


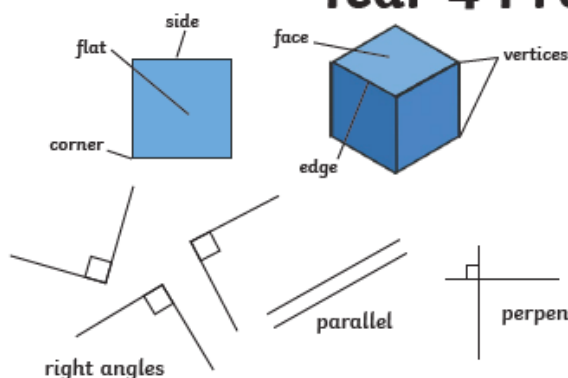
## Prior Knowledge

- Recognise and name common 2-D and 3-D shapes (Y1)
- Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line (Y2)
- Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces (Y2)
- Identify 2-D shapes on the surface of 3-D shapes (Y2)
- Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them (Y3)
- Recognise angles as a property of shape or a description of a turn (Y3)
- Identify right angles, recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle (Y3)
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines (Y3)

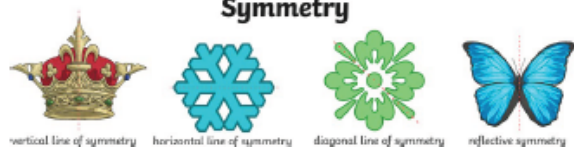
Properties of shapes		Working Towards	Within	Expected	Above
	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes				
	Identify acute and obtuse angles and compare and order angles up to 2 right angles by size				
	Identify lines of symmetry in 2-D shapes presented in different orientations				
	Complete a simple symmetric figure with respect to a specific line of symmetry				
<b>Highlights:</b> _____ _____					

## Glossary

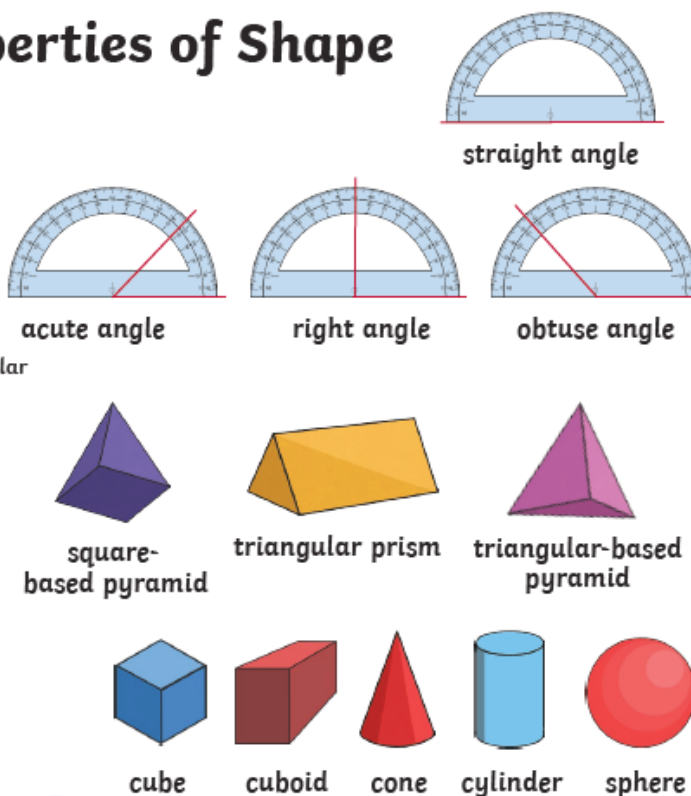
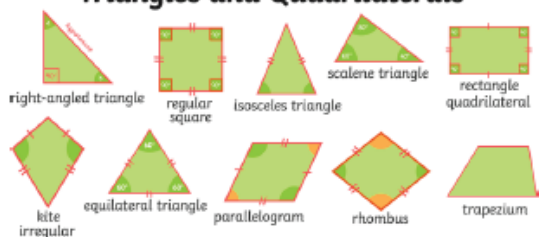
### Year 4 Properties of Shape



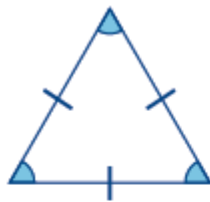
#### Symmetry



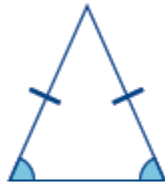
#### Triangles and Quadrilaterals



Triangles have 3 sides and 3 vertices. The total of the angles in a triangle is  $180^\circ$ .



