.			
Level B.8 Identify and discuss the use of 2-D and 3-D shapes in the environment.			


INDIVIDUAL PUPIL ASSESSMENT: SHAPE and SPACE LEARNING TRAJECTORY LEVEL C

Individual Pupil Name	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level C.1 Identify, describe and classify 3-D shapes by comparing their properties including triangular prism and pyramid.			
Level C.2 Explore, describe, compare and classify the properties of 2-D shapes including oval and irregular shapes.			
Level C.3 Construct and draw 2-D shapes; construct 3-D shapes.			
Level C.4 Identify, describe and classify 2-D shapes including equilateral, isosceles and scalene triangle; parallelogram; rhombus; pentagon; octagon.			
Level C.5 Combine, tessellate and make patterns with 2-D shapes.			

Individual Pupil Name	Developmental Experiences		
			
Concepts	 Concrete	 Pictorial	 Abstract
Level C.6 Identify, draw and recognise line symmetry in the environment and in shapes.			
Level C.7 Identify, describe and classify parallel, perpendicular, vertical, horizontal and oblique lines.			
Level C.8 Classify angles as greater than, less than or equal to a right angle.			
Level C.9 Recognise an angle in terms of a rotation.			
Level C.10 Draw, discuss and describe intersecting lines and their angles.			

INDIVIDUAL PUPIL ASSESSMENT: SHAPE and SPACE LEARNING TRAJECTORY LEVEL D

Individual Pupil Name	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level D.1 Identify and examine 3-D shapes and explore relationships including tetrahedron octahedron.			
Level D.2 Draw the nets of simple 3-D shapes and construct the shapes.			
Level D.3 Tessellate combinations of 2-D shapes.			
Level D.4 Classify 2-D shapes according to their lines of symmetry.			
Level D.5 Make informal deductions about 2-D shapes and their properties.			

Individual Pupil Name	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level D.6 Identify the properties of the circle and construct a circle of given radius or diameter.			
Level D.7 Construct triangles from given sides or angles.			
Level D.8 Plot simple co-ordinates and apply where appropriate.			
Level D.9 Recognise, classify and describe angles and relate angles to shape and the environment.			
Level D.10 Recognise angles in terms of a rotation.			