Old Town Infant School and Nursery

MATHS MEDIUM TERM PLANNING

Coastal Learning PARTNERSHIP

Year 1 – Geometry: Shape (Approximately 2 weeks)	
Objectives from Progression Document	**recognise and name rectangles (including squares), circles and triangles** **recognise and name cubes, pyramids and spheres** identify that circles are round, but really spheres are spherical
Previous Learning	**see how a shape can have other shapes within it** e.g. two triangles can make a square **develop spatial reasoning skills by selecting, rotating and manipulating shapes** copy increasingly complex 2D pictures and patterns with these 3D resources **see how a shape can have other shapes within it** e.g. squares on the faces of a cube **select, rotate and manipulate shapes in order to develop spatial reasoning skills**.
Vocabulary	edge, corner (point, pointed), face, side, edge, flat, curved
Key fact(s)	To know the names of some 2D and 3D shapes To know that 2D shapes are completely flat To know that 3D shapes are solid shapes with corners, edges and faces
Number facts for fluency	Fluency Bee Stage 2: Composition of 10 (subitise, composition and bonds) *Comparison to 10 (consolidation week)*
DfE Ready to Progress Guidance Pages https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897806/Maths_guidance_KS_1_and_2.pdf	**1G-1** Recognise common 2D and 3D shapes, pages 35 - 37 **1G-2** Compose 2D and 3D shapes from smaller shapes page 37 – 39
NCETM Ready to Progress Exemplification https://www.ncetm.org.uk/classroom-resources/exemplification-of-ready-to-progress-criteria/	**1G-1** Recognise common 2d and 3d shapes **1G-2** Compose 2D and 3D shapes from smaller shapes
Problem Solving and Reasoning Skills Objectives	with support, answer a question by recording information in lists and simple tables
Pre-assessment:	EYFS shape - identify shapes within other shapes; copy patterns including 2D and 3D shapes

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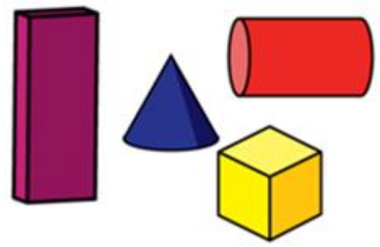
Sequence of Learning						
White Rose Small Steps	**Learning Intention**	**Key Questions**	**Sentence Stems**	**Comments**	**Problem-solving links**	**Extension and Greater Depth Opportunities**
Recognise and name 3-d shapes (1G 1) (1G 2)	**To identify specific 3D shapes**	What makes a shape 3-D? What 3-D shapes can you see in the classroom? What is the name of this 3-D shape? Do all cubes look the same? Does the shape change when you turn it around? Can you think of any everyday objects that are cones/cubes/ cylinders?	The mathematical name of a football is a _____ The mathematical name of a book is a _____ The mathematical name of a tin of beans is a _____ This is a ___because …	Children start by looking at 3-D shapes, as these are tangible shapes that they can touch and feel to help understand their identifying features. Children are required to name simple 3-D shapes such as cubes, cuboids, cylinders, pyramids, cones and spheres. Focus should be more on verbally naming and matching. Encourage children to start to think about the 2-D faces on a 3-D shape, as this will support them later on when they look at 2-D shapes in detail. Children may think that a 3-D shape can only be placed or viewed in a certain way. Ensure that children are exposed to shapes in different orientations.	Building with solid shapes (n-rich) Properties of 3D shapes Shadow Play (n-rich) Visualising 3D shapes Skeleton Shapes (n-rich) Properties of 3D shapes, concentrating on edges and faces	The bottom of a 3-D shape is hidden.  What shape could it be? Explain how you know. How many ways can you sort the shapes into groups? 
Sort 3-d shapes (1G 1) (1G 2)	**To sort 3D shapes according to their properties**	Why is this shape the odd one out? What is the same about the shapes? What is different? Can you find an everyday object to add to each group? How can you test if the shapes roll? What do the shapes that roll have in common? How can you test if the shapes stack? What do the shapes that stack have in common?	A ____has flat faces. A _____has a curved surface. A _____has both flat faces and curved surfaces.	Children start to sort 3-D shapes. They should be given the opportunity to explore similarities and differences between shapes and to sort them according to what they notice. Children sort and group 3-D shapes according to simple properties, including type, size and colour. Encourage children to explain in detail what they notice about groups of shapes and to consider whether they could have been sorted another way. Children should think about the key features of each 3-D shape. Encourage them to consider questions such as “Will they stack, or will they roll?” as another method for sorting. Children may think that cubes and cuboids can never be sorted into the same group, because they do not realise that a cube is a special type of cuboid.		