An equilateral triangle is a regular polygon. It has sides of equal length and each angle is  $60^\circ$ .

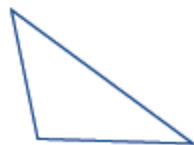


An isosceles triangle has two sides of equal length and two angles of equal size.



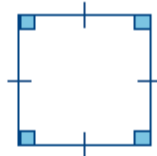
A right-angled triangle always has one  $90^\circ$  angle.

It can be isosceles or scalene.

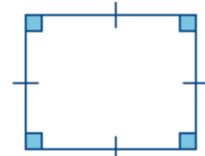


A scalene triangle has no equal sides or angles.

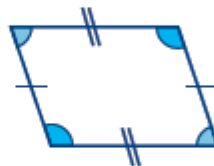
A quadrilateral is a polygon with four sides.



A square has four sides of equal length and four right angles ( $90^\circ$ ). A square is also a rectangle, a rhombus and a parallelogram.



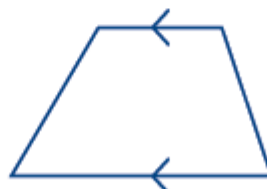
A rectangle has two pairs of parallel, equal sides and four right angles. A rectangle is also a parallelogram.



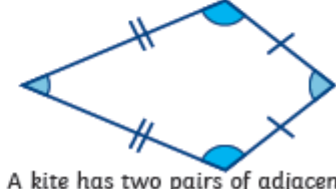
A parallelogram has two pairs of parallel, equal sides and opposite equal angles.



A rhombus has four sides of equal length and opposite equal angles. A rhombus is also a parallelogram.



A trapezium only has one pair of opposite parallel sides.



A kite has two pairs of adjacent equal sides and one pair of opposite equal angles.

An angle is created when two straight lines meet at a point or intersect.

### Right angle

The intersection of perpendicular lines creates a right angle.



### Acute angle

Any angle measuring more than 0 degrees and less than 90 degrees is acute.



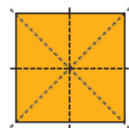
### Obtuse angle

Any angle measuring more than 90 degrees but less than 180 degrees is obtuse.



Lines of symmetry may be horizontal, vertical or diagonal. Some 2D shapes will have no lines of symmetry and some 2D shapes will have multiple lines of symmetry.

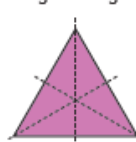
A square has four lines of symmetry.



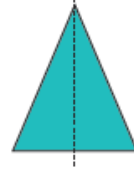
A rectangle has two lines of symmetry.



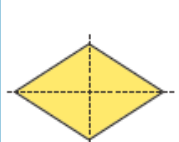
An equilateral triangle has three lines of symmetry.



An isosceles triangle has one line of symmetry.

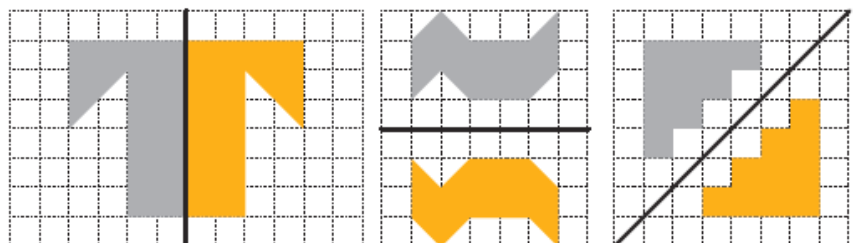


A rhombus has two lines of symmetry.



## Symmetric Figures

Patterns and shapes can be reflected in a mirror line. Mirror lines can be vertical, horizontal or diagonal.





## Resources

A range of 2D and 3D shapes  
ruler  
protractor (potentially)



## Future Learning

### Year 6

- Draw 2-D shapes using given dimensions and angles
- Recognise, describe and build simple 3-D shapes, including making nets
- Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles