

## Can I name and describe 2-D and 3-D shapes?

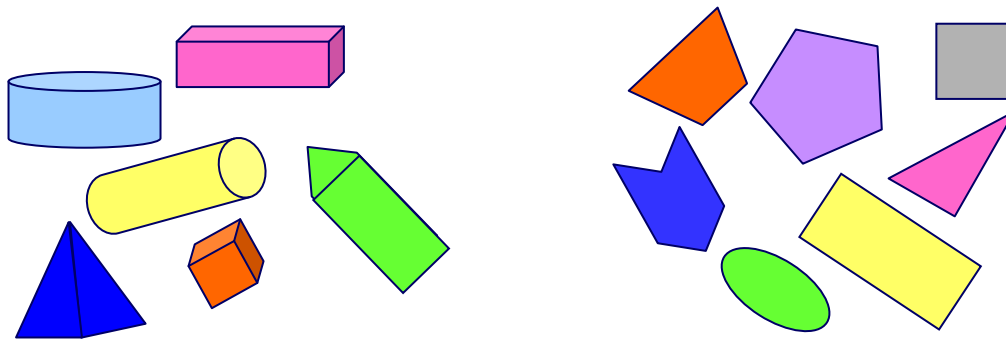
### Teaching guidance

#### Key vocabulary

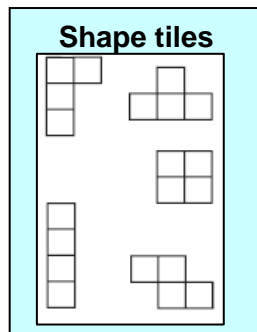
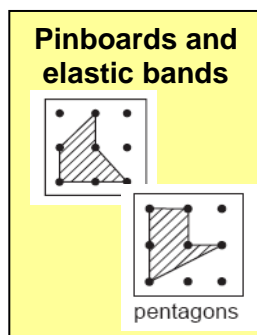
rectangle, rectangular, square, triangle, triangular, circle, circular, pentagon, hexagon, octagon, pyramid, cube, cuboid, sphere, cone, cylinder, face, corner, edge, side, flat, curved surface, straight, round, solid

#### Models and images, resources and equipment

##### Sets of plastic/wooden shapes and sets of 2-D shapes on card

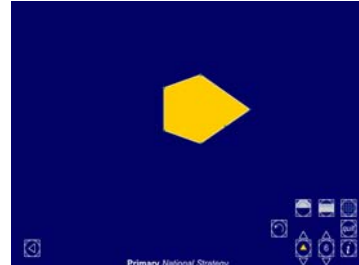
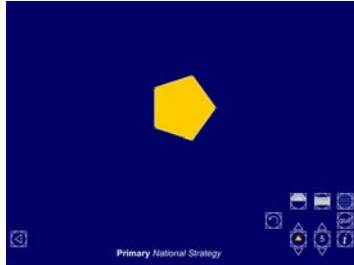


##### Practical resources to make shapes



### ICT

The Polygon ITP allows children to move and manipulate shapes, for example by stretching one vertex.



### Teaching tips

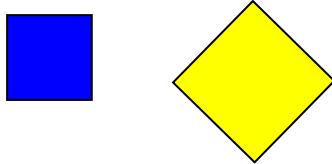
- It is important to help children develop their mathematical vocabulary. Help them make the transition from using everyday words to using precise mathematical vocabulary such as 'circular' and 'face'.
- When you talk to children about their work, use appropriate mathematical vocabulary so that they gain confidence in the use of terms such as 'edge', 'curved', 'side' and so on. Also provide regular opportunities for children to use the correct mathematical vocabulary to describe shapes. For example:
  - Use 'back-to-back' activities where children describe a shape for their partner to draw or select from a set of pictures or real shapes. Barrier games such as this are particularly supportive for EAL learners.
  - Gradually reveal a shape so children can predict what the whole shape will be. As children become more experienced with using the language of properties of shape they should be asked, not only what they think the shape is, but also what it cannot be, and why. Whole-class or group activities of this nature give EAL learners a chance to hear and understand the language of reasoning used in context, for example 'It can't be a ... because ...', 'I think it is a ... because ...'



- Set up a 'Shape shop'. Children can pretend to order a shape via a phone call by describing it to the shopkeeper who can ask questions to confirm the correct properties and shape. For example, is it 2-D or 3-D? Does it have any right angles? etc.
- Draw some shapes on the board and challenge children to find the 'odd one out' or describe a property that links them all. To develop reasoning and communication skills encourage them to justify their answers.
- Take children outside and ask them to represent 2-D shapes using rope or their own bodies. Ask them to describe the shape they have made.

Overcoming barriers in mathematics – helping children move from level 1 to level 2

- Children need to know that shapes can often be described and sorted using a range of different vocabulary. For example, a square is also a four-sided shape and a rectangle. Help children to ask questions that help them identify a particular shape, for example: Does the shape have four straight sides? Are they all equal? Does it have four right angles?
- Ensure that children experience shapes in different sizes, colours and orientations. Some children may not, for example, recognise that both of these shapes are squares.



- Ensure that children also experience irregular shapes. Children need to appreciate that any shape with three straight sides is a triangle, any shape with five straight sides is a pentagon, etc.