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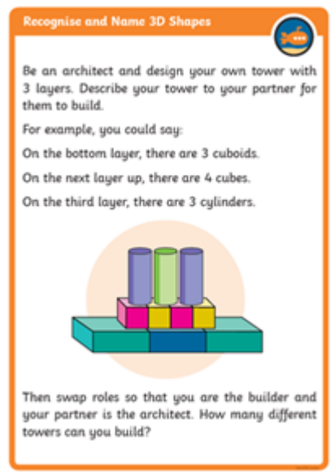
Recognise and name 2-d shapes (1G 1) (1G 2)	**To identify specific 2D shapes**	What 2-D shapes do you know? What is the difference between a 2-D shape and a 3-D shape? Can you see any 2-D shapes on the faces of this 3-D shape? What does "2-D" mean? Describe the difference between a square and a cube. Describe the difference between a circle and a sphere. Where can you see 2-D shapes around the classroom?	On the face of a cylinder, I can see a ___ On the face of a pyramid, I can see a ____and a ____ I know this shape is a ____ because ...	Children are required to name simple 2-D shapes, such as triangles, squares, rectangles and circles. The focus should be on verbally naming and matching. As 2-D shapes cannot be physically explored in the same way as 3-D shapes, they can be difficult to introduce to children in a practical way. 3-D shapes can be used as a way of exploring 2-D shapes, where children focus on the faces of the 3-D shapes to identify which 2-D shapes they are made up of. They can also draw around 3-D shapes or use them to make prints of 2-D shapes. It is essential that children recognise that 2-D shapes are completely flat. Children may not recognise that a square is a special type of rectangle. Children may think that each shape can only be placed or viewed in a certain way. Ensure that children are exposed to these shapes in different orientations.	Paper Patchwork 1 (maths.org) Properties of 2-D shapes Jig Shapes (maths.org) Teamwork and language of shape and position	Here is part of a shape.  How many different ways can you complete the shape using one or more straight lines? Compare your shape with a partner. What is the same and what is different? Use a selection of triangles, rectangles, squares and circles.  Put your shapes into groups. Ask a partner to label your groups. How many different groups can you create?
Sort 2-d shapes (1G 1) (1G 2)	**To sort 2D shapes according to their properties**	What is the name of this shape? Can you describe the shape? Compare your shape to a different shape. What is the same and what is different? Compare your shape to other shapes with the same name. What is the same and what is different? How have the shapes been sorted? Could the shapes have been sorted in a different way?	I have sorted the shapes by ____ These shapes are grouped together because …	Children start to sort 2-D shapes. They sort and group 2-D shapes more formally according to simple properties, including type, size and colour. As well as sorting shapes into groups themselves, children also identify how given groups of shapes have been sorted. Encourage children to explain in detail what they notice about groups of shapes and to consider whether they could have been sorted another way. They should think about what is the same and what is different about shapes, while also recognising that the orientation of a shape does not affect its properties. Take time to explore the similarities between squares and rectangles, so that children see the connection.		
Patterns with 3-d and 2-d shapes	To continue patterns made from 2D and 3D shapes	What is the order of the shapes in the pattern? Can you describe the pattern? What will the next shape be? How many different shapes are in the pattern? Can you say the names of the shapes out loud as you describe the pattern? What is the same and what is different about the patterns?	The next shape in the pattern is a _____ There are _____ shapes before the pattern starts again. The pattern is made up of _____ shapes.	Children create patterns with 2-D and 3-D shapes. They should experience both repeating patterns (ABAB) and symmetrical patterns (ABBCBBA), but do not need to know the names of these types of patterns. Children use both 2-D and 3-D shapes to complete and make simple patterns, focusing on different shapes, sizes and colours. Encourage children to say the patterns aloud, consolidating their previous learning on naming shapes. Use shapes in different orientations to reinforce children's recognition of 2-D and 3-D shapes. Children should be able to recognise the rule within a pattern and use this to continue it in any direction.	Chain of Changes (maths.org) Naming and visualising shapes.	
Post-assessment:	WRH end of block place value assessment – snip as feel appropriate					