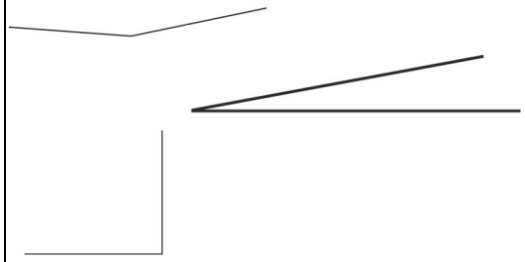
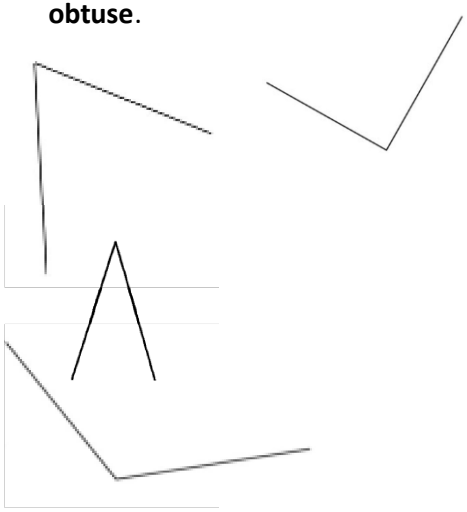
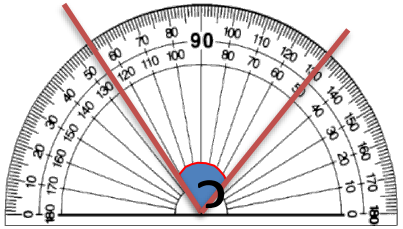
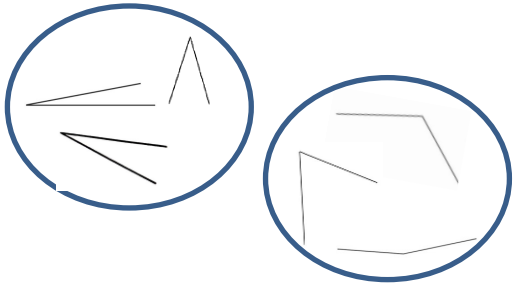
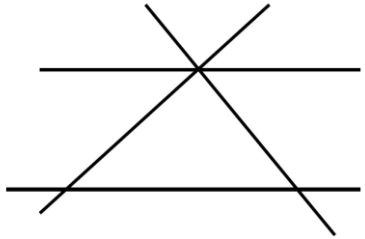
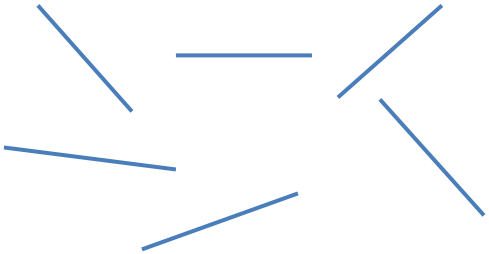
Term by Term Objectives

Year 4

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Angles	Identify acute and obtuse angles and compare and order angles up to two right angles by size.	• Label the angles below as **acute, right** or **obtuse**.  • Order the angles from smallest to largest. Label them **acute**, **right** or **obtuse**. 	• Here is an angle on a protractor.  Sam says "The angle is obtuse because it is more than 90°" Gita says "The angle is acute because it is less than 90°" Who is correct? Explain your thinking. • Tim is sorting angles. Can you label the groups? Can you circle the odd one out? 	• How many acute and obtuse angles can you find in the diagram below?  Label the acute angles (a) and the obtuse angles (o). • Pair the lines below to make an acute angle, a right angle and an obtuse angle. You can't change the orientation of the lines.  Can you do it in more than one way?

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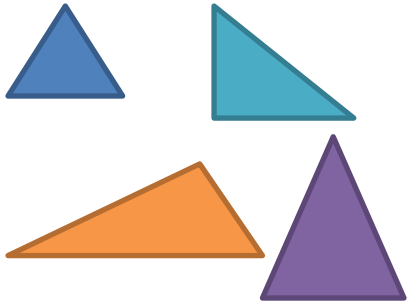
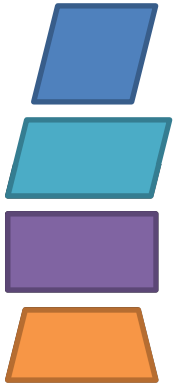
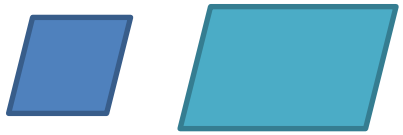
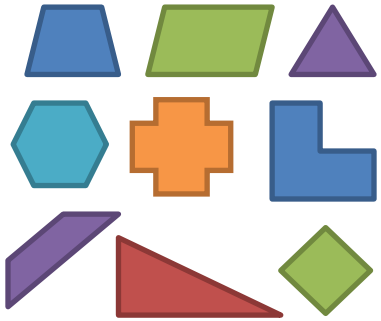
Term by Term Objectives

Year 4

Shape

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	• Label each of the triangles **isosceles**, **scalene** or **equilateral**.  • Match the quadrilaterals to their names.  rectangle rhombus parallelogram trapezium Write down the properties of each of the shapes.	• Look at these shapes. What's the same? What's different? Can you name the shapes?  • Can you sort the shapes below into different groups? Ask other children to see if they can label your groups and work out how you have sorted your shapes.  Can you add one more shape to each of your groups? Can you name each shape? Can you sort your shapes in a different way?	• Here is a square. Inside the square is an equilateral triangle. The perimeter of the triangle is 54cm. Find the perimeter of the square.  • Can you fill in each of the boxes below with a different shape? Can you name each shape? | | Has a right angle | Has no equal sides | | Has 4 or more sides | | | | Has three sides | | | | Has an obtuse angle | | |

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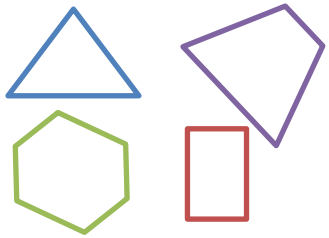
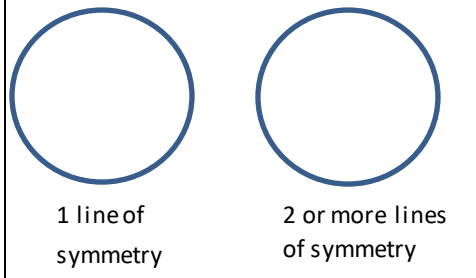
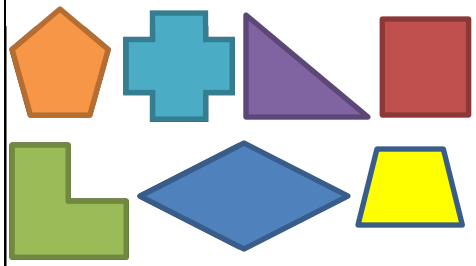
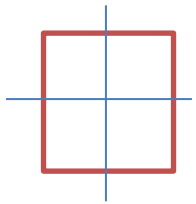
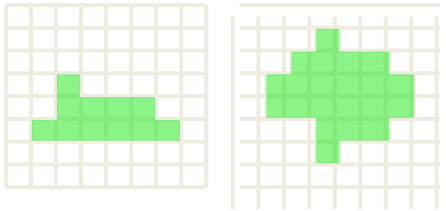
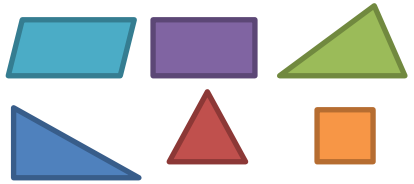
Term by Term Objectives

Year 4

Symmetry

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Identify lines of symmetry in 2D shapes presented in different orientations.	• Find lines of symmetry in the shapes.  • Sort the shapes into the groups.  1 line of symmetry 2 or more lines of symmetry  Can you add one more shape to each group?	• **Always, sometimes, never** Triangles have one line of symmetry. Prove your answer using drawings. • Jasmine has drawn the lines of symmetry on the square.  Has she found them all? Explain how you could check. • Hamza says 'Lines of symmetry are always straight.' Is Hamza right? Convince me.	• Colour in one more square on each pattern to create a shape with a line of symmetry.  • Can you place one shape in each of the boxes below? See table below 

	Has an acute angle	Has two or more lines of symmetry
Has 4 sides		
Has three or less sides		
Has a right angle		

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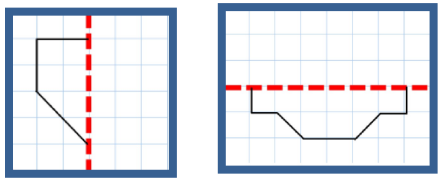
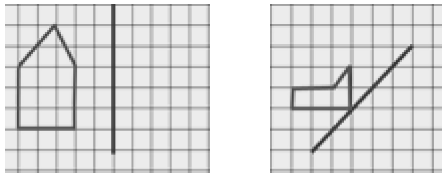
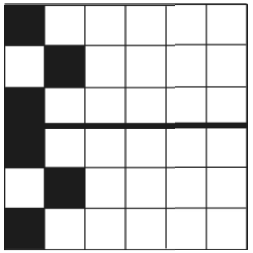
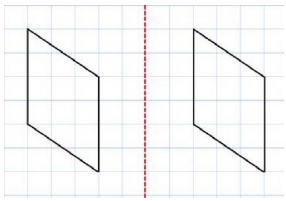
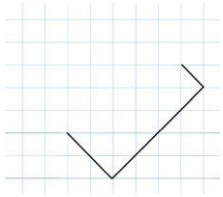
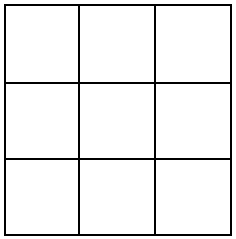
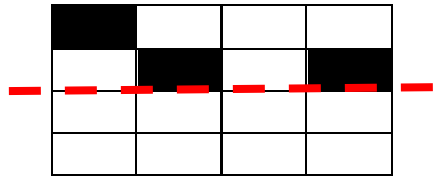
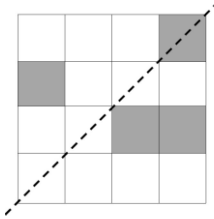
Term by Term Objectives

Year 4

Symmetry

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Complete a simple symmetric figure with respect to a specific line of symmetry.	• Complete the shape with respect to the line of symmetry.  • Reflect the shape in the mirror line  • Shade in the squares to complete a symmetrical pattern. 	• Prove that the shape below is not reflected correctly.  • Complete the shape to make a square and draw on the mirror line.  • Caroline thinks the shape will have 6 sides altogether when it is reflected in the mirror line.  Do you agree? Prove it.	• How many different ways can you colour the squares below to create different symmetrical designs?  • Colour in extra squares to complete a symmetrical pattern.  

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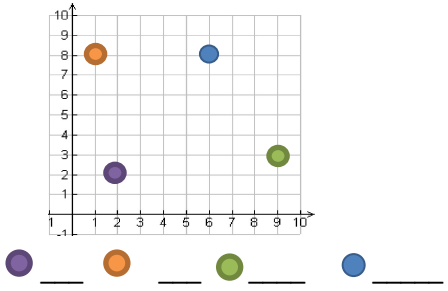
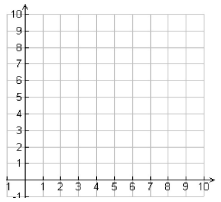
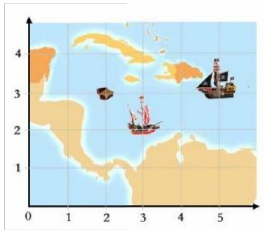
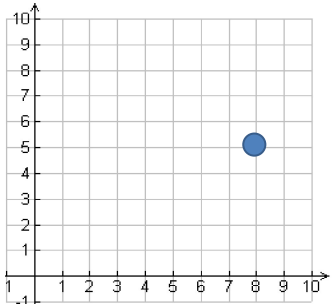
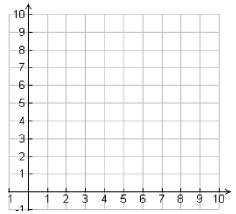
Term by Term Objectives

Year 4

Position and Direction

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Describe positions on a 2D grid as coordinates in the first quadrant.	• Write the co-ordinates of the coloured dots.  • Draw the shapes on the co-ordinates given.  (2, 6) (6, 2) (9, 0) • Write the co-ordinates of the ships. 	• Point A is marked on the grid.  Henry says that point A is at (5,8) Aisha says that point A is at (8,5) Who is correct? Can you explain what mistake one of the children has made? • Junaid says: You can say either number first in co-ordinates, it doesn't matter. Do you agree with Junaid? Explain why.	• Can you place the letters below on the grid by following the rules?  A B C D E P S X Y Z The letters at (1,1), (1,2) and (1,3) are all symmetrical about a vertical line. The letter at (8,3) is not symmetrical and is made of straight and curved lines. The letters at (1,1), (2,1) and (5,1) are symmetrical about a horizontal line. The letter at (5,1) consists of just straight lines. The letters at (5,3) and (2,0) consist of just curved lines. The letters at (5,3), (5,2) and (5,1) are consecutive in the alphabet. The letters at (0,2) and (1,2) are at the two ends of the alphabet.

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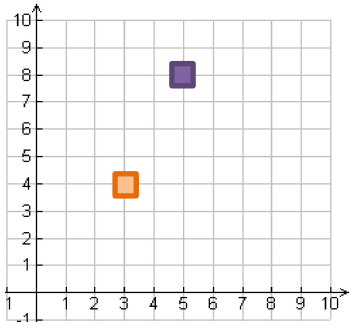
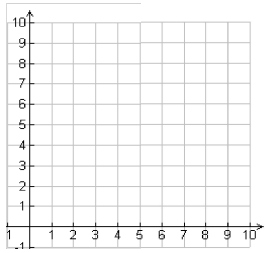
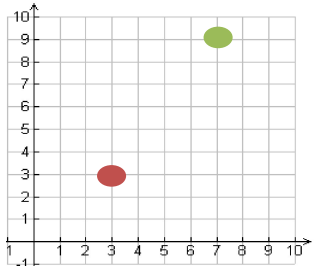
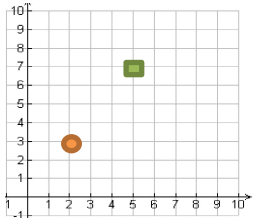
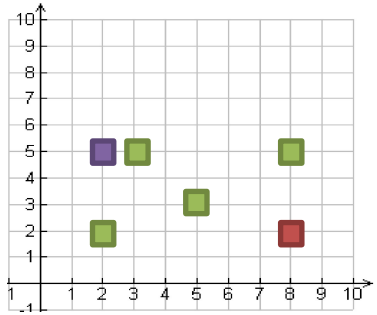
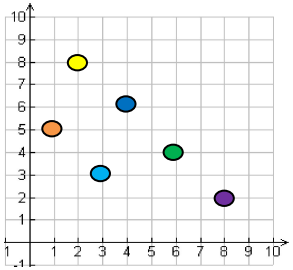
Term by Term Objectives

Year 4

Position and Direction

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Describe movements between positions as translations of a given unit to the left/ right and up/ down.	• Describe the movement of the orange square to the purple square.  • The coordinates of point A are (3,2). Point B is 2 squares left and 7 squares up from point A. What are the co-ordinates of point B? Plot point A and point B on the grid. 	• Describe the movement from the green circle to the red circle.  Describe the movement from the red circle to the green circle. What do you notice about your descriptions? • Keeley has described the movement of the orange circle to the green square as 3 squares to the left and 4 squares down.  Do you agree? Explain why.	• Write a set of instructions to move the red square to the purple square without going through any green squares.  • Write a set of instructions to move from the yellow circle to the purple circle while passing through all the other coloured circles. Compare your instructions with a friend. 

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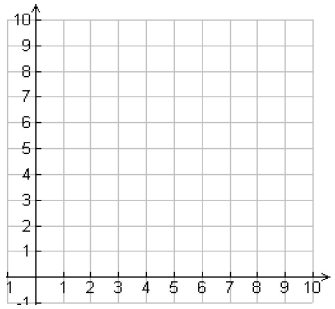
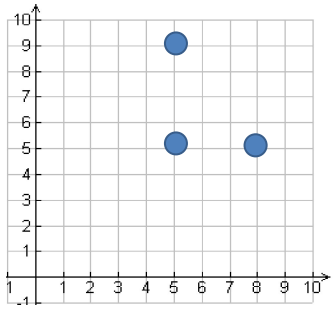
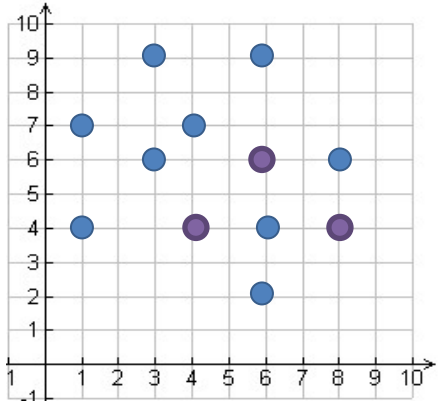
Term by Term Objectives

Year 4

Position and Direction

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Plot specified points and draw sides to complete a given polygon.	• Plot the points on the grid below to make a 2d shape. (2,9) (2,2) (5,9) (5,2)  Tom draws a shape on the same grid using these co-ordinates. (2,9) (2,6) (5,9) (5,6) What is the same and what is different about your shape and Tom's shape? • Write co-ordinates for a friend to plot that make the following shapes: a) Triangle b) Trapezium c) Rhombus	• Henry plots three points on a grid. Aisha says "*You can make a square if you mark another point at (8, 9)*"  Is Aisha correct? • Here are the co-ordinates of corners of a rectangle that has width of 4. (7, 2) and (14, 2) What are the other two co-ordinates?	• There are 12 points marked on the grid that are all corners of squares. Can you work out where the 4 squares are? The purple dots are corners of more than one square. 

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